Kazakhstan’s Livestock Sector – Supporting Its Revival

A joint Sector Work of the
Joint Economic Research Program
The Government of Kazakhstan and the World Bank
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Annex A - Data

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Abbreviations

CIS Commonwealth of Independent States
EU European Union
FAO Food & Agriculture Organization of the United Nations
FSU Former Soviet Union
FTE Veterinary Full-staff Equivalent
GDP Gross Domestic Product
GoK Government of Kazakhstan
Ha hectare
HACCP Hazard Analysis Critical Control Points
ISO International Organization for Standardization
JERP Joint Economic Research Program
Km kilometer
LU Livestock Unit
MoA Ministry of Agriculture
MOK Mal Onimderi Korporatsiyasy
t Metric Ton
NGO Non-Government Organization
SOE State Owned Enterprise
Tg Kazakhstan Tenge (KZT 150 = US$ 1)
USDA United States Department of Agriculture
VLU Veterinary Livestock Unit
WTO World Trade Organization
Acknowledgements

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Washington, June 2004
Executive Summary

1. **Kazakhstan’s livestock sector has a significant, but under-exploited development potential.** Livestock production has been a key economic activity in Kazakhstan for centuries and continues to be a major source of employment, food and income for the rural population. Kazakhstan's vast grasslands provide an important production base, and improved local and world market prices provide opportunities for livestock development, especially for the emerging small and medium size producers. The Government of Kazakhstan (GoK) can play a leading role in enabling livestock producers to capture this potential. Such a livestock development strategy would also contribute to the broader objectives of socially and environmentally sustainable development of the rural areas set by the Government of Kazakhstan.

2. **The livestock sector in Kazakhstan enjoys several areas of comparative advantage that could allow the sector to contribute substantially to income, growth, employment and export opportunities in rural areas.** These sources of comparative advantage are found in the vast but underexploited rangelands, the flexible, low-cost production structure of the smallholder farms, and the availability of low-cost by-products from large-scale crop production (feed grain and oilseed meals). To exploit and capitalize on these sources of comparative advantage, Government would need to focus its interventions on two broad areas: livestock markets, and productivity at the farm level. Current support services and existing market channels have not yet adapted to respond to the newly emerged livestock production systems. The policy challenge facing Government is now to support an appropriate and effective response.

3. **Future growth of the livestock industry is likely to be driven largely by the capacity of the industry to capitalize on the sources of comparative advantage that have emerged from a decade of transition.** There are significant opportunities for growth in the domestic market in the medium term and export opportunities in the longer term. The increase of national income raises demand for livestock products in Kazakhstan. But, the oil and gas industry is also putting upward pressure on the exchange rate. This makes Kazakhstan’s products more expensive, thus less competitive on the international market. Current livestock exports are low, but a good potential exists for niche, high-value products in distant markets, as well as for more traditional products in the regional markets (Russia, China, other Central Asia republics). But opportunities also differ regionally. For example, the northern oblasts already have a good potential for meat exports to Russia.

4. **Because smallholder farmers now produce the bulk of the national livestock production, they constitute an important element of the livestock sector.** After a decade of transition, small farms have come to dominate livestock production, generating around 80% of national production. During the 1990s, demand and supply shocks, together with the agricultural privatization process, caused a contraction of the national herd and a decline in livestock production. Dispersion of the herd across a large number of smallholders and family farms was the result. Since 2000, in fact, the sector has started to recover on its own and smallholder farmers have almost exclusively driven this growth.

5. **An inclusive livestock development strategy that responds to the needs of the newly emerged livestock production structure has the potential to contribute to the broader rural development objectives of the Government.** During the transition, livestock production has played an important safety net function, providing for own consumption as well as an important source of cash income in rural areas. An inclusive livestock development strategy would enable the more productive elements of the smallholder sector to become competitive and commercially oriented. Not all smallholder farmers, however, will become commercially viable, and some will remain subsistence livestock owners. For those households, distinct and social-oriented programs, designed as part of an overall rural development strategy, would be better suited.

6. **Competitiveness and commercial orientation should not be linked to farm size.** International comparison shows that larger, intensive farms do not necessarily equate with more competitive farms. Cost competitiveness depends on technology and cost structure of the respective
farms and the type of technology reflects on the sources of comparative advantage. For example, small-scale dairy producers in Pakistan can produce at lower costs than the much larger, high yield dairy farms in the US.

7. While most of the activities required for the revival of the livestock sector are private in nature, the Government can play a strong facilitating role to regain lost market shares and explore new ones. **The objective of this study is to analyze current livestock policies and to assess the key entry points for the revitalization of the livestock industry, while ensuring sustainable management of its grassland resources.**

8. This report summarizes the results of a collaborative work on the livestock sector in Kazakhstan. The study has been conducted in close collaboration with the Ministry of Agriculture (especially the Livestock Department). The study at first focused on six areas that in joint consultation deemed most important for developing the appropriate policy agenda: the macro-economic framework, marketing channels, food standards and quality, animal health, breeding and feeding improvements. This agenda was broadened to directly respond to requests of the Ministry of Agriculture on the issues of: government spending on the sector, the role of the marketing parastatal, options for livestock legislation, and potential pilot activities for the stimulation of the sector. All these have been individually treated in short Policy Notes that are provided in the Annex of this report. At a joint workshop in June 2003, the key issues of the sector were discussed. Kazakh experts conducted a marketing survey, and reviews of the breeding strategies, feed resources and the veterinary sector. Roundtable discussions with key stakeholders on the oblast level were organized in November 2003. This final report summarizes findings of the policy notes, background papers and discussions.

**How Can the Government Contribute to Revive the Sector?**

9. In order to revive the sector and contribute to further develop its potential and best use the available natural production resources, Government attention should be aimed towards:

   (a) Lowering marketing cost;

   (b) Promoting Food Quality and Standards; and

   (c) Raising Productivity at the Farm Level.

10. To do so, the public sector could play a more pro-active and promotional role to develop the competitive and large potential of the domestic livestock industry and to contribute to the broader objectives of socially and environmentally sustainable development of rural areas. Five key public sector roles can be identified:

   - Promoting organizational models, for example through livestock producers associations, and infrastructure that are adapted to the emerging livestock production structure, to lower transaction costs in reaching domestic consumers and improve vertical coordination between processors and farmers, to facilitate the access to improved and productivity-enhancing technologies (feeding, animal health, and breeding), and to manage resources such as rangelands sustainably.

   - Investing in the dissemination, transfer and generation of productivity-enhancing technologies at the farm level, striving to achieve a better balance between feeding and breeding improvement programs, and animal health.

   - Encouraging the environmentally sustainable development of the livestock industry, notably the management of its vast land resources, and of waste associated with livestock production and processing.

   - Ensuring food safety, and promoting food quality standards in a cost-effective and phased fashion, consistent with the absorptive capacity of the domestic consumers and producers.

   - Facilitating the access to export markets, notably in the context of the WTO accession negotiations.
Lowering Marketing Costs

11. **The Government of Kazakhstan has a key role to play in promoting the emergence and development of efficient marketing channels.** These channels should be adapted to the needs of a livestock production system that is regionally diverse and currently dominated by small-scale farms. With most livestock held in private hands, the marketing of livestock is facing new constraints and challenges. Appropriate marketing channels and organizational models linking smallholders and medium sized farms to food processors remain to be established. A large majority of the rural producers with small herds are not served by such networks and compelled to produce for home consumption or sale on local informal markets where prices remain low and unstable. Throughout the world, efficient marketing channels have emerged to cater to the specific needs of the prevailing livestock production structure, whether dominated by small or large-scale producers, enabling farmers to fully exploit their respective comparative advantages, and to actively participate in economic development.

12. **Producer organizations can facilitate the establishment of efficient marketing networks between producers and processors by reducing transaction costs.** They can also provide a better balance in the commercial relationships between individual farmers and the food processor. Government can help support the development of producer organizations in a variety of ways: financing support programs to help organize producers; adopting a legal and regulatory framework that facilitates the establishment of such organizations; providing financial incentives, such as targeted establishment grants, for the creation of single (e.g. marketing) or multi-purpose producer organizations.

13. **The Government can assist in lowering marketing costs in a number of ways.** This could include the improvement of rural infrastructure, notably rural roads, and the development of physical market infrastructure in rural areas. Where it is not cost-effective to develop market infrastructure, government can stimulate the emergence of periodic rural markets. Another role of Government relates to the WTO accession process in identifying and negotiating tariff and non-tariff barriers to targeted external markets. The extensive range-based livestock production system is expected to develop a rangeland beef industry involving larger-scale entities or producer organizations with the capability to address and resolve their marketing problems. But, there may be a case for providing time-bound, targeted and explicit budgetary establishment subsidies to provide initial incentives for private companies to enter this sector. In remote areas where the economic potential for livestock production is strong, but private markets have not yet developed, the public sector can play a pro-active role in creating market outlets. In remote areas, where transport costs will remain prohibitive to compete effectively in the distant markets and where a local market exists, government could provide support to small-scale processing activities serving local communities.

14. **Currently, marketing support of the Government to the livestock sector is handled by the parastatal CJSD Mal Onimderi Korporatsiyasy (MOK), however, its impact has been small.** According to a recent survey, only 9 per cent of farmers were aware of its existence. MOK could play a useful role if it would focus on public sector functions, promotional and demonstration activities that crowd-in rather than crowd-out the development of private sector and encourage the adaptation of marketing channels to the development needs of the small-scale sector. For example, MOK could assume the responsibilities of promoting the development of farmer organizations in high potential areas and for selected commodities; or of piloting market development activities in selected and more challenging geographical areas.

Promoting Food Quality and Standards

15. **Meeting food safety standards in a cost-efficient fashion will strengthen the competitiveness of the livestock industry and its contribution to public health goals.** Similarly, to strengthen its competitiveness, the livestock industry will need to equip itself to cost effectively respond to domestic consumers preferences for food safety and match food quality standards set by imports, or by foreign buyers in the case of exports.
16. **Strengthening Animal Health Services.** After the revision of the veterinary legislation in 2002 and harmonization with requirements and principles of the WTO on veterinary and phyto-sanitary measures, several implementation challenges now lie ahead. The costs of delivering veterinary services in a small-scale and dispersed production environment can be kept down through producer organizations and the judicious use of veterinary technicians. The over-capacity of veterinary staff and veterinary laboratories should be addressed by clearly differentiating the public and private roles while at the same time the further development of private veterinary services can be promoted by contracting out some public services and easing the establishment of private practices. Prioritization of epizootic and zoonotic disease control and eradication, based on improved risk assessment, would reduce the cost of the program and allow integration in international standard practice and livestock trade.

17. **Balancing Food Safety and Quality Requirements.** The effective management of food safety and product quality concerns will be critical if the domestic livestock production is to maintain and improve its competitive position. Food safety and food quality standards are and will become increasingly relevant to the competitiveness of the livestock industry. For most livestock producers and processors, and most livestock products, domestic demand remains the primary if not the sole market driver for food safety and quality improvements. Higher quality imports penetrating the market already point to the need to raise standards simply to maintain the domestic market share, and achieve import substitution or establish export markets. International experience suggests that implementation of quality standards needs to be driven by the private sector rather than imposed by the government. However, the government has an important public role to play in providing support to skills development of veterinary staff and ultimately advisory services that assist livestock producers and processors to meet ISO/HACCP standards.

18. When introducing safety standards, the challenge is how to phase in interventions as the formal food sector grows, without driving out informal activities that still serve an important economic function. The formal market should be targeted first while the informal market safety standards are slowly improved through providing incentives and better public information. The compliance costs of introducing food safety systems can be large and prohibitive, therefore excluding many producers. A phased and differentiated implementation strategy would give time to producers to adjust, and enable public institutions to develop and refine their control and enforcement capacity.

**Raising Productivity at the Farm Level**

19. **Improved feeding is the first step to higher yield performance at the farm level.** Kazakhstan’s production efficiency parameters are well below international benchmarks. Inadequate feeding is widely recognized as the main explanation for the observed low production efficiency parameters. Improved and more efficient feeding has therefore the potential to contribute substantially to higher productivity of livestock production in Kazakhstan.

20. **Kazakh livestock producers potentially have access to considerable feed resources: rangelands, fodder, grain and protein feeds that are currently underutilized.** The government has a central role to play in encouraging improved feeding: by establishing appropriate land use policies for rangelands, by supporting technology transfer support services to livestock producers, and by supporting feed testing capacities. So far, government support to the development of feed demand and markets has been limited. Fodder production has dropped significantly and vast areas of rangelands away from human settlements are under-exploited. The absence of extension services to encourage improved feed usage among the restructured farm population and poor harvesting and preservation techniques are other key factors explaining the significant drop in fodder production. In addition, the use of grain and oilseed (sunflower, soybean) meals is under exploited. Animal holdings currently concentrate around settlements, and overgrazing now became an issue that could be solved with clear rangeland use policies, increased transhumance and fodder preservation.

21. **Improved and sustainable management of rangeland resources would require an enhanced rangeland use policy and strategy for the sustainable exploitation of rangeland**
resources. Shifting from "open access" to either private or joint resource management, by providing use rights to users, would provide the foundation to the sustainable management of rangelands. A number of activities, supported by the World Bank, are currently ongoing that are supporting the management of the rangeland resources: a study on rangeland resources has been completed, the Forestry Project will support the rehabilitation of saxaul depleted rangelands and the implementation of pastoral resource-led sustainable management and livestock production, and the Dryland Management Project is piloting the improved usage of the dryland areas for livestock production.

22. **Returns from breed improvements would benefit from greater attention to feeding.** Breeding is the dominant focus of government interventions for productivity improvements at farm level, to the detriment of public interventions towards feeding. As a result, returns to public investments in breeding remain well below their potential. The Government’s breeding program focuses on continued financial support to the former state breeding system. Recent regulations on Government certification for breeding farms place a heavy administrative burden on private sector enterprises wishing to engage in rearing breeding stock. The process to obtain a certificate is a centrally driven process, through which potential applicants must show conformity to an approved list of breeds, types and crosses developed from a central commission from the state breeding farms. Specifying which breed or combination of breeds farmers require should be left to the farmers, as they will be in a better position to understand the needs of the market and the consumers they serve.

23. Three areas of public intervention are suggested: (i) streamline the process for importing genetic materials. With domestic genetic improvement stagnating, short-term solutions would tend to place higher priority on imported genetic materials; (ii) support performance testing. International experience shows that performance testing of private herds is more effective at promoting the supply of quality breeding than direct provision of breeding stock; (iii) move toward a less regulated market for breeding. In the medium term, Kazakhstan should move toward deregulation of animal breeding, at the point of importation and of breeding farms as most other countries have done.

Making Government Spending more Effective

24. To perform the roles, recommended for Government in this report, government needs to spend better. Currently, public spending for the livestock sector is not high and falls under three broad categories: (i) veterinary control of contagious diseases; (ii) input subsidies to breeding materials and animals, and (iii) subsidies to market development by MOK (of which the only significant form of subsidy is the initial provision of loan capital at a subsidized rate) and to investment in food processing by the private sector (through credit subsidies). Current spending contributes little to productivity-enhancements on the farm, or to the efficient development of livestock product markets, the promotion of food safety, or the sustainable management of key natural resources. There is, therefore, scope to enhance the effectiveness of public spending through re-allocating expenditures towards the key public sector roles identified above.
# Suggested Reform Program

<table>
<thead>
<tr>
<th>Policies</th>
<th>Current Objective</th>
<th>Importance of Objective</th>
<th>Guiding Principles/Issues</th>
<th>Action</th>
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<tbody>
<tr>
<td><strong>Macro-economic Framework</strong></td>
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<td>Issues: Implications of Kazakhstan’s rapidly expanding oil/gas sector, Progression towards WTO Accession. Principle: Capitalize on comparative advantage, Production oriented towards domestic and export markets.</td>
<td>• Removing legal and regulatory constraints to the emergence of an extensive livestock production system. • Review of tax and subsidy structure with the objective of enhancing sector profitability. • Continue process of commercialization and privatization of non-public sector activities, but ensure access of rural people to essential services. • Assess the effects of broader WTO policy decisions on the livestock sector.</td>
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<tr>
<td>Strategy</td>
<td>Management of aggregate supply</td>
<td>High priority</td>
<td>Government plans for the sector based on analysis of the underlying sources of comparative advantage: (i) scope of extensive rangelands; (ii) potential for smallholder households to rear at low cost and (iii) linkages between the livestock and the grain sectors.</td>
<td>• Sector policies to support areas of competitive advantage and be productivity rather than farm size oriented • Policies aimed at diversification of the sector as a strategy towards risk reduction at the national and at the farm level.</td>
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<td></td>
<td>Sub-sectoral composition (e.g. increasing the relative share of the medium and larger farms)</td>
<td>Very important – increasing medium/large scale sector at expense of household sector – medium/large sector viewed to be more competitive.</td>
<td>To be determined by market and competitiveness in different markets. Not a role for the State (data from 2000-2002 indicate that importance of enterprises is still declining).</td>
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<tr>
<td>Public spending</td>
<td>Productivity improvement through breeding, disease control, marketing assistance</td>
<td>Overall spending low; focused on: (i) purchase of stock breeding materials; (ii) veterinary control; and (iii) subsidy for MOK</td>
<td>Overall spending increase; focus on closing productivity gap and supporting areas of comparative advantage</td>
<td>• Provision of public goods (e.g. disease control measures) • Support for organizational developments, e.g. marketing associations • Subsidized infrastructure investment at the local level to support small scale producers • Establishment of rural markets by local authorities • Provision of extension services</td>
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<td>Support program for the sector needs to focus on creating an enabling environment that fosters private sector development, improves efficiency, and help reduce rural poverty in remote areas.</td>
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- Short-term
<table>
<thead>
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<th>Policies</th>
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</table>
| Support for Livestock Marketing | Development of export markets          | High and more focus on distant international markets than on nearby cross border trade | Current: High priority focus on domestic and regional markets  
Suggested: Medium priority in the short term for export markets  
Priorities for market development need to be derived from overall objectives of livestock policy, including the facilitation of development of sub-sectors with long-term comparative advantage; marketing development for extensive livestock sector; support for livestock marketing in remote locations; focus on domestic and regional markets and increasingly facilitation for the development of export markets. | ▪ Creation of rural producer organizations which can lower marketing costs and increase the market power of producers  
▪ Support physical market infrastructure; transport infrastructure, rural roads  
▪ Support to projects and private sector initiatives offering new or improved market information systems with access in rural areas  
▪ Development of small scale processing activities based in rural areas and serving local communities  
▪ Government should identify key high potential markets as concentration points for research, policy formulation and negotiation  
▪ Revisiting of MOK’s role towards development and establishment of an adequate oversight system  
▪ Facilitate/encourage vertical coordination between smaller farmers and processors |
| Feeding Policy                  | Neglected                               | High priority – improved feeding will have high impact on productivity, sustainable use of rangeland resources should be addressed as a priority. | Government support to the feed sector to be based on supporting the development of an effective private sector response to have maximal impact on productivity and competitiveness of the sector. | ▪ Provide support to training for livestock farmers  
▪ Provide support for analysis of livestock feeds; consider establishment of laboratories and training of laboratory technicians for feed analysis at oblast level.  
▪ Promote rangeland management systems  
▪ Support to feed research; in collaboration with feed industry, develop links to feed and feeding research programs geared to all livestock production systems.  
▪ Undertake assessment of impact of tariffs on the feed industry.  
▪ Better utilization of agric. by-products |
| Social and Environmental Policies | Poverty alleviation in rural areas     | Medium priority  
Environmental – Medium priority | High priority - livestock proven to play a key role in poverty alleviation.  
High priority - Important  
The important social dimensions to agricultural and livestock policy needs to be recognized given the significant number of rural communities located in remote | ▪ Proactive inclusion of smallholder interest in livestock policies  
▪ Encourage extensive (transhumance) livestock production in remote areas and local community participation in land policies |
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<tr>
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</table>
| Kazakhstan’s Livestock Sector | Avoiding rangeland degradation                                                    | Role of the State to assure sustainable resources use. | Areas with little economic activity except for farming; poverty implications given the increased dependency of the rural poor on their small farms productivity. Livestock policy should be geared towards sustainable resource use and embrace environmental aspect. | Use/care decisions and implementation of:  
  • Consider rural poverty reduction as an objective in livestock policy, whereby livestock farming could be used as a mechanism for reducing poverty especially in remote rural areas  
  • Safeguard environmental sustainability: rangeland management, sustainable grassland use, and prevention of soil, water and air pollution. |
| Medium-term                   | Food Safety and Quality Standards                                                | High importance             | Development of quality standards to be a private sector driven activity not imposed by government. The government should start up by assisting with investment cost and monitoring. Safety and standards to be introduced on phased basis, affordable to producers after proper cost benefit analysis. Implementation of quality standards to be driven by private sector | Establish and monitor quality improvement program  
  • Provide training for improvement in quality standards  
  • Consider establishing a broad Public-Private Sector Forum on Livestock Sector Standards to establish national policies and to provide an independent advisory role to Government. |
| Animal Health Policy          | Epizootic disease control                                                        | High importance; main focus of veterinary department | The Government has taken a sound initiative to update the veterinary system. Improvements could be made in the distinction between public and private sector responsibilities in the provision of animal health services. In the long run, better informed producers would also contribute to disease prevention and surveillance. | Streamline veterinary services. Reduce transaction costs through creation of producer organizations or veterinary clubs that can organize joint veterinary visits.  
  • Develop public animal health responsibilities further whereby private practitioners are contracted to carry out certain public sector obligations.  
  • Government, in collaboration with the veterinary and farmer representatives, identify needed skills, develop and support training program.  
  • Government support for streamlining and upgrading laboratory services and phasing-out redundant laboratories.  
  • Move towards prioritized epizootic and... |
<table>
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</tr>
</thead>
<tbody>
<tr>
<td>Animal Breeding</td>
<td>Improvement/ restoration of breeding stock</td>
<td>Very important</td>
<td>Government’s policy centers on continued support to the breeding system that crowds out the development of sustainable private sector breeding programs, and continues to hamper the continued structural change in the sector. \ <strong>Government support to livestock breeds inventory</strong> \ <strong>Streamline process for importing genetic materials</strong> \ <strong>Phasing out support for breeding farms, more focus on adequately equipped and staffed performance-testing facilities.</strong> \ <strong>Move towards less regulated breeding through (i) development of breeder associations, (ii) channeling of breeding subsidies through private farms, and (iii) eliminating the need for certification.</strong></td>
<td>zoonotic disease control and eradication based on importance of disease.</td>
</tr>
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**Current**  **Suggested**
1. Introduction

1. Livestock production has been a key economic activity in Kazakhstan for centuries and continues to be a major source of employment, food and income for the rural population. Kazakhstan’s vast grasslands provide an important production base, and improved local and world market prices provide opportunities for livestock development, especially for the emerging small and medium size producers. Before the transition, the livestock sector contributed 60 per cent to agricultural GDP. To date, it contributes 42 percent. Income from livestock represents 76 per cent of agriculture income of rural households, which translates into around 15 per cent of total household income according to the 2002 household budget survey.

2. Revival of the livestock sector can substantially contribute to agricultural growth, support rural livelihoods in particular among poor rural households, and use the ample available land resources. The Government has a key role to play in facilitating the revival of the livestock industry by adapting policies and programs that support the emergence of private farm businesses, the development of (private) support services, input providers and processing and marketing enterprises, that foster institutional change, and that adopt social policies replacing the need for backyard farming for social security.

3. The changing economy, increased urbanization and openness to competition from global markets will demand market-responsive and competitive production, and a more complex marketing system that responds to the diverse needs of emerging regional agricultural production systems. The Government has an important role to play in enabling the livestock industry to respond and adapt to the new conditions. The Government is looking for the appropriate tools and incentive framework to stimulate the emerging private-sector-based livestock economy. Potential sources of comparative advantage and underlying conditions for the sector to grow and support thriving businesses are discussed in this report. Emphasis has been placed on the policy areas that would allow the Government to support the livestock sector and address the key constraints to productivity growth in the respective production systems that capitalize on areas of competitive advantage.

4. This report summarizes the results of a collaborative work on the livestock sector in Kazakhstan. The study has been conducted in close collaboration with the Ministry of Agriculture (especially the Livestock Department). Throughout preparing this study, outputs of survey results, studies and draft policy papers were shared so that they could be used in on-going Government policy development. The study at first focused on six areas that in joint consultation deemed most important for developing the appropriate policy agenda: the macro-economic framework, marketing channels, food standards and quality, animal health, breeding and feeding improvements. This agenda was broadened to directly respond to requests of the Ministry of Agriculture on the issues of: government spending on the sector, the role of the marketing parastatal, options for livestock legislation, and potential pilot activities for the stimulation of the sector. All these have been individually treated in short Policy Notes. These notes are provided in the Annex. At a joint workshop in June 2003, the key issues of the sector were discussed. Also, a small marketing survey, and reviews of the breeding strategies, feed resources and the veterinary sector were conducted. Roundtable discussions with key stakeholders on the oblast level were organized in November 2003. This final report summarizes findings of the policy notes and background papers. It suggests options to Government and others concerned to revitalize the potential of this important economic sector.
2. Transformation and Opportunities of the Sector

A. Transformation Process

5. After a decade of transition, smallholder farms have come to dominate a much reduced livestock industry. Demand and supply shocks, together with the agricultural privatization process, explain the contraction of the national herd and decline in livestock production and its dispersal among a large number of smallholders and family farms. Support services and marketing are yet to adapt to the newly emerged production systems, holding back the recovery of the livestock industry.

6. The consumption of livestock products fell by about 40 per cent between 1990 and 1998. The drop in consumer income, together with higher livestock prices resulting from price liberalization, inflation and elimination of consumer subsidies, caused the sharp decline in the consumption of livestock products. The domestic demand shock was further exacerbated by the collapse of export markets. Meat exports, a major export product before 1990, more or less disappeared as demand from the Former Soviet Union (FSU) dried up, and the redirection of exports to non-FSU countries proved complicated because of the landlocked location, low product standards, lack of experience in international trade, and increasing restrictions to free trade in the region. Compared to other Central Asian countries, the decline was comparably more severe in Kazakhstan, as Kazakhstan was the biggest supplier of livestock products to the Soviet Union market in the region, including supply to the Ministry of Defense, a large part of Government procurement. Thus, the meat and wool processing industry, especially in the eastern and northern regions was more advanced. Most of these enterprises worked only for the export market and livestock production in these regions was linked to the needs of the processing industry. Since the domestic demand was smaller, the difference in inventory chances after the reform proved much higher than in other Central Asian republics.

7. On the supply side, the price liberalization led to a sudden profitability squeeze as ensured availability of feed and inputs disappeared and key market channels were lost early in the transition period. In 1993/1994, the livestock sector was hit by price increases in fuel, concentrate feed, feed ingredients, and animal medicines. The energy and feed-dependent production systems, widely encouraged under the soviet regime, suffered the most. This situation was aggravated by the increased exposure to imports, either from livestock products catering to the upscale urban markets, and from low cost food aid (mainly poultry parts, popularly known as "Bush legs") that benefited urban consumers but out-competed local producers.

8. The livestock inventory steeply declined during 1992-1998 (Figure 1). Pig numbers have not recovered much. Poultry numbers declining from 60 million heads in 1990 to 16 million heads in 1998 and were slightly up to 24 million in 2002. These trends differ in different regions of the country. Oblasts in the North of the country, for example, lost around 72 percent of their sheep flock compared to 30 percent in the Western region during the period of 1990-1998. Parallel with the change in animal inventories, livestock production started to drop in the early nineties. Between 1990 and 2000, meat production fell by 58 per cent; milk production fell by 31 per cent, and wool production by 78 per cent (Figures 2, 3).
9. The privatization process of farm and farm assets was another key contributor to the ascendency of the small-scale livestock production systems. The declining terms of trade of farming, and a tightening monetary policy decreased, if not halted, the liquidity in rural areas. The introduction of a national currency in 1993 proved a long process that led to an increasing lack of cash in rural areas causing a rise of barter trade. Barter became the main trading tool during 1993-1998 to pay for labor, pensions and essential supplies. Many farms in the marginal areas went bankrupt and were further stripped of financial and physical assets. As most other farm assets were fairly immovable, livestock, especially sheep, was the most liquid asset under the prevailing conditions and commonly used as a payment in kind in farms that tried to settle their farm debts – including payment of workers. The livestock assets provided these farms with a buffer to adapt to the new economic conditions; in many cases this buffer lasted not long enough to ensure survival. This situation was aggravated due to then high budget deficits and belated payment of public salaries, pensions and other social payments making livestock one of the key sources to provide for basic household needs.

10. The structure of the livestock industry changed dramatically from a highly concentrated animal population on mega-farms to a dispersed population owned by many smallholder farms. Although the livestock inventory decreased, farm numbers greatly increased. Before 1991, agricultural production was carried out in large agricultural state and collective enterprises. Following the privatization reforms in 1994-1997, most of the livestock ownership shifted toward privately owned entities. After 1998, livestock producers roughly consisted of agricultural enterprises, household plots and family farms. The share of cattle ownership by enterprises dropped from a high 70 percent to less than 10 percent over the course of the last decade. Meanwhile, the share of cattle owned by household plots rose significantly from just over 30 to 80 percent. Today, the lion’s share of livestock production derives from backyard- and family farms that, in 2003, produced 87 % of the meat, 91% of the milk, 49% of wool, 49% of eggs and 43% of Karakul skins.

Table 1: Farm Structure in Kazakhstan, 2002

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Number</th>
<th>Total arable land ('000 Ha)</th>
<th>Average size (Ha/farm)</th>
<th>Share of Marketed Output (2002)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Enterprises</td>
<td>9,368</td>
<td>12,876</td>
<td>1374.5</td>
<td>22%</td>
</tr>
<tr>
<td>Family Farms</td>
<td>141,328</td>
<td>8,311</td>
<td>58.8</td>
<td>26%</td>
</tr>
<tr>
<td>Smallholder Farms</td>
<td>2,154,791</td>
<td>481</td>
<td>0.2</td>
<td>51%</td>
</tr>
<tr>
<td>Total</td>
<td>2,305,487</td>
<td>21,668</td>
<td>9.4</td>
<td>100%</td>
</tr>
</tbody>
</table>

1 Agricultural enterprises are registered company structures; family farms are under individual ownership, but hire outside labor and are registered. Smallholder farms are usually called ‘household’ in the Government terminology as only people are considered farmers who hire outside labor. This excludes the majority of livestock producers, who live predominantly from livestock production without using non-family labor, but that constitute the dominating share of livestock producers.
The recovery of the livestock sector in Kazakhstan started in the late 90s, and is taking place mostly among the small-scale farms. Yet, the recovery of livestock production is slower than, for example, neighboring Russia and the Kyrgyz Republic. The devaluation of the Ruble in 1998 lowered the price competitiveness of Kazakh farmers and the food processing industry (especially the dairy industry) in the northern region, and share of food imports rose fast. The devaluation of the Tenge in 1999 was an important factor for the recovery of the agricultural production in the northern region. Signs of stabilization and recovery began to show in the late nineties and the production increase was slightly higher than the increase in inventory, suggesting some yield improvement. This decline in cattle inventory flattened out after 1997 and since 2000 the inventory has been slowly increasing. This increase is also illustrated by the increase of young animals in herds; for cattle, for example, the proportion changed from 6% in 1995 to 17% in 2002. The recent increase in dairy cattle and poultry is greater in rayons closer to urban areas. However, the limited adaptation of livestock marketing and production support services that can cater to the needs of the newly emerged smallholder and dispersed livestock production systems is hampering the recovery of the livestock industry. The key challenge is now to enable the newly emerged production systems to become competitive and raise productivity levels. To meet that challenge, the livestock production support services and marketing systems would need to match the needs of the emerging production systems.

B. Market Opportunities and Comparative Advantages

12. Future growth of the livestock industry is likely to be driven largely, although not exclusively, by the domestic market and the capacity of the industry to capitalize on the sources of comparative advantage that have emerged from the last decade. The growing oil and gas industry will cause the domestic market to expand, providing significant growth opportunities for the livestock industry. At the same time, it will also impose constraints on the competitiveness of the livestock industry. Capturing these growth opportunities while meeting competitiveness challenges requires a livestock development strategy that exploits the sources of comparative advantage in livestock production. These are found in extensive rangeland-based systems, family-based mixed farming systems, or intensive production systems based on locally available feeds (grain, oilseed meals).

13. The oil and gas industry expands domestic market opportunities. One positive feature of the fast growing oil and gas industry and the overall economic growth and household income growth it generates, will be the rapid expansion of the domestic market. Rising incomes will expand demand for livestock products, notably for processed livestock products in the urban areas, and provide significant
Transformation and Opportunities of the Sector

market-driven growth opportunities for the domestic livestock industry, provided it can compete with imports. This view is consistent with the proposals in the Government’s Agriculture and Food Program (AFP) for 2003-2005 aiming to bring about a rapid rebound of domestic livestock production, correcting the “overshooting” of the downward adjustment that took place in the nineties. The capacity of domestic producers to capture domestic markets, however, will depend on their capacity to compete with imports and ensure adequate quality supplies. For processed products, as noted in the AFP, a significant degree of import penetration has already occurred, primarily based on imports from Russia and China. In 2002, Kazakhstan imported close to US$ 45 million worth of meat (largely poultry parts) and processed dairy products. This import dominance is based on cost competitiveness of imports from Russia, where post-transition investments in agro-processing started earlier based on higher domestic per capita incomes.

14. But, the oil & gas industry also imposes constraints on the competitiveness of the livestock industry, in particular on export markets. By exerting pressures on the exchange rate, the oil and gas industry makes Kazak livestock exports less competitive and also makes imports of livestock products more price competitive on the domestic market. The exchange rate pressures will compound Kazakhstan’s structural constraints in export competitiveness: remote location from large export markets, high transport costs, low value products, limited knowledge of export markets. Regaining export market share, notably on the Russian market where Kazakhstan used to be a significant exporter of meat and processed livestock products during the Soviet period, is likely to be a difficult, although not impossible task. A likely scenario is that the domestic market will provide the most significant growth opportunities but the livestock industry will find itself under strong competitive pressure from imports, and that Kazakhstan’s livestock and allied product exporters will find it increasingly difficult to remain competitive, in particular for bulk, low value commodities. Although there is scope to tap regional market opportunities based on proximity advantages, the potential for competitive exports in regional markets is not well documented and would need to be studied carefully.

15. Exploiting the sources of comparative advantage in livestock production will be key in meeting the challenges imposed by the macroeconomic environment. The macroeconomic pressures on the appreciation of the exchange rate suggest that the competitiveness will come from relying and exploiting the sources of comparative advantage in livestock production. Several sources of comparative advantage in livestock production have emerged out of the decade of transition during which the livestock industry became exposed to market-determined prices and a much-reduced level of public sector support and intervention².

16. These sources of comparative advantage are found in the extensive rangeland-based livestock production systems that capitalize on vast but under-exploited rangeland

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² A comparison of the comparative advantage of larger versus smaller farms in different regions of Kazakhstan is provided in Annex III, Table 7 and charts 1-3. Output yields and prices and input use and costs appear to differ for the same product depending on the farm’s the location and size. Larger farms producing grains, legumes and oilseeds tend to receive higher output prices, have less machinery costs and get easier access to the government support (subsidies and credits on favorable terms), and therefore gain higher net incomes and cash flows. Also, the attachment to former production regime and traditional channels plays its role, as do economies of scale and the availability of experienced staff. At the same time, small farms producing cash crops (cotton, vegetables, fruit, etc.) or specializing on intensive dairy farming tend to have higher profitability while being commonly excluded from gaining benefits on subsidies. The poultry sector is not looked at in detail in this study.
resources mainly for extensive cattle and sheep raising in the South and North. They can also be found on the family, mixed farming systems that exploit the synergies between crop and livestock production activities mainly, semi-intensive cattle raising, dairy, sheep and pigs throughout the country and the more intensive livestock operation systems (beef, poultry) that capitalize on the local availability of cheap feed sources, such as grains in the north and oilseed meals in the South and Northeast. An additional strength of the household sector and family farms lies in its low cost structure, especially labor, largely own labor with low opportunity costs, but also in its flexibility in feeding regimes, adaptability to market demands and other technical parameters of production. These livestock operation systems, unlike the ones encouraged under the Soviet era, do not rely on large, intensive cattle rearing systems with an exclusive reliance on purchased (and often imported) feeds. Instead, these livestock operations systems base their comparative advantage largely on the availability and economic utilization of locally available feed resources.

17. International comparison shows that larger, intensive farms do not necessarily equate with more competitive farms. Cost competitiveness depends on technology and cost structure of the respective farms (Box 2 and 3 provide international comparisons for beef and dairy production); and the type of technology reflects on the sources of comparative advantage. For example, small-scale dairy producers in Pakistan can produce at lower costs than the much larger, high yield dairy farms in the US.

Box 1: Comparison of Farm Sizes
Average farm sizes in Germany, France and the US are 31, 35 and 170 hectares respectively. The US differentiates farms by revenue (not land holding) into small farms (with revenues of less than US$ 10,000), medium farms (US$ 10,000 – 99,999) and large farms (more than US$ 100,000). Their respective land holdings are 52, 113, and 207 hectare, but less (26, 77, and 170 hectare) in a state with diversified agricultural systems (such as Michigan). The number of small farms in the US has increased from 1.181 million in 1998 to 1.196 million in 1999, while the number of medium and large farms decreased. (data USDA, 2000).

Box 2: Beef Production – International Benchmarks
The contribution of beef enterprises to the total farm returns varies widely depending on farm composition – from 100% in US feedlots to less than 10% in some co-operative farms in Europe. Other important on-farm activities are crops, dairy or cow-calf production. Stocking levels differ substantially depending on the main feed resources – from rates more than 3 LU/ha in conventional German and French farms, over medium levels of 1-2 LU/ha in Austrian mountain and organic farms and east German conventional and Hungarian farms to less than 1 LU/ha in other farms in South America and Australia. For cow-calf producers (for fattening) herds can be classified: less than 50 cows (Austria, Germany), between 50-200 cows (France, Czech Republic, Hungary), between 200-500 cows (east Germany, Poland, US, Brazil), and more than 500 cows (Argentina, Australia, Brazil). Returns are highest in Austria, Germany and Czech Republic (US$ 300/100 kg live weight) and lowest in Argentina and Brazil (less than US$ 100). But Austrian and West German farms also face the highest costs and Argentina and Brazil the lowest (less than US$ 50 per 100 kg live weight). This results in the highest net cash income (more than US$ 200 per 100 kg live weight) for the Austrian and Czech republic system, France, Hungary, US and Australian farms follow (between US$ 50 – 200) and South America profiting less than US$ 50. Three main regions can be identified as the leading producers in beef: North America with a share of 24 percent, South America with 21 per cent and the EU-15 with 13 per cent.

Source: IFCN Beef Report 2003

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3 A number of World Bank projects and studies are currently starting-up/ongoing that are supporting the sustainable exploration of Kazakhstan’s comparative advantages. Projects: Second Agriculture Post-Privatization Assistance Project, Drylands Management Project, Forest Protection and Reforestation Project, Agriculture Competitiveness Project. Studies: Fishery Sector, Rangeland Management, Natural Resource Management.
Box 3: Dairy Production – International Benchmarks

Three main production regions can be distinguished for milk – 20% percent in Western Europe, 20% in India/Pakistan, and 13% in the USA. Milk production is based on small farms in countries like India and Pakistan, but also in countries like Norway, Switzerland and Austria. Rapid growth (5-10%/year) of milk production could be observed in countries with a strong increase in national milk production not being large milk producers in the past, like China, some East-Asian countries, middle East and North Africa. The number of farms grew in Asian countries as household and small farms entered into dairy farming. There is a decline of farms in nearly all European countries and North America. This decline goes along with an overall increase in herd sizes in these countries.

Success does not necessarily mean large size. Data from example farms show that some of the more competitive farms worldwide in 2002 were:

- Argentina (1,400 cows) 7 US$ (production costs/100 kg milk)
- Pakistan (10 cows) 9 US$
- Australia (207 cows) 10 US$
- Estonia (400 cows) 15 US$
- Spain (199 cows) 23 US$
- USA (2,100 cows) 24 US$

Source: IFCN Dairy Report 2003

Kazakhstan (10 cows) 13 US$ (adapted from APAP II calculations)

18. The key policy challenge facing Government is to design a livestock development strategy that enables the predominantly small-scale livestock producers to improve their competitiveness and capitalize on their respective sources of comparative advantage. Such a strategy would cover two broad areas of intervention by government. First and foremost, it will entail facilitating the access to markets in a production environment dominated by small-scale producers dispersed across a vast territory, including their ability to meet the food safety and quality requirements of an increasingly urban and sophisticated population accustomed to imports. Second, it will entail raising productivity levels at the farm level by encouraging the development of production support services adapted to the needs of a dispersed and small-scale livestock producers, and mindful of the sustainable use of Kazakhstan’s rich natural resources. The reminder of this report discusses in greater
details the specific recommendations in those two broad areas of intervention: accessing markets, and improving productivity. Chapter three will present a series of options for improving market access, and Chapter four will develop technical and institutional recommendations for raising productivity levels at the producer level.

19. **A livestock development strategy that supports the growth of a predominantly small-scale livestock production structure that capitalizes on Kazakhstan’s areas of comparative advantage would be consistent with the Government’s broader rural development objectives.** Livestock production has played an important safety net function to rural households during the transition, providing both an important source of cash as well as food. The changes in farm structure of the past decade, and the withdrawal from the farming frontier, as uneconomic farming areas were abandoned, resulted in a substantial rural population whose livelihood depends on the productivity of their small family farms. In the years immediately following the break-up of the state and collective farms, such families were wholly dependent on their farming income, as support social payments from the state fell to negligible levels.

20. A livestock development strategy that targets all areas of comparative advantage and all organizational forms has the potential to contribute to the broader rural development objectives of the Government, by encouraging growth of the smallholder sector. This support would enable the potentially productive and commercially oriented elements of the small farm population to develop, become competitive, and eventually expand the scale of their operations. Others will remain subsistence livestock owners with little prospects of ever becoming competitive. For the latter group, separate social programs should be eventually developed to meet their needs. In remote and marginal areas, where the economic potential is limited and the likelihood of viable private markets ever developing is low, social programs of interventions designed as part of an overall rural development strategy, would be more cost-effective and sustainable means of achieving rural development objective and providing a safety net to marginal areas.

21. In addition, the use of animals and grasslands creates environmental risks and opportunities for environmental improvement. Opportunities for environmental improvement can be seen in the improvement of grassland quality and the prevention of wild fires. Environmental risks of livestock production include (i) land degradation and overgrazing; (ii) waste of farming and of industrial processing; (iii) introduction of noxious weeds and or animal diseases that may threaten plant and animal biodiversity; and (iv) unsustainable use of animal manure burning.

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4 For more details and recommendations refer to policy note.
3. Improving Market Linkages

22. Two keys areas of intervention are in need of greater government attention to provide the enabling environment for the livestock industry to flourish: the lowering of marketing costs, and the judicious management of food safety and quality of livestock products\(^5\). With the transition to more dispersed livestock ownership, the costs of linking dispersed and small-scale livestock producers to consumers, domestic or foreign, have gone up to but can be brought down. To ensure food safety, meet consumer expectations and compete with imports, the domestic livestock industry will need to equip itself to better manage food safety and quality.

A. Lowering Marketing Costs in the New Production Environment

23. Under the pre-transition regime, domestic and export marketing was undertaken by large units under plan targets. With over 80 per cent of livestock held in smallholder farms, the marketing of livestock is facing new constraints and challenges. Appropriate marketing channels and organizational models linking small and medium sized farms to food processors remain to be established. A large majority of the rural producers with small herds are not served by such networks and compelled to produce for home consumption or sale on local informal markets where demand and prices remain low.

24. Despite the average under-developed state of development of livestock marketing channels, some recent and positive developments are taking place. For example, while milk collection networks remain notably under-developed, some are starting to emerge in the immediate vicinity of major urban centers along well-defined corridors. Milk collection networks are still narrow, and can generate local monopolies with market power over atomistic and unorganized producers.

25. Partly as a result of poorly developed and integrated markets, we observe significant inter-regional differences in farm gate and consumer prices for livestock products. Similarly, high seasonal price fluctuations are also observed, for example in the case of fresh milk and milk products. While the marketing of livestock products is not addressed in detail in the Agriculture and Food Program (2003-2005), the emphasis given to the establishment of larger farm units probably reflects the government’s attempt at overcoming current marketing challenges that prevail in today’s dispersed and small-scale livestock production environment. A major step undertaken by the Government in the recent past is the establishment of the CJSC Mal Onimderi Korporatsiyasy (MOK). The main objectives of MOK have been stated as the stabilization and strengthening of domestic markets and the creation of more competitive conditions on those markets, and the development and penetration of export markets for livestock products. However, its impact has been small.

26. MOK was established in 2001 as a government-owned joint stock company aimed at developing (i) the domestic market chain through increasing marketing outlets, and (ii) new export markets. MOK was allocated a loan of Tenge 2 billion from the Central Bank through Government budget for working capital. Though MOK initially made some efforts to support rural markets, especially in the sheep and wool sector, it has not been able to pursue this objective consistently. A market survey showed that MOK is little known among farmers, market traders and procurers in many rural areas - only 9 per cent of farmers were aware of its existence. MOK focuses largely, if not exclusively, on a small number of large farms. With respect to the development of export markets it appears that MOK’s impact has also been small. It had some limited success, measurable directly in terms of the volume and value of its own exports. However, even this limited success has to some extent been achieved by replacing exports that would have occurred in any case through private sector exporters. MOK does appear to have played a role in quality improvement. At least in the wool sector it procured undifferentiated low quality wool and sold it after washing at very low prices in the international markets.

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\(^5\) These areas are closely linked to productivity improvements described in section 4.
27. Increasingly the company has come under commercial pressure derived from the loan nature of its capital base, with the implied requirement to generate an adequate cash flow to service and repay the initial loan to the Central Bank. It is widely perceived that MOK is not subsidized. This is not correct. The channel for subsidization of MOK is the lower interest rate applied to its loan from government.

28. Many instruments can be used to pursue the developmental objectives which MOK was supposed to fulfill including (i) Institutional support for producers to form marketing associations; (ii) Creation of regular or seasonal markets; (iii) Provision of credit for marketing associations and traders; (iv) Support for market price and quality information systems; (v) Remove impediments to broader participation in markets, and cross border trade; (vi) Export credit guarantee schemes; (vii) Training of smaller scale exporters in the regulatory and financial aspects in international trading in livestock products in the region.

29. MOK is displaying a problem commonly encountered by marketing parastatal organizations - the conflict between its developmental and its commercial objectives. As it is presently set up, MOK is not able to play a strong developmental role. In principle, there are three options for MOK’s future development: (i) Privatization; (ii) Continue to play both developmental and commercial functions in the market, but with a much greater degree of clarity of the development functions, using a separation of MOK organizationally and financially into a commercial operation and a developmental organization, each with its own budget and management; and (iii) Conversion to a livestock marketing development agency, operating with a grant subsidy from the government budget. MOK would then mainly be an advisory and development organization. The latter is judged the most reasonable option given that MOK then would not forestall the emergence of private sector trading.

Box 6: Key Down Stream Issues

Marketing. The three major suppliers of livestock products are the households, small peasant (private) farms and the agricultural enterprises. According to the Poverty Assessment report prepared on Kazakhstan, the largest share of farmers’ production is bound for home consumption. Farm gates prices have improved considerably since the mid nineties but still show considerable seasonal and geographical differences.

The traders buy the production from households and then sell either to other traders, wholesalers, and processors, who later sell it to supermarkets and food stores. Some middlemen-traders act also as bazaar vendors of the products they buy from different sources. Bazars are local livestock markets, where sellers own a counter table (a trading spot) to market their products. Participants need to pay several fees, such as bazaar duties, to cover bazaar services, middlemen, food inspectors and security. Most local rural bazaars lack refrigeration and storage facilities. In large cities some supermarkets are emerging that focus on the middle and upper class in urban settings. They rarely cater for the poor. Trading in animals products is relatively new with the majority (60%) of traders (as well as producers) having been involved in livestock/product trading marketing for less than 5 years, 26.6% have been engaged for over 5 years. Forty-two per cent have been trading for 3 years. Most traders (whether retail or livestock dealers) are self-financed; only 11 % used credit. Major constraints to efficient marketing include: (i) Costly and poor transportation system; (ii) insufficient access to credit; (iii) inadequate market information system; (iv) lack of marketing Know how; (v) fragmented livestock products number in the country.

Trade. Kazakhstan, being fairly remotely located, is mainly importing processed animal products for livestock products or involved in cross border trade with neighboring countries such as Russia, Kyrgyzstan, Uzbekistan and China. Its main imports concern upscale processed products for urban markets. Meat imports with a value of US$ 22.5 million in 2002 consist nearly entirely (i.e. 96% of volume and 90% of value) of poultry parts. Dairy imports, with a value of about US$ 22 million in 2002) consist of processed and preserved products. Export of livestock products, except for wool, hides and skins, is limited to cross border trade to Russia, China, Kyrgyz Republica and
Uzbekistan. Surplus producing oblasts include Kostanay and North Kazakhstan; these oblasts traditionally produced also for the Russian markets and are slowly resuming cross border-trade.

Transportation. The lack of transportation and transportation infrastructure is among the major impediments for the development of the sector. Hard top roads serve about 70% of the rural villages, but this percentage is considerable lower in the western Kazakh oblasts. Most farms are not served by hard roads and severely affected by seasonal road problems. Trucks and other transport equipment is aging and not energy efficient. Moreover the sector is saddled with the Soviet legacy of over concentration of limited processing structures and markets requiring long travel times between farms and processors. A market survey suggested that 45% of traders from remote rayons have to travel a distance of over 50 km, including 20% over 100 km and 8% over 200 km. The same survey showed that livestock and livestock products were most commonly transported by truck (48.1%) or car (36.4%). For about 80% of the traders this distance to markets takes less than 3 hours, but for 6% over six hours, especially common for remoter rayons where 37% of traders/middlemen required over 3 hours for transportation of goods to/from markets or other outlets.

30. **Throughout the world, efficient marketing channels have emerged to cater to the specific needs of the prevailing livestock production structure, whether dominated by small or large-scale producers, enabling farmers to fully exploit their respective comparative advantages, and to compete and actively participate in economic development.** The Government of Kazakhstan has a key and unique role to play in promoting the emergence and development of efficient marketing channels, adapted to the needs of a livestock production system that is regionally diverse and dominated by small-scale farms. In practice this calls for Government to support accelerated market development in three areas: (i) the smallholder dispersed livestock sector, especially live animal markets; (ii) the milk procurement channels in rural markets; and (iii) the wool market which has special problems arising from its dispersed nature.

31. **Farmer organizations can facilitate the establishment of efficient marketing networks between small producers and processors, by reducing transaction costs.** They can also provide a better balance in the commercial relationships between individual farmers and the food processor. Government can help support the development of farmer organizations. It can do so in a variety of ways: financing facilitators and support programs to help organize farmers’ organizations; adopting a legal a regulatory framework that facilitates the establishment of such organizations; providing financial incentives, such as targeted establishment grants, for the creation of single (e.g., marketing) or multi-purpose farmers organizations. For example, the EU pre-accession programs (SAPARD) often provide grant co-financing to farmers and farmers organizations in upgrading their production systems and capacity to access markets, and meet certain criteria like food safety standards. Support should be provided on a phased basis to achieve early success and the intended demonstration effect, before support programs are rolled out on a larger scale.

<table>
<thead>
<tr>
<th>Risks in livestock marketing in view of livestock traders (scale 1 to 5 – with 5 being the highest risk)</th>
<th>Perceived importance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Price fluctuation</td>
<td>2.9</td>
</tr>
<tr>
<td>Livestock disease and spoilage</td>
<td>2.8</td>
</tr>
<tr>
<td>Adulteration of products</td>
<td>2.7</td>
</tr>
<tr>
<td>Threat of robbery</td>
<td>2.5</td>
</tr>
<tr>
<td>Low product quality</td>
<td>2.2</td>
</tr>
<tr>
<td>Inflation</td>
<td>2.2</td>
</tr>
<tr>
<td>High cost of market services</td>
<td>2.1</td>
</tr>
</tbody>
</table>

**Box 7: The Wool Market**

Government support for the wool industry should first start with an analysis of the wool export market segment opportunities that Kazakhstan could tap. The low worldwide demand for Karakul skins, combined with animal right arguments, and competition in the low quality wool segment, demand a fresh look at the export market opportunities. Initial recommendations on Government support would suggest:

- Assist farmers to organize themselves around wool production
- Promote breeds that produce the wool that is in market demand
- Promote the organized use of rangeland resources and management
- Assist with the establishment of water points and rural infrastructure
- Assist the development of modern wool collection and washing companies that are not hampered by the low efficiency and overcapacity of the old processing enterprise
- Assist in entering higher quality and price markets (currently Kazakh wool is cheaply sold to Russia, there it is further cleaned and sold for a much higher mark-up to the Russian clothing industry)
32. In the case of milk, countries have applied different models for supporting the development of milk collection networks. In many countries, including in the transition economies, dairy processors work with small as well as with large farms, adapting to the prevailing structure. The Government can support this trend by supporting dairy processors in contracting/investing in small-scale farm procurement networks. In some countries milk collection networks developed that are owned and operated by the processor (USA, EU); sometimes, the processor belongs to the farmers themselves under a cooperative structure (e.g., USA, EU, India, Argentina), hence avoiding the risk of single-buyer power by the dairy processor. In other countries, milk collection centers are owned and operated by farmers’ organizations themselves. Both models can achieve good results to manage and control milk quality at the collection point. Several options exist to mitigate the risk of single-buyer power by the dairy processor. As already mentioned, dairy processing cooperatives represent such an alternative. Promoting competition, through an appropriate business climate, including anti-monopoly controls and enforcement powers by government, represents another alternative. Competition among cotton gins has worked well in Kazakhstan, providing small-scale farmers with good prices and a range of advisory services and inputs, including access to short term credit. Other alternatives include promoting the creation of inter-professional associations that provide a forum to develop industry-specific codes of conduct (e.g., with respect to safety and quality management).

33. Government interventions to lower marketing costs include the development of rural infrastructure, notably rural roads, and the development of physical market infrastructure in rural areas, and market information systems. Where it is not cost-effective to do so, government can stimulate the emergence of periodic rural markets by initial public sector support and media promotion.

34. Marketing Development for Extensive Livestock Sector. The extensive range-based livestock production system is currently under-developed in Kazakhstan, except in the case of sheep. It is likely that a rangeland beef industry will develop on a corporate basis, involving larger-scale entities with the capability to address and resolve their marketing problems without the need for public sector financial support. However, there may be a case for providing time-bound, targeted establishment support to provide incentives for private companies to enter this sector. Improved rangeland management systems will have an immediate effect on the extensive livestock sector, farm organization and marketing costs.

35. The Challenge of Remote Areas. In remote areas where the economic potential for livestock production is strong, but private markets have not yet developed, the public sector can play a pro-active role in creating market outlets (e.g., through MOK as part of an explicit subsidization program for remote rural livelihoods, subject to strict adherence of scope and targeting of subsidy schemes, to be funded from the Government budget). Even in these locations Government should aim to use multiple subsidy delivery agents, including private sector operators (e.g. by periodic tenders). In some remote areas, where transport costs will remain prohibitive to compete effectively in distant markets, and where a local market exists, Government can provide support to small-scale processing activities serving local communities, for example through support for applied research into appropriate processing technologies and dissemination of results of such research to smallholders through extension activities. In remote and
Improving Market Linkages

marginal areas, where the economic potential is limited and the likelihood of viable private markets ever developing is low, social programs of interventions (e.g., in the form of direct, targeted minimum income transfer programs) designed as part of an overall rural development strategy, would be more cost-effective and sustainable at achieving rural development objective and providing a safety net to marginal areas.

36. **Future Role of MOK.** Currently, the Government provides marketing support to the livestock sector through its parastatal CJSD Mal Onimeri Korporatsiyasy (MOK) that aims to “stabilize and strengthen domestic markets and create more competitive conditions on those markets, as well as to develop export markets”. MOK has the potential to address some marketing issues, including market failures such as missing rural markets, promoting competition in thin and monopolistic markets. However, there are some potential pitfalls inherent in the Government becoming too closely involved in livestock markets by direct participation in the market through the operations of a parastatal organization. MOK could play a useful role in supporting the strategy outlined above, by focusing its role on public sector functions, promotional and demonstration activities that crowd-in rather than crowd-out the development of private sector and encourage the adaptation of marketing channels to the development needs of the small-scale sector. As already mentioned, MOK could assume the responsibilities of promoting the development of farmers organizations in key, high potential areas and for key, selected commodities; or of piloting market development activities in the carefully selected, and more challenging geographical areas.

37. **Government has an important public role to play in facilitating access to international markets in the context of the WTO negotiations.** Although current livestock exports are low, a potential exists for niche, high-value products in distant markets, as well as for more traditional products in the regional markets (Russia, China, other Central Asia republics). While exports will remain in private hands, Government has an important role to support the private sector in its effort to access foreign markets. Here, the key role of Government relates to the WTO accession process. The Government needs to take an active stance in identifying the tariff and non-tariff barriers to these markets, with a view to their reduction during and following WTO accession. This requires significant research into the subsidy systems practiced in each of these countries.

38. For the short and medium term Kazakhstan comparative advantage for export is likely to continue to lie in the export of raw materials, especially meat, wool and hides and skins\(^6\). Important potential livestock product markets for Kazakhstan include\(^7\):

- Russia: Re-establishing of markets in the adjoining areas of Russia, notably Novosibirsk, Omsk, Tomsk for which Kazakh producers have a comparative transport advantage over most Russian producers.
- China offers a market with rapidly growing beef consumption (from initially low per capita level) and pork; but the Chinese urban markets are quite distant from Kazakh production sites.
- Iran has potential markets for beef and sheep meat (from western Kazakhstan).

39. There is clearly some scope for slowing or reversing the trend toward import penetration of the domestic market for processed livestock products. The key to import substitution for the future must lie in raising productivity and competitiveness of domestic producers and processors and in quality improvement and food safety, to match the standards met by imported processed products.

\(^6\) The development of markets for processed products will take more time and depend on substantial investment and upgrading of the livestock processing industries.

\(^7\) It needs to be borne in mind that, like Kazakhstan, Russia Mongolia and China are all currently developing their livestock sectors with a view to supplying regional export markets. China has been a traditional supplier of beef to the eastern regions of Russia.
B. Promoting Food Safety and Food Quality

40. **The improved and cost-effective management of food safety and quality of livestock products will be a second key contributor to the competitiveness of Kazakhstan’s livestock industry.** Meeting food safety and quality standards in a cost-efficient fashion will strengthen the product competitiveness of the livestock industry, its contribution to public health goals and its accessibility of export markets. Similarly, to strengthen its product competitiveness, the livestock industry will need to equip itself to cost effectively respond to domestic consumers preferences for food quality and match the food quality standards set by imports, or by foreign buyers in the case of exports.

41. An improved and cost effective management of food safety and quality requires an integrated approach that goes from the farm to the table. It entails effective animal health services that meet the needs of a dispersed and largely small-scale production structure. It also implies a pro-active, market-friendly Government strategy that encourages and facilitates the build-up of the capacity of the livestock industry (producers and processors) to meet food safety and quality standards in a cost-effective and demand driven fashion.

**Strengthening Animal Health Services**

42. **The enabling environment for animal health services has improved significantly.** The Government of Kazakhstan recognizes the importance of reducing animal health risks in the livestock production, and its contribution to improve public health and assure an affordable food safety. Much progress has been achieved. In 2002, the veterinary legislation has been revised and harmonized with requirements and principles of the WTO on veterinary and phyto-sanitary measures. Similarly, Government has achieved progress in reducing the “hassle factors” in the inspection of epizootic standards at the farm level and processing level, for example, by imposing the need to register inspections with the Oblast authorities.

43. Assuming an average gross income of 200,000 tg/yr per private veterinarian (and 1,000 VLU/private vet), the expenditure on animal health by farmers is a low 200 tg (approx. US$1.3) per livestock unit (current gross income per dairy VLU is approximately 50,000 tg/year). The veterinary costs are 0.4% of production, which is low compared to international standards (veterinary costs represent generally more than 1% of the production costs). The epizootic control system, which is provided free of charge includes diseases that in most countries would be considered a responsibility of the private sector, therefore the real cost of veterinary service may be higher.

44. **The next challenge now lies in the cost effective implementation of animal health services.** Several implementation challenges lie ahead:

- Veterinary services have yet to adjust to the structural changes in livestock production to bring down the cost of effective service delivery. The increased number of livestock owners requires a new approach to animal health services since reaching this clientele entails higher transaction costs in reaching the more fragmented farming communities, and the new livestock production structure has transformed the relative importance and incidence of individual production diseases.

- High-capacity in veterinary staff. Kazakhstan has one veterinary full staff equivalent for 650 livestock units, compared to a Western standard of about 3000. In view of relatively low veterinary labor costs and fragmentation of animal ownership in Kazakhstan, the Western standard may be too high for Kazakhstan standards at this point.

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8 Or about 1000 veterinary livestock unit (VLU) per full-staff veterinary equivalent. A VLU is the equivalent of 1 cow, 1.2 horse, 10 sheep or pigs, or 100 poultry.
Impediments to the establishment of private veterinarians. While private veterinary services are allowed by law and encouraged by Government, some impediments remain, including: (i) competition and conflict of interest between public sector and private veterinarians; (ii) a tendency at the local level to support public sector services; (iii) overly strict and sometimes irrelevant licensing and certification requirements that can lead to corrupt practices; and (iv) inadequate skills of the veterinary system in dealing with production diseases.

Box 9: Veterinary Services

During the Soviet period, Kazakhstan adopted the Soviet system of animal health provisions characterized by a centralized and top down system, a delivery through the public sector, a high veterinarian/livestock ratio, and a focus on epizootic disease control with little attention for production disease. The smaller livestock inventory, the destruction of most state and collective farms, and the transfer of animal stock to small holders and backyard farms have changed the paradigms in animal disease control and veterinary service delivery. The transaction costs of veterinary service delivery (i.e. reaching all farms) increased significantly with the many small and medium sized farms. But, the small inventory led to a perceived overcapacity in veterinary staff. In the meantime many veterinarians that became under- or unemployed after the breakup of the collective farms started to provide some private services or looked for other opportunities.

The quality of animal health service delivery deteriorated during the nineties because of lack of inputs (vaccines, drugs etc.) and declining mobility of staff caused by lack of fuel and transport. So the strict centralized control relaxed. Although no major disease epidemics occurred, outbreaks of some epizootic diseases such as foot and mouth disease, sheep pox and anthrax were reported. When the production changed from intensive to extensive, the incidence of the typical diseases of concentrated animal holdings (i.e. pasteurellosis, blackleg) declined, but typical disease of extensive production (echinococcosis, internal parasites, tickborne disease) increased. There has been a surge in zoonotic diseases such as brucellosis and echinococcosis in animals and subsequently in the human population. Human echinococcosis cases have jumped from less than 1/100,000 in 1984-86 to over 2.5/100,000 in 1996-97. The increase in human disease acquired through animals (including anthrax, brucellosis, echinococcosis and maybe tuberculosis) – especially in rural areas – is becoming a major concern of veterinary and public health authorities.

Although many veterinarians started to operate privately, it was not until 2002 that such private services were officially recognized and regulated. Public sector services are carried out by Veterinary Department of the Ministry of Agriculture, and by the veterinary control departments of oblast, rayon, and municipality (town). Veterinary and sanitary supervision in 2,364 rural and village communities is implemented by 1,430 veterinary inspectors of rayon and municipality departments (MoA), another 3,255 inspectors, including 478 veterinary specialists, are executing border and internal state veterinary control at 23 border veterinary and phyto-sanitary points and 133 checkpoints.

Epizootic and zoonotic disease control and eradication need improved prioritization. During the immediate post Soviet period the Kazakh veterinary authorities continued the Soviet system of controlling all OIE list A and B diseases. Rather than limiting the number of notifiable diseases to the minimum required by international standards, the new veterinary law has further increased this number.

Over-capacity in veterinary laboratory services, and choice of appropriate technology to minimize the costs of laboratory services. Modern diagnostic technology has considerably reduced the labor requirement in animal health diagnosis. Kazakhstan may not wish to adopt all these new technologies immediately. It may argue that – under current conditions of low labor costs and long

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9 The "Law on Veterinary Medicine" (July 10, 2002) recognizes the concept of private practice (and licensing of private practitioners). It also accepts the, consequently, changed role of Government with a focus on supervision/inspection rather than carrying out veterinary interventions. The law recognizes 6 types of veterinary interventions that can be carried out by licensed practitioners i.e. (i) treatment and prevention; (ii) production and sale of veterinary drugs and preparations; (iii) sale of feed additives; (iv) production and sale of disinfections etc.; (v) laboratory and diagnostic work; and (vi) food inspection.

10 For example there are strict rules on office and clinic space and decontamination, whereas some veterinarians may wish to practise without office or clinic (i.e. solely make farm visits).
distances - more labor-intensive and broader distributed diagnostic laboratory procedures are still more cost effective and provide easier access to producers and other clients. However, services would need to be adjusted to accommodate the current animal testing requirements.

45. To meet these implementation challenges, the following options are worth considering:

- To adjust to the new livestock production structure, the aim should be to keep public veterinary (staff) costs reasonable. These costs can be controlled through farmer cooperatives or veterinary clubs that can organize joint veterinary visits, and by judicious use of veterinary technicians. Fewer, high quality (and costlier) veterinarians, supported by animal health technicians, could be the long-term option to reach adequately a large and dispersed clientele, while keeping the costs of service delivery down.

- To overcome impediments in the private provision of animal health care, the Government could extend further the scope of public animal health responsibilities (e.g., vaccinations) performed by private veterinarians on behalf of Government. This would require: (i) a clear description of the role of veterinary inspectors; (ii) the full privatization of drug supply, complemented with an adequate public inspection and quality control; and (iii) improved, and more practical training.

- There is a general consensus today that an efficient veterinary system should rely on a combination of public veterinary services, private veterinarians that are contracted by the public veterinary service to perform public tasks and community-based veterinary assistants that are linked to the private veterinarians and that serve producer associations. This is becoming the official position of the OIE.

- To limit public spending on and prioritize epizootic and zoonotic disease control and eradication program, the Government may want to base its program on the relevance of the disease in the Kazakh environment, such as the importance of the disease to producers and/or Kazakh consumers, and its possible effect on trade.

- To streamline and upgrade veterinary laboratory services would require (i) a clear policy on the role of state, institute, and private laboratories for laboratory services; (ii) guidelines on minimal standards and cost recovery; (iii) plan to streamline and reduce the number of laboratories, while improving available services; and (iv) expansion of the quality control program.

Pitching Food Safety and Food Quality Standards at the Judicious Level

46. Food safety and food quality standards are and will become increasingly relevant to the competitiveness of the livestock industry. The domestic market is expected to grow rapidly in the coming decade and will be increasingly discerning of quality and food safety. Higher quality imports penetrating the market already point to the need to raise standards simply to maintain the domestic market share, let alone achieve import substitution for processed products or establish export markets. The effective management of food safety and product quality concerns will be critical if domestic livestock production is to maintain and improve its competitive position. The imposition of food safety and quality standards imposes compliance costs on both producers and consumers. These compliance costs and their impact on the rate of recovery of the sector need to be carefully considered by Government.

47. Food safety is a public health concern with a clear Government role, and is being addressed. The Government’s food safety regulations are enshrined in the Amended Law on Veterinary Services, adopted in July 2002. The law envisages to move food safety requirements closer to EU practice which includes: recommendations on quantity control over the aflatoxines content in livestock food products for beef, horse meat and intestines; and tolerances for pathogens in livestock products. Further, the new law introduced the requirement for all enterprises involved in handling or processing livestock products to have updated laboratory equipment and practices in compliance with EU GLP (Good Laboratory Practice) standards.

48. A differentiated implementation strategy to food safety that reflects the segmentation of the domestic market would meet the dual objectives of safeguarding public health and
improving competitiveness of the livestock industry. One of the difficulties that Government face is how to phase in food safety interventions as the formal food sector grows, without driving out informal activities that still serve an important economic function. This tension suggests, that an initial emphasis on risk prioritization, training and provision of information is the right approach rather than imposing standards and inspection. Information-based interventions help the entire food system without penalizing the informal sector, and accord with the principles emerging from food safety regulatory reform in industrial countries. Food safety interventions should build from basic investments and simple interventions to more complex regulatory systems as economies develop. Introducing a standard system needs to strike a balance between serving the interests of consumers and that of producers. While export trade typically acts as the main market driver to improvements in food safety; this is not the case in Kazakhstan. Thus for most livestock producers and processors, and most livestock products, domestic demand remains the primary if not the sole market driver for food safety improvements. Understanding the priorities for domestic health can inform policies that capture benefits for domestic consumers without creating barriers for local and export markets.

49. The domestic market for livestock products is segmented between the formal and informal markets. While we expect the share of livestock products marketed through the formal food processing industry to increase, the informal market will continue to be an important and integral part of the livestock marketing system for the foreseeable future (as it does in all emerging economies). On the informal market, consumers have adapted their food preparation habits to the prevailing and known food safety risks. Over time, the informal market will eventually disappear as average per-capita incomes increase and the food industry extends its geographical and economic outreach. The continuing and pervasive role of the informal market in Kazakhstan needs to be acknowledged by Government in implementing its food safety program. For example, government can facilitate and encourage the shift from informal to formal market channels, by keeping the compliance costs of such a shift low (e.g., in the short to medium term, refraining to mandate food safety standards that are expensive to comply with; public information campaigns on food preparation techniques to reduce exposure to known health risks), and by raising the economic benefits from such a shift (e.g., public information campaigns on food safety standards and public health risks).

50. The introduction of food safety systems and standards implies compliance costs to both producers and processors, potentially hurting their competitiveness. Food safety standards on the domestic market should be driven by consumer demand and their capacity to pay as local consumers have adapted their food preparation habits to food safety risks. Too high food safety standards with high costs of compliance may actually have perverse effects on public health by driving more consumers as well as producers and processors away from the formal market, but hurt competitiveness and burden entry into the formal market. There is the need for a discerning approach that targets selectively risks to public health, and a differentiated implementation strategy that recognizes the existence of the informal market by minimizing costs and maximizing benefits of compliance.

51. In evaluating investments to improve food safety, risk assessments can provide the basis for understanding the sources of risk and their consequences. This can better inform efforts to meet export standards, while simultaneously developing domestic food safety regulations. For example, the Government needs to review the investment required for establishing and monitoring a quality improvement program. Significant resources will be required for animal identification systems, and to develop an animal database. The costs, at least at the initial stages, will need to be borne by the Government, to ensure that this does not overburden livestock producers, but over time will need to be shared with the industry. A move to introduce major new systems should be subjected to rigorous cost-benefit analysis, including the incidence of costs on different producer and consumer groups.

52. Implementation of ISO/HACCP quality standards needs to be driven by the private sector. Quality standards need to be developed driven by the private sector rather than imposed by the government. The government through the veterinary department and accredited training institutions will need to provide support to skills development of veterinary staff and ultimately local consultancy services that could provide support to producers and livestock processors in meeting the HACCP standards. The
costs of certification for livestock farmers and livestock processors can be potentially large and may in the short-term impact on the continued recovery of the sector. Further, producers in Kazakhstan’s traditional export markets, namely in the CIS, may not require these additional certification requirements. Hence imposing these standards may in certain situations burden producers_PROCESSORS with additional, potentially unnecessary, costs and reduce competitiveness of Kazakh livestock products in these markets. Movement to these higher-level quality standards needs to be a voluntary code that is adopted by the industry.

53. Given the importance of getting the right public/private mix of activities it is suggested that consideration be given to establishing a broad Public-Private Sector Forum on Livestock Sector Standards to establish national policies and to provide an independent advisory role to Government. Such a forum would ensure that the differing interests and concerns of the various private sector groups were adequately taken into account in national policies.

4. Raising Productivity at the Farm Level

54. To improve their cost competitiveness, livestock producers will need to capitalize on their respective sources of comparative advantages by raising productivity levels at the farm level. Besides better animal health, two main actions will raise farm level productivity: improved feeding, and more productive breeds.

A. Feeding – the Key to higher Performance

55. **Improved feeding is the first, key step to higher yield performance at the farm level.** Kazakhstan’s production efficiency parameters are well below international benchmarks (Table 2). Inadequate feeding is widely recognized as the main explanation for the observed low production efficiency parameters. Local research (Zhazylbekov, 2004) shows that, under current field conditions, the yield gains and farm-level financial returns from improved feeding would surpass those from improved breeds. In addition, without improved feeding and proper animal health, the yield gains and farm-level financial returns from investments in improved breeds will be low and risky. Improved and more efficient feeding has therefore the potential to contribute substantially to higher productivity of livestock production in Kazakhstan, and become a key driver to close productivity gaps. Improved feeding throughout the year will also go a long way in reducing the observed high seasonality in milk production (and prices) that is detrimental to the development of a dairy industry that should rely on locally procured raw material. Though Kazakhstan is endowed with potentially significant feed resources, they are currently under-exploited.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Kazakh</th>
<th>Western C.</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADG (beef; kg/d)</td>
<td>0.9</td>
<td>1-2</td>
</tr>
<tr>
<td>ADG (pigs; kg/d)</td>
<td>0.3-0.5</td>
<td>0.5-0.8</td>
</tr>
<tr>
<td>ADG (broiler;g/d)</td>
<td>50</td>
<td>70-80</td>
</tr>
<tr>
<td>FC (pigs; kg/kg)</td>
<td>5-9</td>
<td>3-4.5</td>
</tr>
<tr>
<td>FC (kg/kg)</td>
<td>2.5-3</td>
<td>1.9-2.2</td>
</tr>
<tr>
<td>Eggs per hen</td>
<td>200-260</td>
<td>300-310</td>
</tr>
</tbody>
</table>

ADG = average daily gain  
FC = feed conversion (kg feed/kg gain)

Data: farm visits, staff estimates

56. **Kazakhstan’s vast rangeland resources are currently under-exploited, leading to environmental problems.** Kazakhstan’s rangeland resources are vast but under-exploited, suffering from “open access” management problems. Following the contraction in herd inventory during the transition and the break-up of collective farms, the remote rangeland use decreased. As a result, vast areas of rangelands away from human settlements are under-exploited because the lack of watering points limits access to these remote pastures, and the lack of secure property rights (either exclusive - individual or collective - use or ownership rights) discourages potential ranchers from investing in the needed supporting infrastructure. With unclear rangeland use policies, little transhumance and fodder preservation, animal holdings concentrate around settlements, and overgrazing is now an issue around

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settlements with severe deterioration of the natural grasslands in densely populated areas, especially in the southeastern parts of the country. Government policy focuses on rehabilitating abandoned drylands in the northern parts of the country, exploring alternative land use, and possibly relocating settlements. Some of the effects of overgrazing and desertification have stabilized through an ambitious program of planting shelterbelts to reduce wind erosion. However, grassland fires can go out of control as traditional fire controls dwindled due to the breakup of collective farms, reduced grazing and land management, and lack of budget by local governments. The planned Forestry Project is developing an approach for participatory saxaul rangelands rehabilitation: herder agreements to enable restoration and development of degraded saxaul rangelands, and provision of water resources for compensatory rangelands. Thirty demonstrations covering a total approximately 6000 hectare will be conducted under this project.

57. Most grazing currently takes place in the vicinity of the village, 8 km in winter, to 15 km in summer. Thus many of these producers rely on additional hay, as opposed to silage that is a rarer commodity, and as a consequence fodder preservation has become increasingly more important. With this movement to more extensive production, the rangelands produce over 70 percent of the feed for livestock in Kazakhstan. However, it is estimated that only 60 million hectares of pastureland is used with the abandoned or under utilized rangeland estimated to be close to 100 million hectares. Most Kazakhstan livestock owners and experts believe that the system of seasonal migration is an optimal husbandry system in the southern areas, whilst northern areas of the country will need to depend on stored fodder for winter-feeding.

58. **Fodder Production Fell by Seventy Percent.** Kazakh livestock producers potentially have access to considerable grazing and fodder resources. Yet, fodder production has fallen dramatically over the recent years, and covered only 13% of arable land in 2000 compared to 25% in 1990 (FAO, 2002), and fodder production falling by over 70% from 24 million tons in 1990 to about 6.4 million tons in 2000 (Yegheubayev, 2003). Higher nutritional value crops that were used in livestock feed such as clover, potatoes, beets, carrots, etc., became beyond the reach of most livestock producers. The reduced livestock inventory and lower livestock production explain in part the drop in fodder production over the last decade. However, fodder production fell much more than livestock production, suggesting that other factors have come into play. The absence of extension services to encourage improved feed usage and fodder production among the restructured and smaller farm population, technology gaps such as poor harvesting and preservation techniques, causing an estimated 30-35 per cent loss in the nutrient value of the crop are other key factors explaining the significant drop in fodder and feed production.

59. **Potential grain and protein feed resources are under-exploited.** Traditionally Kazakhstan produced and exported grain of mixed quality, much of which was used as animal feed. Current feed grain availability is around 4 million tons. Increasing quality (and prices) may reduce availability of the feed-quality grain, but increased processing to flour may add some grain byproducts (bran etc.) to the national feed resources. In addition, Government policies supported special programs in the support of national companies by procuring wheat on a regular basis limiting the need to explore additional outlets for grain production. According to a recent FAO study (2002), Kazakhstan enjoys a potentially large and competitive potential in oilseed production, mainly sunflower and soybean, and there is much scope to increase oilseed production to substitute efficiently for the large vegetable oil imports. As a by-product, higher oilseed production would also improve the availability of oilseed meals. Today, however, the small-scale oilseed processing facilities are not well adapted to compete with vegetable oil imports. The modernization and expansion of the oilseed processing industry that has started will be key in promoting oilseed production and provide the basis for the development of a market for oilseed meals. The absence
of farmer organizations and extension support services to encourage greater use of protein feeds among small farms depresses the demand for and hampers the development of the meal market. Fishmeal is another potential source of protein feed resources that is also under-exploited. A companion joint research report looks into the fisheries industry and identifies the factors behind the under-exploitation of fisheries resources.

60. So far, government support to the development of feed demand and markets has been limited. While some farmers are becoming aware of the need to pay more attention to feeding, ration improvement and balancing, the majority of smaller-farms remain under-served by absent farm extension and support services, which could raise their knowledge and awareness level. While large enterprises are able to obtain information through partners, trade shows and visits, small farmers remain handicapped by limited access to technical and economic information. This handicap varies locally as some oblast governments have taken initiatives to engage in agricultural and business extension services. To date, the main source of information for farmers is the private sector i.e. dairy factories (at milk collection centers), bazaars, veterinarians, and AI personnel. An extension infrastructure adapted to the needs of the small farmers community is yet to develop to convey feeding related messages to farmers. In addition, few laboratories exist that can provide feed testing services to farmers. Research institutes have undertaken limited research on (i) animal nutrition and improved utilization of local agro-processing by-products such as grain by-products into animal feed mixtures and (ii) applied research to increase efficiency with which grasses/fodder crops and feed mixture products can be used.

61. The government operates some controls and tariffs on imported agricultural products. These import tariffs, although aimed to support domestic production, have had an indirect effect of hampering the development of commercially produced feed, particularly of essential feed ingredients that include soybean, soybean cake and fish meal. A study looking at the effects of easing of import tariffs on essential feed ingredients may be a first step in developing affordable commercial feed to benefit larger scale livestock producers. The Government should, through research and extension and review of its tariff policy, encourage better use of agricultural by-products whether bran in the grain area, cotton seed in the Southern region or sunflower cake in the Eastern region.

62. Government has a central role to play in encouraging improved feeding: by establishing appropriate land use policies for rangelands, and by supporting technology transfer support services among livestock producers.

63. Shifting the management of rangelands from open access to either private or joint resource management will enable the environmentally sustainable and productive utilization of available rangeland resources. Improved and sustainable management requires an enhanced rangeland use policy and strategy that empowers and enables users to capture the financial benefits from investing in the sustainable exploitation of rangeland resources. International experience indicates that providing exclusive use rights, either to individuals or user groups, is a key foundation to the sustainable management of rangelands. Exclusive use rights (transferable or not) can be extended under alternative legal-cum-organizational models, either under private ownership, or long term exclusive leasing rights from the state to an individual or group of users, adequately supported by enforcement and monitoring mechanisms. While both models can co-exist and be effective in achieving the intended objectives of sustainable and efficient rangeland management, it is important to note that each model entails different levels and distribution of transaction costs (e.g., monitoring and enforcement costs) between users and the state; to be socially sustainable, each model would need to be adapted to the prevailing social norms and context; and will also lead to vastly different income distribution and development outcomes in pastoral areas between a large private ranchers model and a model of user groups of smaller livestock herders. The political and social implications of these strategic policy choices are therefore important and ought to be acknowledged from the outset.

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64. Besides the strategic policy choice on the type of rangeland development model to be implemented, additional steps would need to be pursued:

- Develop the regulatory framework that supports the rangeland use policy, building on the adequate legal framework already in place.

- Develop the supporting organizational mechanisms. This includes establishing the coordination mechanisms between all Ministries involved in land use including Agriculture, Energy, Transport, Environmental Protection and Interior in the implementation of the rangeland policy; the clarification and codification of the respective roles (rights, duties and responsibilities with respect to control, enforcement and monitoring of environmental conditions and grazing efforts, collection and setting of grazing fees) of local governments and central government agencies such as the Ministry of Environmental Protection, as well as the transfer of adequate financial resources (or resource mobilization, e.g., through collection of grazing fees) to local governments that match their responsibilities.

- Determine, through research, pilot experimentation and monitoring, the sustainable carrying capacity of rangelands and develop adequate range management technologies.

65. Supporting feed and fodder technology generation and transfer among the emerging, smaller-scale farm population. Government has a key public role to play in promoting the development of fodder production and improved feeding at the farm level. That role would be most effective if it concentrates on the technology transfer mechanisms that are adapted and responsive to the farming structure in the livestock industry. The lack of an extension infrastructure hampers farmers when looking for information and new ways to do business. Farm extension and advisory services need to be developed, regionally geared toward available and potential fodder and feed resources, and include the smaller, commercially oriented farms. Areas of improved information relate to improved feeding methods and feed resources, processing and storing of products, and food quality requirements; it could also include marketing and market development, and market information, business planning, production improvements.

66. Extension services adapted to the needs of farming population are yet to develop. Although there are some channels that the Government could use to stimulate this knowledge transfer, existing large-farmers unions are unlikely to be able to reach out to the majority of the rural clients. More and innovative channels need to be tapped into to keep costs down and extend the outreach. Farm organizations or livestock associations that cater to the broad spectrum of agricultural producers could play an important and cost-effective role for channeling of information to their members, and also provide feedback to Government on the performance and problems of the various production systems. The Government could promote these organizations and place emphasis on their local orientation. The Government could consider the delivery of technology transfer services through support to livestock associations, consulting services, and training institutes. The government may also consider establishing (or reorganizing) laboratories and training of laboratory technicians for the analysis of feeds at the Oblast level to enable livestock producers and small scale feed producers to test for the nutrient value of their feeds.

67. In collaboration with the feed industry, links to research programs on livestock feeds and feeding could be developed to meet the needs of the variety of livestock production systems. Research needs to look into feed and by-product availability to best use the available feed base. A further promising area is that of new fodder seeds. As in other countries in the region, a major question is how the problems farmers face are brought to the attention of the research institutes and how proposed solutions developed by those institutions are tested and made available to farmers. This issue is acute, given the absence of an agriculture extension service.
B. Breeding - the Scope for balanced Support

68. **Returns of public investments in breeding would benefit from a stronger link to feeding improvements.** Breeding is the sole focus of government interventions geared towards productivity improvements at farm level, to the detriment of public interventions towards feeding; as a result returns to public investments in breeding remain well below their potential. Breeding currently captures 20 per cent of all central government public spending on the livestock industry, and all central government public spending geared towards farm-level productivity improvements (see section 5). The Government’s breeding program focuses on continued support to the former state breeding system as a vehicle to demonstrate to private agricultural investment companies, that such improved breeding services are feasible and profitable. Without the complementary public interventions in improved feeding outlined above, however, the economic returns to public support to breeding are well below their potential. A more balanced approach to productivity improvements that also encourages improved feeding at the farm level would increase farmers’ returns from better breeds and raise the farmers’ demand for improved breeds and pedigree animals. The significant under-spending (66%) of budgetary allocation to improved breeding illustrates the lack of demand for animals from these breeding programs by individual farmers, in particular small-holders.

69. **There is a need for continued public attention to breeding, and scope to improve the effectiveness of public breeding programs through improved design.** Before the transition period, the recorded herds consisted between 15 and 24 percent of the total herd size, supplied by state owned breeding farms. Many of the pure breed animals have been lost and this has contributed to a fall in livestock productivity, and resulted in stagnation in genetic advancement of the herd. With the loss of these pure-breds, it is unlikely that Kazakh breeders can catch up to improve basic productivity in the foreseeable future, which stands extremely low by international standards\(^{13}\). Besides this, Kazakh farmers have been unable to obtain animals with specific traits, particularly with disease resistance, now common in international breeding. The current Government policy suggests that subsidies to breeding parastatal farms will continue until 2005. There is a concern that the continued reliance on these breeding centers crowds-out the development of sustainable private sector breeding programs, and prevents greater reliance on imported breeding stock (semen, embryos or live animals).

70. **Because transaction costs of accessing breeding services in more remote rural areas are high, the Government subsidizes the price of pedigree-breeding stock, with the subsidy accruing to the breeding farm. **The subsidy varies from 25 to 50 percent of the purchase price for dairy and beef cattle, and 35 percent for the support of AI services\(^{14}\). Government plans also propose to introduce new subsidies, from 2003 onwards, in the order of 50 percent of the price for young animals, pedigree eggs, and sire bull semen sold by state farms. Full cost recovery is expected for the storage of semen, and for the purchase and maintenance of pedigree sire bulls.

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Box 10: Example - Breeding Direction in the Shetsky Rayon

All cattle found in the households and peasant farms originate from the former breeding plans of the kolkhozes. Either they are cows that were distributed after the demise of the kolkhozes or they are the products of AI during the soviet time. Where the selection in the past was done for production conditions without nutritional stress and good management this situation has now changed. Where in the past maximization of the milk production was paramount, this breeding goal should be reassessed. Currently the calf of 200 kg live weight, at 200-240 Tenge per kg slaughtered, is worth twice as much as the total yearly milk production of approximately 1,200 liters at 13-14 Tenge per liter. It is therefore important to realize that in Shetsky rayon one should consider the production system more as “dairy ranching” than intensive milk production. This requires a new approach to animal breeding.

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\(^{13}\) The example of milk yields underscores this situation. It currently stands between 1,800 – 2,000 kg of milk/cow/year, compared to, for example, New Zealand where a normal yield for a forage-based diet is around 6,000 kg of milk/cow/year.

\(^{14}\) The AI service is currently inefficient (three inseminations rather than one) and would likely be improved through privatization, though there would be a continuing case for subsidisation of delivery of the service to smallholder farmers in outlying locations.
71. Recent regulations on Government certification for breeding farms, particularly regulation 1061 dated September 26, 2002, place a heavy administrative burden on private sector enterprises wishing to engage in rearing breeding stock. The process to obtain a certificate is a centrally driven process, through which potential applicants must show conformity to an approved list of breeds, types and crosses developed from a central commission of scholars and specialists from the state breeding farms. Specifying which breed or combination of breeds farmers require should be left up to the farmers, as they will be in a better position to understand the needs of the market and the consumers they serve.

72. Poultry production was also severely hit in the transition, but is showing signs of recovery, which is in part driven by commercial interests and foreign direct investment. The Government is contemplating support for poultry breeding. However, worldwide poultry genetic and breeding is highly concentrated (only 14 breeding programs world wide), and as international genetics are clearly better than local stock, the industry may be better off and link with international companies to achieve a rapid improvement in production efficiency.

73. There remains a case for government intervention to protect the genetic base to preserve locally produced breeds that have characteristics suited to local conditions, as this is a justifiable public good. International organizations such as the FAO are helping governments to address the management and preservation of national genetic resources. A long term development breeding strategy may focus on the following actions:

74. **Move toward a less Regulated Market for Breeding.** In the medium term Kazakhstan should move toward deregulation of animal breeding at the point of importation and in terms of certification of breeding farms as most other countries have done. For example, this is the system operated in the US, the UK and Holland, where the industry is self-regulated and entirely in the hands of the private sector. The measures in support of this policy direction would include:

- **Streamline the Process for Importing Genetic Materials.** With stagnating genetic breeding stock improvement, short-term solutions would tend to place higher priority on imported genetic materials. A simplified approach for the import of genetic material would only require certification from the exporting country that it is free from infectious diseases and diseases from List A of the International Animal Health Code (OIE).

- **Ensure Adequate Performance Testing Facilities**\(^1\). Government-support of breeding farms are “crowding out” the development of sustainable private sector breeding programs, and continue to hamper the continued structural change in the sector. Government policy on breeding could, as other countries do, be based on performance testing of the private herds rather than the subsidization of selected farms breeding stock. Incentive-based interventions such as performance testing have proven in many countries to be more effective and sustainable in increasing the supply of market-responsive quality breeding material than direct production subsidies. Thus Government support should be phased out, and re-oriented towards ensuring adequately equipped and staffed performance testing facilities.

- **Encourage of the Development of Private Breeders Associations.** The Government should encourage Private Breeders Associations which can provide, through private sector mechanisms, support to members in the identification and procurement of various types of pedigree eggs, semen, storage facilities, etc from the local and international market. It may perhaps, provide credit facilities and market their improved quality breeds to farmers. There may be a role for Government providing training services to these associations and its members on the management of breeding stock and providing demonstrations on current best practice in the sector. The Private Breeders Associations would, initially in cooperation with the Ministry of Agriculture’s animal production department, take responsibility for registering purebred animals and breeding farms.

- **Channel Breeding Subsidies to Private Farmers.** The subsidies for breeding stock accrue to the breeding farms on their sales. A more cost-effective and market-responsive alternative would be to

\(^1\) A list of breeding farms by oblast and management structure is provided in the Annex.
channel the breeding subsidy to the buyer, i.e., the private sector farmers, based on their purchase of certified breeding stock from breeding farms registered with the Private Breeders Association. This would encourage farmers to shop around, to seek out the characteristics they most require. It will also encourage breeders to minimize their production costs.

- Eliminate the Need for Certification. Privatized animal breeding should lead to a system, which is self-policing by the members of Private Breeders Association. Farms will however, need to show that their breeding stock is free from infectious diseases, and meet the current phyto-sanitary requirements.

- Support an Inventory of Livestock Breeds. The last inventory of livestock breeds was undertaken in 1990. With changes that have occurred during the transition period, it would be a good time to undertake another inventory to understand the changes that have occurred in breed structure and to highlight those breeds that should be preserved.

5. Strengthening Government’s Role

This note has identified key areas in which the public sector can play a much more proactive and promotional role if the potential of the domestic livestock industry is to materialize, and also is to contribute to the broader objectives of socially and environmentally sustainable development of the rural areas set by the Government of Kazakhstan. Summing-up, five key public sector roles have been identified:

- Promoting organizational models, for example through livestock producers associations, and infrastructure that are adapted to the emerging livestock production structure, dominated by small-scale producers, to lower transaction costs in reaching domestic consumers and linking with the food industry, facilitate the access to improved and productivity-enhancing technologies (feeding, animal health, and breeding), and manage in an environmentally sustainable way key resources such as grass and rangelands by promoting pastoral resource-led grazing management.

- Investing in the dissemination, transfer and generation of productivity-enhancing technologies at the farm level, striving to achieve a better balance between feeding and breeding improvement programs, and animal health.

- Ensuring food safety, and promoting food quality standards in a differentiated, cost-effective and phased fashion, consistent with the absorptive capacity of the domestic consumers, producers and processors.

- Facilitating the access to export markets, notably in the context of the WTO accession negotiations and through market information and promotion systems.

- Encouraging the environmentally sustainable development of the livestock industry, notably the management of its vast land resources, and waste associated with livestock production and processing.

To perform these roles, Government needs to spend better. Public spending for the livestock industry is not high. Direct public spending for the livestock sector forms only a small part of the Ministry’s of Agriculture budget (around 20 per cent of total agricultural expenditures (28.8 billion Tenge) in 2002), compared to a 42 % share of livestock in total agricultural GDP. This suggests that there is scope for re-allocation within the Ministry of Agriculture budget towards the livestock industry. Current public livestock spending provisions fall under three broad categories (see table below): (i) veterinary control of contagious diseases; (ii) input subsidies to breeding materials and animals; and (iii) subsidies
to market development by MOK (of which the only significant form of subsidy is the initial provision of loan capital at a subsidized rate) and to investment in food processing by the private sector (through credit subsidies). The present allocation of government resources raises some concerns as it contributes little to productivity-enhancements on the farm, to the efficient development of livestock product markets, the promotion of food safety, or the sustainable management of key natural resources. There is scope, therefore, to enhance the effectiveness of public spending by targeting the allocation of resources towards the public sector functions identified above.

<table>
<thead>
<tr>
<th>Object Subsidized</th>
<th>Budgetary Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding stock materials (including subsidy of artificial insemination and reduction to the cost of breeding calves, eggs etc.)</td>
<td>Budget allocation for bovine AI during 2001-2005 is 947 million Tenge (approx US$ 6.3 million)</td>
</tr>
<tr>
<td>Subsidy for purchase of breeding livestock for dairy production</td>
<td>Provision of approx. 416 million Tenge (US$ 2.7 million) annually during 2002-2003; increasing to 478 million Tenge in 2005 (however, disbursement in 2002 was only 131 million Tenge (US$ 0.9 million))</td>
</tr>
<tr>
<td>Subsidy of breeding stock for meat production</td>
<td></td>
</tr>
<tr>
<td>Veterinary subsidies: (i) Animal disease diagnosis; (ii) Epizootic disease control; (iii) Tuberculosis and brucellosis control; (iv) Eradication of contagious diseases</td>
<td>Total of 3,298 million Tenge (US$ 22 million) provided in 2003</td>
</tr>
<tr>
<td>Subsidies for agricultural processing companies</td>
<td>Commercial banks providing credits to processing enterprises are eligible to apply for compensation part of the interest rate of the credit. Enterprises processing agricultural products are main beneficiaries as they get bank credits with discounted interest rates.</td>
</tr>
<tr>
<td></td>
<td>• Equipment leasing (500 million Tenge/US$ 3.3 million)</td>
</tr>
<tr>
<td></td>
<td>• Reimbursement of interest rate (7%) for equipment leasing (35 million Tenge/US$ 0.2 million)</td>
</tr>
<tr>
<td></td>
<td>• Reduction of interest rate for bank loans (up to 15%)</td>
</tr>
<tr>
<td></td>
<td>(395 million Tenge/US$ 2.6 million)</td>
</tr>
<tr>
<td>Budgetary credits for Mal Onimderi for product processing</td>
<td>Very small</td>
</tr>
<tr>
<td>Subsidized credit through loans to Mal Onimderi</td>
<td>Estimated at around US$ 3.4 million (510 million Tenge)</td>
</tr>
</tbody>
</table>
Suggested Pilot Activities

77. During the discussions with government and private sector stakeholders in the livestock sector, various issues were brought forward, which are important for policy formulation. Some of these issues could form the basis for project proposals and for instruments such as subsidies, legislation, and standards to respond to them and include:

- Improve access to remote grazing, land and cultivation of winter fodder
- Improve basic services such as AI, access to forage harvesting equipment
- Stimulate other income generating activities in rural settlements besides agriculture and stimulate rural financial services
- Re-establish the migratory grazing system where appropriate and reduce overgrazing around rural settlements
- Selectively adopt international standards for food safety and quality to increase safety and quality, and prepare for WTO accession
- Focus on productive farm systems rather than average size of livestock farms
- Improve basic organization in rural settlements to overcome problems of access to basic services, marketing, input supply, sufficient grazing, water supply and irrigation
- Encourage the availability of market infrastructure
- Clarify public and private tasks and responsibilities in the various services provided by the government
- Increase information and capacity of the production and potential for improvement in the farming household sector
- Implement pastoral resource-led grazing management and livestock production on the extensive grazing lands and promote realistic expectations of the productive capacity of the resources
- Rehabilitate and manage as a sustainable resource, the highly valued and environmentally protective shrub, saxaul, in areas of its natural range where it has become depleted through over exploitation

78. Pilot activities and programs are suggested for the six key issues identified: (i) grazing, fodder, erosion and transhumance; (ii) organization of producers and basic services; (iii) farm size, costs and benefits; (iv) erosion of genetic values; (v) desire to adopt international standards; (vi) public and private tasks and responsibilities.

Grazing, Fodder, Erosion and Transhumance

79. Grazing, and conserved roughage for winter-feeding are the cheapest feed for ruminants. Grazing during summer and winter with some supplementary feeding during winter formed the basis of the traditional Kazakh livestock production system. Mobility was one of the most important management tools to assure enough grazing. Many farmers have little access to crop land and depend for their livestock on grazing in communal natural pastures and some supplementation with bought in roughages and grain/concentrates (at a much lower level than in the past). This might have reduced the production per head, but not necessarily the returns per head as the production cost price has declined significantly.

80. Restoring Transhumance Grazing System. Restoring the transhumance grazing system could alleviate the overgrazing problem and use under-utilized grazing areas. An adapted system should be carefully developed by a multi-disciplinary team of experts in close collaboration with representative farmers and piloted in some of the key extensive livestock production areas (i.e. in the dryland management and the forestry project). No legal framework exists to define stock tracking routes, along which animals can be moved at low cost from the settlements to summer pastures and back. There is also need for a system of branding/tattooing animals for identification when grazing in a mixed owners’ herd.
81. Rehabilitation of saxaul depleted rangelands and the implementation of pastoral resource-led sustainable management and livestock production. The over-exploited saxaul rangelands in southern Kazakhstan warrant restoration from both environmental and economic perspectives. Important products of these multi-use rangelands are livestock and fuelwood. The widespread and dramatic decline in livestock numbers, precipitated by the farmers are beginning to adapt to the new economy and looking towards restoring the previous scale of pastoralism. This situation offers a unique and timely "window of opportunity" to ensure that the recovery of the pastoral industry is resource led and managed in a sustainable manner.

82. Demonstration sites, based on the active participation of local user groups, would serve as catalysts for the large-scale implementation of techniques for the rehabilitation of saxaul woodlands, rangeland vegetation improvement and resource-led sustainable grazing management. This approach would maximize the sustainable productive potential of heterogeneous mixes of land resources by the implementation customized site-specific development programs. Outcomes would be monitored and critically analyzed.

83. Increased Fodder Production and Improved Use of Fodder and By-products and Small-scale Concentrate Mixing. Increased access to land and grazing will only improve the fodder production if more fodder is grown and is better used. No effective structure exists in rural areas that trains farmers on new technologies. The government should support training and demonstration programs in this field to help farmers to produce more fodder on their land. It should create a link between farmers, extension and researchers, so that farmer problems are communicated to research in order for them to develop new and appropriate technologies; it should also facilitate the transmission of research findings and recommendations to the farmers. Adaptive research should concentrate on the best forage species for the different livestock farming communities in different agro-ecological zones.

84. Compounded fodders were produced on every large state or collective farm. These facilities are now largely defunct. Most compounds for concentrate fodder are now sold separately on markets and are home mixed. Farmers lack the equipment and the knowledge for proper mixing and the possibilities to test the quality of their feed mix. Although the Government subsidizes essential feed elements, the small livestock farmers lack access to these resources. A promotion of smaller-scale feed milling on rayon or village level, with gained access to subsidized feed could produce better balanced feed and ensure increased farmers access. Such mills should be privately owned or run by a group of farmers. The Government could play a role to secure the availability of compounds in all parts of the country.

Organization of People and Basic Services in the Rural Areas

85. Before the transition, the state and collective farms played a crucial role in supplying basic services to its workers and members. After the collapse of these farms this cohesion was lost. At the moment there seems to be little activity in Kazakhstan in community building and rural development, which could lead to initiating and strengthening people’s organizations and the return of basic services to the rural communities. Kazakhstan urgently needs a legislative framework for NGO’s and community/producers associations, which is non restrictive and facilitating.

86. Develop Productive Service Delivery Systems. A government supported, but not necessarily government executed, program should work with the people on an integrated community development plan, which restores the basic services back in the communities. Potential activities include:

- Setting-up Extension and Advisory Services
- Setting-up Milk Collection Centers - The Government can facilitate this development through leasing arrangements. The same concept can be extended to sheep shearing and wool grading, and the setting up of a weekly/monthly livestock market in an area
- Setting-up Small Feed Mills
- Support for market infrastructure, storage and regional livestock markets.
- Micro-finance and Banking Services
- Promotion of Cottage-style Products and Crafts
• Small-scale Dairy and Meat Processing - The Government can facilitate such training and provide incentives for the built-up of a small-scale industry that caters to the remoter and transhumance areas
• Develop Social and Utility Services - The end-results of such efforts will be a community with a stronger economic basis, more social and economic cohesion and an improved livelihood

Farm Size, Costs and Benefits

87. Agro-Economic Study Unit. Agricultural policy in Kazakhstan seems to largely be guided by quantitative production aspects. In a free market structure it becomes more a case of competitiveness, which to a large extent is determined by the cost and price structure. The Ministry of Agriculture needs more insight in the production cost structures in the different agricultural production structures so that subsidy instruments can be applied more effectively and policy can be led by the true competitive conditions of the sector structures.

88. Access to Land as a Fodder Base. There seem to be many cases where people got a land share, but do not have access to it. In some cases, this might be because the large or medium size farm is using their land shares, with or without compensation. If the aim is to increase the fodder base and production around the villages the available remaining state land or underutilized land should be allocated to the more productive users for fodder production. The determining factor to identify these more productive users should not be the farm size. The new land code would need to spell out exactly what the case would be in the case of underutilization or non-utilization of land. The Government’s policy paper states as one of the instruments to improve livestock production the allocation of state land further away for summer grazing. These aspects are not covered in the land code.

Concern of Erosion of Genetic Value of Animals and Resulting Low Production

89. Genetic erosion of the animal population outside the elite breeding farms is perceived as the main driver for the decline in production. It is not likely that these animals - only 1 or 2 generations away from state breeding control - will have lost so much of their genetic potential to explain the drastic drop in production. This largely is a result from the complete change in diet of the animals: from a grain/concentrate supplemented with roughage to a sole roughage diet. This and a shift to different producers with other production targets means that one single breed standard cannot answer the requirements of the large-scale dairy farmers and the smaller/family farmers.

90. To focus the breeding program toward an effective (producing the right type of animals for the different production systems) and efficient (making good genetic progress for the money invested) program, there is need for changes in the breeding system:
• More animals should be included into the pedigree and preferably production recording system to become genetically active
• Greater flexibility in breeding standards especially for cattle should be observed
• Selection should be done in the type of environment under which animals will have to produce: so ram mothers for rams to be used on range ewes should be selected under range conditions and not under station conditions

91. Strengthen the Private Role in Animal Breeding. Animal breeding is a private good and should be driven by private interest. Therefore, most countries have breed societies/associations, which pursue the improvement of their breed/variety and defend the interests of its members. Through shows and sales the economic interests of the breeders are promoted and a reason for pedigree breeding is created: higher prices for proven genetically superior animals. Farmers should define the breed standards, according to their requirements and conditions, and should design and participate in their breeding program.
92. **Increase availability of Purebred Poultry and other Small Stock.** Many household farmers/small farmers are working with livestock selected and bred for use on capital and input intensive farms. These are not always the most suitable varieties to be kept under the prevailing conditions, where resistance to diseases, longevity, and good utilization of poor quality fodder are probably more important production traits rather than high production potential, low feed conversion on balanced feed rations. An assessment should be made of the types and breeds of animals that people are looking for. Such a program could probably be embedded in a program for biodiversity/conservation of genetic animal resources. Selected state or private farms could be contracted for producing and distributing such animals and actively promote the development of selection and breeding programs as described above.

93. **Government’s role in animal breeding to regulate, monitor and inform.** A legislative framework for private animal breeding, pedigree and production data recording, entry rules for animals to a herdbook should be developed. Breed standards should be designed, in cooperation with the private sector, to define exactly what type of animal should be selected based on local conditions.

**Desire to Adopt International Standards for Food Safety and Quality**

94. First priority for Kazakhstan before spending great effort at implementing ISO and HACCP standards sector wide is to improve the quality of production and rationalize the production systems. There is an enormous task to increase awareness among all stakeholders for aspects of food safety and quality. A strategic partner for government to achieve this is to team up with the various producers’, processors’ and consumer organizations. They are the natural partners to work on training, awareness raising and improvement of food safety and standards. In many Eastern European countries assistance programs have helped to create such liaison between public and private sector in order to improve the performance of a sector. The Ministry of Agriculture could try to facilitate their work and make sure that the most crucial parts of the chain are covered.

**Public and Private Tasks and Responsibilities in the various Services**

95. Many changes have taken place in the production and trading sector. Private entrepreneurs, traders and retailers have sprung up, laws have been modified and the still remaining government services continue their efforts to adopt. The government should clearly define which tasks, in the presence of a functioning private sector, can be left to the private sector and which should remain in the public sector. Food safety and epizootic disease prevention and control should remain government responsibility; also the protection of the environment, occupational safety and the development of a social safety net. Food quality control not related to food safety, set up of animal breeding, provision of advisory services, production increase for personal gain, trade in inputs and products are issues that should be left to the private sector.

96. The transition from Government to privately run services in these fields need to be gradually to be sure that services are available at all times. A clear plan with milestones and deadlines should be presented for the take over of such services from government. Some areas for which such plans are needed are:

- **Animal breeding services:** clear signals toward private breeders to take up responsibility for their own breeds and breeding programs are required; Artificial Insemination could be regulated in such a way that private individuals can get certified and registered to provide such services. A national breeding policy for the different species, together with modified breeding laws would give a clear signal toward the private sector to take up its responsibility and develop their activities and services.

- **Farmer advisory services:** advisory services are a grey area between the akimat’s offices, ministry representatives, former kolkhoz and sovkhoz employees and much of it rather informally. Only a clear policy and strategy for Agricultural Knowledge and Information System (AKIS) in Kazakhstan during the coming 10 years can give a clear signal to the private sector to develop its participation in advisory services and rural development.
Quality control systems: the most efficient way to improve quality is through price differentiation for different qualities of produce. The producer prices are paid by the private sector so this tool is in their hands; rather than government (wanting to) control product quality the government should limit itself to consumer protection through controlling the quality claims and standards of processors.

Auditing of quality systems: in most countries there is a system of accreditation of companies to audit and certify quality systems such as ISO, BRC, HACCP. For local companies to be able to compete with the foreign accredited certifying bodies in Kazakhstan, the new law on technical regulations could open the way for accrediting local certifying companies.
Kazakhstan’s Livestock Sector – Supporting Its Revival

Annex A - Data

A joint Sector Work of the
Joint Economic Research Program
The Government of Kazakhstan and the World Bank
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Annex I Economic and Sector Indicators

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Annex I - Economic and Sector Indicators

**Figure 1. GDP and Agricultural GDP Annual Growth**

![Graph showing GDP and Agricultural GDP growth from 1990 to 2002 with data points for each year.]

Source: World Bank, World Development Indicators

**Figure 2. Agriculture, Crop and Livestock Production Indices**

![Graph showing agricultural, crop, and livestock production indices from 1990 to 2003 with data points for each year.]

Source: FAO Statistical Database
Figure 3. Employment

Source: World Bank, World Development Indicators
Table 1. Inventory of Cattle, Sheep and Goats, Pigs, Horses, and Poultry, 1990-2002 (Head x 1000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle</th>
<th>Sheep &amp; goats</th>
<th>Pigs</th>
<th>Horses</th>
<th>Poultry (mln.heads)</th>
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<tbody>
<tr>
<td>1990</td>
<td>9757.2</td>
<td>35660.5</td>
<td>3223.8</td>
<td>1626.3</td>
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<td>1991</td>
<td>9592.4</td>
<td>34555.7</td>
<td>2976.1</td>
<td>1666.4</td>
<td>60</td>
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<td>1992</td>
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<td>34419.8</td>
<td>2591</td>
<td>1703.5</td>
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<td>1993</td>
<td>9346.6</td>
<td>34208.1</td>
<td>2445.2</td>
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<td>1982.7</td>
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<td>4528.4</td>
<td>11171.4</td>
<td>1206</td>
<td>1015.5</td>
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</tr>
</tbody>
</table>

Change 1990-2002 -53.6% -68.7% -62.6% -37.6% -60.3%

Data: Agency on Statistics of the Republic of Kazakhstan

Table 1a. Inventory by Farm Type
Agricultural Enterprises 1990-2002 (Head x 1000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle</th>
<th>Sheep &amp; goats</th>
<th>Pigs</th>
<th>Horses</th>
<th>Poultry (mln.heads)</th>
</tr>
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<tbody>
<tr>
<td>1990</td>
<td>6739.6</td>
<td>29249.4</td>
<td>2559.3</td>
<td>1115.3</td>
<td>39.9</td>
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<td>25873.9</td>
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<td>17165.1</td>
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<td>893.4</td>
<td>22.6</td>
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<td>11432.6</td>
<td>761.8</td>
<td>718.8</td>
<td>13.3</td>
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<td>5799.5</td>
<td>298.4</td>
<td>438.2</td>
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<td>921.8</td>
<td>2698.0</td>
<td>174.9</td>
<td>235.9</td>
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<td>1483.7</td>
<td>130.1</td>
<td>128.1</td>
<td>9.6</td>
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<td>1114.2</td>
<td>117.0</td>
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<td>344.4</td>
<td>949.8</td>
<td>103.0</td>
<td>72.7</td>
<td>9.6</td>
</tr>
<tr>
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<td>897.4</td>
<td>116.4</td>
<td>67.3</td>
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<td>2002</td>
<td>342.4</td>
<td>851.2</td>
<td>152.1</td>
<td>62.2</td>
<td>11.9</td>
</tr>
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Change 1990-2002 -94.9% -97.1% -94.1% -94.4% -70.3%

Data: Agency on Statistics of the Republic of Kazakhstan
### Table 1b. Inventory by Farm Type, Households Plots, 1990-2002 (Head x 1000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle</th>
<th>Sheep and goats</th>
<th>Pigs</th>
<th>Horses</th>
<th>Poultry (mln.heads)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>3012.6</td>
<td>6360.0</td>
<td>663.7</td>
<td>510.1</td>
<td>20.0</td>
</tr>
<tr>
<td>1991</td>
<td>3194.7</td>
<td>6950.1</td>
<td>698.0</td>
<td>569.5</td>
<td>19.7</td>
</tr>
<tr>
<td>1992</td>
<td>3452.5</td>
<td>7767.2</td>
<td>712.6</td>
<td>636.0</td>
<td>19.1</td>
</tr>
<tr>
<td>1993</td>
<td>3802.1</td>
<td>8523.3</td>
<td>805.0</td>
<td>708.6</td>
<td>18.2</td>
</tr>
<tr>
<td>1994</td>
<td>3556.7</td>
<td>7275.4</td>
<td>756.0</td>
<td>704.1</td>
<td>10.0</td>
</tr>
<tr>
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<td>3461.3</td>
<td>7031.3</td>
<td>845.2</td>
<td>760.0</td>
<td>7.4</td>
</tr>
<tr>
<td>1996</td>
<td>3304.4</td>
<td>6930.5</td>
<td>718.3</td>
<td>777.5</td>
<td>6.7</td>
</tr>
<tr>
<td>1997</td>
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<td>6815.8</td>
<td>733.4</td>
<td>759.2</td>
<td>7.2</td>
</tr>
<tr>
<td>1998</td>
<td>3214.4</td>
<td>7181.9</td>
<td>733.4</td>
<td>759.2</td>
<td>7.2</td>
</tr>
<tr>
<td>1999</td>
<td>3413.9</td>
<td>7675.4</td>
<td>839.0</td>
<td>793.5</td>
<td>9.1</td>
</tr>
<tr>
<td>2000</td>
<td>3552.7</td>
<td>8190.9</td>
<td>941.3</td>
<td>824.5</td>
<td>9.9</td>
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<tr>
<td>2001</td>
<td>3722.1</td>
<td>8560.8</td>
<td>981.9</td>
<td>834.8</td>
<td>11.0</td>
</tr>
<tr>
<td>2002</td>
<td>3914.3</td>
<td>9081.0</td>
<td>1011.9</td>
<td>854.1</td>
<td>11.6</td>
</tr>
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</table>

Change 1990-2002 29.9% 42.8% 52.5% 67.4% -41.9%

Data: Agency on Statistics of the Republic of Kazakhstan

### Table 1c. Inventory by Farm Type, Individual (peasant) Farms, 1990-2002 (Head x 1000)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cattle</th>
<th>Sheep and goats</th>
<th>Pigs</th>
<th>Horses</th>
<th>Poultry (mln.heads)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>5.0</td>
<td>51.1</td>
<td>0.8</td>
<td>0.9</td>
<td>0</td>
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<tr>
<td>1991</td>
<td>33.4</td>
<td>432.2</td>
<td>6.1</td>
<td>10.3</td>
<td>0</td>
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<td>1992</td>
<td>69.0</td>
<td>778.7</td>
<td>12.4</td>
<td>29.5</td>
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<tr>
<td>1993</td>
<td>88.4</td>
<td>827.9</td>
<td>14.2</td>
<td>35.3</td>
<td>0.3</td>
</tr>
<tr>
<td>1994</td>
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<td>691.6</td>
<td>11.0</td>
<td>38.5</td>
<td>0.1</td>
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<tr>
<td>1995</td>
<td>157.5</td>
<td>1120.0</td>
<td>15.7</td>
<td>78.1</td>
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<tr>
<td>1996</td>
<td>226.4</td>
<td>949.4</td>
<td>19.8</td>
<td>94.3</td>
<td>0.2</td>
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<td>1997</td>
<td>243.9</td>
<td>870.5</td>
<td>28.6</td>
<td>96.7</td>
<td>0.2</td>
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<td>242.0</td>
<td>860.9</td>
<td>28.3</td>
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<td>0.2</td>
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<tr>
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<td>0.2</td>
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<td>2000</td>
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<td>840.4</td>
<td>31.7</td>
<td>78.8</td>
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<tr>
<td>2001</td>
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<td>941.8</td>
<td>32.6</td>
<td>83.4</td>
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<td>2002</td>
<td>271.7</td>
<td>1239.2</td>
<td>42.0</td>
<td>99.2</td>
<td>0.27</td>
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Change 1990-2002 5324% 2325% 5150% 10022% --

Data: Agency on Statistics of the Republic of Kazakhstan
Strengthening Government’s Role in Livestock Development

Figure 4. Change in cattle inventory by oblast

Figure 5. Change in cow inventory by oblast

Figure 6. Change in sheep/goat inventory by oblast
Table 2. Production of Animal Products in Kazakhstan (1000 Tons)

<table>
<thead>
<tr>
<th>Year</th>
<th>Beef</th>
<th>Milk</th>
<th>Mutton/goat meat</th>
<th>Pork</th>
<th>Horse,Camel,Yak meat</th>
<th>Poultry meat</th>
<th>Meat (sw)</th>
<th>Wool</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>707.8</td>
<td>5342</td>
<td>375.7</td>
<td>233.8</td>
<td>77.9</td>
<td>163.7</td>
<td>1559</td>
<td>107.9</td>
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<tr>
<td>1991</td>
<td>719.3</td>
<td>5555</td>
<td>359.7</td>
<td>222.5</td>
<td>71.6</td>
<td>150.9</td>
<td>1524</td>
<td>104.4</td>
</tr>
<tr>
<td>1992</td>
<td>590.8</td>
<td>5231</td>
<td>315.5</td>
<td>175.9</td>
<td>62.8</td>
<td>111.9</td>
<td>1257</td>
<td>96.5</td>
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<tr>
<td>1993</td>
<td>647.6</td>
<td>5576</td>
<td>343.5</td>
<td>159.9</td>
<td>66.9</td>
<td>93.1</td>
<td>1311</td>
<td>94.6</td>
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<td>607.3</td>
<td>5296</td>
<td>297.9</td>
<td>121.7</td>
<td>69.5</td>
<td>1159</td>
<td>1159</td>
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<td>1995</td>
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<td>261.0</td>
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<td>63.04</td>
<td>96.5</td>
<td>985</td>
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<tr>
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<td>450.6</td>
<td>3627</td>
<td>212.9</td>
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<td>71.82</td>
<td>855</td>
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<td>398.2</td>
<td>3334</td>
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<td>81.9</td>
<td>71.3</td>
<td>718</td>
<td>718</td>
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<td>347.9</td>
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<td>76.9</td>
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<td>343.9</td>
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<td>98.7</td>
<td>97.7</td>
<td>65.4</td>
<td>635</td>
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<td>3774</td>
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<td>622</td>
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<td>654.5</td>
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<td>4068</td>
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<td>186.6</td>
<td>55.8</td>
<td>672.9</td>
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<td>24.8</td>
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Change 1990-2002: -58.2% -23.8% -75.1% -20.2% -28.4% -77.5% -56.8% -77.0%

Data: Agency on Statistics of the Republic of Kazakhstan

Table 3. National Productivity Levels

<table>
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<tr>
<td>C. Cattle</td>
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<tr>
<td>Milk yield</td>
<td>kg</td>
<td>1988</td>
<td>1934</td>
<td>1760</td>
<td>1767</td>
<td>1671</td>
<td>1642</td>
<td>1504</td>
<td>1558</td>
<td>1775</td>
<td>1913</td>
<td>1969</td>
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<tr>
<td>Calving rate</td>
<td>%</td>
<td>nd</td>
<td>80%</td>
<td>73%</td>
<td>73%</td>
<td>67%</td>
<td>66%</td>
<td>65%</td>
<td>72%</td>
<td>75%</td>
<td>79%</td>
<td>84%</td>
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<tr>
<td>Slaughter weight</td>
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<td>nd</td>
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<td>314</td>
<td>317</td>
<td>275</td>
<td>278</td>
<td>267</td>
<td>280</td>
<td>289</td>
<td>327</td>
<td>319</td>
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<td>D. Sheep</td>
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<td></td>
<td></td>
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<td>Wool yield</td>
<td>kg</td>
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<td>2.8</td>
<td>2.3</td>
<td>2.5</td>
<td>2.5</td>
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<td>2.8</td>
<td>3</td>
<td>3</td>
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<tr>
<td>Lambing</td>
<td>%</td>
<td>nd</td>
<td>98%</td>
<td>94%</td>
<td>95%</td>
<td>79%</td>
<td>85%</td>
<td>89%</td>
<td>99%</td>
<td>94%</td>
<td>95%</td>
<td>96%</td>
</tr>
<tr>
<td>Slaughter weight</td>
<td>kg</td>
<td>3</td>
<td>37</td>
<td>39</td>
<td>37</td>
<td>32</td>
<td>35</td>
<td>34</td>
<td>37</td>
<td>38</td>
<td>41</td>
<td>39</td>
</tr>
<tr>
<td>E. Pigs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Litter size</td>
<td>n</td>
<td>nd</td>
<td>9.79</td>
<td>8.48</td>
<td>8.2</td>
<td>8.76</td>
<td>8.58</td>
<td>8.81</td>
<td>7.56</td>
<td>8.45</td>
<td>8.44</td>
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<tr>
<td>Slaughter weight</td>
<td>kg</td>
<td>nd</td>
<td>102</td>
<td>90</td>
<td>94</td>
<td>86</td>
<td>80</td>
<td>84</td>
<td>84</td>
<td>94</td>
<td>103</td>
<td>98</td>
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<tr>
<td>F. Poultry</td>
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<td></td>
<td></td>
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</tr>
<tr>
<td>Yield eggs/year</td>
<td>n</td>
<td>234</td>
<td>229</td>
<td>nd</td>
<td>170</td>
<td>150</td>
<td>148</td>
<td>147</td>
<td>165</td>
<td>173</td>
<td>170</td>
<td>180</td>
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Table 4. Import and Export of Live Animals and Major Animal Products (1998-2001)

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</thead>
<tbody>
<tr>
<td></td>
<td>MT</td>
<td>1000 US$</td>
<td>MT</td>
<td>1000 US$</td>
<td>MT</td>
</tr>
<tr>
<td>Meat and byproducts, foodstuff fresh,</td>
<td>11,505.4</td>
<td>16,346.0</td>
<td>12,512.7</td>
<td>11,335.9</td>
<td>963.8</td>
</tr>
<tr>
<td>frozen, or cooled</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4,273.4</td>
</tr>
<tr>
<td>Butter and other dairy fats</td>
<td>564.0</td>
<td>820.2</td>
<td>0.5</td>
<td>1.0</td>
<td>26.1</td>
</tr>
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<td>Cheese and related products</td>
<td>352.5</td>
<td>566.6</td>
<td>554.4</td>
<td>506.4</td>
<td>488.4</td>
</tr>
<tr>
<td>Canned meat, meat byproduct or blood</td>
<td>96.3</td>
<td>196.3</td>
<td>125.4</td>
<td>154.9</td>
<td>166.9</td>
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<tr>
<td>Forage and fodder</td>
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<td>591.6</td>
<td>406.4</td>
<td>102.4</td>
<td>791.9</td>
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<tr>
<td>Hides with hairy or non-hairy covering</td>
<td>50,670.3</td>
<td>32,440.2</td>
<td>58,134.9</td>
<td>24,737.2</td>
<td>51,209.2</td>
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<td>Wool</td>
<td>8,436.5</td>
<td>5,403.4</td>
<td>17,235.5</td>
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<td>10,625.6</td>
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<tr>
<td>Import</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Meat and byproducts, foodstuff fresh,</td>
<td>31,716.4</td>
<td>32,086.2</td>
<td>14,663.1</td>
<td>11,472.4</td>
<td>22,094.4</td>
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<td>frozen, or cooled</td>
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<td></td>
<td></td>
<td></td>
<td>35,815.5</td>
</tr>
<tr>
<td>Milk and cream, condensed or non</td>
<td>19,253.6</td>
<td>12,272.0</td>
<td>21,238.8</td>
<td>12,361.7</td>
<td>32,137.7</td>
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<td>condensed</td>
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<td>35,419.4</td>
</tr>
<tr>
<td>Buttermilk, curd, yogurt, kefir and</td>
<td>2,847.5</td>
<td>3,154.9</td>
<td>2,727.4</td>
<td>2,278.2</td>
<td>3,285.9</td>
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<td>related byproducts</td>
<td>3,928.5</td>
<td>6,636.1</td>
<td>3,043.8</td>
<td>4,645.2</td>
<td>7,423.3</td>
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<tr>
<td>Sausages and similar meat products,</td>
<td>2,898.5</td>
<td>4,573.5</td>
<td>2,793.3</td>
<td>3,431.2</td>
<td>7,887.2</td>
</tr>
<tr>
<td>ready foodstuff</td>
<td>4,227.0</td>
<td>4,763.7</td>
<td>3,057.5</td>
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<td>2,732.3</td>
</tr>
<tr>
<td>Wool</td>
<td>208.4</td>
<td>134.9</td>
<td>336.0</td>
<td>63.9</td>
<td>767.7</td>
</tr>
</tbody>
</table>

Data: Agency on Statistics of the Republic of Kazakhstan
Annex II – Marketing Channels in Kazakhstan

This Annex describes the results of a livestock marketing survey undertaken by BISAM Central Asia in Kazakhstan in June 2003. The foci of the survey were to identify:

- The nature and conditions of the current marketing systems for livestock products in Kazakhstan.
- Major constraints to efficient marketing performance and key challenges for the future.

15. Background

Kazakhstan has suffered a significant economic contraction following its independence after the break-up of the FSU. The livestock sector was noticeably one of the primary sectors affected by this contraction, and Kazakhstan switched from a net regional exporter of livestock products in the FSU, to a net importer. Herders started liquidating their animal assets, processing plants either functioned at very low capacity rates, or shut down completely. As a result, livestock inventories dwindled to all time lows and meat, milk, and wool production decreased significantly making room for increased imports.

A series of measures have halted this downward spiral, especially in the last three years, and given hope that the livestock sector could recover. This has also been driven by favorable economic conditions, increase in real GDP and purchasing capacity triggering higher demand for quality products. The livestock sector responded, albeit slowly, by an increase in inventory that generated a rise in livestock products. For instance, milk production went up by 16 percent from 1999 to 2002, wool production increased by 11 percent and meat production by 7 percent over the same period.

Going up on the supply chain, it is not evident that the marketing channels are adjusting at the same speed, though they are in transition. Prior to 1991, animals were raised on large farms, which were required to supply live animals and animal products to large processing plants. The current distribution of livestock reveals that agricultural enterprises, which used to own 70 percent of the cattle in 1990 saw their share tumbled down to single digit figures. On the other hand, the share of cattle ownership for family farms went up from less than 30 percent in 1990 to more than 80 percent in 2002. This drastic change in market suppliers necessarily requires an adaptive market infrastructure to optimize marketing efficiency and value added returns. A preliminary observation indicates that livestock products markets face considerable constraints and challenges such as the lack of marketing experience by a vast majority of suppliers and traders, high transaction costs, lack of standards, limited access to credit, and corruption.

The chapter is based on the survey executed by BISAM, in consultation with the World Bank, on the nature of livestock marketing and internal trade in Kazakhstan. Interviews were carried out across five oblasts representing the major regions in Kazakhstan. Two rayons per oblast were selected, one close to the oblast center and the other distant from it. The total sample size is 390 distributed into 78 interviewees per oblast. The categories of people surveyed included heads of households, heads of enterprises, traders, managers of meat processing enterprises, and managers of supermarkets and retail stores. Interviewees were asked to describe their purchasing and marketing practices, and to identify marketing challenges and constraints.

16. Nature of livestock products marketing in Kazakhstan

The main marketing chains for the different livestock products in Kazakhstan are represented in Figures 10 a. 10.b. 10.c and 10.d below. The three major suppliers of livestock products are the households, small peasant (private) farms and the agricultural enterprises. The households group predominates the other two, as it owns more than 80 percent of the total cattle inventory.
According to the Poverty Assessment report prepared on Kazakhstan, the largest share of farmers' production is bound for home consumption, or what is represented in figure 11 above by subsistence farming. The sale to production ratios for meat, milk, and eggs were estimated at 0.36, 0.12, and 0.15 respectively.

Farmers and agricultural enterprises prefer to market the remaining of their production through middlemen-traders. Nevertheless some 37 percent of farm households and 17 percent of agricultural enterprises sell directly to processing plants procurers or to the wholesale markets.

Traders buy the production from households and then sell either to other dealers, wholesalers, and processors, who later sell it to supermarkets and food stores. Some middlemen-traders act themselves as bazaar vendors of the products they buy from different sources. Bazaars are local livestock markets, where sellers own a counter table (a trading spot) to market their products. Participants need to pay several fees, such as bazaar duties, to cover bazaar services, servicemen, and security. There is also a veterinary duty, and a fee per spot. Most local rural bazaars lack refrigeration and storage facilities.

Internal livestock trade appears to be geographically bound. The overwhelming majority of the middlemen traders act in the frames of their respective rayons. Very few traders appear to move from one rayon to another or across oblasts.

For those farm households and agricultural enterprises who choose to sell directly, they will have to contend with some additional hurdles. First, they often tend to be less experienced than traders, and not much aware of their legal rights, which subjects them to higher illegal duties and increased cost of transportation and marketing services. Second, in order for processors to buy from them directly, they need to be registered as legal entities, pay all the bazaars’ fees, and still cannot be guaranteed an available counter table.

17. Problems and Constraints of the Marketing system

The major deficiencies that inhibit efficiency and profitability of the livestock marketing system in Kazakhstan are as follows:

*Costly and poor Transportation infrastructure*

Perhaps, the major problem facing the marketing system is inadequate and costly transportation infrastructure. Along with other market risks, it is primarily the reason why nearly 80 percent of the production is consumed within the households. Even for traders, who purchase their products from households, they will have to travel for quite a distance, and incur considerable costs before they can sell on the market.

*Insufficient access to credit*

Only large trade and processing companies systematically use the banking services. The predominant majority of farmers, and agricultural enterprises do not approach the banks for the organization of internal trade. The data reveals that among households and individual middlemen-traders slightly more than 3 percent use banking services and 2 percent borrow from banks. There are often complains of high interest rates and unaccommodating loan terms.

*Inadequate Market information system*
The absence of a functional market information system adds to the risks of livestock product marketing. Price and demand fluctuations are difficult to adjust to. Even if some information exists out there, it is often the traders and the wholesalers who can access it and not the small farm household producers, who incidentally are the major suppliers.

**Lack of Marketing Know-how**

The marketing channels for Kazakhstan’s livestock products are still in state of transition. The majority of the market players have no significant market experience. The whole system is fairly recent. About ¾ of the middlemen and traders have been dealing with trade for less than five years. Shortages are also identified in skills for management, marketing and quality control.

**Fragmented livestock products marketing system**

Primarily for meat, and with the exception of few big players\(^{16}\), the market system seems to be highly fragmented. There are nearly no selling and/or marketing cooperatives that could facilitate the marketing activity. MOK appears to have no significant role in the Kazak livestock market.

The marketing channels are highly unorganized. Basically any market player can buy from another regardless where they stand on the marketing chain. A farmer can walk in a supermarket with his produce and sell it right on the spot. At the same time, a large food store would need to send his trading agents to another oblast to secure supplies. Products sometime pass through quite a number of re-sales before reaching the end markets. This inefficiency results in reduced marketing margins and lower profitability for farm households.

**Shortages in product supply**

Processors and food stores have often to deal with seasonal shortages in meat and milk supply. They send their trading agents to other oblasts and remote rayons in order to try to secure some production. More often they rely on imports to fill in the supply gaps. Some of the larger ones have resorted to backward integration in livestock production either directly or through their affiliates, to ensure produce availability.

**Price fluctuations and Weakness in demand**

Price fluctuations are mainly caused by the lack of equilibrium between supply and demand of livestock products throughout the year. There is poor planning on part of all market players involved in order to smooth out the production and marketing process across time in order to avoid seasonal surpluses and shortages, thus stabilizing quantities and reducing price variability.

The weakness in demand for meat and dairy products appears to be a deep-seated problem that will be addressed in part by economic policies that promote growth, stability and a favorable business environment. Livestock producers and middlemen traders find their major problem is low demand. The instability and primitive organizations of sales, consumer remoteness and inadequate transport and market information system contribute to this problem.

\(^{16}\) Becker & Company, Balapan farms, and Accept Agro are among the largest meat industries in Kazakhstan
18. **Figure 10. Marketing of Livestock Products in Kazakhstan**

**Fig 10.a. Meat**

![Diagram of Meat marketing in Kazakhstan](image)

**Fig 10.b. Meat- Poultry**

![Diagram of Poultry marketing in Kazakhstan](image)
Figure 10.c. Milk

Producer/home processing

Fresh

Producers

Fresh

Milk collection point

Fresh

Milk processing plant

Retail or supermarket

Fresh or milk products

Consumers

Fresh or milk products

Mega farms

Fresh or milk products

Mega farms/ own

Fresh or milk products

Institutional buyers

Source: Prepared by Task Team

Figure 10.d Wool

Artisanal processing

Producers

Traders

Posh Washing

Mainly export of washed wool

Storage on farm

MOK

Felt or knitted products

Source: Prepared by Task Team
Figure 11. Selected Livestock Value Chains
21.

22.

23.

24. Beef Value Chain

25.

26.

27.

28. Mutton Value Chain

29.
Source: Sadler, M. for ACP
### Table 1. Household Income structure

<table>
<thead>
<tr>
<th>Household Income Structure</th>
<th>All Rural</th>
<th>Rural Farming</th>
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</thead>
<tbody>
<tr>
<td>1 Pensions</td>
<td>18.42%</td>
<td>15.03%</td>
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<tr>
<td>2 Scholarships</td>
<td>0.08%</td>
<td>0.03%</td>
</tr>
<tr>
<td>3 Targeted social assistance</td>
<td>1.06%</td>
<td>1.74%</td>
</tr>
<tr>
<td>4 Housing assistance state social allowances</td>
<td>0.37%</td>
<td>0.02%</td>
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<tr>
<td>5 Special state benefits</td>
<td>1.47%</td>
<td>1.90%</td>
</tr>
<tr>
<td>6 Long-service bonus for military men, law-enforcement personnel</td>
<td>0.02%</td>
<td>0.03%</td>
</tr>
<tr>
<td>7 Sold own produced fruits, vegetables, grass</td>
<td>0.38%</td>
<td>0.76%</td>
</tr>
<tr>
<td>8 Value of sold live animals</td>
<td>4.25%</td>
<td>3.04%</td>
</tr>
<tr>
<td>9 Value of sold own produced meat, cheese, butter...</td>
<td>1.92%</td>
<td>4.52%</td>
</tr>
<tr>
<td>10 Value of sold reserved production</td>
<td>0.37%</td>
<td>0.85%</td>
</tr>
<tr>
<td>11 Alimony</td>
<td>0.31%</td>
<td>0.09%</td>
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<tr>
<td>12 Dividends, income from property, the real estate rental</td>
<td>0.35%</td>
<td>0.37%</td>
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<td>13 Assistance from relatives and friends</td>
<td>4.66%</td>
<td>3.65%</td>
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<tr>
<td>14 Payment for employment and ocasional earnings</td>
<td>47.99%</td>
<td>33.83%</td>
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<tr>
<td>15 Value of own consumption, gifts and in kind payment</td>
<td>18.29%</td>
<td>30.83%</td>
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Source: HBS

### Table 2. Agriculture Income Structure

<table>
<thead>
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<th>Agriculture Income Structure</th>
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</thead>
<tbody>
<tr>
<td>1 Sold Own produced fruits, vegetables, grass</td>
<td>11.00%</td>
</tr>
<tr>
<td>2 Value of sold live animals</td>
<td>24.61%</td>
</tr>
<tr>
<td>3 Value of sold own produced meat, cheese, butter</td>
<td>51.72%</td>
</tr>
<tr>
<td>4 Value of sold reserved production</td>
<td>12.66%</td>
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</table>

Source: HBS

### Table 3. Profitability of Different Farm Size Holdings

<table>
<thead>
<tr>
<th>Farm Size</th>
<th>Net Income (1000 Tenge/flock)</th>
<th>Return to Farm Labor (1000 Tenge/flock)</th>
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<tr>
<td>Sheep Flock (10)</td>
<td>14,646</td>
<td>642</td>
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<tr>
<td>Sheep Flock (20)</td>
<td>24,060</td>
<td>729</td>
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<tr>
<td>Dairy Cow (2)</td>
<td>56,558</td>
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<tr>
<td>Dairy Cow (10)</td>
<td>249,105</td>
<td>1,233</td>
</tr>
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</table>
Strengthening Government's Role in Livestock Development

Source: APPAPII- Economic Analysis

Chart 1: Profitability of Large and Medium Farms - Existing Situation

<table>
<thead>
<tr>
<th>Farm Type</th>
<th>Arable Land (ha)</th>
<th>Crops/Animals</th>
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</thead>
<tbody>
<tr>
<td>Northern-Large Farm</td>
<td>18800</td>
<td></td>
</tr>
<tr>
<td>Northern-Medium Farm</td>
<td>3292</td>
<td></td>
</tr>
<tr>
<td>Western-Medium Farm</td>
<td>2421</td>
<td></td>
</tr>
<tr>
<td>Eastern-Medium Farm</td>
<td>2262</td>
<td></td>
</tr>
<tr>
<td>Central-Medium Farm</td>
<td>2413</td>
<td></td>
</tr>
<tr>
<td>Southern-Medium Farm</td>
<td>1610</td>
<td></td>
</tr>
</tbody>
</table>

Chart 2: Profitability of Small Farms - Existing Situation

<table>
<thead>
<tr>
<th>Farm Type</th>
<th>Arable Land (ha)</th>
<th>Crops/Animals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Northern-Small Farm</td>
<td>170</td>
<td></td>
</tr>
<tr>
<td>Western-Small Farm</td>
<td>168</td>
<td></td>
</tr>
<tr>
<td>Eastern-Small Farm I</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>Eastern-Small Farm II</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>Central-Small Farm</td>
<td>137</td>
<td></td>
</tr>
<tr>
<td>Southern-Small Farm I</td>
<td>115</td>
<td></td>
</tr>
<tr>
<td>Southern-Small Farm II</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Southern-Small Farm III</td>
<td>8</td>
<td></td>
</tr>
</tbody>
</table>

Gross Benefits | Cash Flow | Net Benefits
Kazakhstan’s Livestock Sector – Supporting Its Revival

Chart 3: Benefit/Cost Ratio - Existing Situation

- Northern-Large Farm (18800 ha of arable land)
- Northern-Medium Farm (3292 ha of arable land, 150 cows)
- Northern-Small Farm (170 ha of arable land, 4 cows)
- Western-Medium Farm (2421 ha of arable land, oilseeds, 10 cows)
- Western-Small Farm (168 ha of arable land, 4 cows)
- Eastern-Medium Farm (2262 ha of arable land, oilseeds, potato, 250 cows)
- Western-Small Farm (168 ha of arable land, 4 cows)
- Eastern-Medium Farm (2413 ha of arable land, oilseeds, 150 cows)
- Eastern-Small Farm II (25 ha of arable land, 4 cows)
- Eastern-Small Farm I (137 ha of arable land, 140 sheep)
- Eastern-Small Farm II (25 ha of arable land, 4 cows)
- Central-Small Farm (137 ha of arable land, 4 cows)
- Central-Medium Farm (2262 ha of arable land, oilseeds, potato, 250 cows)
- Central-Small Farm (137 ha of arable land, 4 cows)
- Southern-Medium Farm (1610 ha of arable land, oilseeds, soy, veg, 80 cows)
- Southern-Small Farm I (115 ha of arable land, 150 sheep)
- Southern-Small Farm II (8 ha of arable land, fruit, 10 cows)
- Southern-Small Farm III (8 ha of arable land, cotton, 20 sheep)

Source: APAPP II – Economic and Financial Calculations, 2004
Annex IV  Livestock Processing, Research Institutions, Breeding and Veterinary Stations

Registered Processing Facilities for Livestock Products

Current situation
There are 220 enterprises producing meat products (of which 68 are large and medium), the aggregate capacity is 687.6 tons per shift, however capacity is used to 10% only including production of meat and food products of all type of livestock (209.5 thousand tons), canned meat (37.2 thousand tons) and sausage of all types (48.2 thousand tons).

There are 195 acting enterprises processing dairy products (of which 46 are large and medium), the aggregate capacity (1,271.7 thousand tons of milk) is utilized for liquid milk and cream processing facilities (294.9 thousand tons), butter (30.9 thousand tons), and cheese (10,9 thousand tons).

There are 10 acting enterprises processing hides (of which 3 are large and medium), their aggregate capacity is 118.6 tons per shift.

The usual legal form of these enterprises is Limited Liability Partnership. Large enterprises are joint stock companies. All large enterprises are formed on the basis of existing facilities that used to operate during Soviet times. There was no formal survey to determine the portion of facilities built in Soviet times and new facilities, but as estimated by MOA experts about 70% of the existing facilities are from Soviet times, however, 60% of its equipment underwent some kind of rehabilitation or renewal.

Government Rehabilitation Plan
Before creating new facilities it is planned to rehabilitate existing but idle capacity. Priority state support for dairy products will be provided in regions with excessive milk supply: North Kazakhstan, Pavlodar, Almaty and Kostanay oblasts. For meat production Almaty, West Kazakhstan, Kostanay, North Kazakhstan, Pavlodar, Aktobe and East Kazakhstan are more suitable. Hide processing are to be rehabilitated in East Kazakhstan and Zhambyl oblasts.

Processing of Livestock Products in 2001-2002

<table>
<thead>
<tr>
<th>Item</th>
<th>Unit</th>
<th>Production, total</th>
<th>Processed</th>
<th>Share of processing %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat</td>
<td>tons</td>
<td>615800</td>
<td>635700</td>
<td>16430</td>
</tr>
<tr>
<td>Milk</td>
<td>tons</td>
<td>3876000</td>
<td>4068200</td>
<td>341960.6</td>
</tr>
<tr>
<td>Wool</td>
<td>thousand tons</td>
<td>22.8</td>
<td>23.8</td>
<td>4.0</td>
</tr>
<tr>
<td>Hides, cattle</td>
<td>thousand pieces</td>
<td>1976.2</td>
<td>1996.2</td>
<td>153.8</td>
</tr>
<tr>
<td>Hides, small livestock</td>
<td>thousand pieces</td>
<td>5300</td>
<td>5567.4</td>
<td>54</td>
</tr>
</tbody>
</table>
Livestock Research Institutions

The Ministry of Agriculture manages all agrarian Research Institutions. The Ministry of Agriculture created Science and Technology Board to coordinate agrarian research. The Board conducted analysis of activities of existing institution and concluded that major change was necessary in the agrarian science management system. Many of the research institutions have limited staff potential and obsolete material base, research topics are fragmented and of little significance for producers. In order to streamline scientific potential 30 research organizations were reorganized to create 9 Science and Production Centers and 1 Institute. Former independent organizations merged to centers, however physical location of facilities that were located in regions didn’t change. They formed daughter institutions with some kind of autonomy but all their researches have to be cleared by the centers. Different institutions located nearby Almaty merged physically or were liquidated. Furthermore, at the moment the Ministry of Agriculture is supervising activities of 37 experimental enterprises (26 experimental farms and 11 experimental station) which are also engaged in agricultural research.

List of Science and Production Centers making research on of relevance to livestock and veterinary:

1. The Republican State Enterprise “Science and Production Centers of Livestock and Veterinary”, Almaty. The Center has facilities in Almaty, Almaty oblast, North, South, East Kazakhstan oblast and Kostanay oblast. There are two daughter institutions: “Scientific research veterinary institute” and “North Kazakhstan scientific research institute of livestock and veterinary”.
2. The Republican State Enterprise “Science and Production Centers of Processing and Food Industry”, Almaty.
3. The Republican State Enterprise “South-West Science and Production Agricultural Center”, Chymkent. The Center conducts research in sheep breeding and hide processing.
4. The Republican State Enterprise “Science and Production Center of mechanization of agriculture”, Almaty.
5. The State Enterprise “Central Kazakhstan scientific research institute of agriculture”, Karaganda oblast.
6. Agricultural experimental stations in Aktobe oblast, Kostanay oblast (Arkalyk, Komsomol and Zhetygarin rayon), Zhambyl oblast, South Kazakhstan oblast (Saryagash and Mahtaaral rayon), North Kazakhstan oblast (Akkainsk and Tayinshinskiy rayon), Akmola oblast, West Kazakhstan oblast.
7. State breeding plant “Kamenskiy” of The Kazak scientific research institute of livestock, Almaty oblast.
8. Experimental farm named after Mynbayev of the Kazak scientific research institute of sheep breeding, Almaty oblast.
10. Experimental farm “Zarechnoye”, Kostanay oblast
11. Experimental farm “Irtyshskoye”, Pavlodar oblast
12. Experimental farm “Birlikskiy” and “Akdalinskiy” of the Kazak scientific research institute of Karakul farming, South Kazakhstan oblast
13. Experimental farms “Kelesskiy”, “Altyntubinskiy” and named after Konysbayev of the South Kazakhstan scientific research institute, South Kazakhstan oblast.

Some of these stations may be more crop oriented.
Kazakhstan’s Current Livestock Breeding Program

Ministry of Agriculture of the Republic of Kazakhstan

National and regional breeding centers (OJSC Asyl Tulik, LLC Asyl, etc.)

RSE research-and-production centers and selection-and-genetic centers

Program of selection-and-pedigree work in livestock sectors

Use of herd sires of improving breeds from local and global gene pool

Farms
Artificial insemination

Improved stock of animals

Breeding farms
Cross Breeding on order

Breed type

Improved stock of animals

Households
Artificial insemination, rent of sires

Exclusion of low productive animals from breeding

Increased number of pedigree animals
## Strengthening Government’s Role in Livestock Development

### Breeding Stations by Oblast and Animal Type

<table>
<thead>
<tr>
<th>Oblast</th>
<th>Total</th>
<th>Horse</th>
<th>Beef</th>
<th>Dairy</th>
<th>Mixed</th>
<th>Wool</th>
<th>Meat</th>
<th>Goat</th>
<th>Pigs</th>
<th>Poultry</th>
<th>Camel</th>
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* = Includes stations that breed cattle as well as horses
** = Includes stations that breed sheep as well as horses

### Livestock breeding stations by management type

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LLC = Limited Liability Company: common form of ownership in commercial medium-sized enterprises and firms.

SM = Cooperative: small and medium sized, most are remnants of Soviet collective farms; they work just like ordinary rural cooperatives

SP = Special Partnership

PPF = Private Peasant Farms: small and low medium sized, usually there is one owner or family owned
Program for Promoting Purchase of Pure Bred Animals 2001-2005

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### Strengthening Government's Role in Livestock Development

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#### Grand total

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Veterinary Inspectors in Rural Districts

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<th>Additional number of rural veterinary inspectors introduced in 2002 from the Republican budget</th>
<th>Total number of veterinary inspectors in rural administrative districts</th>
<th>Percentage of coverage of veterinary inspectors in rural and village districts</th>
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<td>Working at present</td>
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<tr>
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<tr>
<td>Kostanai</td>
<td>204</td>
<td>62</td>
<td>62</td>
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</tr>
<tr>
<td>Kyzylorda</td>
<td>102</td>
<td>32</td>
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<tr>
<td>Mangystau</td>
<td>33</td>
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<td>12</td>
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<td>Pavlodar</td>
<td>172</td>
<td>31</td>
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<td>84</td>
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<tr>
<td>North-Kazakhstan</td>
<td>199</td>
<td>44</td>
<td>44</td>
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<td>South-Kazakhstan</td>
<td>184</td>
<td>32</td>
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<td>105</td>
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<tr>
<td>Almaty City</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
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</tr>
<tr>
<td>Astana City</td>
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<td>Total</td>
<td>2319</td>
<td>567</td>
<td>567</td>
<td>1000</td>
<td>90</td>
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</tbody>
</table>
Number of Veterinary Specialists Operating in the Private Sector by Region as per March 1, 2000

<table>
<thead>
<tr>
<th>G. Regions</th>
<th>Total number of license-holders</th>
<th>H. Breakdown of license-holders</th>
<th>I. Number of limited liability companies and KGKP and veterinary specialists employed by them</th>
<th>Total number of veterinary specialists employed by LCCs and KGKP</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>Legal entities (license-holders)</td>
<td>Veterinary specialists employed by legal entities</td>
<td>Individuals (license-holders)</td>
</tr>
<tr>
<td>Akmola</td>
<td>275</td>
<td>8</td>
<td>116</td>
<td>267</td>
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<tr>
<td>Aktobe</td>
<td>300</td>
<td>19</td>
<td>21</td>
<td>281</td>
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<td>Almaty</td>
<td>382</td>
<td>4</td>
<td>54</td>
<td>378</td>
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<tr>
<td>Atyrau</td>
<td>120</td>
<td>1</td>
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<td>119</td>
</tr>
<tr>
<td>East-Kazakhstan</td>
<td>756</td>
<td>43</td>
<td>52</td>
<td>713</td>
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<tr>
<td>Zhambyl</td>
<td>309</td>
<td>3</td>
<td>28</td>
<td>306</td>
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<tr>
<td>West-Kazakhstan</td>
<td>140</td>
<td>27</td>
<td>423</td>
<td>113</td>
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<tr>
<td>Karaganda</td>
<td>311</td>
<td>17</td>
<td>68</td>
<td>294</td>
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<tr>
<td>Kostanai</td>
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<td>10</td>
<td>114</td>
<td>112</td>
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<td>Kyzylorda</td>
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<td>12</td>
<td>208</td>
<td>246</td>
</tr>
<tr>
<td>Mangystau</td>
<td>27</td>
<td>1</td>
<td>9</td>
<td>26</td>
</tr>
<tr>
<td>Pavlodar</td>
<td>336</td>
<td>30</td>
<td>60</td>
<td>306</td>
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<tr>
<td>North-Kazakhstan</td>
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<td>5</td>
<td>404</td>
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<tr>
<td>South-Kazakhstan</td>
<td>653</td>
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<td>269</td>
<td>638</td>
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<tr>
<td>Almaty City</td>
<td>65</td>
<td>44</td>
<td>146</td>
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<td>Astana City</td>
<td>12</td>
<td>2</td>
<td>9</td>
<td>10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>4475</strong></td>
<td><strong>241</strong></td>
<td><strong>1610</strong></td>
<td><strong>4234</strong></td>
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### Annex V  Livestock Legislation and Taxation

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Document #</th>
<th>Date of adoption</th>
<th>Date of change</th>
<th>Major issues</th>
</tr>
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<tbody>
<tr>
<td><strong>Laws</strong></td>
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<tr>
<td>Law of the Republic of Kazakhstan on animal breeding</td>
<td>N 278-1</td>
<td>09.05.1998</td>
<td>14.12.2001</td>
<td>The law is basic legal document in animal breeding. It defines: interpretation of various law-terms related to animal breeding, sphere of competence of the state agency, rules of state inspection and state regulation of animal breeding, ground for recognition of animal related material as breeding material, principal distinctions of various enterprises engaged in animal breeding</td>
</tr>
<tr>
<td>Law of the Republic of Kazakhstan on animal health</td>
<td>N 339-II</td>
<td>10.07.2002</td>
<td></td>
<td>The law defines basic principles of animal husbandry, competence and authority of state agencies in veterinary issues</td>
</tr>
<tr>
<td><strong>Regulations</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Governmental resolution on Rules of awarding different statuses of animal breeding enterprises</td>
<td># 1061</td>
<td>26.09.2002</td>
<td></td>
<td>The rules specify scheme of status awarding, requirements to different types of animal breeding enterprises, and also regulate attestation procedures</td>
</tr>
<tr>
<td>Order of MOA about Rules on livestock and livestock related product quarantine in case of epizootic disease outbreaks</td>
<td># 27</td>
<td>12.03.1997</td>
<td></td>
<td>The order defines terms of livestock alienation, conditions of compensation, competence of veterinary inspectors in case of epizooty</td>
</tr>
<tr>
<td>Order of MOA about State inspector of livestock breeding at local level</td>
<td># 347</td>
<td>30.10.2002</td>
<td></td>
<td>The order defines terms and competence of state breeding inspectors at the local level and procedures for their appointment</td>
</tr>
<tr>
<td>Order of MOA about Regulating the base of livestock breeding</td>
<td># 192</td>
<td>28.06.2001</td>
<td>19.03.2002</td>
<td>The order identifies livestock enterprises that gained the status of a breeding farm</td>
</tr>
<tr>
<td>Order of MOA about the Livestock department of MOA</td>
<td># 350</td>
<td>06.11.2001</td>
<td></td>
<td>The order determines provisions for the livestock department and its sphere of competence and tasks</td>
</tr>
<tr>
<td>Order of MOA about Rules on carrying out the expertise of selection achievements in livestock</td>
<td># 237</td>
<td>06.08.2001</td>
<td>24.10.2002</td>
<td>The rules define terms of conducting expertise of selection achievements and regulates keeping of state register of purebred animals</td>
</tr>
<tr>
<td>Order of MOA on Rules of issuing of special permission to render services on defining breeding value</td>
<td># 188</td>
<td>02.08.2000</td>
<td></td>
<td>The order regulates legal entities and individuals that provide animal breeding services, including definition of necessary qualifications and experience.</td>
</tr>
<tr>
<td>Rules of keeping of state register of breeding animals</td>
<td># 329</td>
<td>18.10.2002</td>
<td>22.11.2002</td>
<td>Rules defines principles of state register keeping, terms of recording and record keeping and use of recorded information</td>
</tr>
<tr>
<td>Veterinary requirements about terms of import of veterinary material and feed for nonproductive animals</td>
<td># 13-8-01/3-7</td>
<td>06.04.2000</td>
<td></td>
<td>The requirements approved by Intergovernmental Board of CIS countries and define terms of import of veterinary materials and items to be certified prior to import</td>
</tr>
<tr>
<td>Order of MOA about establishing forms of the State register of breeding herds and keeping record of breeding animals</td>
<td># 224</td>
<td>26.07.2001</td>
<td></td>
<td>The order establishes a format for state register of breeding herds and keeping record of breeding animal and provides instructions for feeling this forms</td>
</tr>
<tr>
<td>Document Name</td>
<td>Document #</td>
<td>Date of adoption</td>
<td>Date of change</td>
<td>Major issues</td>
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<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>------------------</td>
<td>----------------</td>
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<tr>
<td>Order of MOA on some issues in livestock breeding</td>
<td># 112</td>
<td>05.03.2003</td>
<td></td>
<td>The order establishes the form of application for awarding different statuses of animal breeding enterprises, the form of conclusion of expert committee on awarding statuses of breeding enterprises and other related forms</td>
</tr>
<tr>
<td>Government resolution on Rules of 2003 budget funds allocations for preservation and development of elite seed production and livestock breeding</td>
<td># 227</td>
<td>07.03.2003</td>
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<td>The resolution determines eligibility conditions for claiming budget subsidy and procedures of funds disbursement for support of elite seed and purebred animals</td>
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<tr>
<td>Order of MOA about establishing minimum requirements to be met by candidates for different statuses of breeding enterprises</td>
<td># 152</td>
<td>25.03.2003</td>
<td></td>
<td>The order provides minimum qualitative and quantitative criteria of productivity necessary for gaining the statuses of breeding factory and breeding enterprise</td>
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<tr>
<td>Order of MOA about the Rules to conduct expertise of selection achievements in livestock to determine its usefulness</td>
<td># 152</td>
<td>03.07.2003</td>
<td></td>
<td>The order determines rules to conduct expertise of selection achievements in livestock and rules of keeping the journal of selection achievements</td>
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<tr>
<td>Government recommendations</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Joint order of MOA and M of Education on recommendations for allocation and use of gene pool of crops and livestock</td>
<td># 155 and # 408</td>
<td>30.05.2001</td>
<td></td>
<td>The order explicitly recommends certain types of crops and livestock to be bred in different oblasts and rayons</td>
</tr>
<tr>
<td>Order of MOA on list of normative acts in livestock field</td>
<td># 162</td>
<td>16.06.2000</td>
<td></td>
<td>Establish a list of normative documents in livestock breeding: instruction on appraisal of agricultural livestock, instruction on artificial insemination, terms of testing and selection achievements in livestock industry, list of breeding certificates.</td>
</tr>
<tr>
<td>Recommendation on creation of a dairy herd, breeding work and livestock reproduction in farms and private households</td>
<td></td>
<td>2000</td>
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<td>Recommendations on livestock husbandry, it contains extension information about different breeds, instructions for better livestock care</td>
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<td>Instruction about prevention of helminth contamination</td>
<td></td>
<td>30.12.1981</td>
<td></td>
<td>Instruction explicitly prescribes actions to be undertaken to prevent helminth infection in livestock</td>
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<tr>
<td>Government resolutions</td>
<td></td>
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<td></td>
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<tr>
<td>Governmental resolution on provision of credit to livestock producers</td>
<td># 277</td>
<td>06.03.2002</td>
<td></td>
<td>The resolution prescribes allocation of 500 mln KZT of budget funds (for the year 2002) to Mal Onimderi Corporation as a loan with repayment period to 2007 for the purpose of production, purchasing and processing of livestock products</td>
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<tr>
<td>Governmental resolution to launch antidumping investigation for some types of livestock produces</td>
<td># 399</td>
<td>15.03.2000</td>
<td></td>
<td>Initiation of an investigation of alleged dumping of some meat-sausage products from CIS countries</td>
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<tr>
<td>Government resolution to approve a control program for tuberculosis and brucellosis in animals</td>
<td># 215</td>
<td>09.03.1999</td>
<td></td>
<td>The resolution approves the program for the tuberculosis and brucellosis control in agricultural livestock for the period 1999-2003 because of critical situation livestock producers faced</td>
</tr>
<tr>
<td>Governmental resolution about some issues of livestock development</td>
<td># 1089</td>
<td>09.07.1997</td>
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<td>The resolution defines some new tasks to various governmental bodies in order to stimulate livestock sector. The resolution envisages direct state aid to some enterprises that own old obsolete equipment.</td>
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<tr>
<td>Governmental resolution on measures undertaken to stabilize livestock husbandry and poultry</td>
<td># 1488</td>
<td>05.12.1996</td>
<td></td>
<td>This resolution prescribes MOA to identify state enterprises with obsolete equipment to transfer it to private sector for free</td>
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<tr>
<td>Document Name</td>
<td>Document #</td>
<td>Date of adoption</td>
<td>Date of change</td>
<td>Major issues</td>
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<td>------------------------------------------------------------------------------</td>
<td>------------</td>
<td>------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------</td>
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<tr>
<td>Order of MOA about bidding to select the bank for managing the credit for</td>
<td># 62</td>
<td>06.03.2002</td>
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<td>The order defines conditions for bidding process to select the bank - operator for Mal Onimderi</td>
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<tr>
<td>crediting Mal Onimderi )</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Decision of Akim of Almaty oblast about financial stimulation of livestock</td>
<td># 2-70</td>
<td>20.02.1998</td>
<td></td>
<td>The decision envisages financial incentives from the Almaty oblast budget for households that increase number of animals held</td>
</tr>
<tr>
<td>development</td>
<td></td>
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<tr>
<td>Order of MOA &quot;About creation of selection genetic centers&quot;</td>
<td># 376</td>
<td>14.07.2003</td>
<td></td>
<td>The order identifies conditions and provisions of operations of the selection genetic centers in the Republic of Kazakhstan</td>
</tr>
<tr>
<td>Order of MOA about attestation of</td>
<td># 264</td>
<td>14.05.2003</td>
<td></td>
<td>The order prescribes conduction of attestation of legal entities and individuals for granting statuses of breeding plant, breeding enterprise,</td>
</tr>
<tr>
<td>legal entities and individuals</td>
<td></td>
<td></td>
<td></td>
<td>breeding center, distribution center</td>
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<tr>
<td>International cooperation</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Agreement about Creation of Interstate reserve of biological preparation and</td>
<td>12.04.1996</td>
<td></td>
<td></td>
<td>To prevent epizootic diseases in any part of CIS the Interstate reserve of biological preparation and vaccines is created. The provisions of</td>
</tr>
<tr>
<td>vaccines of animal protection in CIS countries</td>
<td></td>
<td></td>
<td></td>
<td>the reserve is attached to the agreement</td>
</tr>
<tr>
<td>Agreement between governments of</td>
<td>15.08.1995</td>
<td></td>
<td></td>
<td>The agreement aimed to boost cooperation in epizootic prevention. The agreement envisages exchange of all relevant information in this sphere</td>
</tr>
<tr>
<td>Kazakhstan and Turkey in animal health field</td>
<td></td>
<td></td>
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</table>

* There are number of other agreements between GOK and different countries on cooperation in animal health.

**Special Tax Regime on the basis of integrated land tax payment**

- This regime affects activities related to the production, processing and sale of self-made agricultural products (except for the excised products).

- Enterprises affected are exempted from the following taxes:
  - individual income tax, VAT from income (transactions) of activities considered eligible under the special tax regime;
  - Tax on vehicles, property tax (within limits of requirement normative);
  - Payment for land plots usage.

- The rate of the integrated land tax is 0.1% of estimated land value. The rate of social tax is 20% of monthly calculation index (now 850 tenge) per

- Deadlines for payment of the integrated land tax:
  - 20 October current year and 20 March of the year next to the reported. *In this terms should be paid:* social tax, individual income tax, retained at the moment of payment, pension payments, payment for environment pollution and for usage of water resources from surface sources.

- Deadline for submission of declaration for the integrated land tax – 15 March of year next to the reported. *In this terms should be submitted:* the declaration for social tax, receipt for individual income tax, retained at the moment of payment, reports for the pension payments, payment for environment pollution and for usage of water from surface sources.

**Special Tax Regime on the basis of patent payment**

- This regime affects activities related to the production, processing and sale of self-made agricultural products (except for the excised products). Besides, social tax regime affects production, processing and sale of self-made poultry, breeding cattle, beekeeping.

- Patent cost includes:
  - Corporate income tax, VAT, social tax, property tax, land tax, tax on vehicles, payment for land plots usage.
  - The amount of tax and payments in calculation of patent is reduced on 80% compared to the normal regime.

- Deadlines for payment of the patent - 20 May, 20 October current year and 20 March the year next to the reported. *The latter two are for:* individual income tax, retained at the moment of payment, mandatory pension payments, payment for environment pollution and for usage of water resources from surface sources.

- For taxes included to the patent cost submission of declaration is not needed, except for the VAT. Declaration for VAT is submitted in accordance with general rules. In case of change of legal entity not later than 15 March the year next to the reported, the recalculated patent cost should be submitted.
## Customs Tariffs

<table>
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<tr>
<th>Product</th>
<th>Tariff (percent)</th>
<th>Date/year that tariff was set</th>
</tr>
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<tr>
<td><strong>Live animals (breeding stock)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Live cattle</td>
<td>0</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Live sheep</td>
<td>0</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Live horses</td>
<td>0</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Live pigs</td>
<td>0</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Live poultry</td>
<td>0</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Day old chicks</td>
<td>5</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td><strong>Live animals for slaughter</strong></td>
<td></td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td><strong>Animal products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meat</td>
<td>15 (but not less than € .15 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Beef</td>
<td>15 (but not less than € .15 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Mutton</td>
<td>15 (but not less than € .15 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Pork</td>
<td>15 (but not less than € .15 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Poultry meat</td>
<td>30 (but not less than € .25 per kg)</td>
<td>Resolution # 141 of 7 Feb. 2003</td>
</tr>
<tr>
<td><strong>Meat products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Canned meat</td>
<td>20 (but not less than € .5 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Sausages and processed meat</td>
<td>20 (but not less than € .4 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td><strong>Dairy products</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Butter</td>
<td>20 (but not less than € .3 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Cheese</td>
<td>15 (but not less than € .3 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Cream</td>
<td>15 (but not less than € .18 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Sour cream</td>
<td>15 (but not less than € .18 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Yogurt and kefir</td>
<td>15 (but not less than € .18 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Milk powder</td>
<td>15 (but not less than € .18 per kg)</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Eggs</td>
<td>15</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Hides and skins</td>
<td>5</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
<tr>
<td>Bovine semen</td>
<td>5</td>
<td>Resolution # 1389 of 14 Nov. 1996</td>
</tr>
</tbody>
</table>
Kazakhstan’s Livestock Sector – Supporting Its Revival

Annex B – Policy Notes

A joint Sector Work of the
Joint Economic Research Program
The Government of Kazakhstan and the World Bank
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Livestock Sector Policy Notes

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N. The Approach to Subsidization of Livestock Producers
O. What are the Different Objectives in the Livestock Sector in Kazakhstan?
P. Animal Health Policy
Q. Food Safety and Quality Standards
R. Food Quality
S. Feed Policy
T. Animal Breeding
U. Ingredients of a Livestock Law
V. Environmental Sustainability of Livestock Production
W. Livestock Sector - Potential Pilot Activities
31. The Macro-Economic Framework for Livestock Sector Policy and Interventions in Kazakhstan

Sustainable policies and interventions for the livestock sector must be grounded in a realistic view of the macro-economic framework, which will prevail for the sector over the medium and longer term. This note provides a view of what this macro-framework might look like and draws out the implications for livestock sector policy formulation and the design of specific interventions in the sector.

Two important developments are likely to shape the macro-economic framework for the livestock sector over the coming decade and beyond. These are (i) the implications of Kazakhstan’s rapidly expanding oil/gas sector, and (ii) the likely progression toward WTO accession.

1. Implications of the Oil/Gas Sector for the Livestock Sector

The rapid development of the oil and gas sector has profound implications for all sectors of the economy, and not least for agriculture including the livestock sector. The principal mechanisms through which oil/gas developments impact on the sector are through (a) the exchange rate, which is likely to appreciate potentially leading to the so-called “Dutch Disease”; (b) increased availability of revenues for the public sector budget at all levels (state, oblast, local), likely to be reflected in higher public investment in infrastructure, increased social services and social security provision etc.; and (c) accelerated growth of GDP per capita, reflected in a more rapid growth of the domestic market.

Dutch disease is not some rarified academic concept. It is a reality, which is already occurring in Kazakhstan. Recently the Central Bank has been intervening in the foreign exchange market in an attempt to reduce appreciation associated with the rise in energy prices over the past year, but this is unlikely to prove sustainable. Appreciation is likely to accelerate in the next few years as the full extent of the resultant financial inflows becomes manifest. It will be further exacerbated by high market oil prices, as at present. Appreciation of the exchange rate tends to negatively impact on domestic production of tradable commodities, including livestock and related products. Exchange rate appreciation lowers the value of exported products, measured in the domestic currency. It simultaneously reduces the cost of imports (again, measured in the domestic currency). So it tends to encourage imports and discourage exports.

In extreme form Dutch Disease destroys the domestic sectors of the economy producing tradeables, creating a nation dependent on imported food and other traded goods with exports concentrated increasingly in the energy sector. The Kazakh government is well aware of the

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18 The name derives from the experience of the Dutch economy in the 1970s when greatly increased revenues from natural gas pushed up the exchange rate (of the guilder) and led to a sharp decline in the productive sectors sector, which became uncompetitive as a result.
dangers of Dutch Disease, but has only limited policy options for reducing or mitigating its impact at the macroeconomic level. The effects for agriculture appear insufficiently analyzed so far.

2. Implications of Possible Accession to WTO

Kazakhstan is negotiating accession to the World Trade Organization (WTO). With a history of high state subsidization of the agricultural sector and the strong perception in Government of the need to restore high subsidy levels to the agricultural sector, accession negotiations are likely to remain difficult. A key question is whether and when Russia, Kazakhstan’s largest trading partner, will join.

Once Kazakhstan reaches a policy decision and a timetable for WTO accession there will be an immediate impact on the livestock sector, the effects of which will begin to be felt even prior to formal accession:

The scope for subsidization of the agricultural sector will be increasingly constrained over time. This will occur through several mechanisms, including: (a) the commitment to recent historical levels of subsidy as benchmark ceilings, with commitments to their reduction for important categories of subsidy; (b) the need to shift subsidy instrumentation toward forms acceptable to WTO partners and agreements; Likely easing of existing restrictions to accessibility of the Kazakh market to imports, through tariff reductions and through reduction of non-tariff barriers; The debarring of new subsidy schemes inconsistent with WTO principles.

3. Possible Effects on the Livestock Sector

To summaries the points made in the previous paragraphs it is clear that the livestock sector in Kazakhstan is about to be also affected. At the time when exchange rate appreciation and the implied Dutch Disease are raising the competitiveness threshold for exports and reducing the cost of imports, WTO accession will be reducing the flexibility with which the government can use subsidy instruments to promote livestock production, protect the domestic market and promote exports. Given these two key factors its is argued that planning for the livestock sector should be based on cautious projections of the scope for rapid export-led growth of the sector. A more likely scenario is that there will be continued and deepening import penetration of processed livestock products and that Kazakhstan’s livestock and allied products exporters will find it increasingly difficult to remain competitive. A positive feature of the macroeconomic environment is the likely rapid expansion of the domestic market, driven by rapidly rising public and private sector expenditure.

4. The Current Situation in the Livestock Sector
The dramatic collapse of livestock populations that followed on the farm restructuring process appeared to bottom out in 1999 and since then there has been a modest recovery in stock levels. It is widely presumed that the stock reductions constituted an “overshooting” of sustainable levels as a result of specific aspects of the farm restructuring process, such as the application of bankruptcy to accelerate the restructuring process. This view underlies the proposals in the Government’s Agriculture and Food Program (AFP) for 2003-2005 aiming to bring about a rapid rescaling upwards. This presumption needs to be approached with caution, as most agro-processors face demand-side constraints and problems to ensure adequate quality supply.

For processed products, as is noted in the AFP, a significant degree of import penetration has already occurred in most sub-sectors, primarily based on imports from Russia. This import dominance appears to be based on cost competitiveness of imports from Russia, where the process of post-transition investment in agro-processing started earlier based on higher domestic per capita incomes. With increased impact of Dutch disease it may be difficult for local processors to make progress in import substitution.

For exports, Kazakhstan was a significant exporter of meat and processed livestock products during the Soviet period, but almost exclusively to Russia. Russia is also expanding its livestock production with a view to becoming a regional supplier, and it is likely that new non-tariff barriers to trade have been erected during the period when Kazakhstan has been out of the market. So regaining market share is likely to be a difficult task, though not necessarily impossible.

The upshot of these observations is that the market for Kazak livestock sector products is likely to be closely based on growth of the domestic demand; it would be unwise to base sector development plans on a presumption that export-led growth can be stimulated through a supply-side based strategy alone. A more likely scenario is that the sector will find itself under strong competitive pressure in the domestic and export markets from lower priced foreign competition. The true potential for competitive exports in regional markets is not well documented and needs to be studied as a matter of priority.

5. The Need to Base Plans and Interventions on Underlying Comparative Advantage

The squeeze on the scope for subsidy-oriented policies, and the increased market pressure make it especially important that government plans for the sector be based on a correct analysis of underlying sources of comparative advantage. Failure to follow this precept is likely to lead to substantial waste of resources in promoting unsustainable production levels, modes and patterns. So a key question is what are the underlying sources of comparative advantage for the sector? While this question requires a detailed study for a conclusive answer, some important sources are likely to be:

The vast scope of extensive rangelands, which have been largely by-passed by the intensive orientation of the cattle sector that prevailed under the soviet era;
Kazakhstan’s Livestock Sector – Supporting Its Revival

The potential for smallholder households to rear at low cost using crop residues, fodder crops produced on farm as part of necessary crop rotations and using grazing in nearby land during the summer;
A third possible source of comparative advantage is for more intensive livestock operations linked to major grain sector enterprises (such as the large wheat farms of the northern wheat-belt), or the local availability in other parts of the country of feed such as cotton-seed (south) or sunflower-cake (in the north-east).

It has to be noted that none of these sources of comparative advantage favor the purposive creation of a large intensive cattle-rearing sector based on the use of 100% purchased animal feeds. Rather the way forward would appear to lie in the:

- Development of an extensive rangeland-based livestock sector; and
- Development of the profitability and contribution of livestock activities to smaller family mixed farming operations that exploit the synergies in production between crop and livestock activities.

6. Relation of Livestock Policy to Rural Livelihood and Environmental Management Objectives

The changes in farm structure of the past decade, and the inward movement of the farming frontier, as uneconomic farming areas have been abandoned, have changed the framework in which agricultural policies are set. There is now a substantial rural population whose livelihood depends on the productivity of their small family farms. In the years immediately following the break-up of the state and collective farms, such families were wholly dependent on their farming income, as support social payments from the state fell to negligible levels. However, with the advent of significant oil/gas sector financial flows it is expected that social service and pension provision will rise sharply, also affecting the living standards of the rural population. Agricultural policy, including livestock sector policy provides one means for addressing the income of this rural population. In other words, there is an important social dimension to agricultural and livestock policy.

In addition, the withdrawal of the farming frontier has left large tracts of the country (estimates vary 80 to 160 million hectares) of land, which are currently not farmed, even for livestock, posing an acute problem for environmental management. Livestock rearing on an extensive basis provides an important potential mechanism for maintaining these lands. In other words livestock policy should also embrace an environmental aspect.

7. Appropriate Objectives of Livestock Policy

Within the broad macro-economic framework set out above it is possible to identify in generic terms what policies are appropriate for the livestock sector. This can be captured in some guiding principles:
Sector policies should be based on and consistent with the further development of Kazakhstan’s new private sector orientation and structure of the livestock sector. There is no case for turning the clock back to state managed livestock operations;

Policies should promote and facilitate the emergence of livestock farming systems that are consistent with underlying long-term comparative advantage. In practice this means accelerated emergence of extensive-based livestock management and the development of the small-medium private sector;

Policies should aim at diversification of the sector as a strategy oriented toward risk reduction, at the national level and at the farm level.

Specific Areas for policy concentration, consistent with these guiding principles, are:

Policies and activities aimed at removing legal and other regulatory constraints to the emergence of extensive-based livestock production and processing operations, (such as measures to promote market entry, provide the legal basis for ranching, ease licensing etc.).

Measures aimed at development of the marketing system for livestock products for the small-medium farm sector, especially in the South and East of the country (see Note on Marketing).

Measures to facilitate access of livestock farmers to the widest and most appropriate inputs (see Notes on Feeding and Livestock Breeding).

Measures to create a level playing field for all producers and processors with no discrimination of small versus larger farms.

Ensuring that measures to improve safety and standards are only introduced on a phased basis, and affordable to producers, and that such measures are based on a proper cost-benefit analysis for different categories of producer and consumer groups with different priorities (see Note on Food Safety and Standards).

The Government should take the lead in reviewing the full range of options for supporting the livestock sector under conditions of Dutch Disease. Three broad approaches, can be identified (in order of desirability): (a) measures to boost competitiveness through productivity enhancement; (b) review of the tax system to remove areas where taxation, direct or indirect, is reducing sector profitability; and (c) programs of subsidization.

Review of incidence of the taxation system on the livestock sector to ensure that the tax system is not exacerbating the problem of Dutch Disease. Priority areas for attention are the scope for duty exemption (or zero tariff) on imported machinery and other inputs (such as breeding stock) and the possibility of mitigating the impact of VAT on the sector (domestic VAT and VAT imported inputs).
- Increased attention to the scope for improving export market access (especially to Kazakhstan’s major regional markets) through negotiations in the WTO accession process.
The dissolution of the central planned economy in the former Soviet Union resulted in severe shocks to various parts of the economy. In the first decade, especially the livestock sector experienced a variety of challenges that indicated an overcapacity under the new market conditions, and resulted in a contraction of the inventory and idling of supporting processing industry and services. Kazakhstan appears to be among the countries where the contraction of the livestock sector was the deepest and the most prolonged.

1. Reform and Reform Shocks

Agriculture and the livestock sector were exposed to, demand-side and supply side shocks during the transition. On the demand side, the shock was the decline in consumer income and purchasing power due to inflation, price liberalization, and abolishment of consumer subsidization. This was brought about by rapid inflation and increasing unemployment. Liberalization of prices initially caused a more rapid increase in consumer prices than in wages and salaries. Per capita consumption of livestock products dropped by about 40% from 1990 to 1998. In Kazakhstan, the decline in demand was further exacerbated by the lack of export demand. The export of meat (the major export product) mostly went to other Soviet countries that were struggling with the decline in consumer demand as well. Export of meat more or less halted as redirection of exports to non-FSU countries was complicated by landlocked location, low product standard, lack of experience in international trade, and increasing restrictions to free trade in the region. Low priced hides and skins were still traded internationally. The hides and skins were a less perishable and low priced commodity in oversupply (due to excess slaughter) in a sub-sector dominated by few processors that were used to procure goods in remote areas.

The supply side was affected by price liberalization resulting in an increase of input prices, and in a loss of the input and feed supply. The fairly mechanized livestock sector was affected by price increases in fuel, concentrate feed, feed ingredients and animal medicines. Energy- and feed-dependent-production systems such as poultry and pigs declined first. This was aggravated by the increased exposure to global trade with an increase in imports. These imports concerned products for the upscale urban markets, but also included importation of some low cost products (poultry parts, popularly known as “Bush legs”).

A third factor in the reform shocks was the privatization process of livestock and livestock farms. This applies in particular to Kazakhstan where many (grain) farms farmed marginal areas. The
declining terms of trade of farming, and a tightening monetary policy decreased, if not halted, the liquidity in rural areas. The introduction of the national currency in 1993 was a long process and led to an increasing lack of cash in rural areas causing an increase in barter trade in 1994/1995. This situation was aggravated due to a high budget deficit and the delayed payment of public salaries, pensions and other social payments. Barter became the main trading tool during 1993-1998 to pay for labor, pensioners and essential supplies. Many farms in the marginal areas went bankrupt and were further stripped of financial and physical assets. As most other farm assets were fairly unmovable, livestock, especially sheep, were the most liquid asset under the prevailing conditions and commonly used as a payment in kind. Farms tried to settle their farm debts – including payment of workers- by selling off livestock. Hence, the deep decline in sheep inventories, especially in the farming areas of Kazakhstan and similar areas in Russia and Ukraine. Mechanized grain farming interests prevailed over animal production and livestock was exchanged for essential farm inputs for grain farming (fuel and spare parts). The livestock assets of arable farms provided them a buffer to adapt to the new economic conditions. However, in many cases this buffer lasted not long enough to ensure survival.

This process slowly changed when macro-economic conditions improved, but temporarily set back after the “Russian crisis” in 1998. The Russian crisis and the devaluation of the Ruble resulted in a significant lower competitiveness of the Kazakh farmers and the food processing industry (especially dairy), especially affecting the northern oblasts. The terms of trade for these areas deteriorated sharply and the share of foodstuff imports rose fast. The devaluation of the Tenge was a very important factor in the recovery of agricultural production in the northern region. Whereas the decline in the livestock sector bottomed out in 1996-97 in southern oblasts such as Jambul, Almaty and South Kazakhstan, in the northern oblasts such as Pavlodar and Akmola, it bottomed out with a two-year delay (1997-1999; see also Annex figure 2). The development in the northern grain belt improved during 2001-2003 assisted by a period of high prices for wheat (which were in part related to developments on the world market and in part to State support for the grain sector). Overall, the process of contraction and rebound differed in different parts of the country.

X. The Initial Outcome

The outcome of this contraction of the livestock inventory was a much smaller national herd (Figure 1), a much larger number of farms, and a considerable overcapacity throughout the sector (old processing capacities, staff, etc.). Although some of the reduction in inventory was consumed or exported, much of it was lost. In the first years, the decline was most severe in poultry and pigs that depended on concentrate feed (Figure 2). The value of the lost animal inventory (based on international prices) can be estimated to about US$ 1.5 billion, not counting the losses in animal genetics.

With declining animal numbers, livestock production started to drop.
Between the years 1990 and 2000, meat production fell by 58 percent; milk production fell by 31 percent; and wool production dropped by 78 percent (Figure 3, 4 and 5). Except for wool, the decline in production was not as deep as the contraction in the inventory. The productivity of the remaining herd has been better when compared to oversized herd and flocks in 1990\textsuperscript{20}. However, the data are not very reliable as most of this improvement relates to productivity on small farms and in the backyard production system. Small scale processing and sales also replaced much of the processing.

This substantially reduced inventory augmented overcapacity and redundancy in processing plants that, because of their inefficiency, are not likely to recover. During the Soviet period the processing was concentrated in mega plants that were costly to operate and lacked the flexibility required in the transition period. Moreover, increased energy (transportation) costs, further farm fragmentation and lack of working capital were fatal to most of these plants. Similarly, the smaller inventory led also to overcapacity in services such as veterinary services.

The contraction had also significant social consequences as not only the herders and farmers lost capital and/or their livelihood, but also so did much of the labor in support services (feed supply, animal health services) and the processing industry. Livestock production was often carried out on remote farm or ranch locations. Without central support these rural communities were not, or barely, able to survive let alone support social services such as schools, medical facilities or rural roads. Farm workers were paid in kind, and ended up with livestock without necessarily having the means, fodder or being able to care for it. Many animals were lost in the process. The outcome was a livestock population fragmented over many smallholders that could no longer rely on the state and collective farms for the farm and feed inputs.

Y. The Recovery Period

The recovery of the livestock sector in Kazakhstan has been slower than in Russia and the Kyrgyz Republic. Private farming developed slowly and grain production became the most

\textsuperscript{20} Production of meat, hides and skins increased in the mid nineties when excess stock was slaughtered. However, this increase represents only a fraction of the animals lost.
important agricultural activity in the northern regions supported by special programs, thus making livestock a less attractive source of cash income. The insecurity about land access and the lack of marketing opportunity, especially among the smallholders (the “backbone” of livestock production in Kazakhstan) has delayed – and continues to affect – the recovery of the livestock sector.

There were considerable differences within Kazakhstan. Development in Southern Kazakhstan appears to be closer to the developments in Kyrgyzstan (see below) with earlier reforms and earlier, but modest, recovery. The reasons vary but can probably be linked to better access to markets; urban markets in Almaty, Bishkek, Taraz, Chimkent and Tashkent were within 200 km of many southern Kazakh farms. Most of the northern Kazakh population consisted of recent settlers (settled after the Virgin land program) and many were salaried workers in the settlements of the large farms. Unlike the southern Kazakh population they had little experience in mobile livestock herding, but were fully depended on the “technology” system introduced during the Soviet period which depended more on external inputs (fuel, machinery).

Recovery, after 1997, has mainly been observed in the small scale and backyard operation i.e. dairy and pork and in the poultry sub sector. This is consistent with development in other transition countries. The structure of the livestock sector changed dramatically from a highly concentrated animal population on few mega farms to a dispersed population owned by many small holders (Table 1). This dispersal had significant consequences, especially for processing and marketing (change from a highly centralized to a fragmented collection and processing system), the provision of services and grazing and feeding management.

Table 1. Farm Structure in Kazakhstan (as of January 1, 2003)

<table>
<thead>
<tr>
<th>Legal Status</th>
<th>Farms or farmers (Number)</th>
<th>Total arable land (‘000 Ha)</th>
<th>Average size (Ha/farm)</th>
<th>Output in 2002 (billion Tenge)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Enterprises</td>
<td>9,368</td>
<td>12,876</td>
<td>59%</td>
<td>1374.5 124.4 22%</td>
</tr>
<tr>
<td>Family Farms</td>
<td>141,328</td>
<td>8,311</td>
<td>38%</td>
<td>58.8 146.3 26%</td>
</tr>
<tr>
<td>Household Plots</td>
<td>2,154,791</td>
<td>481</td>
<td>2%</td>
<td>0.2 286.7 51%</td>
</tr>
<tr>
<td>Total</td>
<td>2,305,487</td>
<td>21,668</td>
<td>9.4 557.4</td>
<td></td>
</tr>
</tbody>
</table>

Source: National Statistics Agency

But many were inexperienced farmers and operated small household farms. In the absence of marketing opportunity and with most land still in the hands of the enterprises, many preferred – or had no other option – to stay small, and use most of their product for home consumption. Non-perishable products such as wool, skins or processed products were sold on local bazaars or to itinerant traders at depressed prices or stored for later sale (but deteriorated in the mean time).

The livestock sector served as a mobile capital asset for small farmers that they often turned to in times of market and production volatility. The shift in livestock production, and the change in ownership shares from the large enterprises to household plots underlines the importance of the livestock sector as risk mitigating asset and an essential capital for small households. Though
primarily kept for food security and home consumption purposes, the imputed cash value of the livestock asset held by household plots is significant.

2. Comparison with Other Countries’ Development

A declining livestock sector was common throughout the central plan economies with a contraction during the 1985-2000 period ranging between 50 and 60 per cent for cattle inventories (in Kazakhstan 60 per cent), pigs between 45 and 55 per cent for pigs and between 50 and 80 per cent for sheep (in Kazakhstan around 75 per cent). The decline bottomed out around 1995 in Eastern Europe and around 1997-1998 in the FSU.

Compared to most eastern European countries the rebound was slow in the FSU, and in slowly reforming countries such as Romania. Early rebounders were Poland (where private farming was common) and Hungary (which had updated its livestock infrastructure in the late eighties), which were also characterized by significant private sector and strong entrepreneurial traditions (Bjornlund, 2002). In part because of the expectation of EU accession (and in Poland helped by a Polish diaspora) these countries were also able to attract foreign direct investment. The FDI in the food industry in Kazakhstan during the period 1993-1999 amounted to an average of US$ 46 million, or 3.5% of FDI in Kazakhstan during that period.

Although superficially the same conditions guided the transition of agriculture in the former Soviet countries, the process and provisional outcome appear different. It is generally accepted that, among the countries in Central Asia, Mongolia and Kyrgyz Republic were the early reformers and the Uzbekistan and Turkmenistan the slowest, with Kazakhstan and Tajikistan in the middle. With respect to livestock, however, the contraction of the animal inventory and the decline in production was most severe in Kazakhstan (Figure 6). In Kyrgyzstan, the land privatization was initiated earlier and family farms increased much faster than in Kazakhstan.

In addition, Kazakhstan was the biggest supplier in the region to the Soviet market (including the Ministry of defense – a large Government procurement). Thus, Kazakhstan had a relatively more developed meat and wool processing industry, especially in the eastern and northern regions. Most of these enterprises produced only for export and production was based on the needs of the processing industry. Since the domestic demand was much lower, the difference in inventory change after the reform is much higher for Kazakhstan than in other Central Asian Republics.

Figure 6. Changes in Cattle Inventory by Farm Type in Kyrgyz Republic and Kazakhstan

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Whereas in the Kyrgyz Republic these new family farms absorbed some of the livestock that was shed by the collective and state enterprise, this appears to have been less the case in Kazakhstan\textsuperscript{22}. A similar linkage between recovery of the livestock sector and land reform has been noted in Eastern Europe (Bjornlund et al., 2002). In addition, the geography and landscape of the Kyrgyz Republic resulted in shorter supply lines to and from processing plants and producers were able to add-value to primary products on the farms (especially with processed dairy products, felt and dried meat). The production pattern in Turkmenistan and Uzbekistan did not change, as their production was still based on quota\textsuperscript{23}.

Although this discussion considers the changes in the livestock sector, Kazakhstan also shows the sharpest decline for other indicators of agriculture, such as tractors per ha and fertilizer use, (table 2). The decline in Kazakhstan lasted longer i.e. well into 1998 and 1999 when compared to its southern neighbors. This can in part be related to the imperfect reforms, especially in the north where farm managers who did not fully reform their management practices, often confiscated most of the farmland and continued to accumulate debts or strip farm assets (including livestock). It is also a result of the previous Soviet policy of ‘pushing’ agriculture into marginal lands, and the consequent sharp decline when State support decreased. Also north Kazakhstan - that was economically focused on southeastern Russia - may have been affected more by the “Russian crisis” in 1998. In addition a severe drought in 1998 caused further problems when on many farms the costs of wheat harvesting exceeded the value of the crop (Gray, 2000)\textsuperscript{24}.

Table 2. Change in Mechanization, Fertilizer Use and Livestock Inventory in Selected Countries

\textsuperscript{22} However, the definition of farm types in different countries is not necessarily consistent.
\textsuperscript{23} However, there is some doubt about the accuracy of the data, partially as a consequence of the use of State-mandated production targets.
\textsuperscript{24} The dependence on a single crop (wheat) in northern Kazakhstan encompasses considerable risk and northern Kazakh farmers have not yet been able to develop risk-managing strategies used in similar agro-ecological areas.
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<table>
<thead>
<tr>
<th></th>
<th>Tractors/1000 ha</th>
<th>Fertilizer kg/ha</th>
<th>Cattle x1000</th>
<th>Sheep x1000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kazakhstan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>6.2&lt;sup&gt;25&lt;/sup&gt;</td>
<td>13.5</td>
<td>9,592</td>
<td>34,555</td>
</tr>
<tr>
<td>1996</td>
<td>4.9</td>
<td>4.5</td>
<td>6,857</td>
<td>19,584</td>
</tr>
<tr>
<td>1999</td>
<td>2.5</td>
<td>1.2</td>
<td>3,957</td>
<td>9,556</td>
</tr>
<tr>
<td>Change 92-96</td>
<td>-21%</td>
<td>-67%</td>
<td>-29%</td>
<td>-43%</td>
</tr>
<tr>
<td>Change 96-99</td>
<td>-49%</td>
<td>-73%</td>
<td>-42%</td>
<td>-51%</td>
</tr>
<tr>
<td>Uzbekistan</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>40.2</td>
<td>163</td>
<td>5,275</td>
<td>2,218</td>
</tr>
<tr>
<td>1996</td>
<td>38</td>
<td>99</td>
<td>5,702</td>
<td>2,234</td>
</tr>
<tr>
<td>1999</td>
<td>38</td>
<td>173</td>
<td>5,282</td>
<td>2,310</td>
</tr>
<tr>
<td>Change 92-96</td>
<td>-5%</td>
<td>-39%</td>
<td>8%</td>
<td>1%</td>
</tr>
<tr>
<td>Change 96-99</td>
<td>0%</td>
<td>75%</td>
<td>-7%</td>
<td>3%</td>
</tr>
<tr>
<td>Kyrgyz Republic</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>20</td>
<td>26</td>
<td>1,122</td>
<td>8,741</td>
</tr>
<tr>
<td>1996</td>
<td>14.1</td>
<td>23</td>
<td>847</td>
<td>3,716</td>
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<td>1999</td>
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<td>Change 92-96</td>
<td>-30%</td>
<td>-12%</td>
<td>-25%</td>
<td>-57%</td>
</tr>
<tr>
<td>Change 96-99</td>
<td>34%</td>
<td>-13%</td>
<td>9%</td>
<td>3%</td>
</tr>
<tr>
<td>Russian, Federation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1992</td>
<td>9.8</td>
<td>42</td>
<td>54,676</td>
<td>55,194</td>
</tr>
<tr>
<td>1996</td>
<td>7.7</td>
<td>13</td>
<td>39,696</td>
<td>25,344</td>
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<tr>
<td>1999</td>
<td>6.3</td>
<td>11</td>
<td>28,480</td>
<td>13,412</td>
</tr>
<tr>
<td>Change 92-96</td>
<td>-21%</td>
<td>-69%</td>
<td>-27%</td>
<td>-54%</td>
</tr>
<tr>
<td>Change 96-99</td>
<td>-18%</td>
<td>-15%</td>
<td>-28%</td>
<td>-47%</td>
</tr>
</tbody>
</table>

Source: FAO Statistics

Kazakhstan differs from its Central Asian neighbors in some aspects:

a) The agricultural labor force was smaller. In 1997, only 22% of the labor force was employed in agriculture, against about 40-50% in neighboring countries (World Bank, 1999<sup>26</sup>). Moreover, the labor force, especially in northern Kazakhstan was fairly urbanized and had fewer backyard animals than those in southern Kazakhstan or in neighboring countries.

b) Agriculture was more extensive and more mechanized. Kazakhstan was an outlier with respect to its low output per ha (but still similar to Saskatchewan, Canada in the seventies<sup>27</sup>), low fertilizer use and high horsepower per labor unit in the Soviet Union.

c) Transport costs were higher due to its large size and location of farms. As already pointed out by Medvedev (1987)<sup>28</sup>, transportation problems were a major issue in marketing of livestock products in the outlying areas of Central Asia and lower Siberia. Farms can be located up to 300 km to the nearest processing or supply points - distances

<sup>25</sup> The low number of tractors reflect the large plot size in the predominantly grain farming area; horsepower per hectare is closer to the other countries.

<sup>26</sup> World Development Indicators


that had to be covered also by trucks that transported milk, livestock and/or inputs. This system depended on passable roads and low-cost fuel. When road maintenance deteriorated and fuel prices increased\(^{29}\) between 1990 and 1995 many farms were not able to adapt.

d) **Input supply and processing sector did not significantly reform.** In most countries the real reform was associated with a better response of the production sector to market signals, requiring a responsive marketing and processing sector. Although some entrepreneurial activity is noted around the urban centers (and more so after 2002), the marketing of livestock and livestock products is still hampered by the lack of entrepreneurs\(^{30}\), capital and by the inefficiency of transportation.


\(^{30}\) The Government recognizes this weakness and has initiated a parastatal marketing organization. Although the latter may discourage new entry in the market, it has so far not played a significant role.
Figure 1. Change in cattle inventory

Figure 2. Change in cow inventory

Figure 3. Change in sheep/goat inventory
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Figure 4. Change in milk production

Figure 5. Change in meat production
Figure 6. Sheep skins procured by oblast

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33. Support for Livestock Sector Marketing

2. Background/Issue

The marketing of Kazakhstan’s livestock products is in a state of transition, linked to two key developments:

(i) **The market balance:** The collapse of production levels which occurred during the 1990s led to a withdrawal from export markets (notably Russia) and concentration on supplying the domestic market. While the opening of the domestic market to processed livestock import led to significant penetration of the domestic market for quality products. But, with the gradual recovery of production levels in all categories of the livestock sector in the past three years the balance between production and domestic demand is progressively shifting in the direction of generation of exportable surpluses. While domestic demand is expected to grow rapidly in the coming years as the impact of increased oil/gas revenues raise consumer incomes, livestock products usually have a high-income elasticity of demand, so the growth of the domestic market is likely to significantly outstrip income growth. Even so the increase in production is expected to be even faster, so that penetrating export markets (traditional or new) is likely to be an important challenge. This will occur at a time when Kazakhstan may face new constraints to promote exports through subsidization as a consequence of the expected accession to the WTO. In the past Kazakhstan’s livestock sector exports were heavily subsidized. They will increasingly need to be competitive in destination markets.

(ii) **The transition to dispersed livestock rearing:** With the transition to a dispersed ownership the domestic marketing of livestock has become a critical issue. Under the former system marketing, domestic and export was undertaken by large units in accord with plan targets. With over 80 per cent of livestock held in private hands, the marketing of livestock is facing new constraints and problems. These include:

- Lack of established marketing channels appropriate to smallholders and medium sized farms;
- Under-developed networks for milk collection and marketing and poor linkages between smallholder rural producers and processors;
- A lack of institutions and organization at the producer level showing the dispersed production activities and the long distances between producers and the market;
- The need to compete on the domestic market with imported products for processed livestock products such as butter, cheese, yoghurt, sausages etc with higher standards of presentation and packaging and complying with external market quality standards;
- Strong seasonality of milk availability reflecting the inadequate availability of winter animal feed. This seasonality is mirrored in seasonal prices that vary markedly and provides an opportunity for income-generating activities in the feed market.
- Strong inter-regional differences in farm-gate and consumer prices for livestock products.

In summary, Kazakhstan faces challenges in the domestic marketing (procurement and distribution systems) and export markets.

AA. Current Policies and Marketing Situation

Marketing of livestock products is not addressed in detail in the Agriculture and Food Program (2003-2005), though the emphasis on creating more larger farm units is evidently aimed in part
at addressing marketing problems both in the procurement of raw materials and in output marketing on domestic and external markets.

A major step undertaken by the Government in the recent past is the establishment of the CJSC Mal Onimderi Korporatsiyasy (MOK). The main objectives of MOK have been stated as the stabilization and strengthening of domestic markets and creating more competitive conditions on those markets, and developing and penetrating export markets for livestock products.

Some rural procurement networks have developed on the initiative of private sector processors (for example in the milk sector around Almaty), but these networks are still narrow, often generating local monopolies with market power over atomistic and unorganized producers. A large majority of rural producers with small family herds are not served by such networks and produce for home consumption or sale on local informal markets where quality control and food safety are guided by consumer awareness. While there is likely to be an increase in the proportion of livestock production marketed into the formal processing sector over the coming years, the informal market will continue to be an important part of the livestock marketing system as a whole for the foreseeable future. Government policy needs to be based on recognition of this continuing role of the informal market.

**BB. Discussion**

**(a) The Domestic Marketing System**

Priorities for market development need to be derived from livestock policy objectives, including sub-sector developments with long-term comparative advantage. In principle Government should concentrate on support efforts aimed at the sector(s) least able to resolve their own problems. The commercial large farms and processing units have the capability to develop their own marketing channels. In practice this concentration calls for support for accelerated market development in three areas:

(i) The smallholder dispersed livestock sector, especially live animal markets.

(ii) The milk procurement channels in rural markets.

(iii) The wool market that has special problems arising from its dispersed nature.

MOK has the potential to address some marketing issues, including market failures such as missing rural markets, promoting competition in thin and monopolistic markets. However, there are some potential pitfalls inherent in the Government becoming too closely involved in livestock markets through direct participation in the market through the operations of a parastatal organization. These potential pitfalls include:

- The danger that MOK will in practice replace (“crowd out”) rather than support private markets which are still at an early stage of development. This is most likely to occur wherever MOK enters the market at prices, which fail to provide sufficient price spreads to allow private profitable participation in the market. This may occur (i) if there is cross-subsidization by MOK between products; (ii) if MOK becomes subject to political pressures.
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... (originating from either central or local levels) to pay more favorable prices to producers or to limit seasonal price spreads below full cost (including normal profit and risk premiums).

- If MOK is in fact subsidized by Government e.g. through periodic write-off of bank loans to restore its balance sheet.

(b) The Development of Export Markets

Although the current exports are low, this may need to change, as argued above, on the basis of trends in production and domestic consumption. While the export of particular products is expected to remain largely in private hands, Government has an important facilitating role in support of the private sector.

For the short and medium term Kazakhstan comparative advantage for export is likely to continue to lie in the export of raw materials, especially meat, wool and hides and skins. Developing markets for processed products will take more time and depend on substantial investment and upgrading of the livestock processing industries. In this context important potential livestock product markets for Kazakhstan include:

- Russia: It should be possible to re-establish markets in the adjoining areas of Russia, notably Novosibirsk, Omsk, Tomsk etc. for which Kazakh producers have a comparative transport advantage over most Russian producers.
- China offers a market with rapidly growing beef consumption (from initially low per capita level); also for pork, but the Chinese urban markets are distant from Kazakh production sites.
- Iran has potential markets for beef and sheep meat.

It needs to be borne in mind that, like Kazakhstan, Russia Mongolia and China are all currently developing their livestock sectors with a view to supplying regional export markets. China has been a traditional supplier of beef to the eastern regions of Russia.

The key role of Government in respect of these markets relates to the WTO accession process. The Government needs to take an active stance in identifying the tariff and non-tariff barriers to these markets, with a view to their reduction during and following WTO accession. This requires significant research into the subsidy systems practiced in each of these countries.

(c) Import Substitution

There is clearly some scope for slowing or reversing the trend toward import penetration of the domestic market for processed livestock products, though this will be more difficult to the extent that the expansion of oil/gas revenues lead to further appreciation of the Tenge. The key to import substitution for the future must lie in raising productivity and competitiveness of domestic producers and processors and in quality improvement and food safety, to match the standards met by imported processed products. This issue is covered in a separate discussion note. Under WTO accession the feasibility of raising import tariffs and other non-tariff barriers will be severely limited and cannot be relied on as a feasible basis for policy for the future.

CC. Suggested Policy Options

It is suggested that livestock marketing policy should be approached under five distinct headings:

(A) Measures to Strengthen Rural Livestock and Livestock Products Markets

(i) Seek measures to accelerate private sector market development and avoid measures which impose unnecessary additional costs on the private sector; (for example, by removing regulatory and bureaucratic barriers to internal trade);

(ii) Build a stronger basis of collaboration between the public and private sectors in market development (for example, by establishing a permanent public/private working group on smallholder livestock marketing);
(iii) Support the creation of rural producer institutions which can lower marketing costs and increase the market power of producers faced with single channel or monopolistic processor purchasing channels (for example, by ensuring there is a facilitating legal framework for formation of livestock producers marketing cooperatives);

(iv) Develop physical market infrastructures; and where this is not cost effective stimulate periodic rural markets by initial public sector support to media promotion;

(v) Support to producers to raise the quality and to add value of their products on offer (for example, through subsidized training programs for small-scale producers);

(vi) Start-up support to projects and private sector initiatives offering new or improved market information systems with access in rural areas;

(vii) Develop simple food safety standards that are appropriate for the emerging market channels, in collaboration with the private sector. (See Note on Food Safety and Standards);

(viii) Support small scale processing activities based in rural areas and serving local communities (for example through support for applied research into appropriate processing technologies and disseminate the results of such research to smallholders through the extension activities);

(ix) Improvement of transport infrastructure, notably rural roads, and, where appropriate, subsidization of transport costs for producers in remote locations, either to improve availability of inputs or for marketing of outputs.

(b) Marketing Development for Extensive Livestock Sector

Kazakhstan currently lacks a substantial extensive range-based livestock sector other than for sheep. It is assumed that a rangeland beef sub-sector will be developed on a corporate basis involving larger-scale entities with the capability to address and resolve their marketing problems without explicit public sector support.

But there may be a case for providing marketing subsidies (e.g. internal transport) to provide incentives for companies to enter this sector as part of the social and environmental orientation of this part of livestock marketing policy.

(c) Support for Smallholder Livestock Marketing in Remote Locations

In the remotest areas where markets may not exist the public sector can play a pro-active role in creating market outlets (e.g. through MOK as part of an explicit subsidization program for remote rural livelihoods, subject to strict adherence of scope and targeting of subsidy schemes, to be funded from the Government recurrent budget). Even in these locations Government should aim to use multiple subsidy delivery agents, including private sector operators (e.g. by periodic tenders).

(d) Facilitation of Export Markets

Kazakhstan has only modest livestock sector exports, but the future growth of the industry will be dependent on the successful establishment of new (or re-establishment of former) markets. The Government plays a critical role in this process, especially through negotiations in the WTO accession process. As a start Government should identify key high potential markets as concentration points for research, policy formulation and negotiation.

(e) Clarification of the role of Mal Onimderi Korporatsiyasy and Establishment of an Adequate Oversight System

MOK has been established since a short period, but it has already moved to take a share of the domestic markets, including wool and milk. This share may rise further this year as the organization becomes more widely established. Experience from many parts of the world with the use of state-owned organizations for livestock marketing, points to real dangers in following the parastatal route. In this context it is argued that it is appropriate, at this early stage of the working operations of MOK to establish very clearly the objectives and policy limitations placed on MOK.
operations. These can be approached by steps to ensure an adequate oversight mechanism for MOK to ensure that it is not crowding out the private sector in livestock marketing. This oversight system could include:

(i) **Establishment of a Management Advisory Board with strong private sector participation;** to strengthen and monitor the market development role of MOK.

(ii) The setting of **clear operating rules** for MOK to prevent cross-subsidization of products.

(iii) Creation of **sanctions for financial losses** (i.e. mandatory suspension and closure of loss-making activities or trading activities, except where these correspond to stated GOK subsidy programs and the losses generated are funded from the government budget.

(iv) **Define the conditions under which MOK will withdraw from markets** where it has been active and where the private sector is strong enough to provide a competitive and cost-effective service.
34. **The Role of Mal Onimderi in Marketing Livestock Products in Kazakhstan**

3. **Background**

Mal Onimderi Korporasyasi (MOK) was established in October 2001 as a wholly government-owned joint stock company aimed at stimulating the animal production industry and developing new export markets. MOK was allocated a loan of Tenge 2 billion as a loan from the Central Bank through the Government budget to provide working capital. The loan is repayable in installments over a five-year period and bears an interest rate of 7.8 per cent per annum. MOK has established offices in all the oblast centers and representative offices in Russia, China and Ukraine.

In its first year of operations MOK undertook procurement operations, buying primary livestock raw materials both from primary producers and from the wholesale trade. Its typical mode of operation is to contract existing livestock processing companies to convert raw materials into processed products and then to sell these products on both the domestic and external markets. Latterly, especially during 2002/2003, MOK has been constrained to operate within the regulatory framework of the Law on State Procurement, which requires it to undertake its procurement of raw products through a tender-based process. Such tenders are announced in the media for delivery to its regional canters. As a result of the requirement to use tendering processes, MOK has essentially become a price-taker in raw product markets and has come to be purchasing almost exclusively from the intermediary wholesale trade.

**DD. Objectives of MOK**

Discussions with senior staff of MOK and with officials in the Department of Livestock (undertaken in June and November 2003) suggest that there has been some lack of clarity in the articulation of MOK’s objectives. Originally, emphasis was placed on the developmental role of MOK within the domestic market in creating market outlets in remote areas, and this objective appears to have influenced the pattern of products and locations of purchase for the first year of MOK operations. However, increasingly the company has come under commercial pressure derived from the loan nature of its capital base, with the implied requirement to generate an adequate cash flow to service and repay the initial loan to the Central Bank.

MOK has certainly attempted to develop its export orientation for sales, but this has taken place within the constraints faced by all Kazakh companies seeking to export livestock products, namely problems stemming from price competitiveness and poor quality. As a result the volume and value of MOK’s exports have remained limited and are largely confined to raw or semi-processed products, such as live animals (sheep), wool, and hides. These products have largely been sold into traditional export markets for Kazakhstan, enclosing Russia and China.

**EE. The Central Issue – What is or should be MOK’s Raison d’Etre?**

The creation of parastatal marketing organizations can be a legitimate step in seeking to develop a sector such as the livestock sector in Kazakhstan. However, great care needs to be given to
ensure that the parastatal is able to perform a useful function, and to perform it in a manner, which is more efficient than the use of alternative instruments.

MOK was established to pursue two developmental objectives:

(i) Development of the domestic marketing chain and provision of support for producers in the form of creating a presence in remoter markets and thereby increase the marketing outlets (and hence producer prices available to rural producers. This is a legitimate development objective for government to pursue, given the extreme constraints and thinness of rural markets, especially in the remoter areas.

(ii) Fostering the development of new exportable products and penetration of new export markets. This objectives should also be seen as a legitimate arena for government intervention on ‘infant industry’ grounds: Kazakhstan’s newly established private sector livestock traders have little experience in the development of new export markets, and it can be argued that they potentially could benefit from state support.

The key question is whether MOK has been able to pursue these objectives and whether it is the most effective instrument for this purpose.

With respect to the development of domestic markets and the support for rural producers, it is clear that, although MOK initially made some efforts to support rural markets, especially in the sheep and wool sector, it has not been able to pursue this objective consistently or vigorously. A market survey showed that MOK is little to unknown among farmers, market traders and procurers in many parts of rural Kazakhstan. The main obstacles seem to have arisen from the inability to operate in primary markets to provide effective support to primary producers and to play a price-setting role in the market.

With respect to the development of export markets it appears that MOK’s impact has been very small. With respect to its own commercial operations MOK has had some limited success, measurable directly in terms of the volume and value of its own exports. However, even this limited success has to some extent been achieved by replacing exports that would have occurred in any case through private sector exporters. The more important argument, however, is that the activities of MOK have not impacted widely on the livestock export sector. It has not played a development role for other exporting companies. These are regarded as competitors rather than as companies requiring assistance. The fundamental issue in this area is that the MOK is required to meet a commercial target (loan repayment) and this valid commercial condition has been inconsistent with paying a support role for the export-trading sector. In the meantime, private traders have improved their performance. The question needs to be raised whether the MOK still has a legitimate role to play according to its initial objectives. Also MOK does appear to have played a role in addressing the major issue in livestock marketing, which is quality improvement. At least in the wool sector it procured undifferentiated low quality wool and sold this wool after washing at very low prices in the international markets.
**FF. MOK’s Subsidy**

It is widely perceived in MOK and the Ministry of Agriculture that the MOK is not a subsidized organization. This is not correct. The channel for subsidization of MOK is the lower interest rate applied to its loan from government. MOK pays roughly 10 per cent less than it would pay for a comparable commercial line of credit. Applied to an initial loan of Tenge 2 billion with a scheduled repayment over 5 years, the subsidy element can be estimated approximately at 10 per cent interest on half the initial capital loan, i.e. approximately 10 per cent of Tenge 1 billion over two and a half years. This amounts to roughly US$ 3.4 million. With respect to the limited success to fulfill its development objectives, the appropriate question to ask is what are the alternative instruments, besides MOK’s operations, which could have been used to pursue domestic and export market development.

**GG. Alternative Approaches to Livestock Market Development**

Many instruments can be used to pursue the developmental objectives that MOK was supposed to fulfill. These include:

*For the Development of Producers Primary Livestock Markets:*

- The institutional support for producers to form marketing associations (small grants to meet initial organization costs and facilitate legal requirements, support creation of slaughter houses, milk and wool collection points, bazaars and their facilities).
- The creation of regular or seasonal markets, for example by announcement by the Akimat of the days and locations at which livestock markets will take place which can also be combined with the development of market sites.
- The provision of support to marketing associations for example to establish slaughtering facilities adjacent to rural markets to allow meat traders to buy live animals for slaughter at the market-place (and thereby preventing losses, improve hygiene and prevent environmental contamination by improper treatment of waste).
- Support for market price and quality information systems to enable rural producers to comply with market and sanitary requirements.
- Removal of impediments to broader participation in markets such as abolishment of licensing of traders and limitation of veterinary inspections to a minimum level.

*For the Promotion of Export Markets:*

- Targeted assistance for traders to undertake market development activities (study tours, representation at shows, foreign trips to meets potential importers and identify their requirements).
- Export credit guarantee schemes (aimed to address the very real risk of non-payment for export consignments).
- Training of smaller scale exporters in the regulatory and financial aspects in international trading in livestock products in the region.
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• Representation of the interest of Kazakh livestock sector exporters with neighboring and potential export destination country markets.
• Remove impediments to cross border trade by minimizing inspection etc. by local officials and by development agreements and or border arrangements with neighboring (trading) countries.

HH. The Conflict between Developmental and Commercial Objectives in MOK

MOK is now clearly displaying a problem commonly encountered by marketing parastatal organizations - the conflict between its developmental and its commercial objectives. This conflict has arisen because from MOK’s inception there has been a lack of clarity in the development objectives and the feasibility of providing services on a non-subsidized basis. As a general rule, it is prudent to anticipate that any developmental objective can only be achieved in the context of liberalized marketing systems. However under market conditions like the current ones in Kazakhstan, the parastatal marketing organization always finds itself in competition with the private trade. As such, the organization needs to make a clear distinction between its trading activity and development activities. The mandate and financial organization of MOK has not made this distinction. While MOK does receive a subsidy, there has been no mechanism to ensure that the subsidy element of its financing is directed to reach its developmental objective. As a result, the subsidy has been expended through management inefficiencies and the launching of non-commercial operations with little developmental impact.

II. Options for the Future of MOK

It is argued in this Note that MOK as it is presently set up is not able to play a strong developmental role, and that the problem is inherent in the current conflict between its developmental and commercial objectives. In principle, there are three options for MOK’s future development:

(i) Continue to play both developmental and commercial functions in the market, but with a much greater degree of clarity of the development functions, using a separation of MOK organizationally and financially into two wings: a commercial operation and a developmental organization, each with its own budget and management objectives. However, experience from other countries with marketing parastatals suggest that, while this option is theoretically possible, it is extremely difficult to effect in practice, and for this reason this option is not recommended.

(ii) Confine MOK to a purely commercial set of objectives and operations, as a commercial player in the wholesale and export marketing of livestock products. Under this option, MOK should be privatized and it should not receive credits from the public sector (or the banking sector under instructions form the public sector) on terms more favorable than those obtainable by other commercial operators of a comparable scale and credit-worthiness. MOK becomes a purely privately operated commercial operation.
(iii) Conversion of the MOK into a genuine livestock marketing development agency, operating with a grant subsidy provided annually from the government budget but not directly involved in trading. This option would require a substantial transformation of MOK to develop appropriate means of operation to pursue defined development objectives in the marketing system. This option would appear to be feasible, if difficult, given the expertise in the marketing system that has been acquired by the staff and management of the MOK. MOK would then mainly be an advisory and development organization. It could, if needed, operate in trading but only in markets that are under performing (few or no traders) and would remove itself from such markets once the private sector is well established.

31 An example is the Turkish Rural Development Foundation “Türkiye Kalkınam Vakfı” (TKV).
35. Government Spending in the Livestock Sector

This note reviews the existing subsidy schemes for livestock producers in place in Kazakhstan and their impact and considers a possible new approach to support for the sector.

4. Existing Subsidies

Based on the 2002 state budget the principle, subsidies for the livestock sector relate to breeding materials and breeding stock:

<table>
<thead>
<tr>
<th>Object Subsidized</th>
<th>Budgetary Provision</th>
</tr>
</thead>
<tbody>
<tr>
<td>Breeding stock materials (including subsidy of artificial insemination and reduction to the cost of breeding calves, eggs etc.)</td>
<td>Budget allocation for bovine AI during 2001-2005 is 947 million Tenge (approx US$ 6.3 million)</td>
</tr>
<tr>
<td>Subsidy for purchase of breeding livestock for dairy production</td>
<td>Provision of approx. 416 million Tenge (US$ 2.7 million) annually during 2002-2003; increasing to 478 million Tenge in 2005 (however, disbursement in 2002 was only 131 million Tenge)</td>
</tr>
<tr>
<td>Subsidy of breeding stock for meat production</td>
<td></td>
</tr>
<tr>
<td>Veterinary subsidies:</td>
<td>Total of 3,298 million Tenge provided in 2003</td>
</tr>
<tr>
<td>- Animal disease diagnosis</td>
<td></td>
</tr>
<tr>
<td>- Epizootic disease control</td>
<td></td>
</tr>
<tr>
<td>- Tuberculosis and brucellosis control</td>
<td></td>
</tr>
<tr>
<td>- Eradication of contagious diseases</td>
<td></td>
</tr>
<tr>
<td>Subsidies for agricultural processing companies</td>
<td>Commercial banks providing credits to processing enterprises are eligible to apply for compensation part of the interest rate they charge for their credits. Enterprises that process agricultural products are main beneficiaries as they get bank credits with discounted interest rates. Banks upon completion of credit procedures apply to MOA for compensation. MOA is reviewing applications.</td>
</tr>
<tr>
<td>- Equipment leasing (500 m. Tenge)</td>
<td>Equipment leasing (500 m. Tenge)</td>
</tr>
<tr>
<td>- Reimbursement of interest rate (7%) for equipment leasing (35 m. Tenge)</td>
<td>Reimbursement of interest rate (7%) for equipment leasing (35 m. Tenge)</td>
</tr>
<tr>
<td>- Reduction of interest rate for bank loans (up to 15%) (395 m. Tenge)</td>
<td>Reduction of interest rate for bank loans (up to 15%) (395 m. Tenge)</td>
</tr>
<tr>
<td>Budgetary credits for Mal Onimderi for product processing</td>
<td>Very small</td>
</tr>
<tr>
<td>Subsidized credit through loans to Mal Onimderi</td>
<td>Estimated at around US$ 3.4 million (see Note on Mal Onimderi for an estimate of the subsidy element in GOK loans)</td>
</tr>
</tbody>
</table>
These budgetary provisions can be seen as falling into three categories:

(i) Subsidies for the purchase of stock breeding materials and animals by producers;
(ii) Subsidies for veterinary control of contagious diseases; and
(iii) Subsidies provided to Mal Onimderi, of which the only significant form of subsidy is the initial provision of loans capital at a subsidized rate (in comparison with commercial borrowing rates).

Government spending on the sector is not high. The subsidies itemized above form only a small part of the government budget for the Ministry of Agriculture and Livestock.

J. What are the Effects of the Subsidies of Breeding Stock and Breeding Materials?

Planning documents of the Department of Livestock argue for the need to subsidize animal breeding because of the rapid decline in the national stock of breeding animals compared to the pre-Independence period which resulted from the break-up of the state breeding farms and the associated dispersal and slaughter of breeding stock in the late 1990s. There seems to be a slow recovery of breeding animals in the national herd according to a recently started registration system.

The major spending post is the purchase of breeding stock by livestock producers when they purchase breeding animals from registered breeding stock farms. The producers pay only a proportion (with a maximum of 50 per cent) of the prevailing market prices for the breeding stock acquired. These market prices (based on weight and meat prices) may not necessarily reflect the much higher value as breeding animal. The subsidy is paid by the Department of Livestock to the breeding farm which supplies the products against documentary evidence of sale, so that the transaction price for the breeding stock farm is the gross price including the subsidy element.

This form of subsidy can be expected to provide financial benefit to the purchaser and the selling agents: the purchaser (typically a livestock farm producing meat or dairy products or equivalent products) benefits from the lower purchase price of stock, which reduced the cost of production and increases his competitiveness. At the same time the seller (needs to be a registered stock breeding farm) benefits from the higher sale price, which allows the seller to sell at prices at which he would otherwise be uncompetitive. There are also likely to be indirect effects, including benefits to the suppliers of inputs (feeds etc) to the stockbreeding farm, who also benefits from the increased resulting turnover and profitability of the stockbreeding farms.

It is likely that this form of subsidy positively effects increasing the demand for breeding stock from registered breeding stock farms compared to the use of own stock for breeding purposes by livestock farmers.

However, current spending directions are subject to some limitations and adverse effects:

- The subsidization of breeding stock sales by registered farms has no impact on the problem regarded as fundamental to stockbreeding in Kazakhstan namely the erosion in the proportion of registered pedigree animals in the national herd over time. In fact, if anything, the existing subsidy scheme tends to exacerbate the situation by accelerating the outflow of registered animals from the registered stockbreeding stations. Once sold to farms that are not registered as stockbreeding
farms, the animals lose their pedigree status. The subsidization of sales therefore appears to negatively impact the national breeding herd over time.

- The limitation of subsidization to purchases of breeding stock from domestic registered breeding farms introduces a distortion in relation to the relative price of domestic and imported breeding stock and breeding materials. One of the important characteristics of the changes occurring in Kazakhstan’s livestock sector is the progressive opening up of the market for imported breeding animals and materials. This process can play a major role in upgrading the genetic characteristics of the national herd and accelerating yield improvement. However, at present imported pedigree breeding stock will not be normally registered as breeding stock unless registered stockbreeding farms acquire them. Breeding should be eventually left the responsibility of private farmers and breeding societies not registered breeding farms.

- The subsidy scheme does not encourage a shift in breeding from state farms to private breeders. It provides an unfair competition to potential private breeders that may use or have imported new pedigree genetics but are not registered as breeding farms. Further development of private breeding - accompanied by decentralized “nuclear” breed testing – will diminish the need to finance state farms, and could free up budgetary resources for state support that enhances productivity.

- The subsidy scheme is not helping the recognized need to preserve locally produced breeds which in some cases have characteristics developed to be suited to local conditions and which should be preserved as a matter of policy as a part of the genetic pool. Indeed, by accelerating sales of such breeding animals from the existing breeding farms, the farms are accelerating the demise of these breeds.

These limitations show that the currently used subsidy scheme for the purchase of breeding stock does not necessarily achieve its intended goals (unfortunately the program does not include monitoring of its impact). It is recommended that subsidies on the purchase of breeding stock from registered state farms should be discontinued. There may be a case for introduction of a new subsidy scheme delivered to registered farms aimed specifically at preserving important local pedigree herds, but any such new subsidy should not be based on the sale of breeding stock. In addition, it is recommended to open the breeding process and allow private breeders and breed societies to be established and participating in the breeding market.

**KK. Discussion of Basic Principles for Subsidization of the Livestock Sector**

Existing subsidy policies do not clearly articulate the underlying principles for the application of subsidies in the sector. Actual motivations include the desire to support the existing breeding farms, since these are seen as a national asset for the preservation and development of the national herd; the need to provide public services in support of animal disease control and, especially in the 2003 budget, the perceived need to be supporting the recreation of larger scale livestock farms on the basis of the belief that only larger farm units will be able to deliver a reliable and quality product to the market and for processors. This latter motive has led to the GOK providing subsidized credit earmarked for loans to larger scale units through the oblast-level authorities.

It is suggested that subsidization policy for the livestock sector should concentrate on the following objectives:
(i) The provision of public goods\(^{32}\) in the livestock sector. The clearest example of a public good in the livestock sector is the provision of epizootic and contagious disease control measures. Such measures require a coordinated approach and the application of disease monitoring and prevention measures which private farms will not provide on their own. There is no dispute concerning the desirability of public provision of such services, which are indeed a key task of the state in the livestock sector. However, the strategy for approaching disease control needs to ensure cost-effective application of public funds.

(ii) The provision of support to accelerate the emergence of efficient forms of production. At present GOK policies are oriented to supporting the accelerated emergence of medium and larger scale livestock farms. This is being pursued through the provision of earmarked loans for farms for allocation by the oblast authorities to qualifying enterprises. The policy is focusing on the size of the enterprise rather than its efficiency. It is recommended that the support be geared toward increasing the efficiency of production regardless of farm size. The Livestock Department should undertake studies across the larger, medium and small scale livestock sectors aimed at achieving a better understanding of the sources of comparative advantage and competitiveness of each sub-sector.

(iii) The provision of support for remote rural producers who can produce efficiently if provided with initial investment support. This type of policy aims to use livestock farming as a mechanism for reducing poverty in especially remote rural areas. The support could take many forms, including: support for organizational developments at the producer level (marketing associations etc); subsidized infrastructure investment at the local level to support small scale producers (roads, electricity, water and gas supply, village slaughter houses and hygienic storage facilities); piloting and support for dairy marketing associations); establishment of rural markets by the local authorities; provision of extension services and knowledge to assist small scale producers to adopt improved production methods and more hygienic conditions. At present, while the GOK provides some investment funds for rural infrastructure, there are no activities and investments led by the Department of Livestock aimed at improving the productivity and marketing in the household sector and small farm producers. This is a major gap in government activities and does not recognize the key role that livestock production at this level can have, both in terms of contributing to national production and to poverty reduction in rural areas.

(iv) The pursuit of environmental objectives to ensure the long-term sustainability of the nation’s extensive reserves of pastures and its water resources. The current project activities under the World Bank financed project in Karaganda Oblast are a good example of appropriate expenditures of this type. There is also a case for the Government investing in pilot projects to develop new systems of pasture use, which are compatible with the existing and prospective land resources in the country aimed a facilitating the efficient use of natural grazing without incurring environmental degradation. Also, intensification (especially in the poultry, pig and dairy sector) may require sustainable water management to protect natural waters from farm waste.

LL. The Need for Inclusion of Small Scale Sector in Livestock Policies

The allocation of subsidies currently prevailing reflects the specialties and weight of specialist knowledge within the Ministry of Agriculture, with heavy emphasis on technical specializations appropriate to the former system of large state farm production. There is a noticeable knowledge and expertise gap relating to the dominant small scale and household producing sector. There is

\(^{32}\) A public good is a service of products, which is of recognized value to the community but which will not be provided through a competitive privately owned and managed sector.
little believe in and understanding of the large potential which this sub-sector has for the future
development of livestock production in Kazakhstan. As a result a major resource (household level
entrepreneurship) is not being tapped.

There is a lack of monitoring and information gathering activities that could contribute to gaining a
better understanding of this sub-sector over time. As a result, there is poor knowledge of the
internal dynamics of the small-scale sector over time and whether these are leading to a stronger
basis for the future. For example, while the aggregate proportion of livestock held by the different
sub-sectors are known with the household sector dominant in all except poultry production, it is not
known whether there is a process of increased specialization taking place. It is plausible to argue
that a degree of concentration is occurring in the household sector, starting from the extreme
situation immediately after the break-up of the state farms where almost all rural households had
some livestock, to a situation where many households are dropping out of livestock production as
unsuited to their resources and aptitudes, but accompanied by slightly larger holdings in
households which are specializing in the livestock production. Such a development seems to occur,
but little documentation is available on these developments, as the Ministry does not carry out
surveys of the household sector.

To remedy this situation it is recommended that the Department of Livestock establish a division or unit
dedicated to analysis and policy formulation for the small-scale sector. This unit should be staffed by
specialists in rural economy and not only technical specialists in livestock production, to ensure that
adequate weight is afforded to issues relating to household income generation and poverty
reduction. Such a unit will be able to make an important contribution to the re-balancing of policy
for the livestock sector that also includes the smaller scale producers.
36. **What are the Different Objectives in the Livestock Sector in Kazakhstan?**

The livestock sector of Kazakhstan fulfils different objectives. These objectives are given a varying relevance depending on which institution looks at them. The Table below tries to capture the current major objectives for livestock sector development and highlights the subjective view of the importance attached to each objective by the Government and the suggested shift of priorities.

Importance attached to various Possible Objectives in the Livestock Sector by the Government and Suggested Reorientation

<table>
<thead>
<tr>
<th>Objective</th>
<th>Importance of Objective</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management of aggregate supply</td>
<td>Current: High</td>
</tr>
<tr>
<td>Sub-sectoral composition</td>
<td>Very important – increasing medium/large scale sector at expense of household sector – medium/large sector viewed to be more competitive.</td>
</tr>
<tr>
<td>Development of export markets</td>
<td>High and more focus on distant international markets than on nearby cross border trade</td>
</tr>
<tr>
<td>Poverty alleviation in rural areas</td>
<td>Medium priority</td>
</tr>
<tr>
<td>Promotion of extensive livestock management</td>
<td>Modest interest</td>
</tr>
<tr>
<td>Improvement/restoration of breeding stock</td>
<td>Very important</td>
</tr>
<tr>
<td>Environmental – avoiding rangeland degradation</td>
<td>Medium priority</td>
</tr>
<tr>
<td>Raising quality standards for food safety and trade compliance</td>
<td>High importance</td>
</tr>
</tbody>
</table>
Kazakhstan’s Livestock Sector – Supporting Its Revival

<table>
<thead>
<tr>
<th>Epizootic disease control</th>
<th>High importance; main focus of veterinary department</th>
<th>Epizootic disease control, albeit important, has little direct relevance to the producers at this point. Focus should be more on efficient control of production diseases.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Well educated and skilled workforce in the livestock sector</td>
<td>Low priority</td>
<td>High priority – Skilled workforce (from farm worker to factory manager) is an essential part of an efficient sector and of chain-based quality control.</td>
</tr>
</tbody>
</table>

It is clear from this table that the livestock sector development can be approached from different directions. The Department of Livestock’s view is concentrated on the medium and large-scale sector, with a complementary stockbreeding system as this is seen as the mechanism for attaining technically high standards and rapid growth of production. The broader perspective of the livestock sector is its role in the rural economy. It is an empirical question, which sub-sector will provide the most efficient vehicle for achieving broad sectoral aims. In contrast to the stated objectives of the GOK, it is believed that the smallholder household sector may be partly more economically efficient than the larger scale units, and may have a greater potential for medium-term exploitation of comparative advantage. In addition, the livestock sector is regarded as a critically important contributor to rural livelihoods, especially given the inequalities in access to land that have arisen after the farm privatization process. This seems substantiated by the continuing decline of the enterprises in 2000-2002 despite the increasing support of Government.

It is recommended to advocate a broader strategy for the livestock sector that accepts that the different sectors may contribute in different ways and may have different, but equally important needs for support. The GOK officials tend to be less trusting in the potential of the smallholder sector which is rather seen as technically primitive and not able to meet technical standards demanded by export (and increasingly also the domestic) markets.

To advance the dialogue, there is a need for clarification of empirical issues, the most important of which is the question of the relative efficiency and competitiveness of the large scale and household sectors. These sectors have different points of comparative advantage:

- **The large-scale sector** is more able to meet quality standards and to provide products of a uniform quality. This is evident in the preference of the dairy processing sector to purchase milk, for example, from the larger scale sector (though they purchase the majority from the household sector to achieve quantity and have invested significantly in collection points and partly cooling tanks in rural areas). However, there are many signs that the large-scale sector is unable to compete in the domestic market for meat and that this is a major reason for the lack of investment in this sub-sector.

- **The strength of the household sector and family farms** lies in its low cost structure, especially for labor, which is largely provided from family members at zero or near zero opportunity cost, but also in its flexibility of feeding regimes, adaptability to market demands and other technical parameters of production. However, because of the lack of
current (grazing) organization the small holder sector tends to aggregate around communities and to overuse the nearby pasture resources.

Given these different strengths and weaknesses, it seems advisable for the Government to be pursuing a strategy that provides opportunities for all sub-sectors. A potential strategy could be to develop programs of support for the larger scale and the household sector to meet their specific weaknesses through interventions, which are specific to and appropriate for the sub-sector. For example, the household sector needs support to address weaknesses in grazing organization, marketing, quality and food safety monitoring for the domestic market and breeding. There are currently no government programs addressing these needs. In contrast the large-scale sector may need support in developing food safety and quality standards to be able to compete on export markets and improve its feeding regime and waste management.

The upshot of these considerations is that the Ministry of Agriculture should consider rethinking its own structure and the instruments of support at its disposal to be able to provide a tailored service to meet the different requirements of the two sub-sectors. At the institutional level, this could be achieved by the establishment of a division in the Department of Livestock with specific responsibility for promotion and development of the smallholder sector, with separate budgets and employing separate instruments from the support programs provided to the larger scale producers. This would be well in line with the Government’s strategy for rural areas (also executed by the Ministry of Agriculture).

Livestock and dairy production play an extremely important role in many rural villages in Kazakhstan. This development occurred without an effective program of support, and is therefore entirely an unsubsidized and competitive set of activities.

In stock-breeding there is a particular problem, as the current system and direction pursued by the Department of Livestock will not provide any assistance to the small holder sector in upgrading its breeding and stock quality. In this area there is a need for experimentation with more inclusive approaches to stockbreeding that would recognize the role of small-scale private breeders in the national program. Pilot activities to develop stockbreeding associations would appear to be a sensible first step in this direction.
37. Animal Health Policy

5. Background

The Government of Kazakhstan is recognizing the importance of reducing the animal health risks in the livestock production, protect its national health and assure an affordable food safety. Animal health interventions have a long history in the country.

Some major changes have taken place in the animal production system during the last decade that require review of animal health policies:

(i) The contraction of the livestock sector has led to an overcapacity in the sector, and to closure of many larger livestock farms and processing plants. There seems to be also rather high capacity in veterinary staff with one veterinary full staff equivalent (FTE) per 650 livestock units\(^33\) (compared to a Western standard of about 3000 VLU/FTE\(^34\)).

(ii) The transition has also changed the management system that used to be concentrated in the collective farms and processing industry and is now fragmented in more than one million small farms.

(iii) There is international pressure to improve the standards of animal care and food safety to facilitate adopting WTO rules in agricultural trade.

MM. Current Policies

The animal health system that was fully integrated in the Soviet system has slowly moved to an independent Kazakh system collaborating with neighboring countries. The Government’s program is based on the recently approved “Law on Veterinary Medicine” (July 10, 2002) that recognizes private practice (and licensing of private practitioners), and the changed role of Government with a focus on supervision/inspection rather than carrying out veterinary interventions. Implementation of the law is covered (to date) by 57 decrees and regulations.

Much of the Law and the Government’s policy appear to center on continued support to the control of epizootic diseases. Little attention has been given to the role of veterinarians in helping farmers to improve production efficiency and reduce production diseases. Also, in the regulation the emphasis appears more on “control” and on retroactive inspection then on ‘good practices’. There is a need for a participatory effort including all partners in the production chain to prevent essential epizootic diseases and to enhance food safety. This includes the recognition of the role of producers, traders and field veterinarians in controlling disease through good management practices. (Examples of laws and regulations are available from the International Epizootics Office (see http://www.oie.org or the Food and Agricultural Organization- see http://www. FAO.org).

The Government is also contemplating to adopt some of the EU systems such as disease surveillance and the identification and registration (I&R) of animals and farms. At this point, however, these

\(^{33}\) Or about 1000 VLU per private food animal veterinarian. A veterinary livestock unit (VLU) is the equivalent of 1 cow, 1.2 horse, 10 sheep or pigs or 100 poultry.

\(^{34}\) However, in view of relatively low veterinary labor costs, and fragmentation of animal ownership the Western standard may be inappropriate in Kazakhstan.
concepts have not yet been discussed with all stakeholders and it is not clear on how they could be adapted to local conditions, what the costs of such programs would be and how costs and benefits could be balanced.

NN. Current Organizational and Cost Structure

The management of the State responsibilities in animal health is carried out by the Veterinary Department of the Ministry of Agriculture, and by the veterinary control departments of oblast, rayon, and municipality (town). Veterinary and sanitary supervision in 2,364 rural and village communities is implemented by 1,430 veterinary inspectors of rayon and municipality departments (MoA), another 3,255 inspectors, including 478 veterinary specialists, are executing the border and internal state veterinary control at 23 border veterinary and phytosanitary points and 133 checkpoints. An estimated 5,000 veterinarians provide private services and contract with the State to carry out some State mandated activities such as testing and vaccination.

Although the long distance between farms or flocks and veterinarians in village or urban centers is a constraint in many parts of the country, the high number of local veterinarians and low operation costs allow a system with a good coverage of animal health providers, however, far away from drug suppliers and from access to training and other facilities to improve skills.

The quality in the delivery of animal health services deteriorated during the nineties because of lack of inputs (vaccines, drugs etc.) and declining mobility of staff caused by the lack of fuel and transport. The strict centralized control relaxed. The epizootic disease situation appears under control, although some outbreaks of disease such as Foot and Mouth Disease have occurred in the last five years, and zoonotic disease such as brucellosis and echinococcosis are still common. Also, when the production changed from intensive to extensive some the incidence of the typical diseases of concentrated animal holdings (i.e. pasteurellosis, blackleg) declined, but typical disease of extensive production (echinococcosis, internal parasites, tickborne disease) increased. Farmers are more concerned about production diseases including parasitic diseases, mastitis, reproductive and neonatal diseases, and mineral and vitamin deficiencies. Veterinarians often neglect these diseases. Farmers also demand better diagnostic services and greater availability of animal drugs.

There has been a surge in zoonotic diseases such as brucellosis and echinococcosis in animals and subsequently in the human population. Human echinococcosis cases jumped from less than 1/100,000 in 1984-86 to over 2.5/100,000 in 1996-97. The increase in human disease acquired through animals (including anthrax, brucellosis, echinococcosis and maybe tuberculosis) – especially in rural areas – is becoming a major concern of veterinary and public health authorities.

Assuming an average gross income of 200,000 tg/yr per private veterinarian (and 1,000 VLU/private vet), the expenditure on animal health by farmers is a low 200 tg (approx. US$1.3) per livestock unit. Current gross income per dairy VLU is approximately 50,000 tg/year. The veterinary costs are 0.4% of production, which seems low (veterinary costs represent generally more than 1% of the production costs). The epizootic control system, which is officially provided

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35 Data MoA 2002
36 The law recognizes 6 types of veterinary interventions that can be carried out by licensed practitioners i.e. (i) treatment and prevention; (ii) production and sale of veterinary drugs and preparations; (iii) sale of feed additives; (iv) production and sale of disinfecions etc.; (v) laboratory and diagnostic work; and (vi) food inspection.
37 A sound eradication effort would require major investments and a (probably) ten years program.
free of charge includes diseases that in most countries would be considered a responsibility of the private sector, therefore the real cost of veterinary service may be higher.

The veterinary system uses an estimated total of 44 zonal and 152 rayon laboratories and as small laboratories at markets and bazaars. This appears excessive. A review of the caseload and costs structure of these laboratories may provide an insight into their access, operation and viability, and can help in streamlining these services.

**OO. Suggested Policy Options**

The Government has taken a sound initiative to update the veterinary system. Improvements could be made in the distinction between public and private sector responsibilities in the provision of animal health services. Several policy priorities are suggested:

**Streamlining (private) Veterinary Services.** The increase of livestock owners requires a new approach of the animal health services in serving the new clientele. Reaching this new clientele, however, encompasses higher transaction costs especially in reaching the more remote farming communities. A policy to support the current veterinary staff may make sense as long as veterinary (staff) costs are kept reasonable. These costs can be controlled by reducing transportation costs (a major costs factor in provision of services) through creating farmer cooperatives or veterinary clubs that can organize joint veterinary visits, and by judicious use of veterinary technicians and auxiliaries. The alternative policy of fewer high quality veterinarians, supported by animal health technicians, should be a long-term option; it would require a different system and stratification and improvement in veterinary training.

**Government Support to Private Veterinary Services.** Private veterinary services are allowed by law and encouraged by Government, but some impediments remain:

(i) Competition and conflict of interest and competition between public sector veterinarians (whether State, Oblast of Rayon paid) and private veterinarians;

(ii) A tendency at the local level to support public sector services;

(iii) Overly strict and sometimes irrelevant\(^{38}\) licensing and certification requirements that often lead to corrupt practices;

(iv) Insufficient skills of the veterinary system in dealing with production diseases.

To overcome such impediment the Government can further develop public animal health responsibilities so that private practitioners can contract with the Government to carry out certain public sector functions (such as vaccinations). This requires:

(i) A clear and transparent stratification of the role of veterinary inspectors;

(ii) Complete privatization of drug supply, combined with an adequate inspection and quality control;

(iii) Improved, and more practical, training (at university, post university and technicum level).

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\(^{38}\) For example there are strict rules on office and clinic space and decontamination, whereas some veterinarians may wish to practise without office or clinic (i.e. solely make farm visits).
The Government, in collaboration with the veterinary profession and farmer representatives, should develop clear objectives on veterinary practice, identify the needed skills, develop and support a training program, and adapt the licensing requirements to these objectives.

**Government Support for Streamlining and Upgrading Laboratory Services and Phasing-out Redundant Laboratories.** This would include (i) drafting of a clear policy on the role of State-, Institute- and private laboratories in public and private services; (ii) developing guidelines on minimal standards and cost recovery; (iii) streamlining and reducing laboratories, while improving the capability of the service; and (iv) further expanding the quality control program, including described in ISO 17025 and the associated Good Laboratory Practices (GLP).

Modern - often automated - diagnostic technology has considerably reduced the labor requirement in animal health diagnosis. Kazakhstan may not wish to adopt all these new technologies immediately. It may argue that – under current conditions of low labor costs and difficult long distance access - more labor-intensive and widely distributed diagnostic laboratory procedures are still more cost effective and provide easier access to producers and other clients. Future consolidation of laboratory services may need to be fine-tuned with required improved access to services (i.e. after the quality of transport and speed and quality of communication has improved).

Move toward Prioritized Epizootic and Zoonotic Disease Control and Eradication. During the immediate post Soviet period the Kazakh veterinary authorities continued the Soviet system of controlling all list A and list B diseases. This focus has not worked well (it did neither during the Soviet period). Rather than limiting notifiable disease to a minimum required by international standards, the new veterinary law has further increased this number without a clear reason or realistic implementation plan (and budget) on their eradication or control. The Government may want to prioritize the control and eradication program, based on the importance of the disease to producers (and Kazakh consumers), and maybe their possible effect on trade:

(i) The fact the Kazakhstan has a long and relatively open border is a factor to be considered when planning disease eradication; in some cases when there is great the risk of reintroduction a system of managed control may be more effective than eradication.

(ii) A control or eradication program requires a clear action plan, including monitoring criteria, time schedules and budget. This plan should be agreed with the livestock producers. It should be assured of long term financing (probably from the State budget).

(iii) Eradication programs should be realistic and adequately financed to allow compensation of farmers in case of elimination of diseased animals or contaminated animal products. The control and eradication program of the veterinary service needs to be selective and focus on the most important diseases first.

(iv) The Veterinary Department may further plan for ‘partial control policies’. Such programs (as allowed under OIE/WTO rules) permit Governments of large countries to manage their disease control on an oblast by oblast basis, with only certain oblasts or regions (not the whole country) declared disease free, and then certified to export only from these areas.

(v) The veterinary service should review the list (B) of mandatory control related to cost-benefits, staff requirements and risk. It may want to reduce vaccination requirements of diseases uncommon in Kazakhstan, and consider to eliminate some diseases from the list.

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For example: Foot and mouth disease generally has transient effect on productivity (although some strains may cause mortality among young stock); it has a major impact on trade, however. For change from two to one list of notifiable diseases see [http://www.oie.int/editon](http://www.oie.int/editon)/(March 2004).
that are not epizootic (diseases such as listeriosis, campylobacteriosis, ecthyma), and therefore not a public sector mandate or - at the most - of lower priority.

(vi) A veterinary epidemiology/economics unit and database should be created to improve the surveillance system and to establish more cost effective programs.

(vii) A review of the list of diseases may be opportune as the OIE is proposing to change from two lists (A and B) to a single list of notifiable diseases with indications for the degree of reporting urgency.

Review the adequacy of animal health skills and needs and develop and finance the required training (education) programs to ensure nationally and internationally accepted standards. The disappearance of mega farms and increase in small farms, new animal issues such as food safety and improved service for pet animals requires an overhaul of animal health training. This analysis should provide recommendations on

(i) How to improve the veterinary service to smaller farms and how to improve veterinarians’ understanding of small farmers’ problems;

(ii) How to improve the understanding of disease prevention and reporting of all participants in the food chain (farmers, veterinarians, butchers);

(iii) How to reduce the transaction costs of veterinary services to small farms. What are the development and training needs for veterinary clubs, use of para-veterinary staff in technical and business skills (see various OIE documents for examples);

(iv) How to streamline and increase the cost-efficiency and quality of veterinary education, including new directions in veterinary medicine to respond to consumer needs (such as pet animal medicine, food safety).
38. Food Safety and Quality Standards

6. Introduction

Food Safety has come high on the agenda of many governments due to consumer demand for food safety guarantees. With an increasing distance between producer and consumer and more processing steps in between it becomes impossible for the consumer to assess the safety and quality of products on offer himself. The requirements for Food Safety are usually laid down in regulations.

A clear distinction has to be made between food safety and product quality. Food safety is typically a public sector responsibility for public health concerns. To facilitate trade, the major trading countries (organized in the WTO) have adopted certain measures commonly known as Sanitary and Phytosanitary Standards (SPS).

Product quality is related to consumer demand - like product composition, quality of packaging - and is, not directly related to food safety for example product composition, quality of packaging. The non-safety aspects of quality are usually not a public responsibility and should be dealt with by the producers, processors, trade and the consumer organizations. For this reason quality standards have been developed. These are usually developed by the private sector. Certain quality standards are also of use in international trade so that each trader understands the commodity that is traded.\textsuperscript{40}

To the producer, the distinction between sector made voluntary standards and compulsory regulations is however fading away, since adherence to those standards is often a pre-condition for acceptability of products by large supermarket chains. And insurers may request compliance with standards to reduce product liability exposure. These are the underlying reasons for the increasingly heard concept “a license to produce”.

PP. Sanitary and Phyto-Sanitary Measures (SPS)

With the strong increase in international transport and trade in food products, seeds and animals over the last decade guarantees on food safety and quality standards in this trade have become important. These guarantees are checked through the Sanitary and Phyto-Sanitary measures (SPS). These measures are a variety of regulations on trade in food stuffs, plant material, seeds, animals, animal feed and other natural products to protect human, animal and plant health in the importing country and is mostly used in the World Trade Organization. During the Uruguay Round of world trade negotiations, the significance of SPS measures was recognized and rules and a committee were established as part of the WTO to develop SPS measures. The Agreement on Sanitary and Phyto-sanitary measures oversees the application of such measures on traded goods.

\textsuperscript{40} For example Commodity Boards of Trade only deal in relatively simple commodities of which the standard can be guaranteed (grain, wool, cotton, etc.)
The WTO calls for SPS measures to be (i) based on International Standards or (ii) to conduct a risk assessment (see below) where there is no agreed international standard or the importing country believes that this is insufficient to meet its policy objective. The WTO recognizes certain standards as the basis for SPS measures:

- **Food safety**: guidelines and recommendations established by the Codex Alimentarius Commission.
- **Plant protection**: Secretariat of the International Plant Protection Convention (IIPC).
- **Animal health**: the recommendations of the International Office of Epizootics are recognized by the WTO.

The EU has laid down its rules on food safety in EC regulation EC 1642/2003 of 22-7-2003. This regulation can be found on:


There are different SPS measures:

**Policy Instruments.** These can be used to issue import bans in case of e.g. animal diseases (e.g. import ban of meat and animals from country with FMD), products that are a public health risk (e.g. ban on British Beef during the BSE crisis). These bans can be total or partial: Namibia can e.g. export beef to the EU from certain catchment areas where FMD does not occur.

**Technical specifications** for a process standards (e.g. length of quarantine for imported animals), product standards (e.g. maximum residue level), and packaging standards can be set in the SPS.

**Information remedies.** Labeling requirements on country of origin and registration of producer’s registration number in the EU, controls on voluntary claims etc.

**Scope.** Some measures relate to local and imported produce, others apply only to imported products.

**Regulatory Goal.** There are biological and toxicological risk reducing measures and measures that do not reduce risk but promote other goals such as conservation, quality, and compatibility with domestic production systems. There are three broad social objectives:

(i) Protecting the economic interests of producers;

(ii) Protecting the health and economic interests of consumers; and

(iii) Protecting the environment.

SPS measures should primarily protect consumers, animals and plants from diseases and pests. In the second place they should facilitate trade by laying down the quality requirements for a certain product or goods so that individual countries cannot make excessive demands on quality. SPSs got more in the picture during the last few years due to concerns on the side of western consumers about food safety, the environment and increasingly concerns about the ethics of international trade and the increasing globalization (http://www.maketrafefair.org) and concerns by developing countries on the applied standards in SPS and Codex. Although one of the objectives of WTO is to take away tariff barriers for trade the SPS measures are increasingly used by western states as non-tariff barriers to keep control on the imports of goods. Especially transition and developing countries lack the information, finance and facilities to comply with the SPS requirements and apply them on their imports. It is therefore important for Kazakhstan to develop its capacity to apply these SPS measures before joining WTO. This does not only mean equipping laboratories, but also raising awareness among producers, processors and consumers on issues of food safety, environment and the ethics of international trade. The SPS measures refer to goods and products that will be exported.
QQ. Quality Standards

As earlier mentioned standards were first developed for voluntary compliance but compliance to these standards becomes increasingly a prerequisite for acceptance of one’s products. Standards can be divided in different categories:

- **Standards for analysis and processes**: many in ISO (International Standards Organization) standards, describing how an analysis is done or a process has to take place. For the trade in products of animal origin and the analysis different standards have been set.

- **Standards for trade**: to standardize product descriptions various standards for trading in different products have been developed. An example is e.g. the SEUROP carcass classification system.

- **Quality Standards**: Companies and producers try to distinguish their production methods and products through compliance with a well-described quality standard. ISO 9001/2000 and HACCP (EC Commission Decision 2001/471) are some universal standards. Increasingly there are coming country specific standards such as BRC (British Retail Code), IKB/PVE (Dutch standard for Good Agricultural Practice in pig production).

- **Standards to describe a product**: product branding and depositing a trade name is increasingly used to protect one’s market share. Examples are Scottish Beef, New Zealand Lamb, Roquefort cheese, Feta etc.

**ISO Standards.** Many products and processes are contained in ISO standards. Compliance with these standards has to be certified by independent quality standard auditors, who are accredited to do so. Kazakhstan should aim to systematically harmonize the GOST standards with the ISO standards, and run a training and awareness-raising program for the stakeholders involved.

**Quality Standards.** Most quality standards are a combination of different ISO’s for management, analyses and compliance with regulations. These are commonly called “Good Practices”, which are defined for all individual segments of the livestock food chain:

- **Farmers** comply with regulations and standards laid down for production. They maintain registers of animals, flows of feed, use of veterinary drugs etc: Good Farming Practice (GAP)

- **Stock feed companies** comply with regulations and standards laid down for feed milling and compounding. They keep records of all sources of feed components, demand quality assurances from their suppliers and continuously monitor their ingredients for the presence of harmful substances such as dioxin or aflatoxins: Good Manufacturing Practice (GMP).

- **Private veterinarians** comply with regulations concerning drug registration and use, keep records and follow the local code of ethics/professionalism for veterinarians: Good Veterinarian Practice (GVP).

- **Processing plants** design a quality control system in which tracking and tracing of products is assured through insistence on guarantees by suppliers, marking their products in clear batches, developing a hygiene plan, staff training on quality control and submitting themselves to inspections by sanitary and veterinary inspection bodies: Good Hygiene and Manufacturing Practices (GMP).

- **Laboratories** follow standards as described in ISO 17025 and can then claim to follow Good Laboratory Practices (GLP) 41.

Only when all steps in the chain apply quality standards for their operations can they give guarantees to the next in the chain that the product is safe. Still often the inspection is retroactively in the case of the Good Practices. It has however limited the places where hazardous situations could occur during the production or processing.

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41 Laboratories also have additional systems of standardizing results (the “European Star lab system for example) by circulating samples among labs and recording the results that are not expected to deviate.
An example of a proactive control system is the Hazard Analysis Critical Control Point (HACCP) quality control system that specifically tries to identify the places where hazardous situations can occur, the so-called critical control points, and then develops a control system that includes specific measures to be taken to counteract the problem. In this way there is a continuous monitoring of quality and quick action can be taken when the product safety is jeopardized. A HACCP system is audited to see whether it is well designed and applied. Companies will usually have an ISO 9001/2001 and HACCP system. The EU has made a working HACCP system compulsory in all food processing plants above a certain output.

**Trade Standards.** Trade standards are voluntary and developed by the sector. The SEUROP carcass classification system is an example of a trade standard. Through this standard the comparison of e.g. prices in different EU member states for a similar carcass to e.g. determine the reference price is possible. It also gives a tool to traders to describe a carcass and to buy without seeing.

**Branding.** Increasingly countries try to protect their products and regional producers by depositing the specific trade names and reserve them. Greece recently deposited the name “feta” for white sheep cheese, seriously hindering e.g. Macedonia, which is now trying to deposit the name “fetta”. The traditional Bulgarian “marmelade”, made out of rosehips, cannot be called such in the EU as the British had deposited this name for a “jam exclusively made out of citrus products”: the Bulgarian rosehip jam is now called “marmalade”. Different types of branding systems can be distinguished:

*Protected Designation of Origin (PDO)* - open to products that are produced and processed within a geographical area, and with features and characteristics, which must relate to the geographical area. An example is the French Roquefort cheese, produced in one region from only sheep cheese, processed there and ripened in caves to get the typical green moulds developing in the cheese.

*Protected Geographical Indication (PGI)* - open to products which must be produced or processed or prepared in the geographical area and have a reputation, features or qualities attributable to that area. This is often used for regional cheeses and wines.

*Traditional Specialty Guaranteed* - open to products that are traditional or have customary names and have a features that distinguish them from other similar products. These features must not be related to the geographical area the product is produced in nor entirely based on technical advances in the method of production. An example would be traditional horsemeat products such as Kazhi sausage, that is produced all over Kazakhstan.

**RR. Some Points for introducing Quality Standards in the Livestock Sector in Kazakhstan**

Introducing quality standards will not automatically improve quality: everybody concerned will have to comply with those standards. In a country where much of the production reaches the consumers through informal channels a too rigorously introduced quality standards system for the formal channel would undermine its competitiveness. Only a gradual introduction of such standards, whereby great attention is paid to information supply to producers, traders, processors and consumers and awareness raising on quality issues, would lead in the long run to not only adoption of such standards in the legislation but also the application in practice.

Vast investments would be required to improve the production conditions and the inspection system (not only laboratories, but also transport, staff and farmer training, legislation etc.). Therefore a phased adoption is recommended.
All candidate EU member states have gone through a process to adopt such standards. This process is not yet finished, but for most the EU has approved the system in place. The following are some points to consider:

- The recognition that one standard for all is impossible: there are compulsory standards concerning food safety (hygiene, absence of pathogens, residues and foreign bodies) for all and additional quality requirements for those wanting to e.g. export their product.

- For livestock the EU requires an Identification and Registration system for tracking and tracing. Initial tagging is hard enough; to maintain the integrity of the database through movement reporting is even harder and expensive.

- The Government needs to work in a partnership system with the producers, processors and trade to achieve the objectives: most pre-accession countries had working groups to transpose the EU legislation and to harmonize it with the national legislation.

- Professional organizations/associations of processors and producers should see improving the quality standards as their task to help their members and not as a government-imposed measure.

- Introduce quality standards to be done gradually, starting with good practices and slowly increasing the requirements (e.g.: average milk bacterial count in many East European countries was 10-20.000.000/ml and had to be brought to maximum 100.000/ml: this was done through training, advice and by continuously increasing the requirement).

- Find the right mix in public-private responsibilities: it is impossible for the government to do approval of Good Manufacturing and HACCP plans, train everybody, and do inspection and auditing. Usually the auditing and training are left to the private sector.

- Don’t bother small plants with ISO standards or HACCP systems, which only produce for the less-demanding local market (green market, katalysator etc.). Recognize that local consumers are well aware of the risks of buying in local bazaars and accommodate such risks by proper products selection and food preparation.

- Include large companies that export, plan to export or supply major supermarkets in a discussion about introducing standards and a possible deadline for introducing a complete quality control and management system.

The introduction of quality standards is better served with carrots than with sticks. Companies should be made aware that a good quality management system reduces the amount of rejected product, leads to more effective and efficient production and with increasing awareness of clients preparedness to pay a higher product price.

The following bottlenecks have to be resolved before a quality standard system can be successfully introduced in Kazakhstan:

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42 Recently the milk producers in Tunisia proposed to reach a similar goals through the implementation of a 10 year plan that includes training, testing, quality-based payment, identification of problem farms.

43 An appropriate role of Government can be to determine the amount of rejected or spoiled product, estimate the costs to the sector and raise the awareness among producers, processors and stores.
- A better flow of information on SPS measurements and quality standards: these are continuously changing due to consumer pressure and trade agreements and thus the implementation needs continuous adaptation.

- Scientific and technical knowledge has to be developed. Kazakh specialists should be able to participate fully in the international discussion of these standards. An effective and efficient laboratory system, divided over the public (inspection) and private sector (quality monitoring) should be developed.

- The increasing introduction of process-based self control mechanisms (HACCP) in many countries and the insistence of similar systems for imported products will further widen the gap between the current guarantees and the required ones for Kazakh products; quick action is needed in the most strategic sectors for export.

- Especially in the meat industry with many critical control points it takes a long period of adaptation and training and heavy investments to improve the quality standards. The cost of compliance and implementation of procedures such as HACCP can be prohibitive, because of the long waiting period before standards are met and the uncertainty whether once met there will be access on the lucrative western markets.
39. Food Quality

7. Background/Issue

Food safety and quality standards for livestock products had remained essentially unchanged from the Soviet era, with some minor amendments directly after independence. Although some of these standards had been internally developed, most were developed in collaboration with the Russian State Committee on Standards (GOST). In the past two years there has been general consensus that these standards needed re-examination in light of the transition process that led to changes in ownership and movement towards market driven production.

In light of the changing situation the Government has expressed the wish to raise food safety and quality standards to improve free trade, and possible accession to the World Trade Organization. Thus the current veterinary legislation has been revised and harmonized with requirements and the principles of the WTO Agreement on veterinary and phyto-sanitary measures, with the explicit goal of eliminating technical barriers for trade. Further, the government views the introduction of specific product and process quality standards such as HACCP (Hazard Analysis of Critical Control Point) and ISO 9000 as part of the process to gain WTO accession. In theory the establishment of higher standards may contribute to producers and processors achieving greater value addition throughout Kazakhstan’s marketing chain.

Introducing any standard system needs to strike a balance between serving the interests of consumers and that of producers and between groups of consumers with different interests. Whilst the export trade acts as the main market driver to improvements in quality, in Kazakhstan, this is not the case since the severity of the transition period and subsequent reduction in herd size, has resulted in a dramatic decrease in exports, and an increase in imports. Thus for the majority of livestock producers and processors, the domestic market remains the sole market for their product. In this context the costs of introducing internationally acceptable standards in the short term can be high for domestic producers, and may even price poorer segments of the population in the rural and urban centers out of the market for certain meat and dairy products, given the high income elasticity of demand for these products. Thus introduction of such systems need to be considered in light of their costs, which can have an impact, in the short term at least, on the rate of recovery of the sector.

Anecdotal evidence seems to suggest that for livestock processing companies, particularly in the dairy sector, there is difficulty to obtain products that meet the current Kazakh quality requirements. Also, many companies, particularly in meat processing, do not possess the necessary laboratory equipment to test all the parameters required, and hence perceptions regarding the ability to obtain quality product vary amongst the industry players.

8. Current Policies

The Government’s food safety regulations are enshrined in the amended Law on Veterinary Services, adopted in July 2002. The law seeks to move food safety requirements closer to that practiced in the European Union, which includes: recommendations on quantity control over the aflatoxines content in livestock food products for beef, horse meat and intestines; and tolerances for pathogens in livestock products. In addition, the law introduced the requirement for all enterprises involved in handling or processing livestock products to have updated laboratory equipment and practices in compliance with EU GLP (Good Laboratory Practice) standards. Although not all
laboratories are required to meet the complete range of equipment and process requirements, there is a minimum requirement, which has required most laboratories to purchase additional equipment.

Government inspectors continue to be responsible for epizootic standards at the farm level and that of the final product. Despite frequent complaints in past by producers and processors of the numerous and often-unplanned veterinary inspections that hampered their operations, the government has made significant strides to streamline the inspection process, which has included the need to register inspections with the Oblast authorities.

In terms of improvements in quality standards the Government has re-affirmed its intention to improve quality, through the use of quality control programs such as HACCP and various ISO standards including ISO 9000.

II. Discussion

(a) Costs and Benefits of Introducing HACCP

Introduction of HACCP, which is a process based, rather than a product based quality control system, and is costly in terms of equipment and skills required, particularly in the fragmented and small-scale production systems. Despite the wish to move to these standards there has up to now been a limited assessment of the investment required establishing and monitoring such program. It is likely that the introduction of such a system will require significant investment in animal identification, a countrywide animal database and upgrading of skills of veterinarians.

Except for these costs, there are significant costs that will need to be borne by the producers and processors to ensure that farms and livestock processing facilities are certified according to these new standards. Since much of the marketing and production, in the short term at least, will be geared to the local market, introducing such a system will need a phased approach to ensure it does not cause a negative impact on the sector.

Given the costs of HACCP implementation, a move toward implementation should be based on a prior cost-benefit analysis, and should probably be initially implemented on a pilot basis.

(b) The Relation between HACCP and Animal Disease Control

The government is establishing a veterinary passport system for all livestock within Kazakhstan, to control the spread of animal diseases and to develop quality control and monitoring systems that are a pre-cursor to developing quality standards such as HACCP and ISO 9000, industry wide. Livestock producers will be liable for the costs of implementing the system, which according to Ministry of Agriculture is estimated to be in the region of 150 Tenge per animal.

It is important that government policies are based on an appropriate sequencing of disease control and the introduction of HACCP-based systems. In the US, European countries and other developed livestock economies, the introduction of HACCP-type systems has been preceded by several decades of effective disease control activities targeted at the most serious diseases. There is a danger in Kazakhstan that premature introduction of HACCP will simply reveal the extent of continued incidence of serious diseases which act as a barrier to external trade. It may be better to concentrate initially on a targeted disease control program to achieve elimination of a limited number of the most serious diseases.
(c) Applicability of HACCP to Various Marketing Chains
It is clear that it is not currently feasible to apply HACCP on a nationwide basis and that the costs are likely to outweigh the benefits for remoter smallholder producers who are not closely linked to markets for export or modern processing. The experience of China is of some interest: the government in that country has decided not to extend their formal quality control system to the smallholder livestock producers, for whom the costs of applying the system outweigh the benefits.

(d) ISO 9000
ISO 9000 is a process standard at the plant or company level that can form an important element of confidence building in marketing, especially for new export markets. The decision to proceed with the ISO 9000 process is one that should be taken at the company level on the basis of a company-level cost-benefit analysis. While the government may appropriately publicize the value for companies of obtaining ISO 9000 endorsement, the decision on implementation rests with each company and should not be mandatory.

U. Suggested Policy Options
For many livestock commodities it is usually the export trade that acts as the main market driver to improve quality. However, given the collapse of Kazakhstan’s export of livestock products that occurred in the past decade, and the resultant concentration on the domestic market, export standards are not acting as an effective driver for quality improvement. However, this does not mean that standards are unimportant: the domestic market is expected to grow rapidly in the coming decade and will be increasingly discerning of quality; the degree of penetration of higher quality imports already points to the need to raise standards simply to maintain market share on the domestic market, let alone achieve import substitution for processed products; finally, as Kazakhstan moves back into overall livestock sector surplus there will be an increasing need to establish (or in some cases re-establish) export markets. Product safety and quality will be critical if this is to be achieved. There is, accordingly a strong case for addressing issues of product safety and quality standards. The issue is how this should be achieved. A number of issues need to be examined in reaching an appropriate policy on standards, including:

- The Government investment required to establish and monitor a quality improvement program – Significant resources will be required to establish animal identification systems, and to develop an animal database. The costs at least at the initial stages will need to be borne by the Government, to ensure that this does not overburden livestock producers, but over time will need to be shared with the industry. Any move to introduce major new systems should be subjected to rigorous cost-benefit analysis, including the incidence of costs on different producer and consumer groups.

- Providing training for improvement in quality standards – The government through the Veterinary department and accredited training institutions will need to provide support to skills development of veterinary staff and ultimately local consultancy services that could in turn provide support to producers and livestock processors in meeting the HACCP standards.

- Implementation of ISO/HACCP quality standards need to be driven by the private sector – Quality standards needs to be a private sector driven activity rather than that imposed by the government. The costs of certification for livestock farmers and livestock processors can be potentially large and may in the short-term impact on the continued recovery of the sector. Further, producers in the Kazakhstan’s traditional export markets, namely in the CIS, may not require these additional certification requirements. Hence the imposition of these standards may in certain situations burden producers/processors with additional, potentially unnecessary, costs and reduce competitiveness of Kazakh livestock products in these markets. Thus movement to these higher quality standards needs to be a voluntary code that is adopted by the industry.

- Given the importance of getting the right public/private mix of activities it is suggested that consideration be given to establishing a broad Public-Private Sector Forum on Livestock Sector Standards to establish national
policies and to provide an independent advisory role to Government. Such a forum would ensure that the differing interests and concerns of the various private sector groups were adequately taken into account in the formation of national policies.

- The need for food safety standards in local markets should be driven by consumer demand as local consumers have adapted their food preparation habits to expected food safety risks and higher standards might not necessarily increase consumption levels.
40. Feed Policy

8. Background/Issue

The contraction of the livestock sub-sector characterized during the transition period has halted, and there are signs of tentative, albeit rather selective local recovery. Despite these changes there remain significant constraints along the supply chain, one of the most notable being the lack of suitable fodder supply. Prior to transition, livestock policy was focused on creating large state supported livestock farms, requiring significant quantities of supplemental feeding, especially during the winter months, through hay, production of fodder crops and grain by-products. These farms received subsidized delivery of feed, which perpetuated non-sustainable farm structures and continued fodder cultivation in areas that were climatically unsuitable.

During the transition and up-to the current day, there has been a significant decline in the use of fodder crops and livestock feed partly reflecting changes in ownership structure, with most livestock kept on smaller family farms, and partly the dramatic de-stocking of livestock throughout the country. The resultant impact on feed production was significant, with feed production falling by over 70 percent from 24 million tons in 1990 to about 6.4 million tons in 2000 (Yegheubayev, 2003). Higher nutritional value crops that were sometimes used in livestock feed such as clover, potatoes, beets, carrots, etc., became beyond the reach of most livestock producers, as the cost of production reflected their non-distorted market value.

Thus there has been a pronounced shift toward extensive production, particularly among the over 80,000 private family farmers that emerged from the transition. Most graze their herds in the vicinity of the village, 8 km in winter, to 15 km in summer. This in part has been due to the increasing labor costs particularly for herders, associated with significant out-migration from...
rural areas, risk of theft, lack of family labor, lack of water supply, and the inability to access affordable transport due to small herd sizes. Thus many of these producers rely on additional hay, as opposed to silage that is a rarer commodity, and as a consequence fodder preservation has become increasingly more important.

With a movement to more extensive production, the rangelands produce over 70 percent of the feed for livestock in Kazakhstan. However, the more distant pastures are abandoned and it is estimated that only 60 million hectares of pastureland is used with the abandoned or under utilized rangeland estimated to be close to 100 million hectares. The decrease in traditional livestock rearing (transhumance) and deterioration of infrastructure has reduced access to many remote areas of rangeland. As highlighted in recent reports, most Kazakh livestock owners and experts believe that the system of seasonal migration is an optimal husbandry system in the southern areas, whilst northern areas of the country will need to depend on stored fodder for winter-feeding.

In the northern areas of the country, livestock production is based on a more intensive production system, often found around the large grain production farms, and utilizing more grain by-products in the feeding system. Many of these enterprises are supported by a diminishing number of private feed mills. However, the transition has seen a significant decline such feed mills, due to the significant reduction in livestock numbers, and the move toward extensive production in the southern Oblasts. Those that remain tend to be primarily focused on providing feed to the poultry industry.

The problems of feed and fodder production are many and include structural issues such as lack of protein feed, lack of mineral feeding, and poor harvesting techniques and storage of fodder crops that lead to an estimated 30-35 percent loss in the nutrient value of the crop. In addition, there remains an underdeveloped feed and fodder market in the country.

**V. Current Policies**

Feed and fodder production and feed milling will continue to be a private sector activity. There are only limited interventions that the Government can and should undertake in this respect. The use of feed will be dependent on the farming structures that develop, with more extensive systems, characterized by greater reliance on rangeland development likely to predominate in the Southern Oblasts, while more intensive livestock systems based on grain producer’s wish to mitigate risks in the Northern Oblasts, that may see the emergence of feeds based on grain and other agro-processing by-products, especially close to urban markets.

The government operates a number of controls and tariffs on imported agricultural products. These import tariffs, although aimed to support domestic production, have had an indirect effect of hampering the development of commercially produced feed, particularly for essential feed ingredients that include soybean / cake, fish meal. The easing of import tariffs on these products would be a positive first step in developing affordable commercial feed, that the larger scale livestock producers in the northern Oblasts and around urban markets will be able to optimize.

Livestock research tends to be unfocused and is not targeted on contemporary issues. There is at present insufficient research, undertaken at government level research institutes on the development of animal nutrition and improved utilization of local agro-processing by-products.
such as grain by-products into animal feed mixtures. In addition there seems to be limited applied research to increase efficiency with which grasses / fodder crops and feed mixture products are used.

The government provides subsidies and support to various inputs into the production of crops, including fodder crops. Recent studies undertaken by FAO using 2000 production data and prices, highlight the nature and extent of this distortion to the market, which has implications for fodder crops, particularly of the price of grain by-products and soybean. Thus comparing the ratio of farm-gate prices received by the farmers to international farm gate prices\(^{44}\), one finds that there is a relatively small subsidy (less than 10 percent) for wheat i.e. domestic producers are receiving higher than international prices (CIF adjusted for importable and FOB for exportable). This has marginal implications for grain by-products used for feed, however, it is interesting to note that soybean, a potentially important, although infrequently used feed commodity, is taxed by over 10 percent i.e. cheaper than international prices.

**WW. Suggested Policy Options**

Much of the government support to the feed sector should be based on the principle of supporting an effective private sector response to have maximal effect on productivity and competitiveness of the sector. Measures that would facilitate this development could be as follows:

- **Provide Support to the Training of Small Scale Livestock Farmers** – Government will need to consider introducing training courses, through support to livestock associations, consulting services, and training institutes that highlight better harvesting techniques for hay and fodder crops, the value of better storage of these crops, and through the provision of demonstrations highlight technological advances in feed.

- **Government to Provide Support for the Analysis of Livestock Feeds** – The government may consider the establishment of laboratories and training of laboratory technicians for the analysis of feeds at the Oblast level to enable livestock producers and small scale feed producers to test for the nutrient value of their feeds.

- **Support to Feed Research** - In collaboration with the feed industry, develop links to research programs on livestock feeds and feeding to meet the needs of the variety of livestock production systems emerging in the sector. Research needs to look into feed and by-product availability to best use the existing feed base. A further promising area is that of new fodder seeds. As in other countries in the region, a major question is how the problems farmers face are brought to the attention of the research institutes and how proposed solutions developed by those institutions are tested and made available to farmers. This issue is acute, given the absence of an agricultural extension service serving the smallholder sector.

- **Undertake Assessment of the Impact of Tariffs on the Feed Industry** – Government should commission a study to look at the effects of easing of import tariffs on essential feed ingredients, which may be a first step in developing affordable commercial feed, that may benefit larger scale livestock producers.

- **Better Use of Agricultural By-Products** – Government should, through research and extension and review its tariff policy, encourage better use of agricultural by-products whether bran in the grain area, cotton seed in the Southern region or sunflower cake in the Eastern region.

\(^{44}\) Often referred as the nominal protection coefficient
41. Animal Breeding

9. Background/Issue

The Government of Kazakhstan continues to place high priority on the stabilization and further development of improved breeding stock. Although a breeding policy is important, it needs to be viewed in the context of livestock sector recovery, where issues related to the marketing of livestock products and availability of feed must be seen as higher priority areas. When the market demand for meat, milk and fibre increases farmers become interested in increasing productivity and, consequently, also in breed improvement.

Prior to the transition period, the breed evaluation was highly centralized and the recorded herds consisted between 15 and 24 percent of the herd size, supplied by numerous state owned breeding farms, distributed across all Oblasts\(^45\) within the Republic. However, during the transition, and up to the present day situation, which can be characterized by a stabilization and modest increase in livestock production, many purebred animals have been lost. The loss of this purebred stock has meant that much of the herd is crossed with poorer quality local varieties, which has led to a fall in livestock productivity, and a resultant stagnation in genetic advancement of the herd.

With the loss of these pure-breds, it is unlikely that Kazakh breeders can catch up in the foreseeable future to improve basic productivity, which stands low by international standards. The example of milk yields which currently stand between 1,800 – 2,000 kg of milk/cow/year, compared to, for example, New Zealand where a normal yield for a forage-based diet is around 6,000 kg of milk/cow/year, underscores this situation. In addition to this, Kazakh farmers have been unable to obtain animals with specific traits, particularly of disease resistance or of protein content of milk, common in international breeding.

Since the sharp decline in herd size, the modest recovery since 2000 and continued reliance on domestic markets, it is unlikely in the immediate future that farmers will be ready to participate in breeding programs and may have to rely on imported breeding stock (semen, embryos or live animals). However, as urban demand continues to increase, and the potential to penetrate selected niche export markets based on the recovery of former trading partners and access to newer markets, it is likely that there will be increased private sector activity in the sector.

XX. Current Policies

The Government’s program is focused around amendment and additions to the “Law on Pedigree Livestock Breeding” number 269-II of December 14, 2001. Much of the Law and the Government’s policy stance appears to centre on continued support to the state breeding system, such as the establishing of “Asyl Tulik” OJSC pedigree livestock breeding center, and the “Astana Kus” poultry breeding farm. These represent about 9 percent of the registered 255 farms operating in Kazakhstan. It is the Government’s intention to use these farms as a vehicle

\(^{45}\) Dairy breeding stations were predominantly in the Northern and Southern Oblasts, whilst sheep and cattle breeding farms were stationed in the Central and Western Oblasts.
to demonstrate to private agricultural investment companies, that such services are feasible, and profitable. However, support to these farms comes at a high cost in terms of Government budgeted resources. For instance Asyl Tulik farm will receive about 206 million Tenge in Government support (which translates to US$ 1.3 million).

The current Government policy indicates that subsidies for the Government breeding farms will continue until 2005. However, continuing these subsidies after 2005 raises concern that continued reliance on Government breeding centers will “crowd out” the sustainable private sector breeding programs. These government expenditures are unlikely to assist in further structural reforms to the sector, though they may provide support production in the short run.
With the transaction costs for accessing breeding services for producers in more remote rural areas being high, the Government has decided to provide subsidies for farmers to purchase pedigree-breeding stock, varying between 25 to 50 percent of the purchase price for dairy and beef cattle, as well as a 35 percent subsidy for the support of AI services. Government plans propose that from 2003 onwards, subsidies in the order of 50 percent of the price for young animals, pedigree eggs, and sire bull semen sold from the state farms will be provided to purchasers, whilst full cost recovery is expected for the storage of semen, and for the purchase and maintenance of pedigree sire bulls.

The AI service is inefficient (three inseminations rather than one; partly using outdated semen; and the inseminator rather than the farmers deciding which bulls to use) and would likely be improved through privatization, though there would be a continuing case for subsidization of delivery of the service to smallholder farmers in outlying locations.

The breeding farms are inefficient in generating breeds with desired characteristics and in their direct production outputs. This inefficiency strengthens the case for moving toward commercial farm-based progeny testing and breeding, rather than limiting such testing to dedicated breeding farms.

There are inherent dangers in developing a subsidy scheme, primarily due to the fact that they can often be “captured” by those enterprises and individuals that are well connected, to the exclusion of those that may have the greatest benefit. Furthermore, because of the government budget constraints, the potential number of beneficiaries often decreases as the subsidy per beneficiary increases, again limiting the potential impact of such programs. However, with the real danger of exchange rate appreciation through “Dutch Disease” factors, government measures to increase productivity, without excessively distorting the market need to be considered.

Recent regulations on Government certification for breeding farms, particularly regulation 1061 dated September 26, 2002, place a heavy administrative burden on private sector enterprises wishing to engage in rearing breeding stock. The process to obtain a certificate is a centrally driven process, through which potential applicants must show conformity to an approved list of breeds, types and crosses developed from a central commission of scholars and specialists from the state breeding farms. The specification of which breed or combination of breeds that farmers require should be left up to the farmers (or farmer-based breeders organizations), as they will be in a better position to understand the needs of the market and the consumers they serve. This will vary according to the farm structure, location and the market segment in which enterprises and individual livestock producers compete.

**YY. Suggested Policy Options**

The policy options need to be based primarily on a clear concept of the appropriate role for Government and the private sector in livestock breeding. The current set of Government policies considers a large and pervasive role for the State without clearly identifying the market failures that form the justification for Government intervention. The lack of private breeding centers and farms in part reflects a sector just beginning to recover, but still operating below normal let alone international standards of production efficiency.
Stimulating subsidized high quality breeding stock through government breeding farms will tend to blunt the on-going efforts in farm restructuring to achieve durable patterns of farm ownership and control. Support at this juncture will tend to encourage the perpetuation of state livestock farms, which ought to be dissolved as soon as private breeding farms, associations or companies start to emerge.

However, there remains a case for government intervention to protect the genetic base, as this is a justifiable public good for which the Government should be involved in, although it is unlikely to have a marked effect on production efficiency. International organizations such as the FAO are assisting governments to address the management and preservation of national genetic resources.

There are several policy options that should be considered that provide a more sustainable and rationale way forward. These include:

- **Government Support to an Inventory of Livestock Breeds** – The last inventory of livestock breeds was undertaken in 1990. With changes that have occurred during the transition period, it would be an appropriate time to undertake another inventory to understand the changes that have occurred in breed structure and to highlight the breeds to be preserved.

- **Streamline the Process for Importing Genetic Materials** – With stagnating genetic improvement, short-term solutions would tend to place higher priority on imported genetic materials. It is proposed that a simplified approach be adopted for the import of genetic material, which will only require certification from the exporting country that it is free from infectious diseases and diseases from List A of the International Animal Health Code (OIE). The past few years have witnessed increased recognition of the importance of imported breeding stock and materials, and this trend should be allowed to continue.

- **Phasing out Support for Breeding Farms** – These farms are “crowding out” the development of sustainable private sector breeding programs, and continue to hamper the continued structural change in the sector. Government policy on breeding should, as in other countries, be based on performance testing of the private herds rather than direct provision of breeding stock. The withdrawal from direct provision of breeding stock, and the development and expansion of current private sector enterprises is likely to see demand increased for basic productivity and improved traits through imported breeds. Thus Government support should after 2005 be phased out and be more focused in ensuring adequately equipped and staffed performance testing facilities.

- **Move toward an Unregulated Market for Breeding** – In the medium term Kazakhstan should move toward deregulation of animal breeding, at the point of importation and certification of breeding farms as most other countries. For example, this is the system operated in the US, the UK and Holland, where the industry is self-regulated and entirely in the hands of the private sector. The measures in support of this policy direction would include:
(i) **Encouraging Private Breeders Associations:** The Government should encourage the formation of a Private Breeders Associations which can provide, through private sector mechanisms, support to members in the identification and procurement of various types of pedigree eggs, semen, storage facilities, etc from the local and international market. It may perhaps, provide credit facilities and market their improved quality breeds to farmers. There may be a role for Government providing training services to these associations and its members on the management of breeding stock and providing demonstrations on current best practice in the sector. The Private Breeders Associations would, initially in cooperation with the Ministry of Agriculture’s animal production department, take responsibility for the registration of purebred animals and breeding farms.

(ii) **Channeling of Breeding Subsidies through the Private Farmers:** the breeding farms, which receive a subsidies for their sales, manage the existing system of subsidies for breeding stock. In the context of privatization of the breeding function the breeding subsidy should be paid directly to private sector farmers, based on their purchase of certified breeding stock from breeding farms registered with the Private Breeders Association. This would encourage farmers to shop around, to seek out the characteristics they most require.

(iii) **Elimination of the Need for Certification:** The privatization of animal breeding should lead to a system that is self-policing by the private sector members of the Private Breeders Association. Farms will however, need to show that their breeding stock is free from infectious diseases, and meet the current phyto-sanitary requirements.
42. Ingredients of an Animal Production Law

10. Introduction

The lion’s share of legislation in the field of livestock is related to the veterinary area and concerns the control and eradication of animal diseases. Besides these veterinary laws most countries have additional legislation to regulate animal welfare, animal waste, animal drug certification, animal breeding, trade, systems of carcass classification and standardized weighing, animal welfare etc. This legislation can be developed in two ways:

- **Separate Laws for each subject:** every piece of legislation has to be passed by parliament, which is a time consuming process and is often hindering timely legislation in case of emergencies etc.

- **A Framework Law:** in broad outlines the various aspects relating to animal production are mentioned and per section the competent body is indicated (in most cases the Ministry of Agriculture) and the institutions responsible for the execution of the in the law stipulated points. The minister can then issue regulations for each of the points mentioned in the framework.

The second option is usually preferable as it allows for a quick process of legislation through the issuance of regulations by the minister of agriculture without parliamentary approval as they approved already the framework law on the general principles. That means that the framework law should cover all important issues and define who decides, who supervises, how sanctions are applied and who enforce the law and regulations. The content of livestock laws in different countries varies greatly. For example, various American States in the mid-west describe mainly how to fence and what to do with stray animals; the 1952 Livestock Act from Israel defines the areas of competence in which government inspectors can intervene based on regulations made under a framework law. In many (larger) countries framework laws may be passed by the central government, whereas state or provincial governments regulate more specific laws. In the following the different possible elements of a livestock framework law will be discussed.

ZZ. Elements of a Livestock Law

(a) **Title of the Law**

(b) **Definitions:** An important point is to give an exact definition of all terms so that there is no reason for confusion and disputes. For all elements of the law these definitions should be given.

(c) **Purpose of the Law:** A livestock law has normally one overall purpose, the promotion of livestock production in the territory to which the law applies. Specific purposes could be:

- to facilitate the free movement of animal genetic resources. This is an important element for e.g. the EU. Many EU decisions have been dedicated towards the mutual recognition of herd book registration and selection results;
- to improve the genetic potential of animals in the country;
- to safeguard endangered or rare livestock breeds;
- to regulate the quality aspects of imported and distributed feed stuffs, especially in terms of food safety and right labeling;
- to regulate the relationship between farmers and processors in terms of standardized weighing and carcass classification to promote a payment system based on quality and quantity;
- to set zoo-technical standards;
- to define rules for animal welfare in terms of housing, transport and humane slaughter;
- to regulate the disposal of animal waste and protect the environment;
- to regulate issues of communal grazing on state land: leasing, organization of livestock keepers on such pastures;
- to set standards and rules for animal identification and registration, this is not necessarily only an official state system but could also be the depositing of owner specific brands.
(d) Chapters on the various technical sections of the Livestock Law:
- Animal breeding
- Feedstuffs
- Trade in livestock and livestock products
- Quality standards and control mechanisms
- Zoo-technical standards
- Animal welfare
- Environmental protection
- Communal grazing and pasture leasing
- Animal Identification and Registration

(e) Explanatory Notes: In this sector the various parts of the law are clarified and explained in less legal terms so that the law is also understandable for non-lawyers.

(f) Laws replaced by this Livestock Law: Often a new law will replace certain other existing laws. It is important to list these laws and to specify which parts the framework law has replaced and which parts the regulations.

Once the Livestock Framework Law has been prepared, accepted and published the tasks starts to develop the necessary regulations. However, in some cases the regulations may be developed and enforced by producer organizations, breed organizations and/or producer/processor system rather than by the State. And in some cases the regulation may be defined by oblast rather than centrally.

AAA. Recommendations for Inclusion in a Livestock Framework Law

On animal breeding
Animal breeding should become a private good, not done by government bodies and inspectors, but by herdbook societies and associations with government supervision and support. The EU legislation in this field is a good example to facilitate an open breeding system, whereby animals can be registered and become pedigree after 3 generations, where the performance testing is in line with the ICAR (International Committee for Animal Recording, website http://www.icar.org). The government only plays an advisory and monitoring role. Only when an interest among livestock keepers is created to join herdbook societies and take active part in animal breeding will the population of pedigree and registered animals increase. Several example of laws can also be found on the FAO legal website (http://faolex.fao.org/faolex/index.htm).

The current animal breeding law in Kazakhstan puts too much responsibility with the government, which in a situation in which all farms have been privatized is not the most effective and efficient way to build up a large enough pedigree population of animals, in which selection work can be done. The following EU Directives give an example of EU breeding legislation:

- Directive 77/504/EEC on pure-bred breeding animals of the bovine species;
• Commission Decision 84/247/EEC, laying down the criteria for the recognition of breeders’ organizations and associations which maintain or establish herd-books for pure-bred breeding animals of the bovine species;
• Commission Decision 84/419 of 19 July 2984, laying down the criteria for entering cattle in herd-books;
• Commission Decision 93/693/EC of 14 December 1993, establishing a list of semen collection centers approved for the export to the community of semen of domestic animals of the bovine species from third countries.

The aim of breeding regulations should be to build up a vibrant population of pedigree registered and production recorded animals, which can be used in a breeding program, breeding as a private sector driven activity with state support, advice and monitoring.

**Besides regulations for registers and breed societies/herdbooks for the different breeds and species it is important to start a certification system of the inseminators, especially when they are inseminating cows of private farmers. These need protection against malpractice and to ensure hygiene and animal health.**

In a regulation the organizational structure for animal breeding should be worked out, whereby the responsibilities and roles for public and private sector are clearly spelled out:

**On feedstuffs:**
Many of the recent food safety scandals in America and Europe had animal feed as the basis: mycotoxins, microbial contamination and or chemical contamination with industrial or agricultural residues. It is therefore important to have a good legislation to control the quality of the animal feed. Especially the wholesalers and importers of components are crucial to be checked regularly. The regulations to control the importers should be the first line of defense against unsafe food, only at a later stage regulations for the smaller companies will be necessary. Therefore, a register should be built up of licensed importers before the feed mills are registered.

The way that feed is tested should be specified. There are ISO standards for the various analysis and registered traders, importers and (large) millers over time will have to build up testing capacity. It is good to develop a regulation on testing and test capacity required, but to grant derogation to the industry giving them time to prepare. A similar approach should be followed with requirements for packaging, labeling and routine analysis.

**On quality standards:**
There are many GOST quality standards, but it is hard to implement them, especially because the production is now spread out and much slaughtering and processing happens in the informal sector. The most important aspect for initial regulations is to guarantee the food safety aspects of the produce.
Especially for dairy products it would be good to make a regulation in which the different steps to improve the bacteriological quality over time are stipulated. In this way a country like Poland brought the quality of the milk delivered to the factories in line with EU requirements: each year the requirements became stricter. One can consider a summer and winter value for maximum bacteria count (currently in the EU < 100,000 per ml), which is being lowered over time.
A regulation on express testing of milk at collection centers is important to be developed soon. The number of collection centers for milk from the small-scale producers is increasing and the processing industry needs a legal basis for testing and development of payment systems not only based on fat percentage but also quality characteristics.

For meat and meat products legislation should be prepared to make “Good Manufacturing Practices” compulsory in both the industry and in the to be constructed small slaughtering facilities in villages.

Aspects of tracking and tracing are difficult to implement at the moment as long as so much of the slaughtering, transport and sale of meat is done in an informal way. While tracing can be done informally as long as supply lines are short and transparent, it may become more complex when animal products are distributed over long distance and various intermediaries. Only when the animal identification and registration is in place, the slaughtering is been done in small or larger slaughter facilities tracking and tracing will become possible. Therefore, the good hygiene and manufacturing (e.g. avoiding faecal contamination during evisceration) practices are priority issues for meat quality regulations.

Carcass classification directives in the EU legislation go together with a standardized way of weighing the carcasses, stipulating how carcass should be presented at the scale and within how much time weighing is done. This facilitates payment for quantity and quality. It requires a completely impartial system of weighing and classification to let both producer and processor accept it. In the absence of animal identification and slaughter in the villages, there is little reason to develop legislation for the introduction of a carcass classification system for sheep, cattle or pigs.

The operation of wool grading, now dealing with wool from many small-scale producers, would be facilitated with a good regulation on wool grading, payments per grade. The requirements to promote wool sorting and grading in order to maximize the returns would need to be carefully studied and may rather be left to the industry. The State role should be mainly to oversee that grading standards are transparent and internationally acceptable.

**On zootechnical standards:**
Animals are now being kept in large numbers very near to dwellings of people. Many of these people have little or no land and keep the animals on bought in feed. There should be some regulations to protect public health as well as animal welfare (including minimum welfare standards during transportation and slaughter). It is important to avoid pollution of groundwater sources with effluent. Also waterways should be protected from manure and slurry so that there should be regulations to avoid the construction of livestock facilities too near to rivers and streams.

**On communal grazing and pasture leasing:**
The traditional community structure and grazing management system of the once pastoral Kazakh society has been largely destroyed during the Soviet era. The current underutilization of 60% of the pastures and overgrazing around villages can only be resolved by re-establishing some form of transhumance and dynamism in the grazing system over time and area. Much of the remote grazing land is state land, but can be leased or owned privately if purchased; village pastures are communal land partially threatened by overgrazing. Together with the livestock keeping communities, state and range scientists have to find ways how a transhumance system based on
formal lease contracts for the land by the communities, can be re-established. Livestock rearing and protection of local breeds is also sometimes covered under regional rural development regulations – compared to purely livestock oriented regulations.
43. Environmental Sustainability of Livestock Production

11. Background/Issue

The use of animals and grasslands creates environmental risks and opportunities for environmental improvement. Assuring environmental sustainability is a legitimate role of the public sector. The responsibilities are often stratified between central, provincial and local governments; the policies are often influenced by, and scrutinized by local and international non-governmental groups. Major environmental risks of livestock production include:

a) Land degradation, overgrazing and subsequent risks of biodiversity loss and erosion.
b) Waste issues caused by farming and industrial processing;
c) Introduction of noxious weeds and or animal diseases that may threaten plant and animal biodiversity, and
d) Unsustainable use of animal manure burning thereby depleting land/soil resources.

Land degradation has been on the agenda in Kazakhstan since the Virgin Land program in the fifties, when large areas of rangeland were ploughed up for an unsustainable wheat-growing program. Many of these lands are now abandoned. Livestock-related unsustainable land use became an issue in after the seventies when the Soviet program pushed livestock production in the region leading to oversized livestock inventories and rapid deterioration of rangeland quality. Various other Government programs (nuclear testing, space program, oil exploration and pipelines) removed large swaths of rangeland from agricultural use. After the transition in the nineties, the national herd, the pressure on remote rangeland was relieved. However, with unclear land policies, little transhumance and fodder preservation, the animal holdings concentrated around settlements and the lands around these settlements severely deteriorated, especially in the southeastern parts of the country. The damage of degraded rangelands has been estimated at US$ 963 million per annum.

Improper waste management, and subsequent water quality problems, has been among the many reason for low water quality and overshadowed by the massive industrial water pollution problems. The run-off and pollution from farms and feedlots is an emerging problem, but most of these operations are small.

BBB. Current Policies

Land degradation and waste management were priority issues addressed in the National Environmental Action Plan (1997) and subsequent action plans. The legal framework is

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46 Animal production also contributes to the emission of methane, carbon dioxide, ammonia and dust, but data for Kazakhstan are scarce.
47 Mismanagement of grazing can threaten precious range and mountain land with risks for Kazakh productive resource base and tourist industry potential.
48 Mismanagement of wastewater of livestock processing facilities (abattoir, wool washing plant, tanning plants etc) as well as of larger production units (feedlots) are threatening the quality of water and soils
50 A peculiar rural environmental problem is the run-off from the preparation of dried manure for fuel. Manure drying is a nearly ubiquitous practice where other sources of fuel are scarce or too expensive.

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adequate, if not profuse. The problem is poor implementation, a lack of proactive endorsement by all Ministries, and a lack of clarity on responsibilities between central and local government. Until 2003 the proper land management was overshadowed by the debate about land privatization and the oversight role was poorly defined with changing mandates of the Ministry of Environmental Protection. At the local levels the implementation has been overshadowed by poverty; especially in the remote parts of the country poverty made survival the overarching priority and left little interest in sustainable resources management in local communities.

Rangeland use. Rangeland use is not regulated, except for some indirect rules on ownership and leasing in the Land law. Overgrazing is now an issue around human settlements with severe deterioration of the natural grasslands in densely populated areas. Government policy focus has been on rehabilitating abandoned drylands in the northern parts of the country, exploring alternative land use, and on possible relocating people from the bleakest remote villages. An ambitious program to plant shelterbelts to reduce wind erosion stabilized some of the effects of overgrazing and desertification. The effort, however, was spoiled by the increase in grassland fires that went out of control when traditional fire control dwindled by after breakup of collective farms and lack of budget in local government.

Waste. Although some (industrial) waste management policies are in place they are not enforced. As waste collection systems and water cleaning in most of the processing factories in not working much of the waste is not treated and released in natural waterways.

CCC. Suggested Policy Options

Although many strategies and policies have been defined, there is a need for simplification, prioritization and agreement and endorsement by all government entities. In this effort Government should take into account the interests of a variety of interested and affected parties including herders, other local users, local communities, national interest groups, and the global community. Priority areas include:

i) Rangeland management, in particular a separate land policy that clearly is directed toward sustainable rangeland use and includes issues such as:

- access: open access or access limited to certain users;
- tenure: private ownership or leasing, or community ownership; depending on the societal value of the land and taking regional differences into account;
- lease fees: their collection and distribution (policies should focus on the system of collection, not the amount, which should be change depending on conditions);
- users: how to assure a rural livelihood under varying conditions; are there to be maximum and minimum limitations on the land to be leased (depending on the use form); how to manage several use forms and users;

Conservation of environment is embedded in the constitution (article 31) and enforced by the laws on Environmental Protection (1997), Lands (2001) as well as by a multitude of codes, regulations and strategies. Detail about suggested rangeland policies can be found in the World Bank Technical Paper: Kazakhstan: Rangelands in Transition. The Resource, the Users and Sustainable Use (2004).
• **conflict avoidance:** and conflict resolution among and between users and the State;
• **state management of the rangelands:** role of central state, oblast, rayon, and communities; assurances of quality control by independent monitoring agencies and communities;
• **capacity:** capacity of the rangeland to sustain all use, without losing potential, under varying seasonal and climatic conditions, and improving the capacity to develop range management plans (whether by farm or by watershed), assuring flexibility (mobility) in its use;

ii) Coordinated land management, including a better organization of rangeland management and land care with clear stratification of responsibility for development on the one hand and monitoring and enforcement of sustainable use on the other. This requires - as a first step - an endorsement and cooperation of all Ministries involved in land use including Agriculture, Energy, Transport, Environmental Protection and Interior. The second step will be a clarification of the role of local Governments and interaction between local Government and, for example, the Ministry of Environmental Protection (in its role of supervision of policies and actions for sustainable resource management).

iii) Waste management, specifically transparent and enforceable rules for waste and waste management of waste by (large) livestock farms and processing industry (dairy processors, wool cleaning, tanneries, slaughterhouses). Where needed, establish an independent environmental quality oversight system. For farms, small processors and slaughter places, the authority can be vested in local government, but training may need to be created for local Government officials in environmental assessment and mitigation.

iv) Livestock environment interactions by enhancing the positive effects of livestock either on grazing and land management (grazing as fire protection), or as a contribution to carbon sequestration. Incentive system includes tax-breaks; grant subsidies to communities and technical assistance.

**DDD. Implementation**

Initial public sector investments either relate to:

- **improvement of skills including skills of rangeland users, rangeland managers and environmental supervisors:** training of in land/resources management; innovative dryland management, poverty reduction, conflict resolution and provision of information for users and managers;
- **infrastructure development:** plan and implement infrastructure improvements (roads, water, fire control) where it serves common interests and is economically and environmentally sustainable;
- “**clean-ups**” of previous legacies such as poor waste management and severe land deterioration (for example through pilots effort in selected areas or watersheds\(^{53}\)) with innovative methods both in technology, in organization and (co-) financing of village- or watershed based initiatives

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\(^{53}\) As for example explored in the Drylands Management Project co-financed by the World Bank and GEF.
- **monitoring and early warning systems**: to improve the management of environmental risks. This monitoring includes monitoring of land use, grazing pressure, biodiversity changes and better weather/climate forecasting, fire management, and water quality.
44. Livestock Sector - Potential Pilot Activities

12. Summary of Issues

During the discussions with both government and private sector stakeholders in the livestock sector, various issues were brought forward, which are relevant for policy formulation and the sector study. Some of these issues could form the basis for project proposals and the development of suitable instruments to respond. The issues can be divided into those raised by the livestock keepers, the government and those observed by the livestock sector study team:

I. Livestock Keepers:

- Lack of grazing, no access to land and lack of winter fodder
- Lack of basic services such as AI, access to forage harvesting equipment
- Besides agriculture hardly any other income generating activities in the rural settlements

II. Government:

- Erosion of genetic value of animals and resulting low production
- Break down of migratory grazing system and overgrazing around rural settlements
- Desire to adopt international standards in terms of food safety and quality in order to increase safety and quality, and prepare for WTO accession
- Desire to increase the average size of livestock farms and land consolidation

III. Livestock Sector Team:

- Lack of basic organization in the rural settlements to overcome problems related to access to basic services, marketing, input supply, sufficient grazing, water supply and irrigation
- An unclear division between public and private tasks and responsibilities in the various services rendered by the government
- Too much emphasis on maximizing and too little on optimizing production in terms of costs and benefits
- A gross ignorance on the side of the government of the production and potential for improvement in the so-called farming household sector, currently producing around 80% of the total livestock production

Some of these issues are overlapping; many are related to one another. In the following some suggestions are made to address these issues in terms of possible interventions, legislation and, where applicable, standards.
EEE. Grazing, Fodder, Erosion and Transhumance

Background

Grazing, and conserved roughage for winter-feeding are the cheapest feed for ruminants, camels and horses. Grazing during summer and winter with some supplementary feeding during winter, formed the basis of the traditional Kazakh livestock production system, whereby mobility was one of the most important management tools to assure sufficient grazing. During the Soviet period, this production system was to a large extent dismantled and replaced by large state or collectively owned livestock farms, where, without much attention to a cost/benefit ratio, large numbers of animals were kept, depending on large quantities of supplemental feeding produced and/or purchased with large subsidies.

Now, after the transition and a dramatic de-stocking have taken place, most animals can be found in settled family farms. In many cases these farmers have no access to cropland, because they either have no land share or are denied the use of it. They depend for their livestock on grazing in communal natural pastures and some supplementation with bought in roughages and grain/concentrates, however at a much lower level than in the past. This might have reduced the production per head, but not necessarily the returns per head as the production cost price has declined significantly.

The traditional grazing system that was making use of summer and winter pastures has broken down for various reasons. Livestock was nationalized and concentrated on collective farms. The traditional livestock tracking routes were blocked with farms and settlements so that now the only option to get animals from and to the summer pastures would be expensive road transport. It would now be unthinkable that whole families would migrate as in the past as there are few or no facilities available in the summer pastures, in many instances the water supply is not guaranteed and there are no services.

This lack of access to summer pastures and cultivated fodder has led to a concentration of livestock around the settlements, causing erosion as a result of overgrazing which is of concern to the government.

Possible Project Interventions

1 Restoring a Transhumance Grazing System

Restoring a transhumance grazing system could alleviate the overgrazing problem and make optimal use of now under-utilized grazing areas. As conditions have changed, the old system cannot simply be revived. An adapted system has to be developed that combines the best elements of the old system with new technologies to counteract some of the shortcomings of the past. The new system should be carefully developed by a multi-disciplinary team of experts in close collaboration with representative farmers and piloted in some of the key extensive livestock production areas (i.e. in the dryland management project). The grazing system needs to be integrated in a regional development plan that addresses a broader range of issues. A social scientist should assess and discuss with the farmers in the pilot area the possibility of joint herding/duty rotation system, responsibilities and conflict management. A range management
A system of communication needs to be established, either by radio or satellite for consultation and reporting. If dairy animals are kept, a milk storage tank, preferably driven on solar panels, should be available so that milk collection can be done twice a week in bulk form. Research has been done on certain aspects of such a system in Kazakhstan, but it has not yet been approached in a system perspective. The Institute of Livestock and Veterinary in Chimkent has worked on rangeland rehabilitation and has seeds of promising species available and on development of camel milking machines and cooling and processing equipment for isolated places.

Legal and Standard Aspects. There is currently no legal framework to define stock tracking routes, along which animals can be moved at low cost from the settlements to summer pastures and back. There is also need for a system of branding/tattooing animals for identification when grazing in a mixed owners’ herd, which does currently not exist. This is needed in order to avoid conflicts of ownership and identify the animals in case of theft. The group of participating livestock owners would need a clear legal position towards the range they are going to use, which should be laid down in some sort of rangeland use ordinance. A legal advisor should assist the livestock keepers and the research/project team to develop such aspects of legislation to facilitate a legal basis for a modern transhumance system.

II Increased Fodder Production and Improved Utilization of Fodder and By-products and Small-scale Concentrate Mixing

Increased access to land and grazing will only improve the fodder production if more fodder is grown and if it is better used. In the past, the kolkhozes and sovkhozes would render services in this field to the workers keeping animals at home: machinery could be hired and fodder could be purchased; the workers of the past are today’s farmers and even if they have access to land many lack the knowledge, skills and equipment to produce good quality forage or properly utilize existing crop residues and/or by-products.

There is currently no effective structure in the rural areas that trains farmers on new technologies. The government should support training and demonstration programs in this field to assist farmers to produce more fodder on their land. Elements of such a program should be increased availability to and accessibility of forage seeds and forage harvesting equipment for the farming households. It should create a link between farmers, extension and researchers, so that farmer problems are communicated to research in order for them to develop new and appropriate technologies to overcome these problems; it should also facilitate the transmission of existing research findings and recommendations to the farmers in general. In such a way the existing research system will become less academic and more problem solving oriented.

Adaptive Research. Areas for adaptive research in this area would be the determination of the best forage species for the different livestock farming communities in different agro-ecological zones: oats/vetch hay, whole grain plant silage, under-sowing wheat in the better rainfall areas
with medics or other legumes and introduction of fodder trees/agro-forestry as a means to combine e.g. wind erosion control/boundary demarcation with fodder production. Improved utilization of roughages could be supported for example through the development of ways to treat straw with urea/lime/caustic soda, strategic supplementation of fodder rations with low cost components and improved storage structures to avoid leaching and oxidization. Scientists will need assistance to gain access to the wealth of information in English existing in this field (FAO and CTA publications, CABS abstracts etc).

Availability of Compounded Fodder. Compounded fodders were produced on every large state or collective farm. These factories are now largely defunct. Most compounds for concentrate fodder are now sold separately on markets and are home mixed. Farmers lack the equipment and the knowledge for proper mixing as well as the possibilities to test the quality of their feed mix. Although the Government subsidizes essential feed elements such as soya and fish-meal, the small livestock farmers lack access to these resources. A promotion of smaller-scale feed milling on rayon or village level, these mills could then take advantage of some economics of scale, gain access to subsidized supplies of soya and fish-meal and produce better balanced feed which in turn would increase the access of farmers to improved feed. Such mills should be privately owned or run by a group of farmers. The Government could play a role to secure the availability of compounds now only regionally available (sunflower cake in the West, cotton seed cake in the South, grain by-products in the North) in all parts of the country. The improvement of the feed resources will have an almost immediate impact on the quantity and quality of the produced livestock products. Government’s attention to improved feeding will therefore strongly support the Government’s livestock development objectives.

Legal and Standard Aspects. Compounded feed should be analyzed to control its composition and to control the level of aflatoxin and heavy metals in the concentrate. The miller should be able to supply his buyers with information on the feeding value of his product, so that the farmer can calculate a balanced ration for his animals, based on forages and concentrates.

Various standards for the assessment of feeding value exist:

<table>
<thead>
<tr>
<th>Standard</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weender Analysis</td>
<td>One of the oldest systems, analyzing crude protein, ash, crude fat, crude fiber</td>
</tr>
<tr>
<td>TDN (Total Digestible Nutrients)</td>
<td>Widely used in the world and reasonably straightforward, with extensive literature and tables (NCR). It is based on the results of Weender Analysis.</td>
</tr>
<tr>
<td>“Van Soest” System</td>
<td>More sophisticated ruminants feeding standard, in which the digestibility of the various parts of the feed are taken into account.</td>
</tr>
<tr>
<td>Metabolizable and Net Feeding Value Standards</td>
<td>Rather complicated and probably too sophisticated for the current level of production and farmers’ knowledge in Kazakhstan.</td>
</tr>
</tbody>
</table>

The analysis of aflatoxin and heavy metals are important from a food safety point of view. As mentioned in the Note on Feeding, laboratory capacity at oblast level would be needed to test for
aflatoxin and heavy metals in batches of ingredients for concentrate feed. There are ISO standards for the analysis of aflatoxin and heavy metals in animal feed.

**FFF. Organization of People and Basic Services in the Rural Areas**

**Background**

In the past the state and collective farms played a crucial role in supplying basic services to its workers and members. These covered a range of activities in the field of home production, transport and equipment, child-care, health, education and training. It formed the cement with which the rural dwellers were united. After the collapse of these farms this cohesion was lost. The trusted leaders of the past often turned out to be the ones who abused their former members’ trust the most during the transition. What can be found in most villages now is a low degree of collaboration and cooperation. Most economic activities developed are agricultural production and only near urban centers some additional income from employment. There seems to be a tendency for rural dwellers to use their village relatives as contract farmers/caretakers of their livestock. At the moment there seems to be little activity in Kazakhstan in the field of community building and rural development, which could lead to initiating and strengthening people’s organizations and the return of basic services to the rural communities.

Most of the services lost with the demise of the state and collective farms are only economically feasible if delivered to larger groups of people. Service operations can be either owned by individuals, serving the community or by the community in an associative form.

**Possible Project Interventions**

**Develop Productive Service Delivery Systems**

Rural communities lack services. In the productive sector the most acute lacks are: advice/extension, marketing, input supplies, access to equipment. A government supported, but not necessarily government executed, program should work with the people on an integrated community development plan, which restores the basic services back in the communities. In most countries, international or national NGOs or other existing rural institutions, which form a link between government rural development policies and plans, and the communities, initiate this type of work. They can be instrumental in:

**Setting-up Extension and Advisory Services:** Some of the technical specialists of the state and collective farms should be still around in the villages. They could team up with young educated villagers into small advisory companies and together with farmers, government experts and researchers address existing technical issues, test and demonstrate new technologies and guarantee a steady information supply from central sources to farmers and from farmers to scientists and policy makers.

**Setting-up Milk Collection Centers:** It appears that in villages near major towns there is a fair amount of milk being bought by private milk collectors and sold directly to consumers in town; in further away villages farmers have a problem to market their milk. In both cases, farmers and the quality of the product would benefit if there were milk collection centers with a cool tank, either run as a private enterprise or by the association. The Government can facilitate this development through leasing arrangements; the rural development agent together with village extension/advisory services by assisting farmers to buy into the concept and to train farmers on
milk hygiene. Simple testing equipment at the tank should be used to assess bacteriological quality, fat content and density. The milk is either sold to a private person or company if these own the milk cool tank or through the association if the association holds the lease for the tank. The last situation, although the hardest to reach at, is in the long run the most advantageous for the dairy farmers as it gives them the freedom to decide to whom they will sell their milk. This concept should apply to cow, sheep and camel milk. The same concept can be extended to sheep shearing and wool grading and baling sheds, the setting up of a weekly/monthly livestock market in an area. People decide jointly on the desirability to construct a simple slaughtering slab with running water in order to slaughter animals in a more hygienic way than is currently the case.

**Setting up Small Feed Mills:** Market demand for good quality stock feed is high in Kazakhstan, yet current availability extremely low and often of unsatisfactory quality. Economics of scale for purchasing the ingredients can only be taken advantage of if the purchase of components is aggregated and access of farmers is improved. Proper mixing recipes should be used with the addition of necessary vitamins and minerals. The end product should be periodically tested in the above mentioned feed analysis lab and the results fed back to the village through the advisory/extension services. In case the milk collection center and the feed mill are both run by an association, a link can be made between payment for milk and payment for stock feed thus reducing the farmers’ need for cash. With a strengthening of community cooperation, peer pressure would increasingly guarantee compliance with payment and delivery to the milk collection center in case of e.g. a debt for stock feeds.

**Micro-finance and Banking Services:** In many instances micro-finance is seen as a tool to start small businesses. Ideally, economic activities should start, as described above, and only when cash flows start growing to add a micro-finance component to the overall services package in the community. In this way, the initiative is born out of the idea and cooperation of farmers, which then can be facilitated through the availability of financial services. People will have achieved a certain degree of financial discipline through their milk collection center and feed mill operations and the introduction of financial services will stand a bigger chance of being successful. But, improved access of micro finance and banking services that are geared to the needs and requirements of the agricultural sector are vital to facilitate the development of smaller agricultural enterprises.

**Promotion of Cottage-style Products and Crafts:** The traditional material culture of Kazakhstan is rich, yet has been crowded out by cheap industrial products. Most wool of camels and sheep is exported in a crude form mainly to China, where without doubt it is further processed. Most cotton also leaves the country as lint. In the south of the country, some degree of home carpet, spinning and knitting activities remained. The products are sold on weekly markets, but are out of reach for most local people as it is more expensive than the cheap industrial products flooding the markets. Over time with an emergence of a Kazakh middleclass and increasing appreciation of this material past, there is a good potential for this type of products. Care needs to be taken however, that the skills not get lost in the meantime and people should be assisted in the marketing of such products of heritage value. Forward linking of production groups with interested fashion buyers in the rest of the world, training of these group to produce according to international textile and carpet standards would be one way to provide rural communities with additional income from value adding to their primary production and diversifying their sources
of income. An inventory should be developed that indicates which products and crafts and which areas have the best chance to contribute towards this diversification of the rural economy.

**Small-scale Dairy and Meat Processing**: Contrary to many other places in Eastern Europe and the former Soviet Union, one cannot find much home processed butter, soft and hard cheese on the markets in Kazakhstan. This could be a result of the rigorous GOST quality standards applied, but most probably a result of the fact that all rural population in the past used to be workers on the collective farms and in the industry and there is simply little tradition and skills in this field. Whereas milk producers in a circle of around 50km around major centers can relatively easily feed into the formal dairy sector when they meet the minimal quality standards, this becomes increasingly difficult for producers further away from those centers. Especially when a form of transhumance livestock keeping is developed and reintroduced, it will be important to build small-scale processing capacity in remoter areas to conserve products and facilitate easier transport to markets. This requires again a wide program of training in small-scale dairy processing and hygiene, possibly construction of cool facilities in the villages or in the summer pasture areas. The Government can facilitate such training and provide incentives for the built-up of a small-scale industry that caters the remoter and transhumance areas.

**Develop Social and Utility Services**: When productive services start to work and people’s cash flow starts increasing it becomes feasible to restart social and utility services. There used to be kindergartens in most collective and state farms. The former staff is probably still around but not engaged in this activity. Ways should be found to restart such activities. Village water supply in many cases was linked to the central system in the collective farm. These systems mostly stopped working when the farms closed down. Ways should be found to restart it in an efficient and effective way, whereby the supply is metered and people pay for the privilege of piped water. Sports and cultural facilities can be re-established with a government matching-grant against community initiative. The end-results of such efforts will be a community with a stronger economic basis, more social and economic cohesion and in general an improved livelihood. In discussions in the villages, people referred to destitution and hunger on the side of the elderly. Without a strengthening of the village economy and community spirit through some carefully guided support actions the government could be confronted with a much larger bill to resolve the socio-economic problems when the young and educated continue to leave the rural areas and the elderly are left alone and eventually become too old to provide for themselves through their backyard farming activities.

**Legal and Standard Aspects.** Kazakhstan urgently needs a legislative framework for NGO’s and community/producers associations, which is non restrictive and facilitating. The framework should clearly state the space these have to operate in and how they should remain answerable to their members. For food safety standards there needs to be made a clear distinction between products from cottage style industry and from industrial plants. Whereas no concessions towards food safety should be made, the food standard should however not be restrictive to production of dairy products for the domestic market through e.g. excessive demands on packaging, product technological quality etc. The market itself can take care of these aspects as consumers and producers will impact the necessary standards.
GGG. On Farm Size, Land Consolidation, Cost Benefit and Who is a Farmer?

Background

During the discussions, the livestock sector team found that there are some differing views on what comprises a farmer. Apparently, the Government considers only people who hire outside family labor as farmers. This leaves out the large segment of the population, who make an exclusive living from the livestock sector that they keep behind their house: poultry, pigs, rabbits, cattle, horses and sheep and that currently constitutes the dominating share of livestock and livestock product producers. If this restrictive definition of what constitutes a farmer is looked at from the European perspective - there would be few farmers in Europe, as only few agricultural producers can afford to employ outside labor. Yet these family farms constitute the most productive element of European and also global farming activities. Government policies should be aware of this fact and support the family-farming sector if the objective indeed is to revive the livelihood and productivity of agriculture in Kazakhstan.

More than 80% of meat, dairy products and wool are produced in private households; only in the case of poultry this figure is estimated at around 50% as the current policy document of the livestock department states. In the same documents it is stated that the small-scale commodity production prevailing in the livestock sector affects the products’ competitiveness due to a primitive production technology. This production technology, however, is actually a production system that produced under extremely low investment cost and near zero subsidies. It should therefore be actually considered a most profitable production system. If the low competitiveness is meant in the light of sub-standard quality aspects, then there is a task for the Government and these small-scale producers to uplift the average quality of production. Instead of neglecting, Government should facilitate and provide options for this production segment. Especially in the livestock sector investments in training and facilitation by the Government will have a quicker and larger impact than if purely the larger industrial sector is targeted.

Most of the Government support towards agricultural development in the coming three years seems to be geared towards the medium and large-scale farms. The relative increase in production has been 10-15% in this sector, which comprises only 10% of the total production. The household/family farm sector, which comprises 90% of the total production, grew with a mere 5%. On first site it looks as if one should concentrate on the higher growth segment. On careful consideration it is however clear that the figures translate into a 1.5% growth in total livestock production attributed to medium and large-scale producers and 4.5% growth in total livestock production attributed to the household sector). The difference is becoming even larger if this growth is expressed against the cost in public funds to achieve this growth. Whereas most of the government subsidies towards livestock development have been taken up by the medium and large sector, the small- holder sector achieved this growth without outside financial support purely on their own financial and family resources.

Land consolidation is a process that if a well-developed land market exists, with land fetching realistic prices in relation to its earning capacity, will facilitate landowners to smoothly get out of livestock production/agriculture. Currently most family households in Kazakhstan have no other option than to hold onto farming as a subsistence strategy. The diversification of the rural economy will create more employment and possibilities for income generation in the rural areas,

54 ‘The concept of a new approach to production and selling livestock products under present conditions’
which in turn will give people the chance to move away from agriculture without becoming destitute.

Possible Project Interventions

I  Agro-Economic Study Unit

Agricultural policy making in Kazakhstan seems to a large extent be guided by quantitative production aspects not by competitiveness, which to a large extent is determined by the cost and price structure. The Ministry of Agriculture needs more insight in the production cost structures of the different agricultural production structures in Kazakhstan so that support instruments can be applied more effectively and policy can be led by the true competitive conditions of the sector structures. At oblast level, a cost and price monitoring mechanism could be established for the different segments of the production sector. Based on this, simple economic farm models should be developed that would allow assessing the effects of policy interventions and crosschecking these with producers’ views.

II Access to Land as a Fodder Base

Although most reports state that most people have access to land, this has to be assessed more precisely. There seems to be many cases where people did get a land share, but do not necessarily have access to it. If the aim is to increase the fodder base and production around the villages the available remaining state land or underutilized land should be allocated to the more productive users for fodder production. The determining factor to identify these more productive users should not be the farm size as discussed above.

Legal/standard aspects. The new land code would need to spell out exactly what the case would be in the case of underutilization or non-utilization of land. The Government’s policy paper states as one of the instruments to improve livestock production the allocation of state land further away for summer grazing. This is in line with the suggestions on restoring transhumance above. However, at this point, these aspects are not covered in the land code. It would require the development of an additional chapter in the land act towards the facilitation of group lease holds of summer and winter grazing areas, preferably with a tracking route in between. It would also need a specialist team in the Ministry of Agriculture to develop and supervise such transhumance grazing schemes.

HHH. The Perceived Problem of Erosion of Genetic Value of Animals and Resulting Low Production

Background

Livestock breeding is a combination of selection of the best producing animals and planned reproduction of these selected animals. Traditionally every farmer is a livestock breeder selecting which calves to keep for further breeding. Crucial in animal breeding in a certain area or production system is to rank the productive capacity of animals under that specific production environment and for that breeding purpose and use the best animals to produce the next generation. In the last 20 years, it has become clear that a certain ranking of genetic value made
in one environment is not necessarily the same in another environment. This so-called genotype-environmental interaction is a factor to reckon with in the interpretation of breeding values for different environments. These different environments are not necessarily determined by geography but also farming system and production aims.

As most animals in the former Soviet Union used to be kept on collective or state farms animal breeding became automatically a state employed specialist’s job. The environment under which animals were produced was controlled, fairly similar in the different farms and it was easy to collect performance data and select the genetically superior animals for more intensive use in breeding programs. The existing state elite breeding farms have now all been privatized and the number of animals under production and pedigree recording has declined sharply over the last 10 years. The growth in number of animals on these breeding farms is hampered by the subsidized sale of breeding stock from these farms (see note on breeding). Genetic progress is a function of the selection intensity one can apply, which is related to the number of animals in the population one can choose from and of the amount of variance existing within the population for the different traits. The number of pedigree and production recorded animals in Kazakhstan is low and thus genetic progress to be achieved from within population selection will be low.

There is perceived genetic erosion within the existing animal population outside the elite breeding farms, which is reflected in the decline in production. Whereas without doubt there was uncontrolled mating during the last 10 years, it is not likely that all of these animals - only 1 or 2 generations away from state breeding control - will have lost so much of their genetic potential to explain the drastic drop in production. This to a large extent is a result from the complete change in diet of the animals: from a grain/concentrate supplemented with roughage diet to a principally roughage diet. It would be an interesting experiment to bring some of these presumed genetically degenerated cows back under an optimal feeding regime and see which effect this would have on the level of production. This dramatic change in diet for animals and a shift to other type of producers with other production targets means that one single breed standard cannot answer the requirements of the large-scale dairy farmers and the small/household farmers: Brown Swiss from America e.g. could suit the large-scale dairy farmers, whereas most other dairy farmers would be better off with the dual purpose Original Braunvieh type from Switzerland.

In order to focus the breeding program towards an effective (producing the right type of animals for different production systems) and efficient (making good genetic progress for the money invested) program, there is need for fundamental changes in the breeding system:

- More animals should be included into the pedigree and preferably production recording system to become genetically active
- Greater flexibility in breeding standards especially for cattle should be observed
- Selection should be done in the type of environment under which animals will have to produce (for example, ram mothers for rams to be used on range ewes should be selected under range conditions and not under station conditions)

Possible Project Interventions
I Strengthen the Private Role in Animal Breeding

Animal breeding is a private good and should be driven by private interest. Therefore, most countries have breed societies/associations, which actively pursue the improvement of their breed/variety and defend the interests of its members. Through shows and sales the economic interests of the breeders are promoted and a reason for pedigree breeding is created: higher prices for proven genetically superior animals. Farmers should define the breed standards, according to their requirements and conditions, and should design and participate in their breeding program. Kazakhstan should focus on strengthening breeding societies to fully reap available genetic potential.

II Make Purebred Poultry and other Small Stock more widely Available

Many household farmers/small farmers are currently working with livestock selected and bred for use on capital and input intensive farms. These are not always the most suitable varieties to be kept under the prevailing conditions, where resistance to diseases, longevity, and good utilization of poor quality fodder are probably more important production traits than extreme high production potential, low feed conversion on balanced feed rations. An inventory should be made what types and/or breeds of animals people are looking for (i.e. one farmer visited would like Brahman chickens as being strong and giving nice slaughtered product, but could not find them anywhere; geese suitable for down production instead of only fat goose liver etc.). Such a program could probably be embedded in a program for biodiversity/conservation of genetic animal resources. Selected state or private farms could be contracted for the production and distribution of such animals and actively promote the development of selection and breeding programs as described above.

Legal and Standards Aspects: The role of the government in animal breeding should be solely to regulate, monitor and advise. A legislative framework for private animal breeding, pedigree and production data recording, entry rules for animals to a herdbook etc. should be developed (see note on Animal Production Law). Breed standards should be designed, in cooperation with the private sector, to define exactly what type of animal should be selected based on conditions in Kazakhstan.

III. International Standards in Terms of Food Safety and Quality

Currently, Kazakhstan adheres to the so-called GOST standards, which were developed for the CIS states in 1995. In 2002, a Technical Regulations Law was published in Russia in order to modernize the thinking on regulations and standards for quality. Also in Kazakhstan work is in progress to develop a new law on “Technical Regulations”, which is expected to come in force next year. This law will distinguish between a compulsory level and voluntary standards with recommendations. This would be an improvement from the GOST standards, which are compulsory for all. It acknowledges the fact that one standard cannot suit all producers. Most companies, which want to comply with e.g. HACCP and ISO standards resort to certification by foreign accredited companies, because there is no local system in place to certify these international standards. The same happens with the certification of organic production according to EU directive 2092/91.
First priority for Kazakhstan before spending great effort at implementing ISO and HACCP standards sector wide is to improve the overall quality of production and rationalize the production systems. The “Good Practices” approach is the first step to follow before attempting the more advanced ISO and HACCP self control systems, which are currently more applicable in the larger companies, geared towards production for large supermarkets and/or export. Currently too many production processes suffer from too little control, documentation and thus tracking and tracing possibilities. There is an enormous task to increase awareness among all stakeholders for aspects concerning food safety and food quality.

A strategic partner for government to achieve this is to team up with the various producer, processor and consumer organizations. They are the natural partners to work on training, awareness raising and improvement of food safety and standards. Consumer demands are usually stronger tools to motivate producers to change their attitudes towards food safety and quality than legislation, which is hard to enforce with the high degree of informal marketing and processing. In many Eastern European countries assistance programs have helped to create this type of liaison between public and private sector in order to improve the performance of a sector (ACDI-VOCA, Land O’Lakes, GTZ, TACIS programs). The Ministry of Agriculture could try to facilitate their work and make sure that the most crucial parts of the chain are covered. Study tours to EU accession countries such as Hungary, Bulgaria and Estonia could show an example how such collaboration has worked out. In e.g. Bulgaria the introduction of GMP/GHP and HACCP in the meat sector was a joint effort of the National Veterinary Services, the Association of Meat Processors in Bulgaria, The Integration Policy Department of the Ministry of Agriculture and Forestry, EU funded twinning programs and a Dutch funded TA program. Similar examples can be found in other countries55.

JJJ. Division between Public and Private Tasks and Responsibilities in the various Services rendered by the Government

Many changes have taken place in the production and trading sector in Kazakhstan over the last decade. Private entrepreneurs, traders and retailers have sprung up, laws have been modified and the still remaining government services continue their efforts to adopt these changes.

The government should clearly define which tasks, in the presence of a functioning private sector, can be left to the private sector and which should remain in the public sector. It is obvious that issues on food safety and disease prevention and control would always be a government responsibility; as well as the protection of the environment, occupational safety and the development of a social safety net. Issues of product quality not related to food safety, production increase for personal gain, trade in inputs and products are issues that should be left to the private sector. The government can define the size of the private sector playing field through its legislation and function as a referee; the actual game has to be played by the private sector itself, with its own coaches and trainers.

Too much government control and involvement will block the development of private sector owned services and structures and potentially result in the government having to continue the

55 See also note on food standards.
provision of such services. Examples where private sector involvement is advisable are the set up of animal breeding, food quality control and the provision of advisory services.

The transition from Government to privately run services in these fields need to be made gradually so as to be sure that services are available at all times. A clear plan with milestones and deadlines should be presented for the development of such private services to take over from government. Some areas for which such plans are needed are:

- **Animal breeding services**: clear signals towards private breeders to take up responsibility for their own breeds and breeding programs are required; Artificial Insemination could be regulated in such a way that private individuals can get certified and registered to render such services. A national breeding policy for the different species, together with modified breeding laws would give a clear signal towards the private sector to take up its responsibility and develop their activities and services.

- **Farmer advisory services**: advisory services currently are a grey area between the akimat’s offices, ministry representatives, former kolkhoz and sovkhoz employees and much of it rather informally. Only a clear policy and strategy for the development of the Agricultural Knowledge and Information System (AKIS) in Kazakhstan during the coming 10 years can give a clear signal to the private sector to develop its participation in advisory services and rural development.

- **Quality control systems**: the most effective and efficient way to improve quality is through price differentiation for different qualities of produce. The producer prices are paid by the private sector so this tool is in their hands; instead of government (wanting to) control product quality the government should limit itself to consumer protection through controlling the quality claims and standards of processors.

- **Auditing of quality systems**: in most countries there is a system of accreditation of companies to audit and certify quality systems such as ISO, BRC, HACCP etc. For local companies to be able to compete with the foreign accredited certifying bodies in Kazakhstan, the new law on technical regulations could open the way for the accreditation of local certifying companies.