

# **Annex 6**

## **WORKING PAPER on**

# **Current Status of Zambia's Agricultural exports**

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**Prepared  
For the World Bank**

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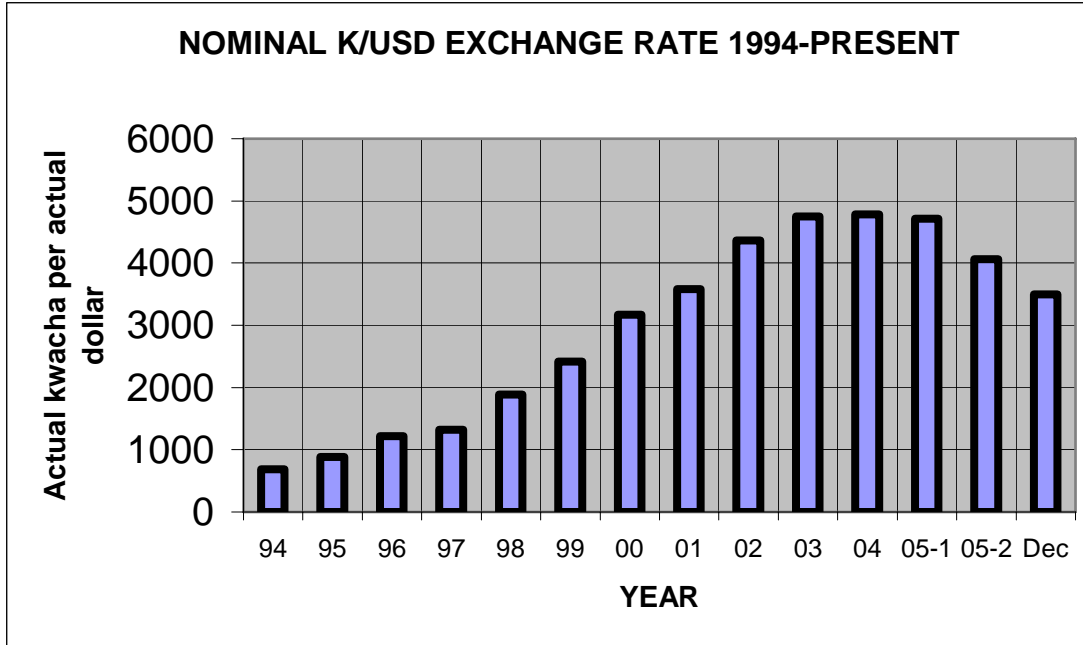
# CURRENT STATUS ZAMBIA'S AGRICULTURAL EXPORTS & THE IMPACT OF SPS ISSUES

## 1 Recent changes in the exchange rate

The main constraint that the producers and exporters noted in all the agricultural export sectors was the issue of how to remain profitable at a time when the value of the Zambian currency was changing dramatically. As this was the dominant issue amongst the businesses, the recent strengthening of the Kwacha is discussed in detail.

For a number of years the Government has allowed the Zambian Kwacha to float freely against other currencies. Between the mid 1990s and 2003, the Kwacha devalued against the USD (Fig 1) – from about less than a ZMK 1,000 to around ZMK 4,750 to the USD. From early 2003 to mid 2005, the exchange rate with the USD was reasonably constant, but between June and December 2005, the Kwacha revalued to about ZMK 3,300 to the USD. This very significant 30% revaluation has impacted dramatically on exporters' revenues – it caused a 30% reduction in revenues. Admittedly, this will be partly offset by a reduction in the cost of some of the inputs that are imported or are quoted in foreign exchange. At the time of the study, the price of the imported goods purchased in Kwacha from input suppliers had not come down in line with revaluation – in other words, importers were paying more in USD for **all** their inputs. Labor rates have not changed; therefore the cost of labor is 30% more expensive, in USD – than it was in mid 2005. Even if the costs of imported inputs do reflect the revaluation, it will not compensate for the decrease in revenues. **The revaluation of the Kwacha was by far the biggest concern that was facing farmers and exporters in March 2006.**

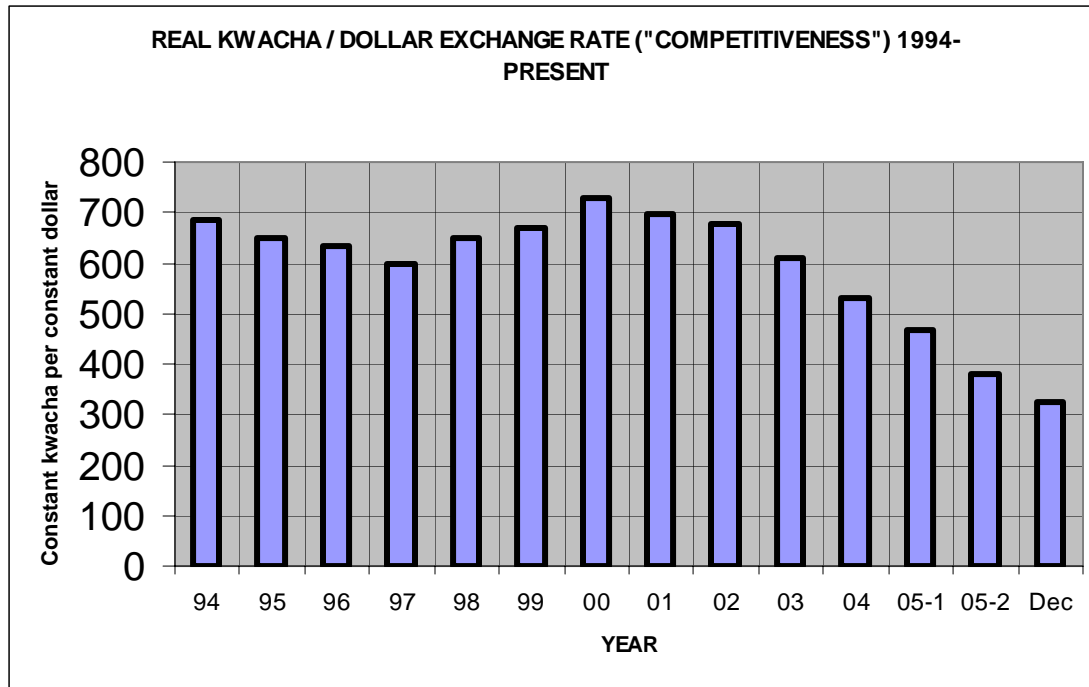
**Fig 1** Nominal Kwacha to USD exchange rate – 1994 to 2005



*Note* – the exchange rate in 2005 is split in two, 05-1 refers to the average rate over the first six months and 05-2 is the average of the last six months of the year.  
*Source* – Kwachamania, *The Post*, 20 Dec 2005

For many years, it has been assumed that the steady devaluation of the Kwacha helped Zambia’s export industry remain competitive. Without doubt, **real** devaluations do help exporters to increase profitability. If the nominal exchange rates used in Fig 1 are adjusted for the inflation rates within Zambia (using Zambia’s consumer price index), the real value of the Kwacha (ie, in constant 1994 values) was remarkably steady between 1994 and 2003 at about ZMK 660 to 700 to the USD (Fig 2.2). However, this changed very significantly in 2004 and 2005 with a dramatic revaluation to ZMK 300 to the USD in constant 1994 values.

**Fig 2 Kwacha to USD exchange rate, in constant 1994 values – 1994 to 2005**



*Note – the exchange rate in 2005 is split in two, 05-1 refers to the average rate over the first six months and 05-2 is the average of the last six months of the year.*

*Source – Kwachamania, The Post, 20 Dec 2005*

Despite the apparent steady devaluations between the mid 1990s and 2003, the real value of the Kwacha was remarkably constant. Therefore, many of the benefits to exporters noted in Fig 1 were nullified by the differential in inflation rates. As the international markets targeted by Zambian exporters have become increasingly competitive, the exporters have had to become more efficient, in terms of productivity, quality and added value, to remain competitive. Given these pressures as well as the high cost of transport on exported goods, Zambian exporters have already been forced to become very efficient and competitive business. Therefore, it will be extremely to identify the increases in productivity needed to compensate for the recent strengthening of Kwacha. As the profit margins for many primary agricultural products are notoriously very small, this sudden strengthening of the Kwacha will inevitably lead to many of the producers and/or exporters becoming unprofitable.

The real impact on productivity of the strengthening of the Kwacha will not be fully seen until the 2006/07 cropping season because most of the export crops have already been planted.

In addition to the problems caused by the strengthening of the Kwacha, the 2006 budget placed further financial pressure on farmers and exporters. It was proposed that a Value Added Tax (VAT) of 17.5% would be added to all agricultural inputs and crop sales. The larger farmers and exporters who claim back VAT would be unaffected – apart from the impact on their cash flow. However, the vast majority of the country’s small-farmers who are not VAT registered would have to pay more for their inputs without being able

to reclaim it. The budget also contained a proposal for a 45% withholding tax on the smallholders. The issues of 17.5% VAT and 45% withholding tax were a great concern during the field work for the assignment. However, at the end of March 2006, the proposal to increase VAT to 17.5% was removed and the situation effectively went back to before the 2006 budget.

## 2 Export statistics

The quality of the export statistics in Zambia is, at best, variable. In an effort to get some consistency for comparisons between the value of different crop exports, data was provided by one source [the Export Board of Zambia (EBZ)] (Table 1). The three main agricultural exports from Zambia are cotton, tobacco and sugar – cotton and tobacco have steady and impressive growth since 1999; most of the increase in value of sugar exports has taken place between 2004 and 2005. Horticulture and floricultural exports are declining – more dramatically for horticulture than floriculture. In contrast, exports of coffee appear to be increasing steadily. Of the lesser products, paprika is declining quickly whilst honey is increasing and tea appears to be steady. The exports of other commodities appear to be much more variable – probably because they tend to be opportunistic. The main opportunistic exports will be maize – when Zambia has a surplus, there will be exports, when there is a crop shortfall there will be virtually no exports – just imports.

**Table 1 Value of selected agricultural exports, 1999 to 2005 (USD '000/year)**

	1999	2000	2001	2002	2003	2004	2005
<b>Cotton</b>	9,200	9,500	15,600	30,220	32,270	54,800	53,147
<b>Tobacco</b>	8,540	12,000	9,490	27,034	36,134	55,077	57,868
<b>Coffee</b>	9,439	4,450	8,994	5,664	7,440	11,900	11,042
<b>Horticulture</b>	23,871	27,355	36,384	44,907	45,969	35,851	18,919
<b>Floriculture</b>	42,677	33,863	34,078	30,298	22,402	26,767	28,721
<b>Sugar</b>	23,143	22,754	37,043	35,111	35,249	35,990	65,296
<b>Livestock</b>	4,400	3,400	3,100	5,200	3,600		
<b>Paprika</b>	2,800	1,800	2,980	1,625	1,500	1,178	232
<b>Honey</b>		202	87	233	355	544	
<b>Groundnuts</b>				151	1,019	556	110
<b>Tea</b>		630	594	900	822	981	
<b>Animal products</b>	4,400	3,400	3,100	5,200	3,600		
<b>Processed food</b>	9,857	12,846	5,957	8,589	8,651		

*Note – 2005 data for cotton, horticulture and floriculture are based on 11 months to November*

*The honey data also include exports of beeswax*

*Processed food is the EBZ's reported data with sugar exports removed*

*Source - Data provided by EBZ from various internal reports*

In the rest of this chapter, export data are presented from other sources, eg, associations or import statistics. These have been used because they probably represent more accurately the state of exports.

In 2001, most of Zambia's agricultural exports were sold within Africa, with South Africa the most important export destination (22%) followed by the DRC (17%) and other African countries (17%). Europe was the destination for 43% of exports with only 2.2% being exported to non-African and non-European markets<sup>1</sup>.

The destinations of Zambia's exports are broadly the same as in 2001. Estimates by the consultants suggest that perhaps trade with the EU has increased to just over 50% - which was mainly the horticultural and floricultural exports, a significant portion of the coffee, tobacco, sugar, paprika and honey. Trade with African countries is probably just under half of the total exports with South Africa the main destination (taking most of the cotton as well as some sugar and paprika). Malawi is probably an increasingly important destination because of burley tobacco sales.

### 3 Horticulture and floriculture

#### a) Current status of horticultural and floricultural exports

Data on horticultural and floricultural exports was obtained from ZEGA (Table 1). The values reported by ZEGA are at variance with the EBZ data – in particular the value of horticultural exports is much higher in the EBZ data. However, the trends are still similar. Horticultural exports peaked in 2002 and have decreased significantly since then. This decline was mainly due to the biggest horticultural exporter – Agriflora – getting into financial difficulties in 2004 and, subsequently, going into administration. Some of its assets were sold to other exporters, but a significant amount of its production was lost and has not been recovered. Currently, there are three main exporters of horticultural produce – York Farm, Borassus and Chalimbana. The main market is the EU (predominantly the UK supermarkets), but small amounts are exported to South Africa, Australia and the Far East.

**Table 2 C&F values and weight of horticultural and floricultural exports, 1999 to 2005**

	1999	2000	2001	2002	2003	2004	2005
<b>a) Value of exports (USD'000/year)</b>							
<b>Horticulture</b>	20,020	17,541	23,272	26,780	25,910	18,145	16,791
<b>Floriculture</b>	42,607	33,863	28,957	30,844	26,603	29,825	34,352
<b>Total</b>	62,627	51,404	52,230	57,624	52,514	47,970	51,142
<b>b) Weight of exports (tons/year)</b>							
<b>Horticulture</b>	5,005	4,874	7,884	8,485	8,330	6,238	5,784
<b>Floriculture</b>	3,424	3,468	3,764	4,379	3,762	3,995	4,275
<b>Total</b>	8,428	8,342	11,648	12,864	12,092	10,233	10,060

Source - ZEGA

<sup>1</sup> Zambia – The Challenge of Competitiveness and Diversification – produced by the Private Sector Development Unit of the World Bank- September 2002

The current wave of horticultural exports from Zambia started in the early to mid-1980s when incentives such as foreign exchange retention and subsidized air freight encouraged a number of farms to start exporting. These exports were predominantly targeted at the United Kingdom and other North European markets and were focused around supplying mangetout in the European summer<sup>2</sup>. Other crops such as fine beans and baby vegetables have been added to increase the product range. The industry gradually expanded and became much more professional and is regarded as significant competition to Kenya, which is the biggest exporter of air-freighted horticultural produce to Europe.

The floricultural exports are based almost entirely on cut-roses grown under plastic in greenhouses. The value of exports peaked in 1999 and then fell away in the early 2000s, but it now appears to be increasing. Floricultural exports started in the mid-1980s supplying the European market (mainly focused on Holland) in the European winter months. At that time, the alternative was to grow roses in European glasshouses using supplementary heating and light, which gave Zambia its comparative advantage. The industry received support from the EU in the early 1990s<sup>3</sup> and is now characterized by about 24 growers with between 2 and 15ha of greenhouses. More recently, the competitive position initially enjoyed by Zambia has gradually been eroded. Since the mid-1990s, there has been a significant increase in the production of roses in Africa; much of which has taken place near to the equator in Kenya, Uganda and Ethiopia. These countries have the distinct advantage of production all the year round, giving higher yields, which has probably resulted in the slight decline in the value of rose exports since 1999.

There are a number of reasons why Zambia built up a reasonably successful horticultural and floricultural industry. There was a cadre of farmers who wanted to diversify into exports and who had the commercial and technical skills to produce high-value crops, the country had the climate to grow certain horticultural crops in the Zambian winter and roses in its summer – which gave sufficient all-year-round produce to attract cargo aircraft throughout the year. The growers established the Zambia Export Growers Association (ZEGA), which helped organize the cargo aircraft, manage the airport cold store and represent the industry. Finally, both the horticultural and floricultural industry received constructive support from the donors.

It must be appreciated that the comparative advantage for supplying the European market with the range of horticultural and floricultural products exported from Zambia lies in countries such as Kenya and, to a lesser degree, Uganda and Ethiopia. Zambia has competed successfully in the past because of its excellent management as well as support of the donors and ZEGA. It must also be recognized that by far the biggest cost they incur is air freight – at about 30 to 40% of the C&F price. Therefore, issues that give

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<sup>2</sup> Mangetout, or snow peas, are too labor intensive for economic production in Europe; the cheap labor offers Zambia comparative advantage.

<sup>3</sup> In particular, the European Investment Bank assisted ZEGA Ltd with the financing of the cold store at the airport and with subsidized loans to farmers to establish rose production sites and the EU funded Export Development Project also provided ZEGA with a revolving fund to help pre-finance inputs.

Zambia comparative disadvantages with the cost of freight have a major impact on its competitiveness.

**b) Major constraints and opportunities**

The horticultural and floricultural export industries stressed that they have a very uncertain futures due to the following issues:

- Revaluation – the revaluation of the Kwacha has hit the horticultural industry hard. They estimate that about 25% of their costs are Kwacha-based (because of the high labor costs). The rest of their other costs are predominantly dollar-based and will therefore eventually decline. The floricultural crops are less labor-intensive and it is estimated that only about 4% of their costs are Kwacha-based, therefore they have been less badly affected by the revaluation. However, the cost of imported items might have been reduced – but not by as much as the Kwacha was strengthened – so even the margins of the floricultural exporters have been badly affected.
- Freight issues – a key success factor in the establishment of the horticultural and floricultural sectors has been the industry working together to negotiate competitive freight rates. The main cost of running a cargo aircraft is the cost of aviation fuel<sup>4</sup>; but the cost of aviation fuel in Zambia is much more expensive than other competing countries in the region, by 40 to 50%<sup>5</sup>. Therefore, this significantly impacts on the cargo charges out of Lusaka to such a degree that exporters can make a considerable saving by trucking their produce to Johannesburg and flying it out of South Africa to Europe. The exports via RSA reduce shelf-life by about 2 to 3 days<sup>6</sup> – which is not a significant problem for vegetables, but it is for the roses. As at March 2006, a significant portion of the horticultural produce was exported via RSA and, before too long, all Zambia’s vegetable exports are expected to be via Johannesburg. This means that the demand for air cargo capacity out of Lusaka will decrease by about half – already three of the five freight aircraft that used to land routinely in Lusaka to carry freight have stopped operating.

The horticultural industry is very concerned about its future. The industry is in part coping with the revaluation by trucking the produce to South Africa to reduce costs in an effort to remain competitive. However, even these savings will not be sufficient to negate the losses caused by the revaluation. The exporters have two different strategies for coping. The first is to significantly reduce output and concentrate on the higher-value and higher-margin lines, which will lead to considerable decrease in the number of

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<sup>4</sup> About 50% of the direct costs associated with cargo aircraft is the cost of aviation fuel.

<sup>5</sup> According to ZEGA, the cost of aviation fuel is 40% more expensive in Lusaka compared with Johannesburg. BA stated that they pay about 40% more for fuel in Lusaka than Johannesburg or Nairobi. In June 2005, IATA undertook a regional study and noted that Zambian aviation fuel was between 12 to 40% more expensive than other countries.

<sup>6</sup> Simply because the journey time to Johannesburg is about 2 days.

people employed. The other strategy is to increase output and try to reduce costs, ie improve efficiency to increase margins. The longer-term issue with the first solution is that reducing output will effectively mean that some market share will be lost, possibly forever. The problem with the second solution is that it is very high risk.

### **c) Main SPS issues**

Zambia's horticulture and floriculture exporters have not generally faced serious market access constraints on the basis of either food safety, plant health or other technical requirements. Most commercial exporters comply with regulatory and private requirements of their markets, and incidence of interceptions at the EU border has been very limited.

The bulk of Zambia's horticulture exports are to the EU, with the UK and Holland being the main destination. Horticulture exports to the EU are subject to a wide array of official regulations and private codes of conduct that are usually required by retailers. Under EU regulations, plants, including fresh fruits and vegetables, entering the EU must be accompanied by a phytosanitary certificate issued by the competent authority in the country of origin confirming that the shipment meets the EU requirements (eg, free of pests). Moreover, competent authorities issuing phytosanitary certificates are required to adhere to a set of operational rules and are generally subject to inspections and oversight by the European authorities.

The EU rules also set some requirements on the packaging. For example, the packaging of the consignment or the means of transport used in shipping horticultural produce must be closed or sealed to ensure that no infestation or infection in transit can take place. EU regulations also set levels for the maximum levels of pesticide residues in fresh fruits and vegetables.

By comparison, private codes of practice cover a wide array of issues that extend beyond food safety and plant health, to include social and environmental aspects of agriculture production. Although the specific requirements vary between different codes, they generally cover the following issues:

#### ***At the farm level***

- Pesticide usage
- Water and soil management
- Social aspects of production such as child labor
- Occupational health standards
- Traceability of produce
- Plant health (eg, disease and pest-free plants)
- Handling and storage of agrochemicals

#### ***At pack-house level***

- Quality grades
- General labeling requirements
- Packaging standards

While official regulations represent minimum requirements for entering any market, private codes of practice have increasingly become the minimum requirements for accessing the biggest portion of the market. In the case of the EU, the main supermarkets in the UK, and increasingly other North European countries, their suppliers have to be certified with private sector accreditation. Therefore, Zambia's horticulture exporters have obtained EurepGAP and BRC certification. Some exporters have also achieved specific standards set by individual supermarkets, eg, Nature's Choice; and also organic certification has been achieved through Ecocert.

Floricultural trade continues to be governed primarily by price competition and adherence to quality grades, although GAP and social standards<sup>7</sup> are being requested. Floriculture imports are subjected to stringent regulatory requirements by the EU, eg, requirements for phytosanitary certificates from competent authorities in the exporting country and inspections at the EU borders<sup>8</sup>.

Although the horticultural and floricultural industry does not regard SPS issues as being serious at the moment, there were still several SPS issues raised by the exporters. The first was in early 2005, that the floricultural exporters were suddenly subjected to a 100% inspection for insects (primarily thrips). Prior to this, only 5% of the floricultural exports from Zambia were inspected by the EU authorities. This was important to the growers because the cost of inspections (which was the equivalent of approximately USD 3,000/ha) was charged to the exporters – thus reducing their net returns. After lengthy discussions, in early 2006, this was reduced to only 10% of the consignment being inspected. However, the increase from 5 to 100% inspections probably cost the floricultural industry just over USD 400,000<sup>9</sup>. This was the equivalent to just over 1% of the FOB value of cut flowers, but as the issue has now successfully been addressed, it is not regarded as a serious problem – but it does demonstrate the need for good sources of information and a system for promptly addressing SPS issues problems as they arise.

There have been some problems with caterpillars being found in mangetout by inspectors in Holland. This problem only occurs at certain times of the year and has so far only been an issue when product is cleared through Customs in Holland. It happens because caterpillar eggs are laid prior to harvesting but are not seen during the inspection in Zambia because they are too small. The eggs then hatch and develop into caterpillars during transit. Apparently, this was mainly a problem with exports from Agriflora, but since it went into administration, there have been fewer reported incidents. The other exporters have got round the problem by a combination of more careful spraying at the

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<sup>7</sup> For example, Milieu Project Sierteelt (MPS) and Max Havalaar

<sup>8</sup> In April 2003, following a number of interceptions of harmful organisms in flowers (especially *Bemisia tabaci*, *liriomyza* spp, and *Thrips palmi*), the EU implemented new regulations requiring all imports of Zambian flowers to be inspected by a competent authority in the exporting and that the official service in the exporting country issues a phytosanitary certificate for each consignments declaring that the consignment is free of harmful organisms. The measures applied to flowers also included inspections at the EU border.

<sup>9</sup> There are about 145 ha of roses in Zambia – and if the extra cost of inspections amounted to USD 3,000/ha, then the total cost to the industry in 2005 was USD 435,000

critical times of the year and by clearing mangetout destined for Holland in the UK. In 2005, ZEGA had only two reports of incidences of caterpillars – which amounted to less than one ton of product being destroyed – which would be worth about USD 3,000.

A few years ago PQPS was being asked by Agriflora to undertake a pest risk assessment (PRA) to facilitate horticultural exports from Zambia to the USA. This has been successfully completed for mangetout with support from the USA's Department of Animal and Plant Health Inspection Service (APHIS). Subsequently, a small amount of mangetout exports occurred, but this has recently stopped, reportedly due to lack of profitability. It is hoped that two more products will be added to the list, ie baby carrots and baby corn. Reservations have been raised as to whether Zambia has comparative advantage to supply the USA market – especially since the Kwacha strengthened, but if it is a commercial opportunity, it is important that all the SPS requirements are met. However, PQPS noted that they do not have sufficient resources to undertake these PRAs in a timely and efficient manner – and without the completion of PRAs, exports cannot even be started. Undertaking PRAs is an area where the PQPS could be strengthened, which would then increase the range of market opportunities available to Zambian exporters.

It should be noted that there is a Dutch-funded project working with both PQPS and ZEGA which has been designed to “ensure that the phytosanitary procedures will no longer form an impediment to competitiveness and sustainability of Zambian export orientated horticultural sector”<sup>10</sup>. This project is managed by the NZTT<sup>11</sup> and will achieve its goals by:

- improving the efficiency and reliability of export inspection procedures,
- improving the monitoring and surveillance capacities
- building capacities for further improving sustainable pest and disease prevention, and
- informing growers and exporters of changes in Zambian and European phytosanitary standards.

This project is already established and running; its main focus is the PQPS activities at the Lusaka International Airport (LIA). Already, this project has helped increase its staffing levels at the LIA – it is currently paying for three extra staff to be employed to work at the Airport. In addition, it has funded study tours to Europe and plans have been drawn up so the project can establish laboratories to enable PQPS staff to perform their duties. These facilities will be built on land provided by ZEGA. Therefore, this Dutch-funded project gives ZEGA members considerable support to ensure that they are not adversely affected by SPS issues in Europe.

Another SPS issue that was discussed in Zambia was whether PQPS needed to have equipment to undertake pesticide residue analysis on behalf of the exporters. It must be

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<sup>10</sup> Taken from “Strengthening Phytosanitary Services for the Export-orientated Horticultural Sector” – the Project Plan prepared by IAC Wageningen UR, June 2005

<sup>11</sup> NZTT - National Research and Development College/ZEGA Training Trust

stressed that Zambian horticultural exports have not had a problem with pesticide residues and the lack of equipment to undertake the analysis has not been an issue to date. However, the issue of pesticide residue analysis was raised by PQPS and as it could impact on exports in the medium to longer-term through higher costs and delays, it is discussed. Currently, exports to the EU have to meet regulations where the pesticide residue levels do not exceed certain limits. The maximum residue limits (MRL) for pesticides are set by both the importing country and often by the retailer as part of the EurepGAP regulations. Exporters from Zambia, and indeed most other countries, ensure that they meet these standards by rigorously enforcing the instructions for the time between applications of the pesticide and harvesting. The importer undertakes regular MRL analysis<sup>12</sup> on behalf of the exporter in the importing country and there have not been any problems. It is encouraging that there have been no reported problems with Zambian exports failing MRL. Despite some claims by Zambian Government officials, there is no EU regulation stating that the phytosanitary certificate must stipulate that the product has been tested for MRL. Therefore, there is no legal obligation for PQPS to invest in equipment to undertake this analysis. PQPS have also stated that they would like to test for MRL for horticultural produce sold on the local market. This is a worthy objective, but perhaps it should be within the remit of the Ministry of Health (MOH). PQPS already has a vital role to play in assisting exporters and it was noted that they were lacking in resources to fulfill these obligations promptly. Therefore it would not be sensible to stretch its mandate further for tasks that are not essential.

The final issue that was raised by PQPS in Zambia was whether a ZamGAP (Zambian Good Agricultural Practice) should be established. The genesis of this idea came from Kenya where a KenyaGAP (Kenya Good Agricultural Practice) is being discussed. The concept is that by establishing a KenyaGAP, it might be easier for small-farmers to export to Europe. The concept of KenyaGAP has only recently been developed – and as yet, it has not been proven in Kenya and currently the European retailers still demand EurepGAP. Until it is proven that KenyaGAP is accepted by the European retailers and that it is easier to implement than EurepGAP, it is not worth any investment in a similar code in Zambia. Also, the recent revaluation of the Kwacha and the demise of Agriflora have considerably reduced the number of small-farmers involved with horticultural exports – it is therefore unlikely that there will be any significant demand for ZamGAP even if it were to be implemented<sup>13</sup>. There is a possibility that a ZamGAP could be useful for regional exports. Certainly, there is an increasing demand from South Africa for vegetable imports – but the issue for Zambia is whether it could supply what the South African market wants at a competitive price.

## **4 Cotton**

### **a) Current status of cotton exports**

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<sup>12</sup> Pesticide residue analysis generally cost between USD 150 to 300 per sample and normally each product will be tested about four times per year.

<sup>13</sup> The concept of encouraging small-farmers to use GAP is important and it is hoped that in time it will be formalized for the local market trade, probably being driven by the larger supermarket chains. It could possibly be useful for sales in regional markets, if the opportunities arise.

Cotton is the most widely grown cash crop in Zambia; it is estimated that at least 300,000 out of the country's 800,000 small-farmers grow it. Data produced by the Zambia National Farmers Union (ZNFU) indicate that at the old exchange rate, small-farmers were able to get a return of USD 1.28/day growing cotton<sup>14</sup>. Following the revaluation, this is likely to fall to about USD 1.16/day for the 2005/06 season, but it may then rise to USD 1.22/day as the price of imported inputs reduces. The reason for the smaller return to labor in 2005/06 is that the price paid to farmers will have to reflect the revaluation, but the inputs for the crop were already imported and will therefore be charged at the old exchange rate. Assuming that the cheaper import costs of fertilizer and pesticides are passed on the farmer, the return to labor-day is slightly higher – but it is still less than before the revaluation. As the ZNFU paper states – the revaluation of the Kwacha is “a condition that is wholly incompatible with poverty reduction goals”.

Zambian cotton exports have increased very significantly from about USD 8 million in 1999 to USD 70 million 2005 (Table 3). This increase is due to many more farmers producing the crop and higher productivity by the small-farmers. Most of this increase in output can be attributed to investments made by the private sector to encourage and stimulate small-farmer production. One of the most successful innovations was the dismantling of traditional extension and buying systems and its replacement by a cadre of distributors who are effectively the agents of the larger ginneries, but who get rewarded for the successful recovery of loans for the farmers' inputs and the amount of cotton produced by their farmers. Prior to the system of distributors, the industry was bedeviled by the non-repayment of loans and side-selling/side-buying<sup>15</sup> of the cotton.

**Table 3 Seed production trends in Zambia, 1999/00 to 2004/05**

Crop year	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05
Production (tons)	45,000	75,000	116,000	118,000	172,000	
Number of cotton farmers	95,000	12,000	145,000	160,000	227,000	300,000
Export value (USD mill)	8.1	15.0	24.3	29.5	51.6	70.0

*Source: Agrifood Consulting - Cotton Development Trust – Cotton Outgrowers Scheme Progress Report 2002-2003, and ZNFU*

Currently, the Zambia cotton industry is dominated by Dunavant (Z) Ltd and Clark Cotton (Z) Ltd; in addition there are four smaller companies: Continental Ginnery, the Zambia-China Mulungushi Textiles, Mukuba Textiles, and Amaka. All companies procure virtually all of their cotton from smallholder farmers. All cotton produced in Zambia is ginned locally. The market prospects for smallholder farmer produced cotton

<sup>14</sup> The impact of Kwacha revaluation and proposed tax provisions of the 2006 budget on Zambian Agriculture - ZNFU Food Security Research Project, March 2006

<sup>15</sup> Side-selling or side-buying is where a farmer is supplied inputs as a loan and then instead of selling the cotton to the person who gave the loan so the value of the inputs can be deducted, the farmer sells to another buyer thus evading the repayment of the loan. Around 2000, the cotton companies were getting loan repayments of less than 50%, which considerably affected the viability of the industry.

is increasing due to the higher quality of hand-picked cotton in comparison with mechanically harvested cotton – but this is in part offset by the short staple length inherent in Zambia’s cotton. Over the last few years, none of the Zambian ginning companies have been running at full capacity. It is estimated that the 13 gins in Zambia have a combined capacity of over 210,000 tons<sup>16</sup>, although the indications are that in the 2005 season, the gins must have been working at close to capacity.

Traditionally most of the ginned cotton has been sold to South African companies, although more recently the main cotton companies have been selling to Mauritius and India.

#### **b) Major constraints and opportunities**

By far the biggest issue facing the cotton industry is the revaluation of the Kwacha. The largest cotton company always publishes a pre-planting buying price in Kwacha, so farmers can make cropping decisions. For the 2005/06 season, the pre-planting decision was made assuming an exchange rate of about KMK 4,500 to the USD. However, following the revaluation, the cotton companies have had to amend the cotton-buying price downwards, which obviously upset the small-farmers. This revaluation has come at a time when the cotton companies were hoping for an increase in cotton exports. Most of the farmers have already planted their crop for the 2005/06 season, so it is likely that cotton exports in 2006 will be reasonable, but there is considerable uncertainty as to what will happen to cotton production in the longer term. The ZNFU’s paper evaluating the effect of the appreciation of the Kwacha projects a USD 17 million reduction in cotton output – and a 25% decrease in the number of farmers growing the crop. Other people are suggesting that the impact will be less – as farmers have virtually no other cash crop they can grow, and they need a source of cash. However, if production declines, then it also impacts on the ginneries, as they will be further under-utilized.

#### **c) Main SPS issues**

The cotton exporters raised two SPS issues with relation to exports.

- First, the PQPS sometimes ran out of phytosanitary certificates and therefore they could not issue any certificates which must accompany all exported consignments.
- Second, there is some concern as to whether cotton destined for certain markets had to be fumigated before export.

The shortage of phytosanitary certificates, although was not reported by any other sub-sectors and doesn’t appear to be a problem that occurs frequently, would cause some delays in exports and increase costs. This shortage implies a resource and/or administrative capacity weakness at PQPS – whether it is a shortage of manpower to anticipate the requirement for certificates, or whether there is a shortfall in resources to pay for them is not understood.

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<sup>16</sup> Source – Synthesis Study on Options for Smallholder Commercialization in Zambia Out-grower case Study – Cotton by Agro Business Development A/S, Denmark

The issue of fumigating the cotton before export reflects a common problem at PQPS of not fully understanding the requirements of export markets. Like many of these misunderstandings in information flow, the problem is apparently soon resolved, but if there is any unnecessary fumigation, then it does add significantly to the cost of exports. While it is hard to estimate the total cost of fumigating cotton prior to exports specially since the number of containers that had to be fumigated was not reported, one can use estimates from other sectors. If the fumigation cost is the same as for coffee, then it would be about ZMK 500,000 (USD 150) per container. However, if it does not have to be performed, it will represent a significant cost saving for the exporters.

## **5 Paprika**

### **a) Current status of paprika exports**

Paprika was introduced to Zambia in 1993 by Cheetah Zambia Ltd who started promoting the crop in the commercial farming sector and then emergent and small-farmers were encouraged to grow it. Quickly, it was realized that the crop was more suited to the small-farmer and now they dominate production. Cheetah promoted the crop, offered technical support, collected the dried paprika pods for subsequent aggregation and export. Exports were either to Spain or South Africa, and more recently, the USA has become a market. Cheetah also invested in equipment to produce paprika powder – which not only added value to the crop but also gave some product diversification and opened new market opportunities. The company has also made significant investment in laboratory facilities - including equipment capable of measuring aflatoxin content.

After the initial success, a number of other organizations started to promote it in the small-farmer sector as a means of improving rural incomes. For example, in the late 1990s, a number of donor-financed programs were established, eg, Cooperative League of the USA (CLUSA) and the Smallholder Enterprise and Marketing Project (SHEMP). In 1997 the Zambia Association for High Value Crops (ZAHVAC<sup>17</sup>) was established by a small group of people who wanted to promote smallholder and emergent farmer production of paprika around Lusaka. The members of this Association set up a pyramid structure to promote paprika production among small-farmers and provided inputs and a market for the paprika. ZAHVAC and its members received a significant amount of donor support; in particular from the EU-funded Export Development Programme (EDP). Other companies and NGOs also supported small-farmers to produce the crop, but they normally sold it to either Cheetah or ZAHVAC for export. In fact, by the early 2000s, the Zambian paprika industry became polarized around these two companies. One of the original members of ZAHVAC was Enviro Oil & Colourants, an oleoresin extraction factory, which was financed by a Japanese grant<sup>18</sup>. Recently, Enviro Oil & Colourants has been bought by a South African paprika processing company.

Given that a number of companies have invested in the crop and that there have been a number of donor interventions, it is disconcerting to note that the exports of the crop have

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<sup>17</sup> ZAHVAC is now called Paprika Association of Zambia

<sup>18</sup> Enviro Oil & Colourants has recently been bought by a South African paprika company.

been very disappointing (Tables 4 and 1). These data exclude any oleoresin exports that might have taken place from Enviro Oil & Colourants, but it would appear that exports are about 600 to 800 t/year, worth about USD 1 million per year. However, it is disappointing to note that, despite all the support from donors, exports have declined. This is especially disappointing as production in Zimbabwe started at the same time and its exports reached around USD 20 million/year before its recent political problems caused its output to decline.

**Table 4 Value and weight of Zambia’s paprika exports, 1999 to 2005**

	1999	2000	2001	2002	2003	2004
<b>Weight (tons)</b>						
Malawi			6			
RSA	60	184		1		4
Spain	249	354	1,035	679	177	501
USA		216			20	48
Zimbabwe						52
<b>Total</b>	<b>309</b>	<b>753</b>	<b>1,041</b>	<b>680</b>	<b>197</b>	<b>605</b>
<b>Value (USD '000)</b>						
Malawi			2			
RSA	89	358		2		42
Spain	313	628	1,684	752	158	678
USA		183			12	109
Zimbabwe				1,768		115
<b>Total</b>	<b>402</b>	<b>1,069</b>	<b>1,686</b>	<b>2,512</b>	<b>170</b>	<b>944</b>

*Source - Internal Accord Associates, based on Comtrade data*

Paprika is now grown almost entirely by small-farmers whose inputs are generally pre-financed by either of the two exporting companies or by promoters of outgrower schemes who then supply the exporters. The decline in paprika exports has been disappointing in recent years – especially when compared with the improvement in cotton and tobacco (Table 1) and the successful introduction in Zimbabwe. Despite the void in the market caused by the problems in Zimbabwe, Zambia’s exporters were not able to take advantage of the situation. The main reason normally given for Zambia’s declining output has been that the two main exporters competed to the detriment of each other; for example, side-buying has resulted in both companies being left with a considerable debt being owed by small-farmers. This has apparently constrained the exporters’ resources for providing further crop inputs and technical support. There is probably more to the cause of low paprika exports because there have been equally serious issues with side-buying and side-selling in cotton and tobacco and the exports of both have increased dramatically.

**b) Major constraints and opportunities**

The biggest issue facing the paprika industry is the revaluation of the Kwacha, which means the farm-gate Kwacha price will decrease. The report commissioned by the ZNFU projects that the Kwacha revaluation will result in a massive decline in exports – to 20%

of the 2005 levels. Whether or not this projection is accurate, it is very likely that the decline shown over the last few years will be accelerated.

Despite the considerable amount of donor support given to the paprika industry, the small-farmers still get very low yields; average yields are in the order of 400 kg/ha with minimal inputs – when double this should be obtained. At the current average yields, growing paprika is not an attractive crop for small-farmers. Also, given the low throughput, it is difficult for the exporters to invest sufficiently in providing extension advice to help farmers achieve better yields.

### **c) Main SPS issues**

The paprika industry does have some SPS issues. The main problem has been with aflatoxin levels in some consignments destined for the EU. In 2005, one of the exporters had to negotiate price reductions on about 25% of the consignments<sup>19</sup>. This has only been a problem with the EU market; paprika destined for the USA or RSA has not had any aflatoxin issues. The laboratories in the paprika industry are capable of monitoring aflatoxin levels, but the cost of analyzing a sample is about USD 50, and given that the average small-farmer produces USD 40 worth of paprika, it is not possible to analyze the produce from every farmer. At best, only mixed samples from farmer groups can be tested. The exporters try to blend paprika from different farmer groups to ensure that the average aflatoxin levels are low enough not to cause problems, but sometimes they fail.

The losses so far due to aflatoxins in paprika have been low and it appears that the management of the main exporters understand some of the key ways of minimizing losses in the future. For example, extracting the oleoresin from the paprika powder eliminates this problem. Also, the exporters are aware that better post-harvest management of the dried pods reduces the issue. Finally, selling into markets where it is less of a concern can also minimize the problem.

## **6 Tobacco**

### **a) Current status of tobacco exports**

Zambia has a very strong tradition in tobacco exports – it was grown successfully before Independence and continued to be one of the mainstays of agricultural exports and a significant generator of rural employment until the mid-1980s. However, for a number of reasons tobacco exports declined (to less than USD 5 million in 1995), whilst Zimbabwe and, to a lesser degree, Malawi became the predominant producers in the region. Since the mid-1990s, considerable efforts have been made to promote tobacco again in Zambia, which resulted in a significant revival of the crop, especially in the last three years (Table 5). The recent increase in exports has been helped by the political problems in Zimbabwe, which created a market opportunity for Zambia. Output has been improved by many Zimbabwean tobacco farmers relocating to Zambia.

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<sup>19</sup> It is estimated that the price reductions negotiated by importer could have cost the exporter between USD 40,000 to 80,000 in lost revenue.

**Table 5 Value of tobacco exports, 1999 to 2005 (USD '000/year)**

	1999	2000	2001	2002	2003	2004	2005
<b>Weight (tons)</b>	7,067	6,483	6,682	13,217	17,701	29,331	41,339
<b>Value (USD '000s)</b>	9,9196	6,910	8,739	14,851	22,275	52,096	63,279

*Source - Data provided by TAZ*

In Zambia, tobacco is produced in Southern, Central and Eastern Provinces. The country produces slightly more Virginia tobacco (22,500t) than burley (18,800t) and there are about twice the number of farmers growing burley than Virginia. Zambia's tobacco crop is produced by both large-scale commercial and small-farmers. TAZ estimates that there are about 25,000 farmers growing tobacco – of which about 100 are large-scale commercial producers. Most of the production in Southern and Central province is Virginia tobacco, which is sold to international buyers who come to Lusaka. There is considerable burley tobacco production in Eastern Province, most of which is marketed across the auction floors in Malawi. Indications for the 2005/06 season are that the total crop will be higher than 2004/05 and that the early deliveries were of high quality<sup>20</sup>. Most of Zambia's crop is bought by four buyers - Alliance 1 (Stancom/Dimon), Zambia Leaf Tobacco Company (ZLTC), Tombwe Processing Limited (TPL), and Associated Central Africa Limited (ACAL).

#### **b) Major constraints and opportunities**

Like many of the export crops in Zambia, there are some important issues affecting the industry. In March 2006, the biggest problem facing the industry was the imposition of VAT on the tobacco crop. Whilst it is possible to reclaim it, it still impacts significantly on the cash flow of the exporting companies and growers. However, at the end of March, it was announced that the Government were going to remove the necessity to pay VAT on agricultural crops, which will eliminate this problem.

The revaluation of the Kwacha is expected to significantly impact the tobacco industry. The industry estimates that almost 68% of the direct costs are local currency costs – mainly labor. Therefore, the revaluation of the Kwacha will significantly reduce the farmers' margin. This will have a very major impact on the Zimbabwean tobacco farmers who have recently come to Zambia because many of them have borrowed money to establish their farms. These farmers therefore have to service their loans from smaller than anticipated crop margins and it is reported that some of them are already in financial difficulties. The ZNFU paper on the effects of the Kwacha appreciation estimates that the industry will contract to about 25% of its current size – it estimates that exports will fall to about USD 15 million/year.

It was also claimed that the high cost of finance and the small size of the industry (compared with neighboring countries) impacted on the growth of the tobacco industry.

#### **c) Main SPS issues**

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<sup>20</sup> The 2005/06 tobacco marketing season started on 24 March 2006

At present, the tobacco industry reported that it had no SPS issues but expects that pesticide and heavy metals residues in the tobacco to become an issue in the near future. As a pre-emptive measure, the Tobacco Association of Zambia (TAZ) has just started to send some tobacco samples to Malawi for pesticide residue and heavy metal analysis<sup>21</sup>. It expects the results to show that the Zambian crop has none or only minimal traces of both, so if in the future there is any controversy about pesticides and heavy metals in African tobacco, TAZ will be able to provide proof of the good agricultural practices used in the production of the Zambian crop. This “finger-printing” of Zambian tobacco is a very sensible action by TAZ and it should be encouraged.

The tobacco industry has, in line with other major producing countries, put into place measures to stop using Methyl Bromide as a soil fumigant. It will be phased out almost completely within the next year or two.

### 3.7 Honey

#### a) Current status of honey exports

The North-Western Province in Zambia has been producing honey and beeswax for many years. Traditionally, the honey was wild-harvested and used in the production of local beer. More recently there have been a number of initiatives to encourage honey production in hives and develop exports. It is now estimated that there are about 500,000 hives and 10,000 beekeepers in North-Western Province. This province is an accredited producer of organic<sup>22</sup> and “Fair Trade” honey and can therefore command premium prices in the export market. The private sector estimates that total honey exports are about 600 to 700 tons, worth about USD 1.5 to 2 million each year, ie higher than both the Central Statistics Office data (Table 6) and EBZ data (Table 1).

**Table 3.6      Zambian honey exports, 2002 to 2005**

	2002	2003	2004	2005
<b>tons</b>	127	234	564	389
<b>USD (thousands)</b>	227	423	929	626

*Source - CSO<sup>23</sup>*

There are two main exporters of honey from Zambia, Forest Fruits and North Western Bee Products who, along with Honey Bee Farms, have formed the Zambia Bee Products Association. Despite the impressive growth of honey exports and establishing a good name in the EU market, the Zambian honey industry reportedly operates on small margins. This is because of the high costs of transport to collect the honey from the rural villages and then move it from North-Western Province to Lusaka and then to the international markets. In addition, it requires a large number of people to harvest the

<sup>21</sup> It was reported that it cost a total USD 100 to analyze eight samples, which seemed very cheap.

<sup>22</sup> Certified by Ecocert

<sup>23</sup> Taken from “Zambia Export Opportunity Study” produced by Alexander Valeta and Chiwama Musonda of the International Trade Centre, February 2006

hives, organize and train the producer groups and operate the equipment in factories to separate the honey out from the combs.

Forest Fruits export most of its honey to Europe in bulk where it is blended with other sources and sold mainly into the catering or industrial market where it is used as an ingredient for organic pastries/cakes etc. Another exporter sends honey to Europe in bulk where it is repackaged into glass jars for retailing. Since the Government-owned glass factory at Kapri Mposhi closed, Zambia has had to import glass jars, which has made retail packing of honey very difficult. The retail packs of honey for the local market use low quality plastic jars which are unsuitable for export. The lack of good quality packing facilities hampers the development of regional market opportunities.

#### **b) Major constraints and opportunities**

The revaluation of the Kwacha will hit the beekeepers hard as it will inevitably lead to a significant reduction in the price they receive. The main exporter has negotiated a price reduction to the beekeepers of 20% - which will only partially compensate the exporter for the Kwacha revaluation.

If the exporters could pack into retail jars at competitive prices, it would add value in-country, improve margins in existing export markets and open up regional markets as well as the Middle East. But the cost of imported glass jars as well as the lack of critical mass to operate a packing line effectively prevents this.

Even though most of the exports are to the EU, South Africa represents a large market opportunity for Zambia because, between 2000 and 2004, its imports of honey increased from just over USD 500,000 to USD 2.5 million. The exporters have made a considerable effort to develop this market opportunity. In fact, prior to the revaluation of the Kwacha, the biggest constraint to improving profitability and expansion of the industry was the refusal by the South African Government to allow Zambian honey to be sold in South Africa unless it had been irradiated. If the honey is irradiated, it cannot be sold as “organic”. It is claimed that the honey has to be irradiated to prevent the introduction of American Fowl Brood (AFB) – a pest that already exists in South Africa. Therefore, this is a non-tariff barrier established to protect the South African honey industry because it is not clear whether the South African measure was based on risk analysis or other scientific logic. The Zambian exporters claim that they could sell up to 3,000 t/year at a price 27% higher than in the EU<sup>24</sup>.

#### **c) Main SPS issues**

Honey exports are certainly constrained by SPS issues. Not being able to access the South African market is a very large missed opportunity. This issue needs to be resolved at the bilateral level between the Zambian authorities, possibly with technical support

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<sup>24</sup> If the honey export trade is worth USD 1.5 million, then an extra 27% would be worth about USD 400,000. It is perhaps unrealistic to assume that all Zambia’s honey would be sold into South Africa, but even if half of it were sold, it would improve revenues by USD 200,000. The higher prices would give much more encouragement to the exporters and beekeepers to increase production and perhaps the 3,000 ton target could be met in the longer-term.

from donors, and their South African counterparts. Alternatively, Zambia could raise the issue with the SPS committee as South Africa is violating the SPS agreement.

Despite the good progress made by the industry, the growth potential will continue to be constrained by lack of properly trained bee-keepers. Moreover, honey exporters still do not implement proper record-keeping and traceability systems; exporters have been working on such systems but are being hindered by lack of information about diseases in the production areas.

Honey exports to Europe are regulated as an animal product in the EU. Recent EC regulations (Directive 2001/110) set new quality requirements for honey and are now being implemented in member states. It is therefore subject to a range of official regulations and private requirements relating to:

- Pesticide and antibiotic residue limits
- Limits of heavy metals
- Microbiological standards
- Export certificates
- Packaging standards
- Organic codes for production of honey sold in the organic market
- Color, water and sugar content and hydroxyl-methyl-furfal (HMF) levels.

High levels of the sugar enzyme HMF is another quality issue that honey exporters have to monitor. The combination of high temperatures during storage and transit over a long period of time increases the risk of HMF levels rising above the EU standard, which can lead to rejections or price discounts<sup>25</sup>. Zambian exporters have not yet had serious problems with HMF levels, but one exporter reported two occasions in the last eight years where HMF levels were above the EU limit. In both cases, a price discount of 4% was negotiated.

### **3.8 Seeds**

#### **a) Current status of seed exports**

Zambia has a thriving seed production and export industry. The industry is based primarily on maize seed and it is exported to most of Zambia's neighboring countries. Zambia has an excellent and reliable climate for maize seed production and with the political problems in Zimbabwe; it has created a significant market opportunity. The data provided by EBZ do not separate out maize seed; however, it is estimated that the trade is worth about USD 20 million/year.

There are a number of companies producing and exporting maize seed – including Seed Co., ZamSeed, and Pannar. These companies work closely with the Seed Control and Certification Institute (SCCI) in the testing of varieties as well as inspection and

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<sup>25</sup> The EU standard for HMF is 40 mg/kg, whilst the international standard, set by CODEX is currently at 80 mg/kg

registration of the seed crops. The industry hopes that when the Plant Breeders Rights Act completes its passage through Parliament, it will facilitate the diversification into other seeds, such as flower and vegetable seeds that will be destined for the European market.

**b) Major constraints and opportunities**

Virtually all the seed exports are to neighboring countries and therefore the revaluation of the Kwacha has not affected sales as significantly as with other exports.

**c) Main SPS issues**

The industry did not have any SPS issues. They noted that, providing they were organized and gave PQPS and SCCI sufficient warning, they are able to complete all the required documentation on time.

### **3.9 Coffee**

**a) Current status of coffee exports**

Zambia is only a very small exporter of coffee - it produces in the region of 6,000 to 7,000 tons of Arabica coffee per year - 99% of which comes from about 40 large-scale commercial estates or farms. The total area of coffee is about 4,000ha. There are only about 250 smallholder coffee growers who, on average, cultivate 0.5 ha of coffee<sup>26</sup>. Despite poor international market conditions, there is a potential window to Zambia as a source of specialty coffee. Currently, its main markets are Europe, with a small amount sold in South Africa.

There are two organizations that control the coffee industry. First, the Zambia Coffee Growers Association (ZCGA) is responsible for marketing Zambia's coffee. It has the following mandate:

- Regulation of production and processing of coffee
- Collection, storage, processing and marketing of Zambian coffee
- Price negotiations with international buyers
- Administration of export proceeds.

Secondly, the overall regulation of the coffee industry in Zambia is the responsibility of the Coffee Board of Zambia (CBZ) whose responsibilities include:

- Quality control
- Promotion of Zambian coffee
- All aspects of coffee research
- Advising and lobbying government on coffee issues.

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<sup>26</sup> Source – Synthesis Study on Options for Smallholder Commercialization in Zambia Out-grower case Study – Coffee by Agro Business Development A/S, Denmark

One of roles of the CBZ is to encourage good coffee quality, which will help maintain and build on the good reputation Zambian coffee has developed. It employs a Coffee Inspector who ensures that all regulations such as the Coffee Act, Seeds Act and the Plants, Pests & Diseases Act are adhered to.

The World Bank has supported the coffee sector. In the 1980s, it established the Coffee I project which was followed by the Coffee II project in 1992, which provided a USD 20.4 million loan, which, amongst other things, has been used to help commercial farmers and cooperatives obtain 80% pre-shipment finance<sup>27</sup>.

The value of coffee exports has increased in recent years; initially due to increased production and latterly due to higher world prices – exports are now worth almost USD 10 million/year (Table 7). Also, efforts are being made to add value to Zambian coffee and attempts are being made to develop niche market opportunities. Despite this growth in coffee exports, the ZCGA notes that the margins being made by growers are small and there is little incentive for further expansion.

**Table 7 Weight and value of coffee exports, 1999 to 2005**

	1999	2000	2001	2002	2003	2004	2005
<b>Weight (tons)</b>	3,450	2,200	5,868	5,000	6,500	5,881	6,655
<b>Value (USD thousands)</b>	9,695	4,492	9,048	6,250	6,810	7,578	9,712
<b>Average price (USD/t)</b>	2,811	2,041	1,542	1,250	1,135	1,289	1,846

*Source - Data provided by ZCGA*

**b) Major constraints and opportunities**

The major constraints to expansion of this industry are the revaluation of the Kwacha, the issue of VAT, as well as lack of profitability. The ZCGA also noted that there was a lack of competitive finance for expansion. However, given that coffee is a long-term perennial crop, once a grower has established a coffee crop, they are likely to continue harvesting it. Therefore, these constraints reduce the likelihood of further increases in plantings and will also strengthen the drive to add value and more specialized marketing.

**c) Main SPS issues**

The industry reports that they have not had any significant SPS problems. Some African countries have had rejections of consignments due to high levels of Ochratoxin A – but this has not been an issue for Zambia<sup>28</sup>. Apparently, proper post-harvest practices and the careful monitoring of the moisture content of the beans have prevented any Ochratoxin issues<sup>29</sup>.

<sup>27</sup> Coffee II closed in 1996, but the revolving fund for pre-finance is still used.

<sup>28</sup> This may be, at least in part, because Ochratoxin is much more of a problem for Robusta coffee, whereas Zambia is mainly a Arabica producer

<sup>29</sup> Ochratoxin A is a mycotoxin produced by the fungus *Aspergillus ochraceus* and also by several species of *Penicillium* fungi and is frequently found in green coffee. Ochratoxin A remains present even after the roasting process.

The only SPS issue reported is an apparent misunderstanding of whether the beans need to be fumigated before export. At the start of 2005, PQPS stated that coffee exports had to be fumigated – but the buyers did not demand this. It costs almost ZMK 500,000 to fumigate a 19 ton container<sup>30</sup> - but after some containers were fumigated, the “requirement” was dropped.

Coffee grown in the North of Zambia has a problem with Coffee Berry Disease (CBD) – but this disease affects coffee in the growing stage and does not impact on the quality of the finished product. Efforts are being made by the Kasama Coffee Company to breed CBD-resistant varieties, which will help improve yields and possibly average bean size – but, apart from average bean size, CBD does not affect quality.

### **3.10 Livestock**

#### **a) Current status of the livestock sector**

Data on the national herd provided by the Department of Veterinary and Livestock Development (DVLD) in MACO are that Zambia has

- 2.3 million cattle
- 1 million goats
- 60,000 to 70,000 sheep
- 14 million chickens
- Annual production of 20 million day-old chicks
- 4 million layers

As with many of the national statistics in Zambia, there could be a significant error with these data.

The cattle sub-sector is the most important in the livestock industry. The main concentrations of the national cattle herd are in Southern and Western Provinces. Not only is it the most valuable traded livestock commodity, but cattle are a very important source of “wealth” for the rural community – if there is a demand for money, then some animals can be sold. In terms of numbers, most of the cattle (83%) are owned by small-farmers, which is referred to as the traditional herd, the balance being the commercial herd. However, it is estimated that country’s meat is supplied about equally from both the commercial and traditional herds. Even though the data are erratic, the indications are that the national herd has fallen significantly in recent years. For example, the cattle population in Southern Province fell from 1.2 million in the mid-1980s to 600,000 in 2001. Similar trends are reported in other provinces. The main causes of the decline in cattle populations have been due to outbreaks of Corridor Disease and other tick-borne diseases, Foot and Mouth Disease (FMD), Contagious Bovine Pleuro-Pneumonia (CBPP), Anthrax, Brucellosis and Trypanosomiasis. The increase in these disease levels

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<sup>30</sup> ZMK 450,000 for the fumigation, ZMK 30,000 for PQPS’s services and ZMK 1,500 for the actual certificate.

has been attributed to the breakdown in the veterinary services following privatization, the failure of sanitary barriers designed to prevent infections spreading, the movement of cattle from infected areas (and countries) and the mixing of wild animals with cattle. Overall the health of the national herd is very poor and meeting international phytosanitary standards for many countries would be virtually impossible because of the incidence of diseases in the country. It has been suggested that there should be some attempts to create disease-free zones from which cattle could be exported.

Exports of animal products are small, at between USD 2 to 5 million per year (Table 8). This category includes eggs and chickens, fish, beef and beef products, game meat<sup>31</sup>, hides, etc. Unfortunately, the data supplied by EBZ did not break down the exports into the different types of livestock. However, most of the exports would be day-old chicks and eggs for hatching; the Poultry Association of Zambia (PAZ) estimates this at about USD 2.4 million/year. There are also reportedly exports of frozen chickens to the Democratic Republic of the Congo (DRC), Malawi and Zaire. In addition, it is reported that there are exports of animals and meat to the DRC, Angola and Zaire – however, most of these exports are “informal” and may not be included in the export data. These informal exports are really just an extension of the local marketing systems and are therefore not captured in the formal statistics.

**Table 8 Value of animal product exports, 1999 to 2004 (USD '000/year)**

	1999	2000	2001	2002	2003	2004
<b>Animal products</b>	4,400	3,400	3,100	5,200	3,593	1,992

*Source - Data provided by EBZ*

Exports of livestock and animal products are a very small part of the total industry. It has often been commented that Zambia has many comparative advantages for beef production and that its quality is excellent. However, the decline in the national herd size has resulted in a shortage of beef and, consequently, high prices on the domestic market. Therefore, the commercial companies that could export significant quantities of meat do not have the commercial incentive to develop exports. Beef exports can be realistically segmented into two opportunities: firstly, formal exports to RSA and possibly to some of the major towns in neighboring countries, eg, Luanda<sup>32</sup>, and secondly, informal exports to DRC, Angola, Zaire, Malawi and Tanzania.

Formal exports from Zambia are not currently attractive because

<sup>31</sup> The EBZ reports that in 2004, USD 1 million of crocodile meat was exported from Zambia – which fell away to zero in 2005.

<sup>32</sup> It has been suggested that because Botswana and Namibia have very significant beef exports to the EU, this could be an opportunity for Zambia. However, before this could happen, there would have to be a massive investment in eradication, control and surveillance of disease, a very large investment would be required in abattoirs and quarantine facilities and Zambia would need to negotiate a quota with the EU. It is extremely unlikely that Zambia will be able to address these issues for the foreseeable future. Therefore, beef exports to the EU are not being considered.

- Disease levels in Zambia are much too high to meet formal export standards without a very major investment in disease eradication or the establishment of disease-free zones. The investment would be needed by the private sector in vaccinations and disease prevention as well as by government to increase its capability to detect, monitor and control diseases.
- Margins made on the local market are so attractive that there is little incentive for the private sector to actively seek export markets.
- As the national herd size has declined in recent years, there is no surplus meat available for export. Therefore, very significant investment in increasing the herd size would be needed.
- Exports to RSA<sup>33</sup> and indeed cities such as Luanda would be competing with South American beef – the high cost of transport would disadvantage Zambian exporters.
- The demand for formal exports tends to be for the higher grade cuts (ie, the hind quarters) which mean that there would be much more lower-value (industrial meat) that would need to be disposed of on the local market.

There are some small formal beef export opportunities in the regional markets. For example, one company is exporting small quantities (about 75t/year) of processed meat to a mining company operating in the DRC and it hopes to get a contract to supply similar amounts to tourist lodges in Tanzania. There are reportedly opportunities to further expand this trade – and if the processors had accredited food safety standards, it would give their potential new buyers more confidence to take their produce. Another company hopes to export beef products to Nigeria for retailing in Shoprite – but this will only be for a “few” years until Nigerian meat companies are able to meet Shoprite standards. These do demonstrate that there are some limited formal opportunities and it is important that the companies involved are supported to meet the international food hygiene standards so these opportunities can be sustained.

In contrast, informal exports should certainly not be discouraged; in fact they should be positively encouraged. Informal exports are already happening – though the scale is not known. Normally, if attempts are made to make informal exports meet formal standards – such as SPS standards – then all it does is increase the efforts that traders make to avoid formal trade routes.

As noted above, the exports of day-old chicks are significant. This trade has been active for more than 20 years and Zambian companies have established a good reputation in the region. The PAZ hopes that day-old chick exports will continue to expand. In addition to these day-old chicks, there are a number of companies that produce frozen chickens

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<sup>33</sup> South Africa is a significant net importer of beef, importing 55,000 t in 2004 – a decline from 129,000t in 1994. Most of the imports are supplied by Namibia – which has the advantage of being part of Southern Africa Customs Union (SACU) and there for has duty free access. Other sources of beef imports are Brazil and Argentina, which face a 40% import duty – Source, GIRA Meat Club 2005

that are exported to regional retail outlets – again, the PAZ believes that there are opportunities to expand this trade.

#### **b) Major constraints and opportunities**

The livestock industry has a considerable number of issues that are constraining the development of significant export trade. These include:

- The decline in national herd size has led to very good local market prices that do not give much incentive for exports.
- The large investment needed to create a big enough surplus of meat to develop significant formal trade.
- Very significant disease levels that need to be controlled before SPS standards could be met in some export markets.
- Insufficient capacity and resources within the DVLD to ensure competent disease monitoring.
- The erratic changes in the exchange rate of the Kwacha do not give the private sector confidence to invest in formal exports.

Having noted some of the constraints, it must also be noted that there are some small opportunities for exporting added-value meat products and day-old chicks. Also, IFAD have designed the Smallholder Livestock Investment Project (SLIP) with the objectives of reducing the incidence of diseases, specifically East Coast Fever and CBPP, and improve smallholders' access to draft animal power (DAP). This USD 15 million project expects to achieve these objectives by supporting the Disease Control Sub-unit established within MACO and by increasing the availability of DAP for smallholders.

#### **c) Main SPS issues**

The livestock industry in Zambia has very significant SPS problems. The range and intensity of diseases, especially FMD, CBPP and Corridor Disease mean that exports to formal markets, such as South Africa and the EU will be virtually impossible in the short to medium-term. It would be extremely difficult and very costly to bring Zambia's livestock industry up to the SPS standards demanded by the formal export markets – and given the good margins being made currently by farmers on the local market, there is little incentive for the private sector to actively seek further market opportunities.

The informal export of livestock will continue to happen irrespective of SPS issues. These opportunities will tend to be erratic and should be encouraged.

The successful day-old chick industry should maintain its status – unless there is an issue with Avian Flu. Also, opportunities to develop exports of processed meats should be encouraged. Currently, the value of processed meat exports is small, but there could be opportunities to increase them. The target market would be regional, supplying the tourist trade and retail outlets. The meat processors could certainly benefit from the introduction of food hygiene standards, such as ISO 22,000 and HACCP.

### **3.11 Food processing**

### a) Current status of processed food exports

Exports of processed food are dominated by sugar – which is Zambia’s biggest agricultural export at USD 65 million in 2005 (Table 9). However, it should be noted that the more normal value of sugar exports is about USD 30 to 35 million/year. Zambia’s sugar production is almost 250,000 t/year; some is exported to the EU under the 28,000 t/year quota, about 16,000 t/year is exported to SACU countries and another 16,000 t/year to other regional markets<sup>34</sup>. The domestic market absorbs about 120,000 t/year.

**Table 9 Value of processed agricultural exports, 1999 to 2005 (USD '000/year)**

	1999	2000	2001	2002	2003	2004	2005
<b>Processed</b>	33,000	35,600	43,000	43,700	43,900		
<b>of which</b>							
<b>Sugar</b>	23,143	22,754	37,043	35,111	35,249	35,990	65,296
<b>Non-sugar</b>	9,857	12,846	5,957	8,589	8,651		

*Source* - Data on processed agriculture and sugar provided by EBZ – non-sugar is calculated

If the EBZ data on the value of sugar and processed agricultural products are correct, then the value of non-sugar processed agricultural products is almost USD 10 million per year (Table 3.9). It is not obvious what products make up the “non-sugar processed exports” – Zambia has only a very fledging processing industry that is almost entirely focused on the local market. It has very little comparative advantage for exports because the cost of packaging is high, as most of it has to be imported from South Africa. Also, the costs of raw materials tend to be expensive, the power supplies are erratic and other infrastructural difficulties make processed foods very non-competitive in the export markets – even before the recent revaluation of the Kwacha. In the mid-1980s, Zambia had five or six factories processing locally grown horticultural produce; this has now decreased to two – Rivonia Foods and Speciality Foods. Recently, a Zimbabwean company has invested in the old ZamHort facilities<sup>35</sup> and it has plans to expand production for both the domestic and international markets.

The processed food sector will continue to have a small niche opportunity on the local market. The revaluation will increase the competitiveness of imports – which will put their local market share under pressure.

### b) Major constraints and opportunities

The biggest threat facing the sugar exports is associated with the revaluation of the Kwacha and the imposition of VAT. The ZNFU Kwacha appreciation paper noted that “these two Kwacha-induced competitive pressures” led to the sudden rise of sugar

<sup>34</sup> Source – ZNFU’s Kwacha appreciation study.

<sup>35</sup> ZamHort – or Zambia Horticultural Products was established in 1978 to provide a market for local horticultural production. It established a multi-purpose food-processing factory that was sold to a South African company as part of the government’s privatization plan.

smuggled into Zambia from neighboring countries. For example, sales of Zambian sugar in Chipata fell from 800 to 1,000 tons per month to 120 tons and local prices have dropped from USD 800 per ton to USD 420 per ton – which will seriously undermine the local industry’s profitability.

The main constraints with non-sugar processing are the sub-sector’s lack of comparative advantage even before the recent Kwacha revaluation.

### **c) Main SPS issues**

There are no significant SPS issues constraining the exports of sugar.

However, it is hard to state with certainty that the meat processing and other food processing sector have not been constrained by SPS issues. These sectors may indeed follow a pattern of “*defensive commercialization*”<sup>36</sup> where the prospective exporters select some markets and avoid others, which may be more profitable, based on their capacity to comply with SPS requirements. This pattern has observed among commercial operations in some developing countries. In Zambia, some meat processors noted that the South African market could be extremely profitable for organic meat but that they did not attempt to access that market due to the stringent SPS regulations and requirements with relation to animal disease and traceability.

## **3.12 Food safety in the tourism and retailing sectors**

### **a) Current status**

Tourism in Zambia is still only small but is growing quickly – over the last five years its value has doubled to USD 145 million/year<sup>37</sup>. It is estimated that the total number of tourists is about 200,000 per year with 60% coming from South Africa with another 400,000 other visitors – mainly entering the country on business. Data quoted by the tourist industry puts the total arrivals (ie tourists and businesspeople) to Zambia at about 600,000/year, who on average stay five nights, ie 3 million bed-nights per year. Industry estimates that the average cost of food ingredients per visitor night is USD 10. Therefore, the cost of supplying the tourist and business visitors is about USD 30 million, which would be about USD 22 million on meat, fish and livestock products and USD 8 million on fruit and vegetables. The hotels and restaurants that were interviewed estimate that about 90% of their requirements are produced locally.

One interesting development is that British Airways (BA) is negotiating with one of the main hotels in Lusaka to prepare their airline meals. In November and December 2005, the hotel did prepare meals for about 17 flights – apparently, the eating quality of the food was reasonable, but there were some issues with meeting the standards for the traceability of the raw material and the keeping of records during the food preparation – both of which are required as part of the airline’s due diligence process. The benefit of

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<sup>36</sup> India's Emergent Horticultural Exports: Addressing SPS and Other Challenges, World Bank (2006). Washington D.C.

<sup>37</sup> Taken from Zambia Diagnostic Trade Integration Study, 2005

preparing the airline meals in Zambia is that it frees space in the airplane for cargo<sup>38</sup> and creates another market opportunity for Zambian farmers as it is estimated that about 80% of the value of the airline meals that were prepared was local content. The airline, hotel and company organizing the local fruit and vegetable supplies are confident that the paperwork issues will be sorted out and this opportunity will be developed further. The total amount of local produce that would be taken by the airlines would only be small<sup>39</sup> when compared with total horticultural production in the country, but it is an important niche market for the better-managed farms.

In the retail sector, supermarkets in Zambia are becoming increasingly important in the retailing of horticultural produce, a trend that is happening throughout the world. In recent years, two of the larger South African supermarket chains have established themselves in Zambia. Whilst in terms of the total amount of horticultural produce sold, they may be small – the traditional markets still dominate fruit and vegetable sales, these supermarkets are important in that they provide an outlet for better quality produce and provide an incentive for farmers to improve their quality and traceability standards. Also, as in many other countries, supermarkets play an important role in the improvement in quality standards. It is encouraging to note that Shoprite claims that, apart from fruit, 90 to 95% of its agricultural produce is locally produced; in contrast only 5 to 10% of the fruit is locally produced. About 35% of their processed food is of local origin<sup>40</sup>. It is assumed that much of the processed food sold by Shoprite consists of meat products.

Shoprite and some of the leading hotels use a procurement company, Freshmark, to provide the majority of their fruit and vegetables. Freshmark claims that 95 to 98% of the vegetable orders placed by their customers are locally grown, but a most of the fruit is imported. Freshmark has contracts with small-scale commercial farmers who are located in a similar area. For example, they have 20 farmers in Chambe Valley, which is located just outside of Lusaka, who supply in total 200 to 300 tons of vegetables per week worth about USD 100,000 – or about USD 5 million/year<sup>41</sup>. By targeting a number of smaller-farmers rather than one or two larger ones, it does give the buyer “countervailing” power in negotiations. Freshmark provides technical advice to the growers to improve yields and quality and they also give strict advice on pesticide usage. They routinely check water supplies and test for bacterial levels in the “prepared products” and they also send samples to South Africa for pesticide residue analysis. It is interesting to note that most of the main supermarkets in South Africa insist that their suppliers are EurepGAP registered; however, none of the Zambian suppliers are certified EurepGAP or any other

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<sup>38</sup> Carrying the meals for the return journey takes equivalent of about 2 ton of freight capacity – which if released can be used for importing and exporting more cargo.

<sup>39</sup> If the BA plane to Heathrow carries on average 250 passengers, and assuming 2 meals per passenger, this is the equivalent of 75,000 meals per year that would need to be prepared. This would need about the same amount of raw material that would be needed by about 2 or 3 medium-sized restaurants.

<sup>40</sup> The shelf-space in supermarkets was observed to try and substantiate these claims. A quick measuring of the shelf-space would appear to suggest that these claims are, at least, approximately correct.

<sup>41</sup> It is very difficult to calculate the value of the local supermarket trade in agricultural produce – but if Freshmark spends about USD 5 million per year on vegetables, then USD 15 million/year would be approximately the total market size.

standard. However, Freshmark are helping the farmers set up the paperwork systems to help them progress towards achieving internationally accepted traceability standards.

This is important because if the farmers can achieve internationally recognized standards, then it will increase their chances of finding export opportunities in South Africa and, if there is a devaluation of the Kwacha, perhaps in Europe. Also, if there is an improvement in standards, then it will facilitate the processing of airline meals in Lusaka.

**b) Major constraints and opportunities**

It is expected that the importance of supermarkets in Zambia will increase. While they may only represent a small proportion of the overall horticultural market, it is important for improving the standards of some farmers. Hopefully, these improvements will eventually trickle down to other producers – especially in areas such as better pesticide usage. With the increase in tourist and business arrivals in Zambia and the continued expansion of the supermarket sector, it is expected that the demand for improved quality horticultural produce with appropriate traceability will increase.

The main constraints for supplying the supermarkets and restaurants revolve around climate issues – certain fruits cannot satisfactorily be grown in Zambia and have to be imported, eg, apples, grapes. In theory, the recent revaluation of the Kwacha should make imports more competitive, but importers noted that it was becoming increasingly difficult to meet the phytosanitary criteria set by PQPS and therefore it is preferable to buy local production<sup>42</sup>.

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<sup>42</sup> One example of this is that it was reported that PQPS had recently stated that imported fruit had to be held in a “cold sterilization facility” prior to transportation. The number of days the fruit had to be held in a steri-compliant facility reportedly varied from 11 to 21 days.

