

Cocoa Sector Overview Risks and Opportunities

**as an introduction to:
Managing Risk in Côte d'Ivoire's Cocoa Sector**



General

- Mars Incorporated
- Chocolate Market and Market Outlook, Cocoa Price History
- Price Risk Management by Industry
- Cocoa Production and Shifts of Production
- The Importance of Cocoa to various producing countries

Cocoa Sustainability:

- Awareness of Risk of Availability (Supply) in addition to Price Risk
- Identify Supply Challenges and Solutions through use of appropriate Science, capacity building and Pilot Programs conducted in “farmers’ fields”
- Develop Key Partnerships



Introduction of Mars Incorporated

Mars Incorporated is a family owned business that was founded in the USA in 1911 and we are a world leader in branded Snack foods, Main meal and Pet care products

Today, Mars Incorporated is a US\$25 billion business operating in over 70 countries with 60,000 associates and 120 factories

Throughout our history the business has been guided by the Five Principles of Mars: Quality - Responsibility - Mutuality - Efficiency - Freedom

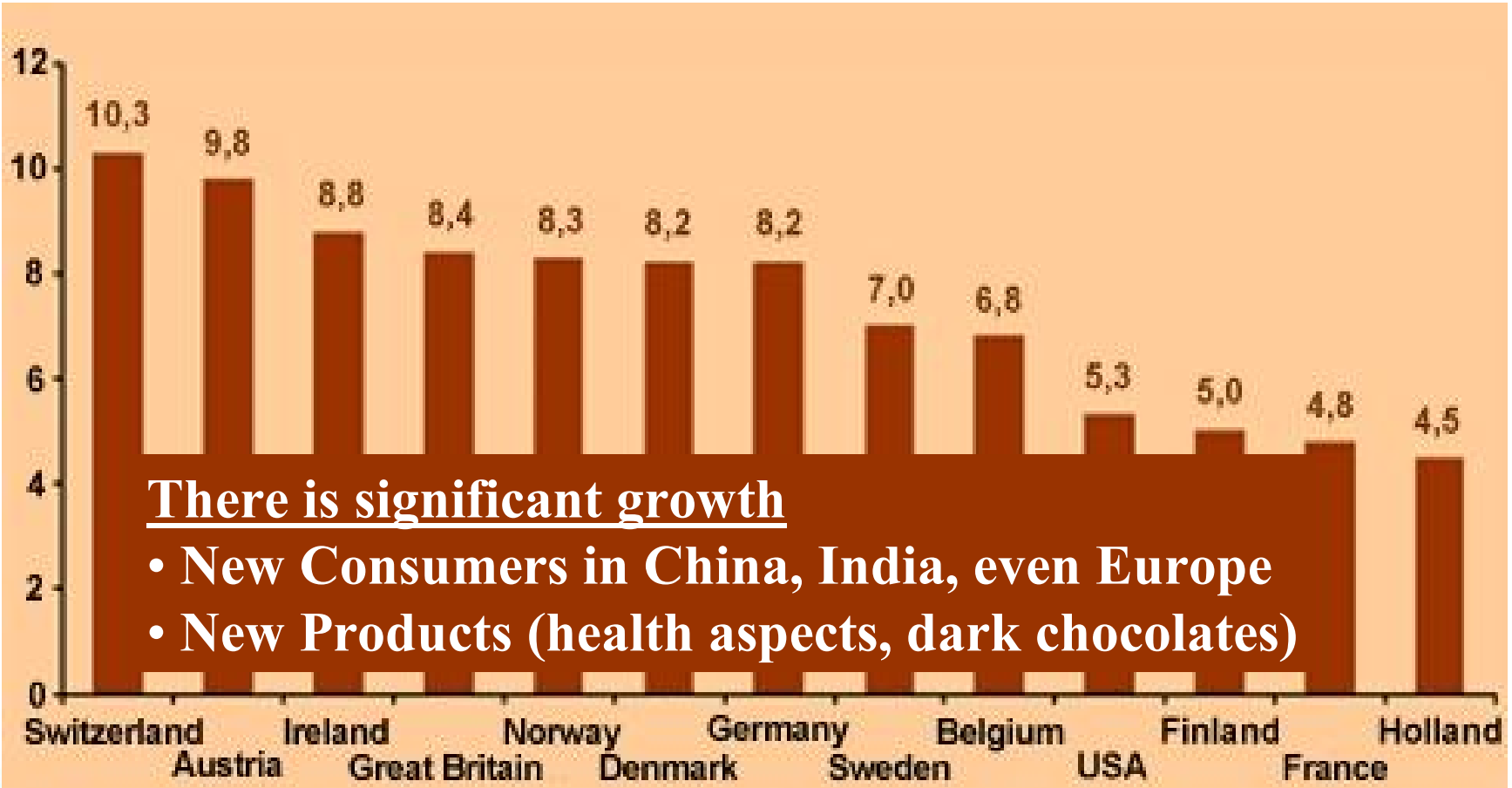
Mars Incorporated and Cocoa Sustainability: for Mars, cocoa beans are a key raw material and supply of affordable, good quality cocoa beans is important

Mars commits itself to help bring about necessary changes to transform the cocoa sector into a sustainable industry, focusing on economic, social and environmental wellbeing of all stakeholders



Cocoa = Chocolate

The Market and Market Outlook

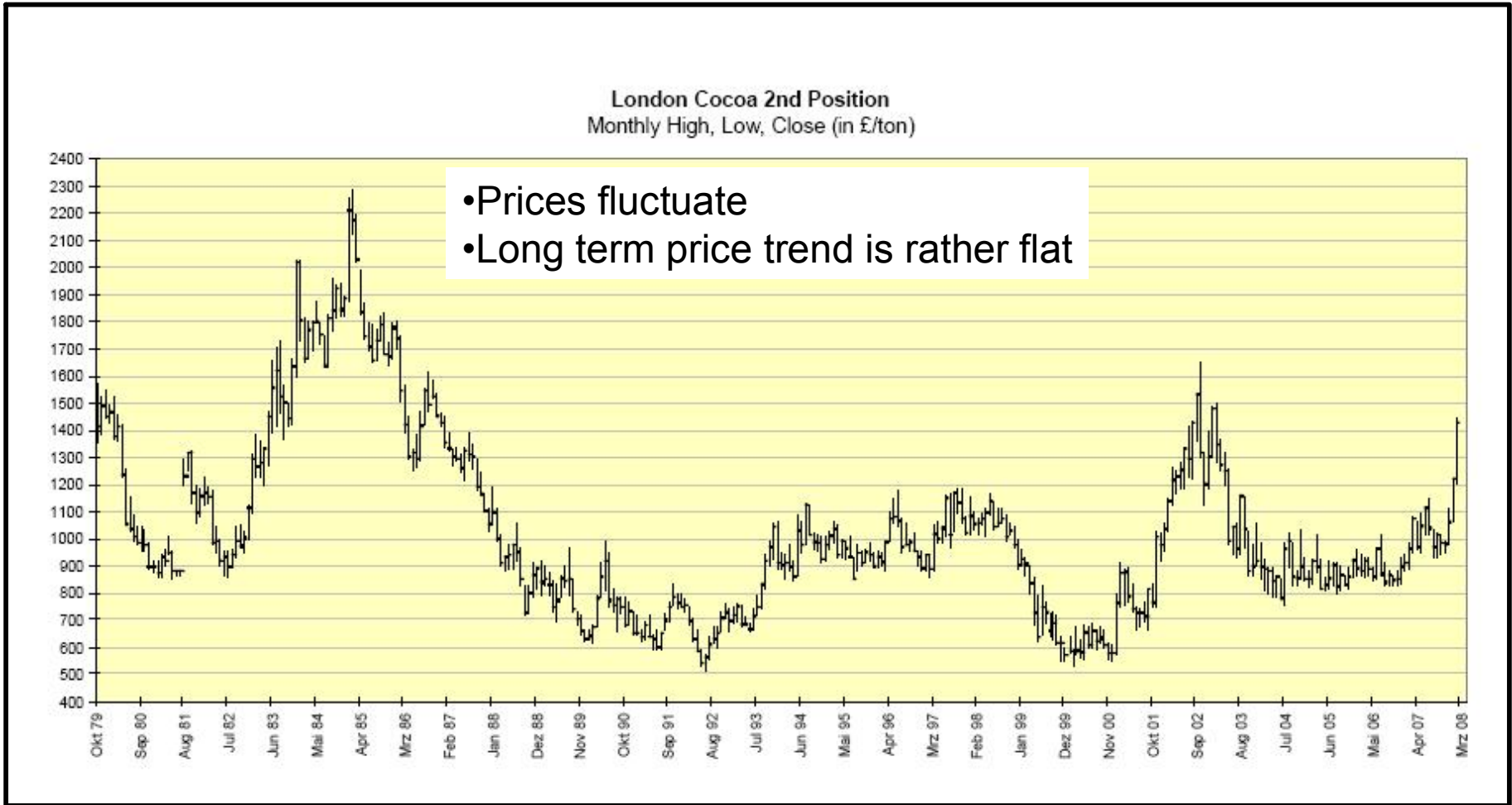


There is significant growth

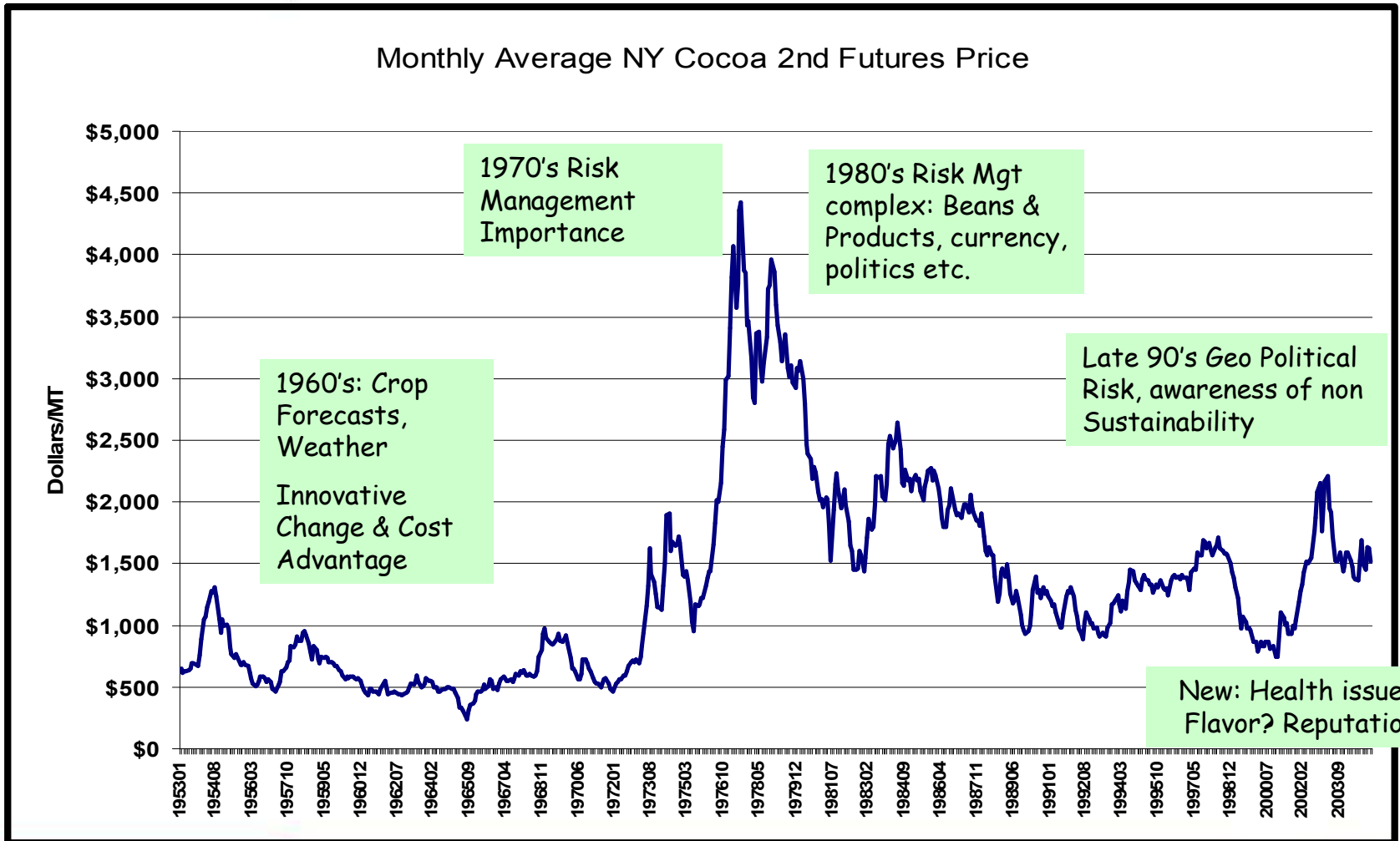
- New Consumers in China, India, even Europe
- New Products (health aspects, dark chocolates)



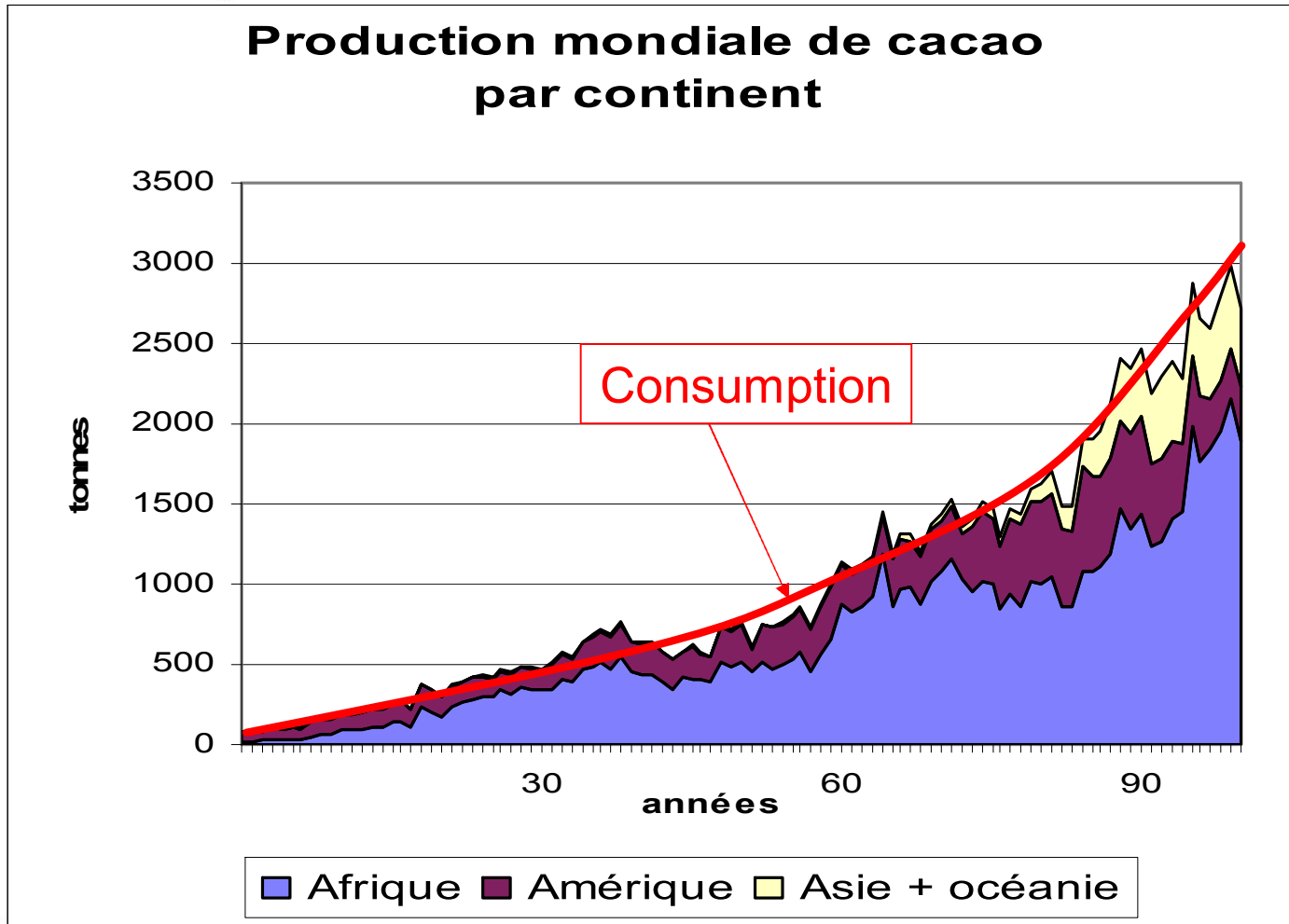
Cocoa Prices: History 1979 – 2008 London Market



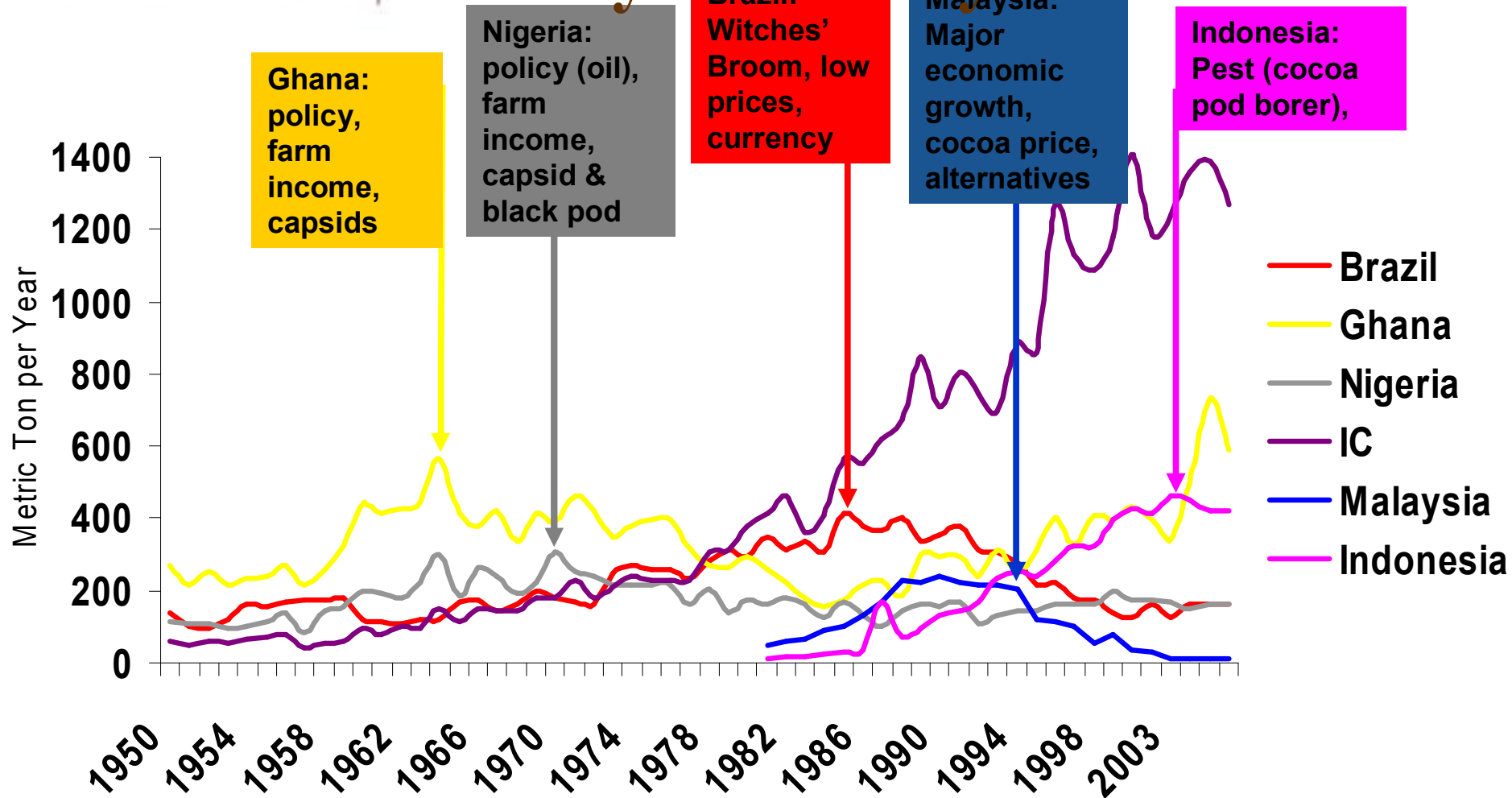
Historical "Industry Focus": Price Risk Management



Global Cocoa Production: Last 100 years



Issues with Cocoa Production in-country: Last 60 years



Importance of Cocoa for African Countries

Country Data and Cocoa	Cameroon	Nigeria	Ghana	Cote d'Ivoire
Ranking of cocoa as Agriculture income earner and as source of employment	1 1	n/a 1	1 1	1 1
Production (2005)	180,000	190,000	630,000	1,400,000
People 'living' of cocoa	1,400,000	1,400,000	6,300,000	7,000,000
Percentage of people 'living' of cocoa	12%	1%	29%	44%
Foreign exchange earnings in millions US\$	270	285	945	2,100
% of foreign exchange earnings derived from cocoa	15%	0.40%	30%	35%



Awareness of Risk of Availability (Supply) in addition to Price Risk

Industry knows how to manage price risk

- But managing price risk is not enough if there will not be sufficient supply of affordable, good quality beans

Mars' Commitment to Cocoa Sustainability

- Understand situation (Risk analysis)
- Identify Supply Challenges and Solutions; use, linking and Sharing of Science
- Capacity building in producing countries and
- Pilot Programs conducted in “farmers’ fields”
- Develop Partnerships



Challenges in the Current Cocoa Supply Chain

Economic issues - Low Yields

Poor agronomic practices, pest and disease problems, ageing farms, inadequate planting materials, poor soil management and use of farm inputs

Economic issues - Other

Land Tenure rights, Inadequate infrastructure and land-use planning, poor market information systems and quality signals, absence of crop diversification, no credit systems

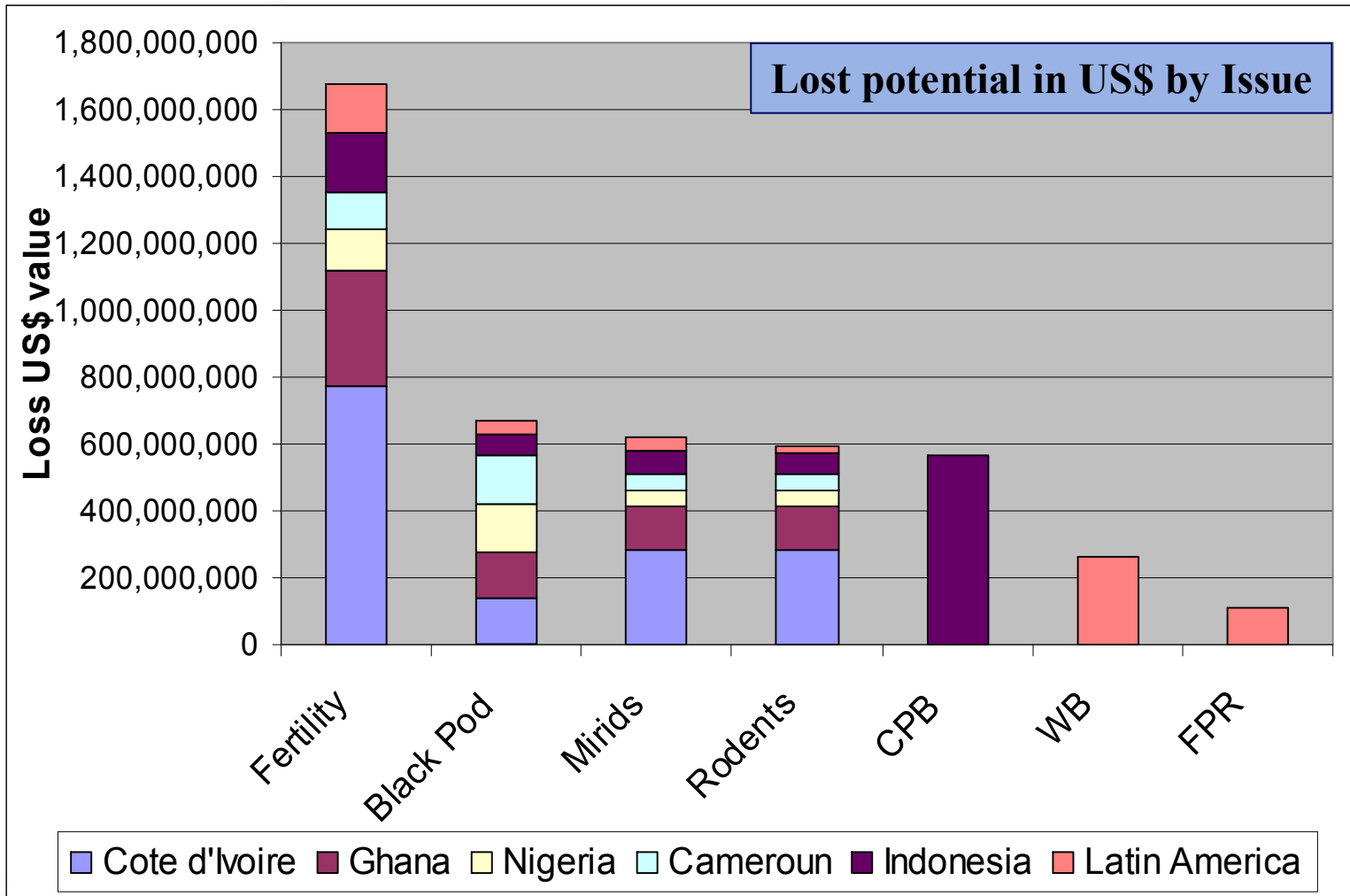
Environmental issues

Weather anomalies and trends, soil erosion, deforestation, water stress, global warming, monoculture issues

Social Issues

Poverty, lack of education, diseases, vulnerable rural livelihoods, labor conditions i.e. WFCL

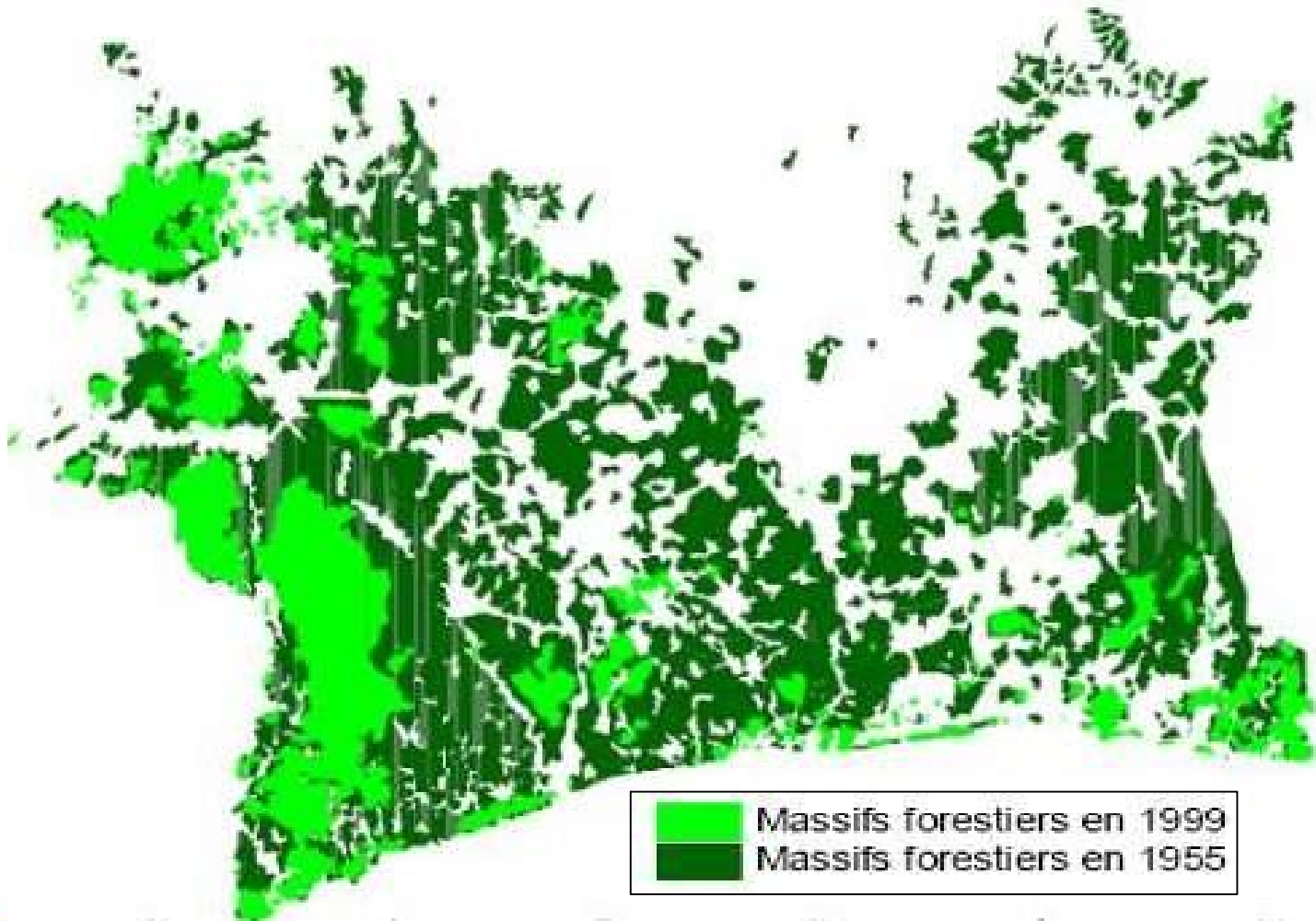
Missed production potential due to Pest and Disease and Soil Fertility





When productivity and income decline due to avoidable soil nutrient depletion, land is abandoned....

Rainforest in Cote d'Ivoire change from 1955 to 1999



Challenges of a sustainable cocoa supply chain - Down-stream

Inadequate Marketing systems

No or inadequate price information systems and low farm gate price compared to FOB and World Market price, poor price/quality signals to farmers, boom/bust cycles etc.

Cocoa and Chocolate Market far away from Farmer

Not enough direct contact and feedback to farmers, market forces at farmers' end very different than those at consumers' end

Consumer Needs and Demands

Good Quality but affordable product, pressure to improve human and environmental conditions for all stakeholders in chain

Corporate Social Responsibility

The image of a business, a product



Competitiveness & Cost of Doing Business – Value of Cocoa

	How many kg of rice can be bought by one kg of cocoa?	How many kg of cocoa are needed to buy one 100 cc motorcycle?	How many kg of cocoa are needed to buy one fertilizer bag
Indonesia	4,2	800	8
Ghana	1,5	2900	14
Côte d'Ivoire	1,1	5500	52

Sources: survey Ruf (CIRAD)

Production and Purchasing Power:

Indonesian Cocoa Farmers have twice the yield and 500% more buying power from 1 kg of cocoa beans than Ivorian Cocoa Farmers

Competitiveness and Policy:

Whilst Ivorian Farmers could compete on productivity (yield) with Indonesian Farmers they are still at a disadvantage – policy issues?

Situation Assessment of Cocoa Growing Countries: Competitiveness

Bulk Cocoa Origins	Country-Level Bulk Cocoa Origin Trends and Conditions				
	Avg. Yield (Kg/Ha)	Farm Gate Price as % FOB	Annual Pest / Disease Loss	Annual Soil Fertility Loss	Other Challenges
Côte d'Ivoire	450 (200-1000)	40-45%	24%	28%	<ul style="list-style-type: none"> Lack of sector support High tax rates Limited land for further expansion High % of aging cocoa trees
Ghana	400 (200-1000)	65%	29%	25%	<ul style="list-style-type: none"> Limited land for further expansion High % of aging cocoa trees
Indonesia	800 (300-1500)	84%	49%	15%	<ul style="list-style-type: none"> Poorly flavored beans Low rates of post-harvest fermentation Major losses from Cocoa Pod Borer
Cameroon	425 (200-1000)	79%	50%	23%	<ul style="list-style-type: none"> Sector neglect in favor of oil and gas industry High % of aging cocoa trees Major losses from Black Pod
Nigeria	350 (200-800)	79%	50%	23%	
Brazil	175 (200-1500)	90%	65%	20%	<ul style="list-style-type: none"> Unsolved Witch's Broom infestation Declining interest in cocoa farming

- The **climate** in Côte d'Ivoire, Ghana and Indonesia is most **suitable** for cocoa cultivation
- Whilst Ghana & Côte d'Ivoire yields are lower than Indonesia, they have the **lowest crop losses**
- **Soil fertility in W. Africa is low** – but can be improved by use of compost and additional fertilizer
- **Farm Gate prices** in Cote d'Ivoire are do not provide incentives for Cocoa Farming

Cocoa could be a viable industry in West African Countries

The Solution to current problems in the Cocoa Producing countries lies in

- Competitiveness (price, productivity, infrastructure)
- Intensification (germplasm, rehabilitation, P&D control, fertility) +
- Crop Diversification (farmers cultivating several crops)

Whilst Mars and other Cocoa Industry stakeholders understand 'cocoa issues' such as competitiveness and intensification, more expertise is needed for 'crop diversification'



Coconut and Cocoa Farm



Cocoa under Fruit



Cocoa under Coconut



Cocoa in Mixed Farm

Farm Diversification: Mixing of Crops or Several Single Crops

Partnerships: Mutual and Complementary Goals

Mutually Achieving Goals through Development of Sustainable Cocoa

Goals	Mars, Inc. (and others in the cocoa and chocolate industry)	World Bank, Governments of Producer Countries, NGO's	Producer Organizations and Small Farmers
Long Term	A socially, environmentally and economically sustainable cocoa industry with motivated farmers and assured supplies	Poverty reduction and economic growth through a market and trade oriented agriculture	Predictable yield, allowing investment in land and equipment; agroforestry systems that will expand the economy
Medium Term	Better quality and more reliable supply of cocoa from Asia by combating CPB	Sustainability and high quality technical support implemented at little incremental cost	Increased yield and income; reduced labor cost/acre
Short Term	Opportunities in trading; infrastructure, training	Global access to world-class knowledge and advanced technical innovations	Improved understanding of farming techniques; improved planting materials



Cocoa Sustainability Mars Incorporated Initiatives

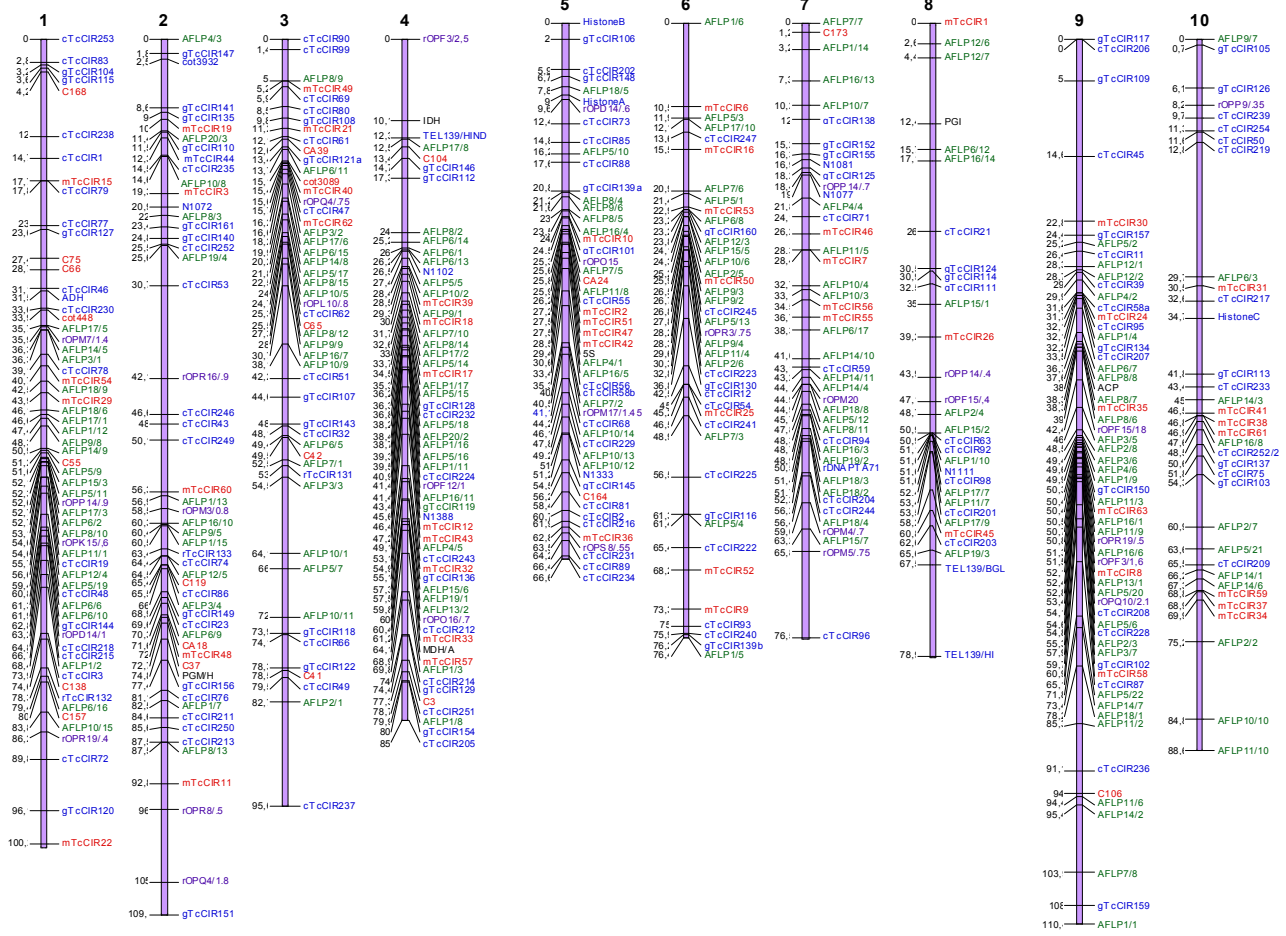
Mars Inc. works in Partnerships and Collaboration with:

- Research Institutes
- Government , Public and Civil Society Institutes
- Private industry

Mars Inc. focuses on our Expertise, i.e.

- Analysis: both in-house and external
- Science: e.g. Cocoa Genome
- Implementation: Mars Cocoa Development Centres, iMPACT
- Supply Chain: Certification through Rainforest Alliance, Utz Certified

Example of Mars leading Science: Molecular genetics at USDA



Mars waives IP rights on this research

Example of application of Science in a Mars Cocoa Development Centre

Side grafting



top grafting



Results from grafting



rehabilitation





Thank You