Agro-processing: An opportunity for manufacturing growth – Value Chains

August 2017

Why Value Chains?

- Given,
  - Limited commonalities between different products e.g. fruit juice and bread;
  - Priority contestation (growth/investment/exports vs employment/self-employment and food security); and
  - Uncertainty of where to draw the line between agriculture and industrial policy
- Requires a Framework with cross-cutting measures and separate analyses of some key value chains within agro-processing
- Cross cutting and value chains measures are complementary

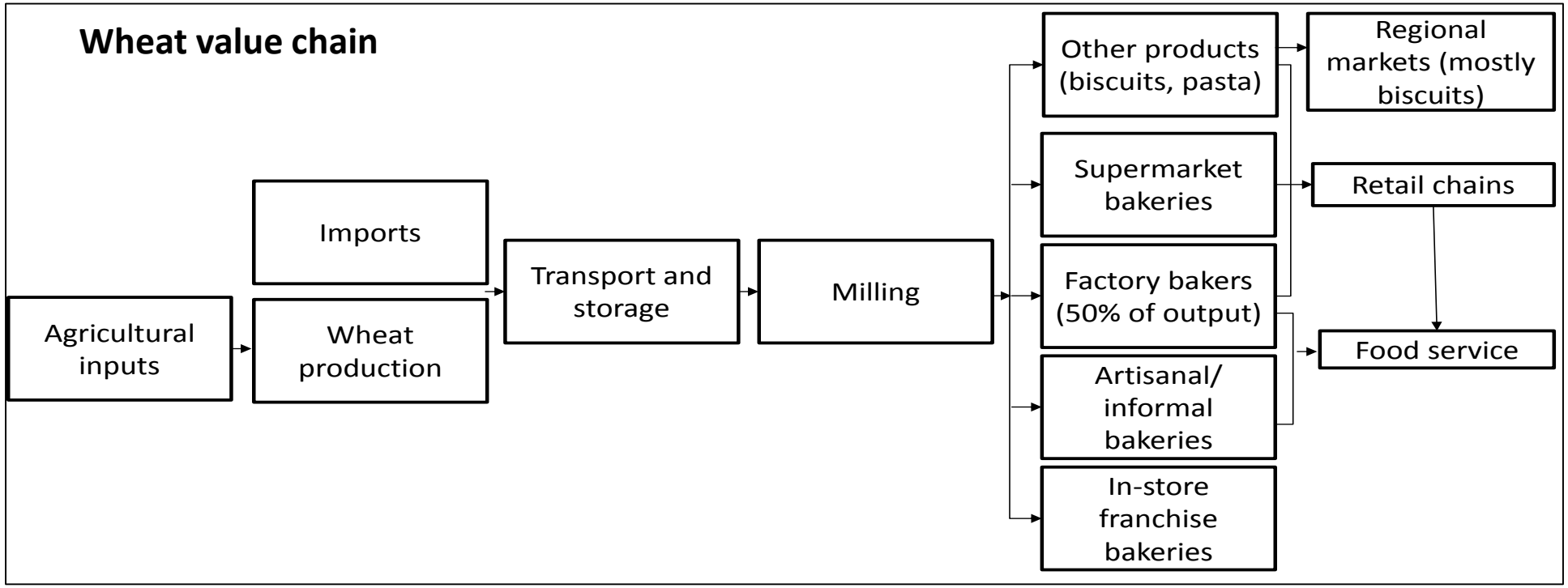
Approach

- Selected VCs: Wheat and maize milling, soya, fruit and veg processing, sweets and wine
- In each case, assesses the value chain against key socio-economic objectives including:
  - production; employment; imports and exports and food security where relevant
- Identify where value chain is falling short of potential
- Identify main constraints (e.g.: demand, input costs/availability, technological issues, infrastructure, market access, etc.)
- Analyse main activities and power relations in production process, from agriculture to processing to final sale (domestic, regional, exports)
- On that basis, point to possible interventions that are within the dti's capacity

Case study on grains and soya

- Wheat milling to bakeries
- Maize milling
- Soya beans

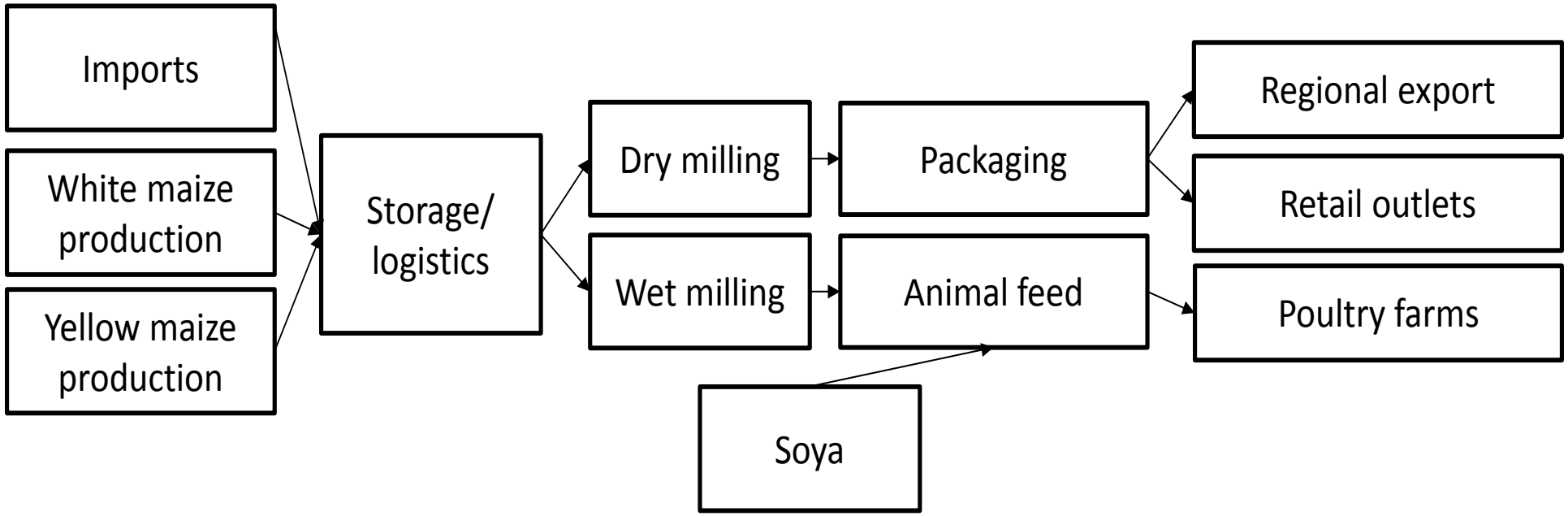
Wheat milling to bakeries VC



- Around half of the wheat consumed in South Africa is imported, and most is for bread
- Bread is sold primarily through retail chains with some independents and food service
- Dominant bread producers account for half of all bread sold but hundreds of small independent and franchise bakeries, some of which sell directly to the public

Maize VC

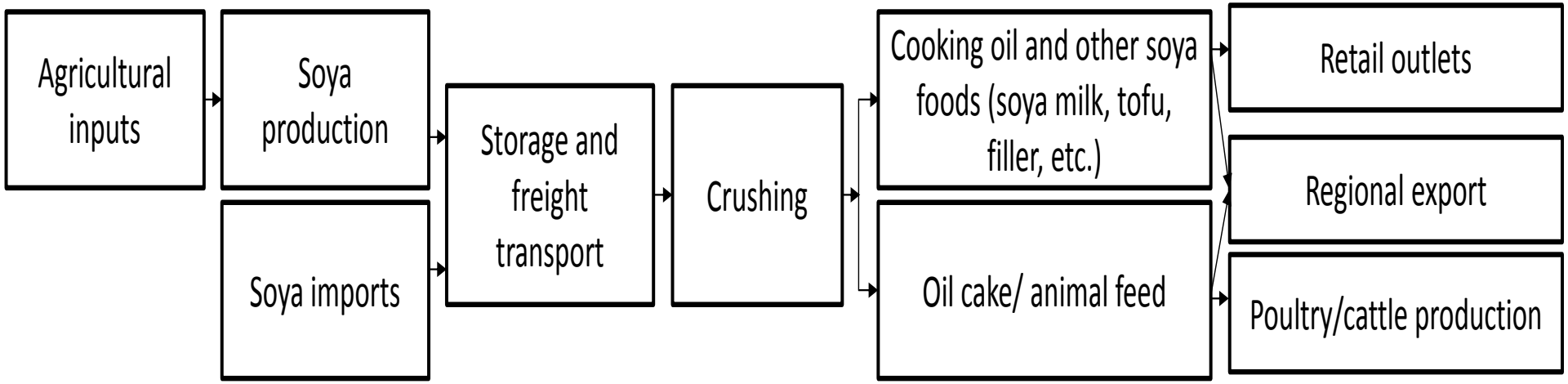
Maize value chain



- Almost half of maize output, mostly white maize, is consumed as food; the rest, mostly yellow maize, goes for poultry feed and starch
- Milled maize is important principally as a staple food and, increasingly, as a source of poultry feed
- Maize farming is also a significant employer
- Virtually all exports for human consumption

Soya bean VC

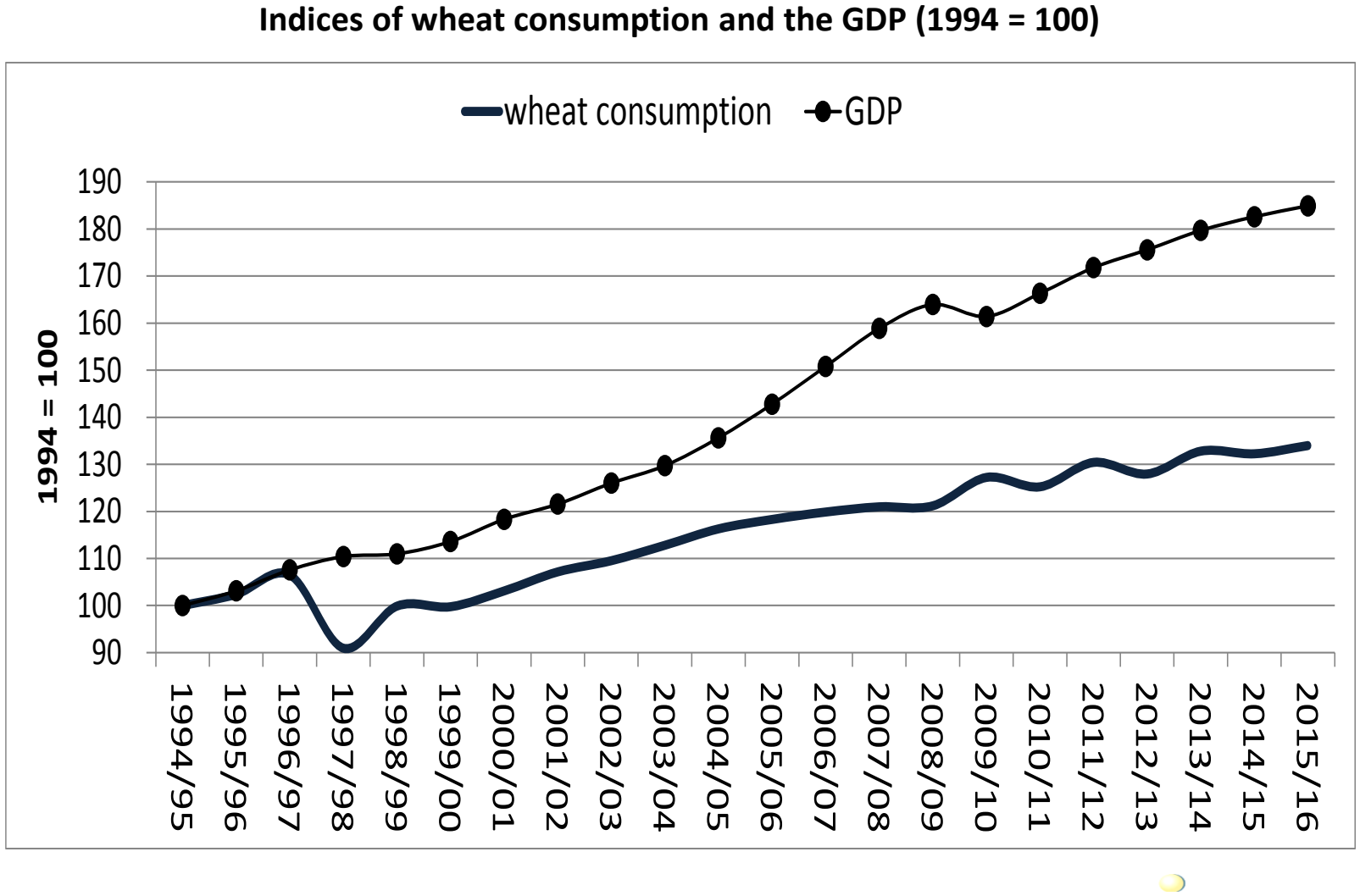
Soya bean value chain



- Soya bean consumption in the country is estimated at 32% for oil and oilcake, 60% for animal feed and 8% for human consumption
- Demand has been largely driven by animal feed industry (especially in the broiler and egg industries)
- In general terms, SA has a shortage of oilseed and oilseed products, and a significant import trade
- Major import countries are Brazil, Argentina and Spain

Grain production

- Wheat and maize milling saw slower growth than the rest of food processing from around the 2008/9 global financial crisis
- Nonetheless, its share in total manufacturing sales climbed because of slower growth in the rest
- Maize milling for animal feed has grown substantially faster than for human use
- Expansion in crushing capacity has stimulate domestic soybean production especially by small-scale farmers

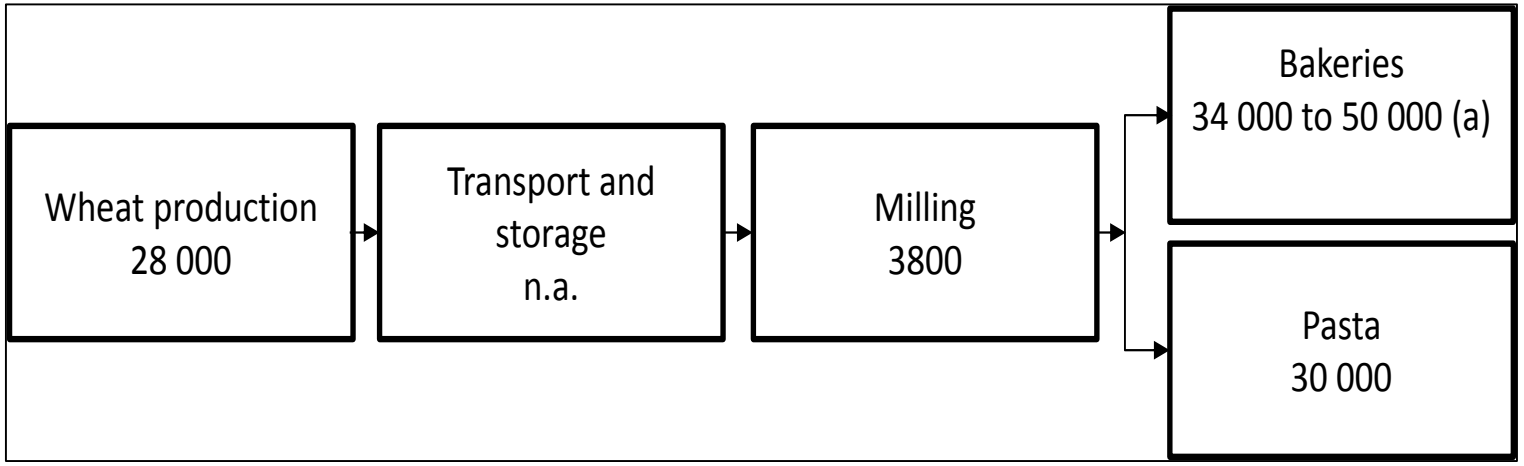


Source: Wheat consumption from DAFF. Abstract of Agricultural Statistics 2016. Excel spreadsheet. Series on wheat consumption in tonnes. Downloaded from www.nda.agric.za in September 2016. GDP from SARB. Interactive data set. Series on GDP. Downloaded from www.resbank.co.za in March 2017.

Employment and exports

- The employment data on milling include maize as well as wheat
- According to one estimate, there are more than 4500 small independent bakeries in South Africa, as well as 250 franchise bakeries.
- Other estimates are higher, with estimates for small formal and informal bakeries running as high as 50 000
- The only significant export product from the value chain is sweet biscuits, sold almost exclusively in southern Africa

Employment in the wheat and maize value chain



For soya:

- More than 15,000 people are employed in oil and fat processing, manufacturing and trading activities
- On-farm employment estimated in the tens of thousands of jobs

Key constraints in wheat

Type of constraint	Description
Demand	• Production of wheat-based goods essentially tracks population growth – however, share of imports has been steadily increasing • Exports to the region will be constrained by the end of the commodity boom and increase in local milling capacity
Inputs	• Wheat traders and producers price their product in line with imports. In this context, a significant tariff on wheat imports increases the cost of all wheat sold in South Africa - cost to low income households and to processors
Market structure	• Four of the top five bakers ranked amongst the dominant millers – namely Tiger Brands, Pioneer, Premier and Foodcorp. These firms operated as integrated milling/processing conglomerates.
Infrastructure	• The lack of serviced industrial and retail sites makes it harder for small-scale township and rural producers to enter the market. • The poor quality and high cost of regional infrastructure hinders regional trade. • Freight costs for wheat and bread are significant factors in the total price, driven largely by energy costs.
Skills	• A shortage of skilled bakers, which also limited growth especially in small-scale bakeries

Key constraints in maize

Type of constraint	Description
Demand	• Maize milling is unlikely to see rapid growth in demand • The main growth drivers appeared to be the extension of social grants, rising poultry consumption, and exports
Inputs	• Only around a tenth of the maize crop is irrigated, so it is vulnerable to poor rains • Maize moves between being a net exporter and an importer depending on the season. When the crop falls short around once a decade, the price rises around 30% to import parity • Climate change may lead to greater production swings

Market structure	• Four companies account for around three quarters of milling capacity: Premier Foods, Tiger Brands, Pioneer (which produces Sasko) and Pride.
	• There are an estimated 200 micro mills in the country but they struggle with:
	  • Selling to supermarket chains, unless they could establish a special relationship. The main obstacles are competing with the existing large millers and achieving the scale of supply required by the dominant chains.
	  • Obtaining affordable maize. The major storage and trading companies reportedly charge a fairly high premium and often require large guarantees

Key constraints in soya

Type of constraint	Description
Demand	• Rapid increase in crushing demand largely due to higher consumption of animal products and cooking oil as incomes and the population have grown • Production of soya is only a third of current crushing capacity

Inputs	• Import dependence underpins import-parity pricing
	  • Problems for crushers and consumers given depreciation
	  • Extraordinary growth in farm production points to profitability
	  • Exacerbated by the drought conditions in 2016
	  • Contributor to the crisis in poultry sector
	• GMOs are engineered to enhance yields, increase resistance to disease and chemicals, and improve growth speed. However, Zimbabwe and other countries in southern Africa have banned GMOs.

Market structure	• Soya beans are largely provided by commercial farmers • SMMEs attempting to enter the value chain as growers or processors face challenges in the form of relatively high capital requirements to produce and process oilseeds

Recommendations

1. Pricing and market structure:
   - Investigate the tariff policy on wheat
   - Revising the types of information provided by SAGIS
   - The oligopolistic structure of storage and trading companies
   - Manage IPP in soya e.g. through taxation, getting SAGIS to provide cost information
2. SMME support
   - Small bakeries serving both township and high-end (luxury and tourist) markets
   - Micro milling
   - Smallholder schemes in soya production linked to crushing mills
3. Export strategy
   - Include high-end poultry products in export strategy, building on base in Middle East