

PAPER ON AGRO-PROCESSING, VALUE CHAINS AND MARKET ACCESS

1. AGRO-PROCESSING

“Agro-processing industry is a subset of manufacturing that processes raw materials and intermediate products derived from the agricultural sector. Agro-processing thus means transforming products that originate from agriculture, forestry and fisheries”

The South African agro-processing sector has strong linkages both up-down-stream and is the largest manufacturing sector in the economy.

The agro-processing industry is currently a R49 billion industry according to figures by the Department of Trade & Industry. It therefore presents a great opportunity for grassroots women and smallholder farmers to play a more meaningful role in this sector.

The Department of Agriculture, Forestry and Fisheries has established a special directorate within the Department that is focussed solely on agro-processing. Although food production is most identifiable in this industry, there are also other divisions, namely: beverages, paper and paper products, wood and wood products, textiles, furniture, tobacco, leather and leather products, rubber products and footwear. According to Stats SA, among the divisions in agro-processing, the food division is the most dominant in its share of total output (42,4%) employment (31,3%), value added (36, 8%)

1.1. CHALLENGES FACING START-UP AGRO-PROCESSORS

- Inadequate funding
- Lack of relevant information
- High post-harvest losses
- Lack of appropriate agro-processing technologies suited to start agri-business
- Non compliance
- Climate Change challenges
- Water scarcity

1.2. AGRO-PROCESSING OPPORTUNITIES

1.2.1. FOOD

Food processing contributes to food and nutrition security through reducing food losses, contributing to more diverse diets, and supplying important vitamins and minerals. In light of the very real challenges posed by climate change and water scarcity, it is important that new ways of food production be utilized. Climate smart agriculture is an integrative approach that sustainably increases productivity to support viable increases in farming incomes, enhances resilience and ensures food security. Technology has a great role to play in ensuring these targets are met. Hydroponics, aquaponics, aquaculture are solutions that can be effectively utilized by urban women and smallscale farmers to ensure high yielding and more drought-resistant crops than the current staple crops. As much as farming is to achieve food security, it is also a business and thus it needs to make financial sense.

1.2.2. CROPS

- Maize- Maize is a major staple food in South Africa. Although it is produced mainly by large scale farmers, there is opportunities in the value chain for women small scale farmers/agricultural entrepreneurs. Setting up maize grits plants next to grain silos in key maize growing areas. Maize grits are used as ingredients in snacks, food blending, bread mixes, soup powder, stabilizer, ice cream cones, biscuits, added to processed meat fixing agent for minerals and vitamins, PET food products.

- Potatoes- Besides growing potatoes for the fresh produce/retail markets or the export markets, this crop presents many other opportunities. Potato processing into potato chips, potato crisps, and potato soup powders.
- Mushroom Farming- Mushroom farming is one of the most profitable agricultural businesses with a turnaround time of just 3(three) weeks. There is already a very high demand for good quality and organic mushrooms from restaurants, hotels, exporters, pharmaceutical companies as well as households. Mushroom farming does not require large hectareage only good soil.
- Tomatoes - Tomatoes have a huge market appeal as there is very high consumer use and demand for them. Although there is value in selling fresh produce, the key is to produce products which will have shelf life and a market, at a cost that is not inflated by investment in infrastructure. For the industrial market, tomato paste is the most important ingredient because it is used as the basis for a wide range of other products such as tomato sauce, soups, tinned meat and fish etc. production of concentrated tomato products can be carried out at a range of scales- from small scale (kilograms per hour) to large industrial scale operations (200-300 tons per hour). Sun dried tomatoes are also in greater demand and there is a varied market for them. Supermarket chains, restaurants and hotels always source high quality products. It is an added bonus if they are grown and processed organically.
- Peppers are also highly valuable crop as they are used in a variety of means. As there are a large variety of peppers for purposes of understanding we shall incorporate both bell peppers and chilli varieties. Currently the market for pickled peppers in a wide range of offerings has very high profit margins. Pulping the peppers into sauces and pastes also has huge market potential.

1.2.3. FRUITS AND NUTS

There is high value add in canning and drying fruit for the domestic and export markets. Homemade jams and juices are becoming more popular with the rise in health consciousness among people. And, with that the opportunities of having a sustainable, profitable business are increased. There are various processing techniques to achieve this:

- Dehydration
- Juicing/Pulping
- Extraction of essential oils
- Jam making

There is now an increased demand in processed nuts such as macadamias and avocados. The macadamia oil and processed cream is used in the cosmetics industry as well as health food industry. Avocado oil and coconut oil are now firm replacements for regular cooking oils.

1.2.4. HERBS

Basil, rosemary, thyme, oregano, parsley, chives, sage, mint, fennel and dill.

There is a great demand from European countries for organically grown food herbs. The most important to factor when exporting to the EU is compliance. The General Food Law is the legislative framework regulation for food safety in the European Union. Herbs must be traceable through the supply chain and risks of contamination must be limited. All products will be subject to official controls. These controls are carried out to ensure all foods sold on the European markets are safe. Therefore products containing illegal or untraceable pesticides or containing high levels of will not be allowed. Many buyers will expect a test report on the microbiological contamination of your product. It is therefore imperative that a farmer/producer contact the South African Department of Agriculture, Forestry and Fisheries before embarking on this venture to ensure familiarity with necessary protocol.

1.2.4.1. Medicinal and Herbal plants - If you're familiar with alternative medicine, you know medicinal herbs are popular with health conscious consumers. Herbal medicines are increasingly used as part of health regimens as well as by those treating medicinal issues. Herbs may be grown in a field, greenhouse, containers or hydroponically. Production requires a few hectares of land. Herb crops may be sold wholesale, through farmers' markets, or through direct sales. They are sold in many forms: liquid or solid extracts; fresh or dried; tablets, capsules, powders or tea bags. Common medicinal plants with a huge potential for income include: moringa, lavender, peppermint, Echinacea, arnica and calendula.

1.2.4.2. Essential oils - Essential oils are generally regarded as high value, low volume commodities. They are mostly used in soaps, detergents, perfumes and other household goods. However, due to the increasing trend for alternative products and therapies such as aromatherapy, acupuncture and massage and reflexology, essential oils are in greater demand. These oils are extracted from the leaves, bark, roots of a wide variety of plants and the rind of certain fruits. Of an estimated 3 000 known essential oils, only 300 are commercially viable. Plants most suited for the South African climate are: Sandalwood, Rose Geranium, Eucalyptus, Lemongrass, Lavender, Chamomile, Buchu and Mint amongst others. The Lowveld areas of Mpumalanga, Limpopo, Western Cape, Kwazulu-Natal and the Eastern Cape are ideally suited for cultivation due to soil types and favourable weather.

Farmers can produce oils from their crops through methods such as steam extraction, distillation, chemical extraction and Carbon Dioxide extraction. There are currently quite a number of Associations of Essential Oil growers who are able to assist emerging farmers in this market. Equally, the Department of Agriculture, Forestry and Fisheries, through its Agro-processing unit, has a dedicated team to assist from cultivation to processing. The largest market for essential Oils is currently the United States of America, followed by the European and Japan. Major users of essential oils are the beverage industries, the perfume and food flavourant companies.

1.2.5. FLOWERS

Although very lucrative, this industry is not very big amongst women farmers in South Africa. Flowers are the perfect seasonal crop because they are easy to grow, produce quickly and supply an income all season long. Most retail florists prefer to buy from local growers thus cutting out middlemen and increasing direct profits for farmers. Although there is ample local demand for fresh or dried flowers, growing for export and earning in foreign currencies is more financially savvy for the farmer with an appetite for such.

Buyers for flowers would typically be:

- Farmers' Markets- flowers sell best in urban markets. Therefore it is important to identify those within relative distance from your farm, contact the managers to learn whether or not they have space for a new vendor. Be familiar with the market's opening and closing dates so you can focus on flowers that are blooming during those months.
- Retail florists- A business directory will identify all your local retailers. Some larger retail chains like Pick n Pay prefer to source from local emerging farmers.
- Floral wholesalers- As intermediaries between growers and retailers, wholesalers pay the least. But in many cases they can buy the most. Therefore to avoid wastage where a farmer has excess stock and no buyer, they are the buyer of last resort.
- Export Market- South Africa produces just a fraction of the total world export market in flowers, but some factors are set to change this. Although SA produces mainly roses, Proteas and cape foliage, it's in the chrysanthemum where its strengths lie. Other flowers in great demand internationally are gerberas, carnations, daisies and woodies.

1.3. LIVESTOCK

Breeding livestock does not only mean selling animals live or slaughtered. There is a major upside in the value-chain to processing livestock and its by-products. (processing, refining, packaging).

1.3.1. Goats - Goats yield much more than meat. Other products include milk, cheese, yoghurt, cashmere wool and skins, powdered milk and soaps. Goat milk has a higher content of Vitamin B2, known as riboflavin. It also has a characteristic flavour because of the differences in the type of fat in the cream. Experts agree that goat milk is very good for children. Powdered goat milk is often used for children who are allergic to cow's milk. Goat milk is also more digestible than cow's milk. Cheese derived from goat milk and fat like brie has a very high commercial value.

1.3.2. Pigs-Piggery, unlike many other livestock does not have a high input requirement. As white meat is becoming increasingly more in demand, pork meat is quite lucrative. As an agri-business, pig farmers can earn more money raising breeding stock than just selling pigs for slaughter. Also piggery is more sustainable as it does not require a large area to house the pigs. Feedstock, mostly protein is less expensive than typical feed required for other animals.

1.3.3. Poultry-Poultry farming is not only breeding chickens. Ducks, turkeys and geese. It is important to decide which sector of the industry one wants to target. In chicken farming, there are a few options. One option is to hatch and sell day-old chicks to larger producers. This means that one is only involved in the first stages and not incurring risks of growing the chicken. For this one will need to acquire incubators to start a hatchery. Selling day-old chicks will provide a faster method of generating income as you'll be supplying chicks weekly. An added benefit is that there is no need to purchase feed. Chicks take 21 days to hatch so you start generating an income in three weeks.

Another option is to buy day-old chicks and grow them yourself for market. This is a six week process and requires more inputs such as feed, medicines and adequate facilities to breed the chickens. Another option is to do the entire process including slaughtering. After slaughter, one can then package and sell the chickens as their own product and thus earn more money in the process. Although this may seem more arduous, it has higher long term benefits and higher returns. Processing the chicken yourself means cutting out any middlemen and you can sell to your own market in the community or other established market. There is also more value for the produce if the chickens are raised organically and are free range.

Egg production is also a guaranteed source of income as there is always a high demand for eggs. One can have laying hens that produce an egg a day (sometimes more). It is important though to ensure the quality of hens used meets market standards as there are already many egg producers and therefore being able to meet or surpass quality is key.

Turkeys are often overlooked in poultry farming as there is a higher supply of chicken meat. Although not as in great demand as chicken, there is still however, a very lucrative market for turkey meat. Turkey farming yields a higher income than chicken. However, due to their size they require a greater grazing land. They are less likely to carry disease and are much sturdier. They are ready for market for market in 10 weeks. There is a high demand for turkey breast meat for the export market especially in the European market.

Geese are another bird that is rarely considered by smallscale and women farmers. However, geese are multi-stream earners. They supply meat, eggs, down (from their feathers), fat and liver. They thrive best when they are allowed to roam free and fend for themselves. They eat a lot less per gram than chickens and are thus less expensive to maintain. If they are free range, they actually survive on a diet of grass, barks and leaves. They are also not susceptible to contagious diseases.

Goose down is a layer of feather lying beneath the outer covering feathers, usually on the underside of the bird. Due to its lightness and fluffiness, it is a most sort after commodity in the bedding and clothing industries. A goose down duvet or jacket is often at the top tier of the market. Goose fat is also a high-end luxury in the cooking industry due to its higher nutritional content compared to other animal fats. It has a rich and sultry texture with a subtle, savoury taste. Top end hotels and restaurants are niche markets for this.

Goose liver (foie gras), is a luxury food product made from specially fattened geese. It is sold whole or is prepared into a mousse, retailing for more than triple chicken liver.

2. SUPPORT FOR WOMEN AND SMALLSCALE FARMERS

There are various avenues of support for women in the Agribusiness. The government continues to provide and widen the accessibility of support through the relevant departments and agencies.

Department of Agriculture, Forestry and Fisheries

Directorate: Agro – processing Support Unit

2nd Floor Sefala Building

503 Belvedere Street

Arcadia

Telephone: 012 3198458/7

The Department of Agriculture has a dedicated desk to support agribusinesses run by smallscale farmers. All provinces have satellite offices.

Department of Trade and Industry

77 Meintjies Street

Sunnyside

Pretoria

The department of trade and industry also has a Critical Agroprocessing Infrastructure Support Programme which is aimed at achieving greater participation, competitiveness and integration of marginalised processors into the agricultural value -chain.

The Industrial Development Corporation

Agro-processing and Agriculture Strategic Business Unit

19 Fredman Drive

Sandton

011 269 3000

The IDC provides funding from R5 million for agriculture and agroprocessing business ventures such as high value crops, horticulture, livestock, beverages, and aquaculture.

The African Development Bank (AfDB) has also released funds to support and assist agricultural co-operatives and agri related businesses. These funds are accessible through the Development Bank of South Africa (DBSA) and the Land Bank.

The National Agricultural Marketing Council

This council promotes market access for South African produce. It also has a Business Development unit for smallholder farmers. Their Agricultural Trusts division provides information from the relevant departments on all support available and a list of related markets to target.