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**SECO Local Economic Development Assistance  
Programme in iLembe – Value Chain and Cluster  
Development (VCD) Component:**

**Supplementary Report:  
Horticulture (vegetable and fruit) Value Chain**

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## 1 Fruit and Vegetables

The VC diagrams in this section depict generic value chains for the fruit and vegetable value chains with a discussion on SME producers in the iLembe District, their challenges and their support needs.

### 1.1 Fruit

Albeit the District has potential for bananas these must be irrigated and apart from household level production of a few banana, some Litchi and mangoes, there were no significant commercial scale operations that were identified in the iLembe District.

Strawberries was one commercial fruit operation identified and offers some useful insights to the challenges in start-up businesses by emerging SME businesses in the agricultural production space.

Most people assume strawberries are a type of berry, but they are not a botanical berry, rather an aggregated fruit that has the appearance of a berry.

There is one producer near Ballito; Cappeny Estates, owned and run by Mr Xolani Gumede<sup>1</sup> and his wife. Their operation and situation is unique but highly illustrative of what it takes to develop a new farming venture, especially if you are a first-generation farmer, without local farming knowledge and generational history of experience in the crop to fall back on.



**Figure 1: Mrs Yoliswa Gumede and Mr Xolani Gumedi**

- Entering farming is not an overnight decision, it takes much careful thought and research and if you are not able to undertake the necessary advance research setbacks are inevitable. It is then all about how quickly and cost effectively these setbacks can be managed that determines ultimate success.
- In Mr Gumede's case he was a property developer and a consultant in the building industry. Cappeny Estate was originally targeted as a property development opportunity but the land needed to be productively used in the interim. He apparently appraised researched approximately 20 varieties of flowers and 10-15 types of berry fruit. Before concluding that in his analysis, he should invest in the production of strawberries. This

<sup>1</sup> Mr Gumede is also Chairman of the iLembe Chamber of Commerce

decision was based on the indicative high per unit profitability that could be achieved on a relatively small area and proximity to the King Shaka International airport if exports were to become an option.

- A critical issue in farming is to match the crop and/or choice of variety to the bioclimatic characteristics and more specifically the micro-climate of the production site. Strawberries do best in a cool dry climate as they need a certain number of chill units and a dormancy period to stimulate flowering and fruiting. The local area is classified as sub-tropical region with an above average rainfall. This resulted in a few years of trial and error with variety selection and consequently low yields, which impact cash flow and in all such cases places strain on finances.
- Mr Gumede noted that the local (in ZA) availability of plant material for varieties of strawberries that could tolerate KZN's heat and humidity (varieties grown in California and Florida) also contributed to XG's decision to go into strawberries.
- Having the appropriately skilled advisers whose interests are aligned with the farmers is critical. Some of the early advice from "so-called" experts on variety selection was not sound.
- Developing the infrastructure is an expensive undertaking and a suitable financing package is a key success criterion. There is approximately 4 hectares developed to open field and tunnel production in 27 tunnels to control the micro climate.
- Cappeny is currently producing approximately 100 tons of strawberries per annum divided roughly equally between frozen and fresh sales. While frozen strawberries do not attract a high price, the Gumede has identified the installation of technology that allowed Individually Quick Frozen (IQF) as an objective as he would realise a slightly higher price R15-20/kg. But the ultimate objective were it feasible would be to freeze dry strawberries, a product that can realise prices of up to R600/kg!
- Another aspect, which is often a challenge when outside finance is needed is the alignment on the disbursement to meet the seasonal establishment requirements. If the ideal planting season is missed this can delay projects by a year, with negative cash flow consequences.



**Figure 2: Cappeny Estates infrastructure<sup>2</sup>**

<sup>2</sup> <http://stuffedfeeling.co.za/2015/09/cooking-up-inspiration-with-xolani-gumede/>

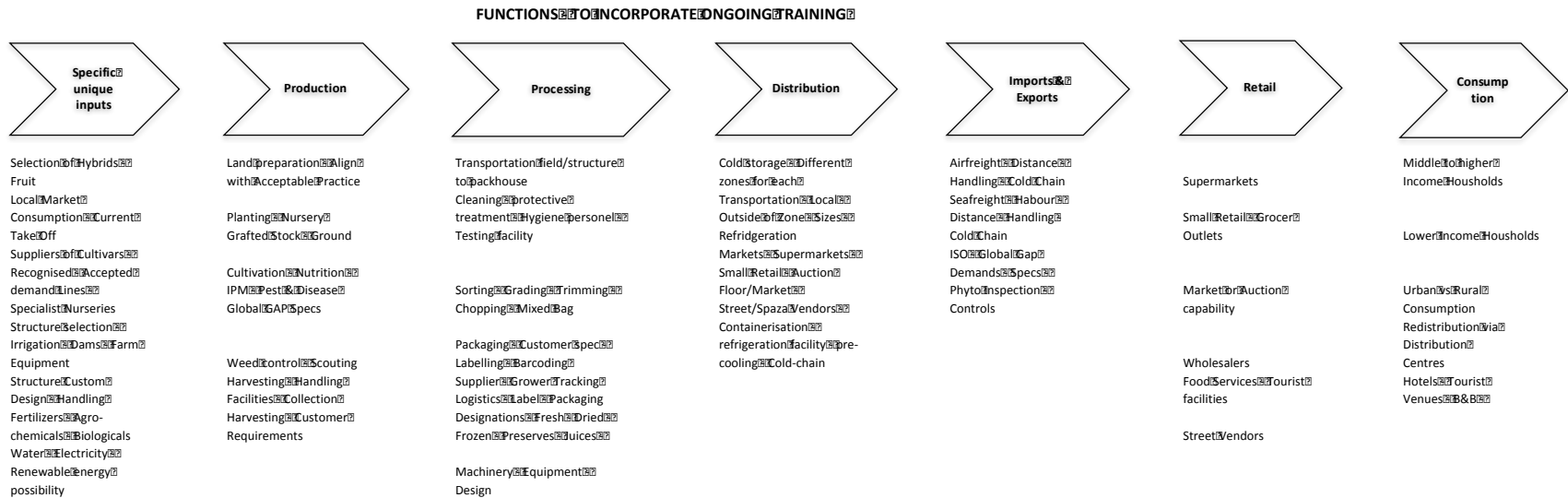
- For irrigation projects care needs to be taken that the water quality is suitable. In the case of Cappeny given its location the water may be high in salts.
- The local markets take all the product and these are through the major chains such as Freshmark (Shoprite), Food Lovers Market, various Spar outlets and Oxford Fresh Market.
- Experience shows that conservative financial planning should be undertaken at the outset so as not to underestimate the funding requirements to cover shortfalls when yields may not be initially achieved and/or other start-up challenges are experienced.
- Identifying niche market opportunities is another key success factor and the Gumede's with their proximity to the Durban consumer and day-tourism markets have launched a 1-day Strawberry Festival, which takes place annually in September. The plan is to grow it into a 7-day event. They also plan other activities to attract day-tourists such as "catch & release" fishing, strawberry themed birthday parties and school-tours to the farm.
- Gumede says he has had an expression of interest, through his agent, from foreign markets, most notably in Mauritius and the UAE. The availability of excess air freight capacity on these routes, served as they are by direct flights with Emirates and SAA means that in due course this may be a realizable export opportunity
- Having a long-term vision is important and this would usually include expansion. In the case of Cappeny Estates this includes the possibility of leasing sophisticated glasshouse production units at the Dube TradePort AgriZone facility, which falls just outside the District in the eThekwin Metro.
- The decision to invest in growing strawberries was also taken partly with the high affinity of strawberries for processing and the generation of secondary revenue streams in mind

## Conclusion

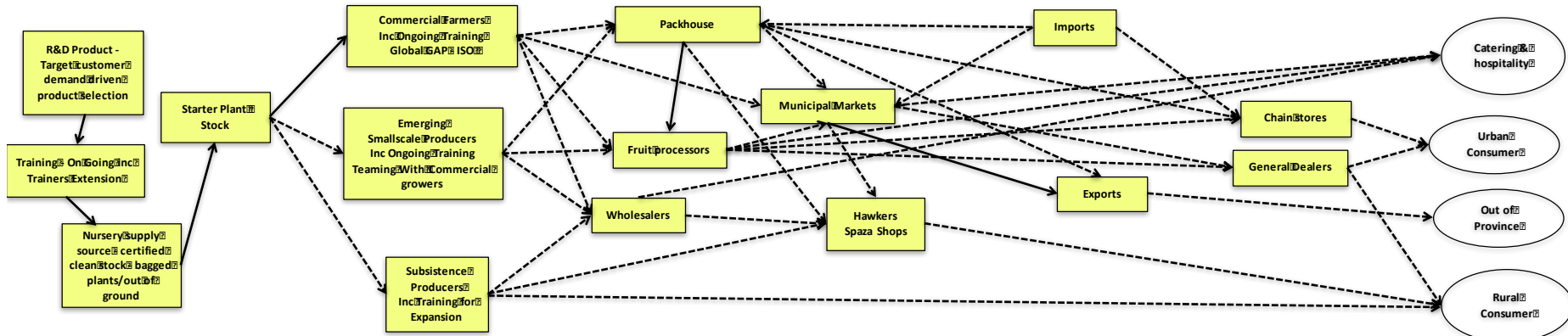
Xolani Gumede at Cappeny Estates is atypical in many ways. Moreover, he has received significant support from iThala Bank and from the Agri-Business Development Agency. Such individual and highly isolated farmers are not suitable candidates for the LED Programme. Regrettably it was not possible to identify any other significant producer of fruit in the District. Therefore there are no immediately identified opportunities to support SMEs in the fruit sub-sectors of horticulture to develop and/or expand in the fruit sector, within the framework of the LED Programme.

## Generic Fruit Value Chain

### FRUIT VALUE CHAIN



### CATEGORIES OF OPERATORS AND LINKAGES



## 1.2 Vegetables

### **Background**

For micro scale and SME vegetable producers to be fully integrated into a value chain, supplying high value products to consumers through the existing chain of actors across functions, requires several basic building blocks (key success factors), without which there will be no success. These are:

- Suitable land with irrigation;
- Production management skills of the operator to achieve quality products compliant with the market standards;
- Adequate equipment for land preparation, planting and transport
- Working capital to invest in production over a three to four-month period before income is earned;
- Access to a cold chain within a short space of time after harvest;
- Access to a market;
- Business management skills.

As an example of initiatives to assist emerging black SME vegetable producers Enterprise iLembe have been promoting the development of both open field and tunnel vegetable producers since circa 2008. Even after 9-years of support these producers are still struggling to be independently successful albeit several studies, assessments and recommendations. Currently efforts support production and marketing through the schools feeding scheme.

The DARD Bioresource Unit (BRU) programme enables an estimate to be made of the agricultural resource potential of the district. The BRU codes and their respective attributes and crop potential (Fruit, herbs and vegetables only), summarised by Zitholele<sup>3</sup> as best suited to the climate for open-field production are presented in Table 1.

**Table 1: List of vegetables best suited to the climate in iLembe**

Vegetable name	
Carrots	Chinese Cabbage
Potatoes	Cabbage
Tomatoes	Pumpkin
Beans	

### **Scale and estimated volumes**

It is difficult to accurately determine the numbers of vegetable producers and the scale of production as there is no single point of representative body or association where this type of

<sup>3</sup> Zitholele Consulting. Baseline Survey and Product Identification for the iLembe Agri-Processing Hub. iLembe Municipality. 2008

information is recorded. At best an estimate has been made from an aggregation of several sources.

The range of vegetables produced by small to medium-sized farmers in iLembe as per the DARD is summarised in Table 2 below, with total approximate yields of 347.50 tons per annum.

**Table 2: Estimated vegetable production area of small to medium sized producers**

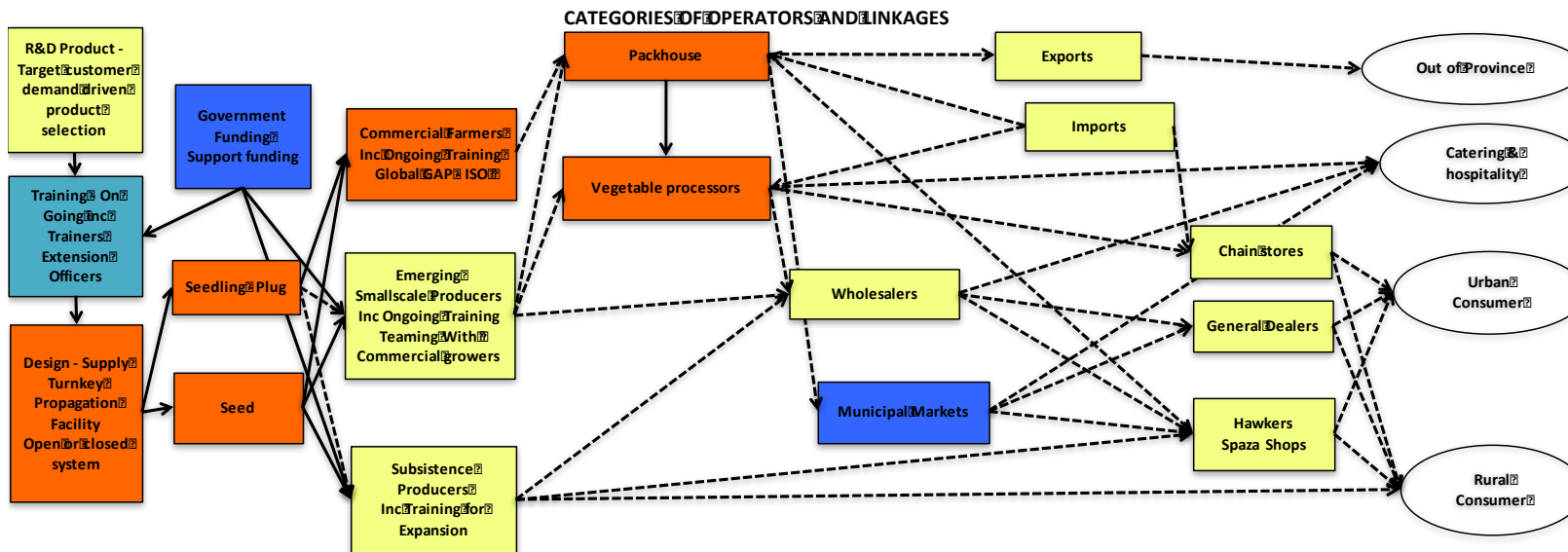
Crop	Number of farms	Ha under production -	Assumed level of production (tons)
Amadumbe	3	4	60
Beetroot	1	1	14
Brinjal	1	1	15
Cabbage	5	2	60
Calabash	3	8	64
Carrot	3	1.5	30
English cucumber	1	0.5	6
Lima Beans	3	4.5	22.5
Luffa	1	1	12
Macadamia nuts	1	12	24
Onions	1	0.5	10
Spinach	1	0.5	10
Turnips	3	5	30

Source: DARD as per Zitholele (2008) with yields estimated by Andisa (2017)



**VEGETABLE VALUE CHAIN**

FUNCTIONS						
Specific unique inputs	Production	Processing	Distribution	Imports & Exports	Retail	Consumption
Selection of Hybrids/Vegetables with Fruit, local Market Consumption Current Take Off, Suppliers of Seed types Recognised/Accepted demand Lines, Structure Selection Irrigation Farm Equipment, Structure Custom Design/Handling Equipment, Fertilizers/Agro-chemicals/Biologicals, Water Electricity/Renewable energy possibility	Land preparation/Align with Acceptable Practice, Planting/Plug/Bag/Ground, Cultivation Nutrition/PM/Global Gap/Specs, Weed control/Scouting, Harvesting/Handling Facilities/Collection Systems, Harvesting Customer Requirements	Transportation field/structure to packhouse, Cleaning protective treatment, Sorting/Grading/Trimming Chopping/Mixed Bag, Packaging/ Customer Spec, Labelling/Barcoding, Supplier/Grower Tracking, Logistics/Label/Packaging, Designations/Fresh/Dried	Cold Storage Different Zones for each requirement, Transportation local/Outside of zone/Sizes, Refrigeration, Markets Supermarkets/Small Retail/Auction, Floor/Market/Street, Vendors/Wholesalers	Airfreight/Distance Handling/Cold Chain, Seafreight, Harbour/Distance, Handling/Cold Chain, ISO/Global Gap/Demands, Specs/Phyto, Inspection, Controls	Merchancing/reorder and Stock shelves, Pricing/labelling, Wastage/disposal manage, perishability, date, Marketing/promotion and advertising, Spacials	Buying decision/choice between vegetable types, palate preferences, seasonality, Out of season availability, choice, quality/price, packaging



Some of the barriers to entry identified for small scale vegetable producers include:

- High fertiliser costs
- Access to markets
- Access to finance
- Transportation
- Technical skills

Attempts to support and stimulate SME vegetable production is not something new in the province of KwaZulu-Natal. In 2007 the Department of Economic Development, Tourism and Environmental Affairs (EDTEA) commissioned a study into the vegetable sector and in summary the key issues, opportunities, support required, investment opportunities and recommended interventions postulated (EDTEA, 2007) are summarised in the table below.

**Table 3: Overview of the vegetable Value Chain**

Key Issues	<p>Dominated by single channel marketing through major retailers</p> <p>Limited scope for processing</p> <p>Highly perishable product with high quality standards by markets</p> <p>Lack of co-ordination between producers</p> <p>Ensuring a year-round supply of produce to retail markets</p> <p>Understanding and adoption of health and safety protocols</p>
Opportunities	<p>Organic production for local markets</p> <p>Speciality vegetables (baby vegetables, herbs and ethnic vegetables)</p> <p>Continuous high demand for staple vegetables</p> <p>Opportunities for cooperation between producers to enhance consistency of supply</p>
Support required	<p>Technical support and extension</p>
Investment Opportunities	<p>Speciality vegetables for local and overseas markets.</p> <p>Training and mentorship to improve entrant farmers' ability to produce high quality vegetables.</p>
Recommended Intervention	<p>Investigate feasibility of co-ordinating production of speciality vegetables for supply to local and international markets (via Dube Tradeport).</p>

Albeit this report there is no obvious intervention at scale that is sustainable, which is indicative of the challenges and long-term nature of any required support programme.

### ***Fresh produce market channels***

As per Zitholele there are several formal and informal market channels and the general flow of fresh produce is shown below.

The channels identified are concentrated in the Durban CBD/Clairwood areas and in Pietermaritzburg. Zitholele found that no significant market channels north of eThekweni exist and concluded that most formal and informal traders in the municipalities north of eThekweni would either purchase from the Durban/PMB channels or directly from farmers. The conclusion (*ibid*) was that the potential exists for a formal fresh produce market in iLembe. No such formalized market has been established yet.

The implication of Zitholele's findings for emerging growers is that market outlets will be difficult to access, a problem that persists to this day and one any SECO intervention, through an appropriate project design, would have to address to link emerging SME farmers to a contract market.

Smallholder farmers are reliant on either the local informal community as an outlet for surplus or on hawkers who collect at farm gate (the so-called "bakkie traders"<sup>4</sup>). These routes reportedly often do not yield attractive returns to smallholders, where they are often forced sellers, having to accept any cash price offered due to their precarious financial situation and the perishability of their product.

The north coast has several SME vegetable farmers of Indian origin who rely on selling through formal markets such as the Clairwood or Durban municipal markets or through niche channels they developed over many years. Reportedly (Mr Roy Nohari, *pers. comm.*)

It is notable that different channels require different quality standards, with retailers all requiring standards that guarantee food health standards and product traceability.

### **Pack Houses**

Pack house operations can be categorised based on both the method of sourcing raw materials and on market/product specialisation.

In terms of raw material sourcing there are two broadly distinctive vegetable pack houses; those that are erected by farming operations to pack own-produced vegetables and those that rely on bought-in produce, either from contracted growers or spot market purchases, either direct from farmers or from market agents.

In terms of market/product specialisation the two distinct types are those that specialise in a single crop (i.e. peppers, tomatoes, cucumbers etc.), usually supplying to a high-end retail customer such as Woolworths, Checkers etc. and those that offer a wider range of customers a full spectrum of vegetables, in the form of mixed salads and mixed vegetable packs.

The pack house operating at the Dube TradePort which was originally packing a range of vegetables for major retailers (vegetables being imported into the province) closed down and the banana growers in Mpumalanga and the South Coast are now using it as a ripening and packing facility.

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<sup>4</sup> "Bakkie" is a local term to describe a 1-tonner LDV.

Making a profit from a stand-alone pack house operation is not easy and most successful ones are usually on-farm as per the Norahri Farms pack house inland from Ballito, albeit modest in size at a capacity of about 45 tons per month on average.

An indicative gross profit assessment of an SME pack house processing about 50 tons per month is a turnover of circa R12 m at a GP margin of 55% with overheads of about R5 million, leaving R1.6 m for interest and other capital replacement costs.

A requirement for smallholders, located across a range of growing conditions is to have a market outlet that offers an opportunity to sell a range of products and a range of quality specifications.

### ***A Profile of Smallholder Vegetable Production in iLembe***

#### **Independent Individual Producers**

In the iLembe District a small number of mostly relatively small-scale independent individual farmers were identified. Unfortunately it was not possible to identify “critical mass” or a cluster of such farmers. Instead they were very dispersed and is likely to raise the cost of supporting them above what it might have been were there more of them clustered either geographically or by product type. Whether or not their dispersed nature means that they cannot be supported is something that must be determined by SECO LED Programme. But for the purpose of this report we have included notes from some of the examples we encountered.

Although located outside the iLembe District, another example of the specialised single-product operation is the **Qutom Farms** operation located at the Dube TradePort Agri Zone. Here Derek Baird reported that Qutom originally located part of its (mostly Bapsfontein near Johannesburg based) operation there in order to supply local markets. They originally leased 12ha of the 16ha facility at the Agrizone and produced a range of green and red peppers, cucumbers and patty pans. But technical difficulties with what are Dutch-designed cold climate greenhouses – mainly that it is not possible to keep temperatures cool enough in the hot and humid coastal iLembe summer – has meant he has not only reduced his lease area to 8ha but that he has reduced to a single product, English cucumbers. The respondent also indicated that because of the narrow range of production possibilities, value chain development opportunities are also limited since they are product dependent and the vegetables grown in iLembe don’t have a high affinity for processing. He also claimed that anyone advocating export of fresh vegetables from Dube/iLembe doesn’t understand export markets or how they work, nor, the relatively high cost and therefore uncompetitive nature of products grown in the area. While he declared himself willing to look at partnerships or outgrower schemes that could share infrastructure and piggy-back on his market access, he said he would be more likely to consider this at his main centre of operations in Gauteng province.

Errol Dhaniram is an independent farmer who cultivates English cucumbers and chillies under 2 ha of tunnels on a 9ha plot next to the Ashville primary school just off the R74 from Stanger almost on the border between the KwaDukuza and Ndwedwe local municipalities. He employs 6 people who are the sole beneficiaries of the chilli crop and he supplies the Shoprite-Checkers KZN distribution centre at Canelands near Verulam with English cucumbers in accordance with a growing programme that he has agreed with them. He has also planted 200 litchi trees on parts of the property unsuited to the erection of tunnels. Dhaniram is constrained by both his small landholding and a lack of cooling and packing infrastructure. As he said, given his market access

through the supermarkets, “I haven’t got a market problem but I do have a supply problem”. He has researched avocado production and would appear to be an ideal candidate for SECO-UNIDO support (albeit that he is one of the few independent but very dispersed commercial vegetable producers we encountered) if that included assisting him with business management skills training and help to undertake his business planning for his avocado orchard.

Ronnie Bloch at Picketwood Farms near Salt Rock also farms English cucumbers under 3ha of greenhouses. Asked why cucumbers, he responded that this is one of few products that the enterprise economics, market conditions and local bio-agricultural conditions permit. Indeed he was the only producer interviewed who say the upside of the local climate in that it meant there was no need to artificially heat the greenhouses at any point in the growing cycle. He employs 60 staff but is himself reaching retirement age and is looking to sell the business. That it is located amidst a number of upmarket gated housing estate developments poses a challenge to him as he would like to see the business taken over and continue operating for the sake of his staff. But the land he occupies was previously zoned residential and if rezoned residential again, it would price it out of the market of anyone other than property developers. This highlights the matter of competing land-use in the KwaDuzkuza local municipal area and how both sugar cane and now even what little vegetable production there is could be at risk due to urban sprawl.

Romac, located at Ballito is a project with a varied history. It was a vegetable farm with 4.5ha under tunnels and shadehouses with a formerly HACCP accredited packhouse. It seems to have functioned well in the period 2008 through 2013 producing produced fancy lettuces, spring onions, cherry tomatoes and herbs. They also bought in large quantities of other vegetables from outside iLembe for processing and packing for Spar (Freshline brand). A majority stake was sold out to Black Balance a BEE company that maintained operations until 2015 when production ceased and the facilities and infrastructure began to fall into disrepair. At some time during the tenure of the BEE company the packhouse operation partnered Enterprise Ilembe under a Department of Cooperative Governance and Traditional Affairs (GOGTA) project to fund and develop 8 new greenhouses (5 of which were to be in iLembe – 2 in Mandeni, 2 in Maphumulo and 1 in Ndwedwe) that would supply veg to the Romac packhouse for supply to school nutrition schemes amongst others. The then owners focused on the pack house operation buying in raw material and supplying a wide range of vegetables and salads to a range of outlets. They had a mix of own-produced herbs and salad tomatoes but bought in a range of vegetables from either contract growers, located mainly in the KZN midlands. This was augmented by purchases from market agents off the municipal markets to fill gaps in order requirements for their product range. The products consisted of a wide range in salad mixes and mixed vegetable packs to a range in customers, from retailers like the Spar Group to restaurants. This operation ceased in 2015/16.

Enter Radeshni Govender in 2016 who took up a lease on the farm. But, unable to commence with redevelopment and rehabilitation of the farm itself, she also focused on the buying in of vegetables and processing and packing processed vegetables for sale to Spar under the Freshline brand. Although she had ambitions to redevelop the project, which would have required a significant new investment, she was capital constrained. After interviewing her on site, we were to later learn that during the study period the lease was terminated by the owner due to non-payment of the lease (J Schinns, *pers. comm.*). This again illustrates the challenges in this sector. At the time of the sale the indicated volume of quality vegetables they would be able to absorb

from smallholders was about 320 tons per annum as per the following list: Baby cabbage, Baby potato, Pumpkin, Broccoli, Butternut, Carrot, Cauliflower, Green beans, Leeks, Marrow, Spinach, Sweet potato, Young cabbage.

Another example of the specialised, own-produced operation, selling a single product line is that of KwaSizabantu, the mission located on the R74 midway between Stanger and Greytown in Maphumulo (Note that the pack house is just outside the District but some portions of the farm fall within the District). In terms of vegetables this operation has 2,500 m<sup>2</sup> of hydroponic Multispan Greenhouses, producing about 400 tons of peppers for Woolworths. The business, since 2008 has expanded the greenhouses to 4 ha. In addition, the pack house packs their own avocados and exports through Halls & Son.

### **Open Field producers**

Both Enterprise iLembe and the DARD have production support programmes for open field smallholders. The projects are identified as per Table 4 below. Estimated yields from the projects provided based on average yields in these types of projects as per Andisa could be about 2,688 tons per annum. This reconciles from Enterprise iLembe reports that they achieve about 38 tons per week from these projects for the school feeding scheme, i.e. 1,997 tons per annum.

**Table 4: iLembe Open Field Projects**

Name	Locality	Ward No.	Size (ha)	Yields (tons)	No of Persons
Ibuya project	Ndwedwe	10	2	30	12
Khanyisani	Ndwedwe	17	2	30	20
Mshiyeni	Ndwedwe	16	5,2	78	13
Sakhisizwe	Maphumulo	7	7	105	34
Embo flagship	Maphumulo	11	5	75	45
Zubane	Maphumulo	18	38	570	581
Nsuze	Maphumulo	1	9	135	52
Okuhlenomuso	Mandeni	11	3	45	11
Emakhuluseeni	Ndwedwe	18	38	570	47
Daka Daka	Ndwedwe		133	300	775
Mansomini	Ndwedwe		186	750	646

*Note the Mansomini and Daka Daka projects form part of the Qwabe Co-operative and due to the failure of the sugar growing projects the DARD has been assisting farmers diversify to vegetable production. The areas provided are the gross areas with irrigation potential and not the area under vegetables. The yields reflected are estimates as per Andisa.*



**Figure 3: Example of a small scale co-operative vegetable farm in iLembe**

Enterprise iLembe (EI) is currently providing subsidised support to a limited number of open-field vegetable farmers within the limits of their budget received from the District Municipality. This budget covers support for mechanisation, limited inputs, facilitation and transportation but not for infrastructure (irrigation, fencing and roads), which is a key component for successful operations. The numbers of growers EI can support within its budget and with those who show commitment has dropped from 63 in 2016 to 20 in 2017. Growers are screened for support based on their (1) consistency of supply, (2) commitment and pro-active approach and (3) proof of positive value add and growth of the business from year to year; i.e. making a profit. This is important because of EIs approach to reduce the subsidy over a period.

The support is aimed at enabling the supply of product to the National Schools Nutrition Programme or “School Feeding Scheme” as it is commonly known. This scheme aims to supply fresh vegetables to schools to provide meals to learners from poorer communities. EI has been contracted by the Department of Education to supply 64 tons per week of fresh vegetables to 402 schools, serving 143,000 learners across the District. These learners are spread between the Local Municipalities of Mandeni (37,000), KwaDukuza (34,000), Maphumulo (36,000) and Ndwedwe (36,000). EI are paid R0.50 per learner for Primary School learners and R 0.60 per learner for High School learners. EI determines the price to the grower, which is reviewed quarterly with the intention of keeping prices as stable as possible, taking account of municipal market prices. The product mix and weekly volumes are: Cabbage (21 t), Onion (8 t), Tomato (6

t), Carrot (6 t), Green Bean (11 t), Spinach (4 t), Butternut (8 t) and fruit (unspecified volume). EI find it difficult to meet the full order from local supplies and report on average achieving 60% and must buy in some 25 to 26 tons weekly, usually from the Durban Municipal Fresh Produce Market

Some 50 local transport service providers, using 1-ton LDVs, are contracted by EI (16 at Ndewedwe, 11 at Maphumulo, 14 at Mandeni and 12 at KwaDukuza) to collect from farmers and bring to 4 hubs, where they are stored in cool rooms over the weekend and then delivered to the schools from Monday onwards. These transporters are paid R 4.50 per km. The hubs have a staff of 3 who do the loading and unloading and oversight is provided by the 4 EI extension officers. One of the biggest challenges is the dispersed nature of schools, the poor road conditions and the topography that creates long distances between schools even though they may be close, as the crow flies.

EI provides a co-ordinated planting programme but wants to get a longer-term (3-year) contract with the Department to provide more certainty for growers to commit to a long-term planting programme. In addition, EI also has facilitators to assist groups of farmers form a co-operative, set the constitution and get it registered.

The types of challenges faced are:

- Poor road infrastructure;
- Challenges of making regular and timely payments to farmers;
- Integrated and timely funding for irrigation, fencing, on-farm handling, inputs;
- To successfully produce Cabbage, Spinach, Onion, Tomato and Carrots one needs irrigation, whilst Butternut and Green bean can be planted seasonally under dryland conditions.
- Technical support in production practices;
- Training in mechanisation, maintenance and operation of tractors and equipment;
- Training on pest and disease control;
- Co-operative governance support.

The view expressed by the EI officers is that Maphumulo offers the best opportunities for expanding vegetable production on a small-scale level given the availability of more land, the cooler climate

EI extension officers estimate the numbers of SME individual farmers supplying to direct markets they have established themselves are:

- KwaDukuza – 3;
- Ndwedwe – 0;
- Mandeni – 2; and
- Maphumulo – 0.

Expected yields from these 5 commercial producers is roughly indicated at 2,250 tons per annum based on 30 ha production each an average yield of 15 tons/ha.



An example of a successful SME producer of vegetables and speciality crops like ginger is that of the Nohari family. This operation some 20 km inland from Ballito is run by a family with four generations of successful vegetable farming, with the current owners' great grandfather having started off leasing 6 ha in the Upper Tongaat area. Now the 4 brothers and their sons have each contributed 35 ha to a family joint venture; Polyon Farms. In addition, they lease land from commercial cane farmers for 1-year periods while the land is fallow, between cane crops. In total, they produce on 280 ha - 300 ha, depending on how much leased land they have at any one time. They have a mixed farming enterprise, growing sugar cane, litchis, and a range of vegetables including madumbies (a type of yam), sweet potatoes, ginger, turmeric, lima beans, luffas, okra and calabash. Income is split about 50/50 between sugar cane and vegetables. The family has a GlobalGAP accredited pack house with an average throughput of 45 tons per month i.e. 540 tons per annum.

Product is sold to Woolworths, Checkers, Pick n Pay, Spar and other smaller retailers. In addition, they sell on the Durban Farmers Retail Market; mainly to hawkers and street traders.

This family is happy to undertake joint ventures with emerging black farmers on the basis that they will lease a specified area from the emerging farmer but require the emerging farmer farm for own account on an equal area of land under their tutelage. Currently they are mentoring the Qwabe Co-operative produce 180 ha of beans.

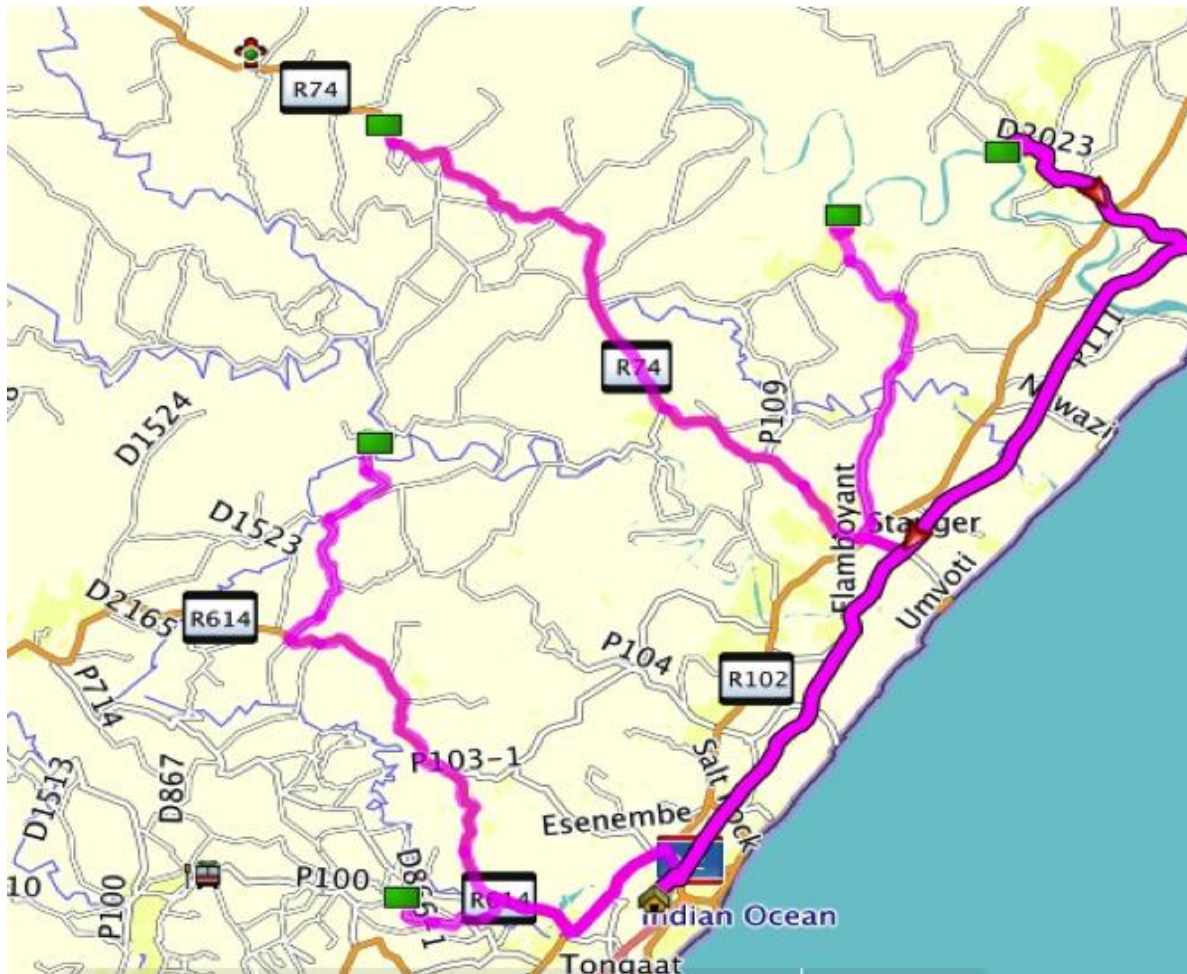
It is reported that generally there has been a decline over the years in the numbers of SME vegetable producers (Roy Nohari, *pers. comm.*) who is Chair of the Farmers Retail Market, located on the same site as the Durban Municipal Fresh Produce Market, reports that numbers have dropped from 1,500 in the early 1990s to only 150 today. These producers are spread along the coastal areas, north and south of Durban.

### **Greenhouse projects**

The iLembe Greenhouse project consists of five sites spread across the District with the development of 2 x 2,500 m<sup>2</sup> hydroponic Greenhouses located on each site. A distribution map of the sites with the location of the ex-Romac and KwaSizaBantu packhouses as an illustration of the types of distances producers would have to deliver produce to if an existing and/or rehabilitated pack house was to be used is provided in Figure 4.

The five Greenhouse projects and their distances to the old Romac site are located at:

- Mathonsi Devine Greenhouses near Mandini, by road 64 km to Romac and 96 km to KwaSizaBantu
- Bulwer Farm Greenhouse, by road 54 km to Romac and 49 km to KwaSizaBantu
- Maphumulo Greenhouse, by road 70 km to Romac and 11 km to KwaSizaBantu
- Ndwedwe Greenhouse 2, by road 56 km to Romac and 37 km to KwaSizaBantu
- Ndwedwe Greenhouse 1, 23 km to Romac and 96 km to KwaSizaBantu



**Figure 4: Map showing location of the iLembe Greenhouses, KwaSizaBantu and the ex-Romac facility, with Logistic routes to Romac**

Given the above considerations an institutional and organisational development strategy that was previously proposed but not acted on included the following elements: -

- Given the challenges of consolidating viable volumes of product sourced from smallholders, due to their individual small production base and dispersed location, the five iLembe Greenhouse sites could be used as Product Consolidation Hubs (PCHs) for smallholders located within a 20-km radius.
- Given that smallholders require mentoring support to plan, produce and market fresh vegetables, which are surplus to household consumption requirements, through a variety of distribution channels an independent mentor organisation should be contracted to provide the required services.
- Given the challenges smallholders have in accessing value-add markets, smallholders could be linked with an existing Pack House, which has existing market access and to the housewives “boxed vegetable” market.
- Given that smallholders will be required to produce according to a production supply template provided by the pack house the mentor organisation engaged would have to provide the necessary planning and co-ordination support.

- Given the high costs of inputs for smallholders buying individually the PCH should act as an input supply hub, sourcing inputs at competitive prices and in appropriate pack sizes
- Given the high level of health and safety standards required by Retailers the Pack House entity should be responsible to control the collection, storage and logistics of supply from the PCH to the Pack House.
- Given the need for fair prices the Pack House could operate on prices linked to municipal market benchmarks, which should be advertised at the hub

A schematic of a possible organisational and institutional structure is provided below. Farmers within a 10-15 km radius of the Greenhouse (providing the location for a PCH) would deliver to the PCH recommended to managed by a mentor organisation.

The Pack House should develop the retail market for high quality vegetables and supply mixed vegetable product to value add markets such as Retailers, Grocery Stores and any other market outlets demanding high quality pre-packed product. The PCH can also act as a sale point for local hawkers, “Bakkie” trade and “boxed vegetables”.

Farmers can supply either as individuals or under an association / co-operative entity.

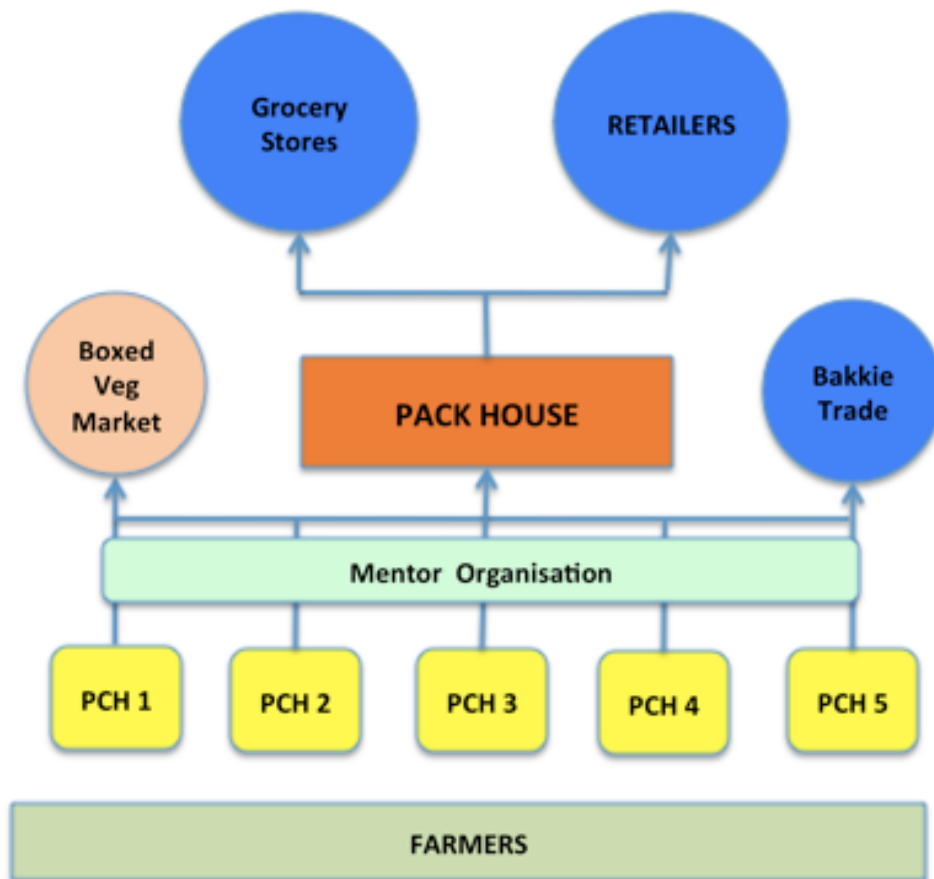


Figure 5: Proposed Organisational Relationship

## Service requirements

Indicated service requirements for smallholders would include:

- Fertiliser and chemicals for those following a production system based on inorganic fertilisers and chemicals.
- Field layout and land preparation advice for organic production systems based on soil protection, water harvesting and conservation, composting and crop rotations.
- Production advice, which includes crop options, planting scheduling, agronomic practices of pest and weed control under either an organic (permaculture) production regime or with the use of inorganic fertilisers and chemicals.
- Business development advice and support.
- Initiation of self-help groups (SHGs), which can develop as savings clubs and ultimately a micro-credit system for further business development.
- Prices competitive with at least municipal market prices for sales to a pack house and prices close to retail prices for the boxed vegetable sector.
- Regular payment within at least a two-day period paid into a bank account.

## 2 Conclusions

The project team has tried to estimate, within the limitations of the methodology employed, the number of small scale commercial vegetable farmers in iLembe. To achieve this we have relied on information obtain by way of opinions on this matter received during fieldwork from various respondents interviewed. It was not within the realm of practical possibility to conduct a census of vegetable and fruit producers, and therefore our estimates are presented in the table below.

Local Municipality	Area (ha)	Number of growers	Production Estimate (Tons)
Ndwedwe	364	1,513	1,758
Maphumulo	239	83	2,390
KwaDukuza	280	30	4,200
Mandeni	75	103	1,125
<b>Total</b>	<b>958</b>	<b>1,729</b>	<b>9,473</b>

Based on the assessment outlined in this report, interventions in support of growers of fruit and vegetables should be focused and concentrated on the small core of dispersed enterprises demonstrating high potential for successful movement into higher value added products and integration into horticultural value chains. The observed lack of scale effect and the absence of



clustering is not necessarily a reason for non-engagement. Yes, the cost of supporting them would be above what it might have been were there more of them clustered either geographically or by product type, but it just may be the case that a focused intervention within a small number of relatively small-scale projects may in itself be methodologically more likely to stimulate the growth of the fledgling horticulture sector in iLembe. Not only would it also be easier to manage than a more extensive less specific support programme, but it may well prove to be the genesis of a nuclei of producers that in turn could reinforce further growth.

In the next stage of the programme, i.e. during implementation, it is recommended that a specialist small farmer support organisation is commissioned to identify a small number of products that could be produced at scale, meet local or export value chain requirements, and engage in a focused, geographically concentrated project. Perhaps then it may be possible to achieve a “critical mass” or a cluster of fruit and vegetable farmers.

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## 4 Annexure A – Interviews

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