

RECOMMENDED STRATEGIC PROJECTS

1. Dairy Production potential

The coastal region of the BCM is very suitable for dairy production because of the mild climate and the suitability of this area for the production of pastures under dry land conditions. The low cost of these pastures lowers the milk production cost and thus makes the dairy industry in this area more profitable. This area could be compared to the Alexandria District when it comes down to suitability for dairy production.

In consultation with dairy farmers, approximately 120 000 litres of milk is produced per day in the greater East London area. This milk is sold direct to local consumers and the big Cooperate Dairies. As East London does not have a milk processing facility, all the milk that is bought by consumers through retail outlets is import into the area from places like the Western Cape and Gauteng. There is a definite potential for the erection of a milk processing facility in the BCM.

2. Red Pepper Production Potential (Pepper dew)

This is a relatively new crop in South Africa and especially in the Eastern Cape. Production of this crop started in the Grahamstown area in 2005. The processing factory is presently processing and exporting about 600 metric ton of peppers per annum with a maximum capacity of about 800 metric tons. The product is exported to Europe.

To supply this 600 metric tons of product about 90 ha is under pepper production. This production ranges from Fort Beaufort in the North to Port Alfred in the South. The growing season of this crop is limited by when the first frost occur. This means that crops that are grown on the coast should produce higher yields than crops that grow inland under the same management.

Presently production yields differ from approximately 10 tons per ha to 30 tons per ha. The price that the factory pays for the unprocessed pepper is R3.00 per kg which means that the farmer receives between R30,000.00 and R90,000.00 per ha for product deliver to the factory.

Because of the above, this crop would make an ideal crop for rural development because of the following. It is labour intensive because the plants have to be continually harvested throughout the growing season and the high return per ha. Such a crop would warrant the erection of a processing in the East London area – preferably the IDZ and the product exported to Europe.

3. Olive Oil Production Potential

An Olive crop satisfies the ideal crop for rural development criteria completely. The only drawback is that it takes 8 years to reach full production with the first income only during the fourth year.

4. Suitability of Olive Production in the Eastern Cape

The critical climatic factor governing the production of olives is temperature. The olive requires a period of winter chilling for floral initiation, cold enough to affect vernalization and warm enough to allow the necessary concomitant cell division. When comparing the environmental characteristics of some important olive producing areas in Table 1& 2 it is evident that they are very similar to those of the northern and central regions of the Eastern Cape.

Environmental characteristics of some important olive producing areas.

Country and region	Altitude (m)	Proximity to sea (km)	Average temp. of coldest month (°C)	Annual rainfall (mm)
Argentina (La Rioja)	800	200	8,0	300
Greece (Kalamata)	120	10	11,8	500
Israel (Beit Shean)	-120	10	13,3	300
Eastern Cape	500 - 800	100 - 200	12,5	400 - 600

Average monthly temperatures in olive producing regions

Area	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Beit Shean (Israel)	13.3	13.6	15.2	19.6	25	27.3	29	29.3	27.8	24.5	20.8	15.1
Kalamata (Greece)	11.3	11.7	12.8	16	20	24.5	26.9	27.4	24	19.5	15.8	12.7
E. Cape	13.1	14.9	19.1	24.7	26.6	27.0	27.2	28.1	26.5	22.1	18.3	14.7

As can be seen from the Tables above, the average monthly temperatures for the Eastern Cape fall between the main olive producing areas of Israel and Greece, except for the months from August to November when the local average temperatures are higher. However, as the lands that we intend to plant to Olives are, on average, slightly cooler temperatures that will fall within these ranges.

The international production of olive oil for 1996 was 2.6 million tons of oil. This figure differs slightly every year because of the alternate bearing effect of the olive tree. This means that the olive tree has a very high yield one year and a reduced one the next. However, in Europe the production of olive oil is on the decline because of the age of the trees, cost of labour, labour problems and the growth habit of the trees that make it unsuitable for mechanized harvesting.

The international consumption of olive oil for 1996 was 2 million tons of oil. This figure increased yearly until 2.58 million tons of olive oil was consumed in the year 2000. There is a definite increase in the international olive oil consumption, which can be attributed to the International Olive Oil Council. This Council is constantly promoting olive oil and its health benefits world wide especially to the countries in the East where market is rapidly growing.

The International Olive Oil Balance for the year 1999

Countries	Production (tons)	Consumption (tons)	Imports (tons)	Exports (tons)
EC Countries	1 878 000	1 731 000	116 000	298 000
Tunisia	210 000	60 000	0	112 000
Marocco	40 000	55 000	4 000	500
Turkey	70 000	60 000	2 000	16 500
USA	1 000	170 000	175 000	5 500
Total	2 374 000	2 452 000	486 000	444 000
South Africa	250	1 875	1 625	78

The International Olive Oil Balance for the year 2000

Countries	Production (tons)	Consumption (tons)	Imports (tons)	Exports (tons)
EC Countries	1 919 000	1 776 000	107 000	305 000
Tunisia	130 000	60 000	0	108 000
Marocco	35 000	47 000	5 000	0
Turkey	200 000	75 000	0	85 000
USA	500	190 000	198 000	6 000
Total	2 590 000	2 580 000	517 000	523 000
South Africa	275	2 840	2 565	100

The main producers of olive oil in the world are the EC countries, Tunisia, Morocco, and Turkey. As can be seen from Table 3 and 4 that these countries account for up to 90 % of the olive oil produced internationally. One of the countries that does not produce a lot of olive oil but consumes a lot, is the United States of America. It only produces 1,000 tons of olive oil in 1999 and 500 tons of olive oil in 2000. However, it consumes 170,000 tons of olive oil in 1999 and 190,000 tons of olive oil in 2000. This represents an increase of 20,000 tons in one year. To satisfy this increase an extra 10,000 ha of oil olives would have to be planted. (oil yield = 20%, average yield of 10 tons of olives per ha = 2 tons of oil per ha)

South Africa produced 250 tons of olive oil in 1999 and 275 tons of olive oil in the year 2000. However, the consumption of olive oil was 1,875 tons in 1999 and 2,840 in the year 2000. This represents a growth of 51% in one year ending 2000 of 965 tons of olive oil. To satisfy this increase in demand an extra 482.5 ha of oil olives would have to be planted. This trend in South Africa should remain on the increase for the foreseeable future as the South African public are only now becoming aware of the health benefits of cooking with olive oil especially for heart disease and South Africa has one of the highest rates of heart disease in the world.

A large portion of the olives harvested in Italy and Spain produce oil of an inferior quality because they are not from the best olive cultivars and a lot of the olives are not harvested at the correct time due to the lack of labour. Italy imports most of the oil produced in North Africa, bottles it and exports it again. These oils are mostly refined and are also of an inferior quality.

The olive oil that is imported into South Africa comes mainly from Italy and Spain. This is there inferior quality oil that they battle to sell on the international market because the South African public is not discerning and cannot tell the difference between good and poor quality olive oil. However, this is changing as the Olive Oil Growers Association is going out of its way to educate the public.

Up until 1990 there were about 1,000 ha planted to 250,000 olive trees in South Africa. At the end of 2000 these figures had increased to 3,200 ha with more than 900,000 olive trees. Yearly plantings of 200,000 to 250,000 trees are taking place and the predictions are that by the end of 2005 there will be about 1,000,000 new trees planted over 2,500 hectares. About 80 % of all these trees are of the Mission cultivars for table olives. The Mission cultivars produces an average table olive but is not suited for olive oil at all. The olive oil extracted from Mission olives is of a very low quality.

The first plantings of olive oil cultivars for quality olive oil started in South Africa in 1995 when Morgenster imported the best Italian cultivars from Tuscany and Umbria. Since then there are about 300,000 trees planted on about 600 hectares over South Africa. The olive oils produced by Morgenster have won the Orciolo d oro prize for the fruitiest olive oil produced outside Italy for the last three years in a row.

Olive plantings and production in South Africa

Plantings	Year	No Trees	Hectares	Table Olives (ton)	Oil Olives (ton)
Producing trees	2000	390,000	1,500	2,500	210
New Plantings	2000	520,000	1,700		
Total Planted		910,000	3,200		
	2001-2005	1,000,000	2,500		
Total Planted		1,910,000	5,700		
Estimated production 2010				25,000	2,000

South Africa has an excellent future in the olive oil industry. The climate, soil and water quality in the Eastern Cape is well suited to produce a very good quality olive oil. South Africa has the added advantage that there is ample labour available at the required time for harvesting. The olive oil cultivars and their management are the best oil cultivars and management imported from Italy. The olives can be harvested at the correct times, processed with the latest equipment and with the low labour costs, the best quality olive oil can be offered on the international market at competitive prices.

5. Beef Production Potential

Pastoralism, or free range livestock farming, is the most widely practised form of land use in the Eastern Cape for both commercial and rural farming systems. The economic returns from livestock production in the rural areas cannot be maximised as the condition of the veld is generally poor, particularly in the sweet-veld areas, and the vegetation is characterised by the dominance of unpalatable and unproductive forage plants and widespread soil erosion.

The basic reason for the poor condition of the veld is incorrect veld management; in particular over-stocking i.e. the stocking rate of cattle and sheep exceeds the grazing capacity of the veld. This results in livestock in poor condition that are susceptible to diseases. As a result these animals fetch low prices on the commercial market, as there is a high probability that the meat will be condemned because of measles etc.

However, speculators travel into the rural areas, buying up these cattle at minimum prices after which they take the cattle to their farms where they are dosed to rid them of any diseases, fattened up and made ready for the commercial market where they are sold for high prices.

A major factor contributing to overstocking in the rural areas is the mindset of the rural stock farmer. He sees cattle as a form of wealth controlled by himself alone. This means that the numbers of cattle are important to the rural cattle farmer, not animal condition, herd composition, rate of conception or age etc.

Pilot projects where rural farmers can be taught to farm livestock on a commercial basis need to be set up. The benefit of these pilot projects is that they will serve as examples to

rural farmers on how to obtain financial benefits from livestock farming using the correct farming practices and the correct stocking rates.

Another factor contributing to overstocking in the rural areas is the lack of local markets. Most of the animals in the Eastern Cape are bought by stock agents on behalf of huge feedlots and are trucked to these systems in the North West Province, Gauteng, KwaZulu-Natal and Western Cape. These major role players play an important part in controlling the prices of livestock to the producers. However, if a sustainable market could be developed in the Eastern Cape that could add value to the livestock and supply a niche market in the country and the world, this could break the strangle hold of these major role players on the livestock industry in the Eastern Cape

90 % of livestock farming in the Eastern Cape is farmed on a free range basis. This product is very sought after in the European markets. If a marketing system could be developed to market Eastern Cape beef into these markets the prices received for the beef could increase by up to 30% making beef farming a far more lucrative enterprise.

6. Goat Production Potential

Bush encroachment in the Eastern Cape causes a great concern to everybody involved in the livestock industry. If the number of trees per ha increases above 1,500 tree equivalents per hectare the grazing capacity of the area starts to reduce. The most effective way of controlling this bush encroachment is by using goats and burning in the management of the veld.

However, if a livestock enterprise wants to produce the most amount of meat per ha from any project then it should farm with both goats and cattle. In this way the most efficient use is made of the available vegetation in producing meat.

There is a big market for goats locally especially around June and July and December as goats are used extensively in the rural areas during the Abakweta ceremonies. Goats are fetching prices in excess of R600.00 per animal during these times making it one of the most lucrative livestock farming enterprises. Presently, 50 million Rands worth of goats are imported from Namibia into KwaZulu Natal every year. As the Eastern Cape is a lot closer goats could be marketed into this area easily.

The main drawback farming with goats is that they require a lot of management and constant supervision as they easily go through fences. If they do this and get into a neighbour's high value crops the restitution payments could be very high.

7. Sheep Production potential

Sheep production should take place mainly in the sour veld areas. These areas are characterised by high rainfall where the grass can withstand high concentrate grazers. One of the biggest problems in farming sheep in mixed and sweet veld is that the grazing habits of the sheep are such that they will destroy the palatable grass species of the veld and thus reducing the veld condition and thus ultimately the carrying capacity of the veld.

The best way of farming with sheep in the BCM is to farm on an intensive basis using pastures to produce fat lambs. These fat lambs can then be sold to both the rural and commercial markets throughout the Eastern Cape.

Presently, 20,000 sheep and 5,000 cattle are consumed weekly throughout the former homelands of the Transkei and Ciskei. These animals are mainly consumed at funerals. (Approximately 5,000 villages having 1 funeral per week consuming 4-5 sheep per funeral and 1 ox)

These animals are slaughtered and the skins discarded and left for the dogs and vermin to consume. If these skins were collected and tanned they could be processed into sheepskin

slippers, jackets and boots and exported to the European, American and Canadian markets. South Africa's production in these products is too small to supply these markets.

In the past wool was used to manufacture carpets in Dimbaza. These carpets were sought after throughout South Africa and internationally. This type of processing should be revived which could turn around our wool industry in the Eastern Cape.

8. Macadamia Nut Production potential

Macadamias are deliciously nutritious, and have caught the imagination of the health conscious consumers around the world. The recent popularity of the Atkins diet as well as "low carb" diets, especially with regard to addressing obesity problems, has seen increased demand for macadamias and indeed all the tree nuts in the last few years.

At the recent International Tree Nut Congress held in Berlin during May 2005, all producing sectors of tree nuts reported exceptional demand and rising prices. This trend will not continue indefinitely achieving average prices such as USD 12.50 per kg for macadamias. Of necessity, these prices must settle as greater volumes enter the market and therefore it is projected that an average price of USD 8.00 per kg kernel is a fair figure to calculate for the longer term future.

According to GFNC, it is projected that world production of macadamias in the year 2015 to be around 45,000t kernel. It is a tiny fraction of the world tree nut production. The macadamia industry must continue to work on market development, because there are many applications and geographic regions where it is totally unknown. USA consumes half of the world product of macadamias, and until 10 years ago, was the only real macadamia market.

Since then, Europe has become the second most important market for macadamias with consumption growing dramatically from country to country. (Eg Spain imports of macadamias 1997 10t – in 2004 the imports of macadamias to Spain were 645t).

The world's biggest producer of macadamias is Australia, the indigenous origin of the product with 11,000t. Then follows Hawaii 5,000t, followed by South Africa 4,500t (present 2005 estimates). Macadamias are grown in various other locations, but the fastest development of macadamias is in the Southern African region with South Africa, Malawi, Zimbabwe and Kenya leading the way. New plantations are starting in Mozambique.

9. Tunnel Production Potential

The climatic conditions around East London are ideal for the growing of tomatoes. Previously tomatoes were grown in open fields and the East London area produced about 16% of South Africa's total open field tomato production.

However the consumer trend of a higher demand for perfect tomatoes led some farmers to grow tomatoes in tunnels. This gave the tomato farmers in East London an edge on the other South African tomato growers to the extent that when the tomatoes were auctioned on the local markets in the big South African Cities, the East London tomatoes were sold first then the other tomatoes from the other areas were sold. Consequently, tomatoes grown in the East London area fetched higher prices.

Currently the tomato farmers in the East London area are the leaders in South Africa for growing top quality tomatoes in multi-span Greenhouses (Blueberry Hill Farm). Although the total production of tomatoes grown in the East London area has decreased, it produces some of the best quality tomatoes in South Africa (communication with market agents in the major centres of South Africa).

Multi-span greenhouses would be the equivalent of putting a number of smaller greenhouse frames together and covering all these frames with a plastic covering making one big

greenhouse. This reduces costs by eliminating the amount of sidewalls and thus the amount of plastic required in the overall structure. A multi-span is more efficient when compared to normal greenhouses in cost, management, production, etc.

In these multi-span greenhouses, the tomatoes are grown hydroponically. This means that the tomatoes are not grown in soil, as in normal field production, but in a growing medium with a constant flow of water and nutrients through it. The purpose of the growing medium is to support the roots but not to provide any form of nutrients to the plant. All the plants nutritional requirements come from absorbing the required nutrients from the water flowing through the growing medium.

Until recently South Africa did not export tomatoes to other places in the world, but because of the high quality of tomatoes produced in the East London area, export markets have opened up with several companies attacking these developing markets in Dubai, Reunion, Mauritius, Seychelles, etc. Interest has been shown in these tomatoes from as far a field as Europe on the condition that the farms are GAP approved and the pack shed is HASSOP approved.

In 2003 about 30ha of covered tomatoes supplied most of the export quality fruit. Because of the increase in the demand for Grade A tomatoes the amount of covered tomatoes grown in 2004 in the East London area increased by 40%. This increase will still not satisfy the demand for Grade A tomatoes that has developed because of the increased export demand as well as the increase in the local South African formal and informal markets.

There are many other crops that can be produced in tunnels such as:

- Vanilla
- Flowers
- Peppers
- Pot plants
- Etc

10. Essential Oil and Medicinal Plant Production Potential

Although Southern Africa is richly endowed with aromatic plants, certain of which have economic merit, few plants have been developed to the stage of commercial exploitation. For example *Agathosma betulina* (Buchu), *Artemisia afra* (Wilde als) and *Tagetes minuta* (Kakiebos) are some of the aromatic plants that yield valuable essential oils which are marketed internationally (Graven et al 1987).

A large portion of the aromatic plants found in South Africa have medicinal uses, not only by the local tradition healers using plants like *Artemisia afra* for colds and flu etc but internationally where extracts are taken from the Buchu plant as a natural diuretic. So whether the plants are farmed for their aroma or for their medicinal uses only the market changes.

The essential oil industry in South Africa is not very well known and there are only a few essential oil entrepreneurs scattered across the country with the majority situated in the Western Province. Consequently, very little is known about these plants by most pasture scientists, extension officers and farmers alike which causes these plants to have no economic value to farmers. This could be due to the sanctions imposed on South Africa by the international community, the closed essential oil markets internationally, the secretive nature of the essential oil industry and the stigma that is attached to farming with so called "weeds".

These plants are regarded as invader plants and are viewed as a sign of poor management and degraded veld and a great deal of effort and expense is incurred annually in the eradication of these plants. However, a number of alternative uses are available for these

plants which should be considered so that a farmer could receive an income instead of laying out a considerable sum of money for their eradication. This could be termed turning a liability into an asset.

For a farmer to do this, he needs to contact an essential oil entrepreneur that has a mobile still and deals in that specific oil that can be extracted from the plants that the farmer wants to be rid of. The farmer and the entrepreneur can then negotiate a price per ton of material harvested or per kilogram of oil distilled from the harvested material.

A recent development in the flavouring industry in particular, which encourages the development of new crops, is the discreditation of the "nature identical" category of food components. "Nature identical" refers to the chemically synthesised compounds that are similar to compounds found in the biological material. "Natural components" are compounds derived from natural products such as plant oils, etc.

There are strong indications that the market for natural chemical components such as menthoniol, bisabolol, pulegone, diosphenol, dihydro-tageton, etc that can be extracted from essential oils is due to expand greatly, if not already, as the major flavour and fragrance houses actively search for new and reliable sources of supply.

It is noteworthy that some of the crops discussed below have obtained EINECS (European Inventory of Existing Commercial Chemical Substances) registration. This in effect means that the oils are exempted from pre-marketing notification provisions in terms of article 1(4) of directive 67/548/EEC. These crops are *Agathosma betulina*, *Artemisia afra*, *Eriocephalus punctulatus*, *Tagetes minuta*, *Salvia stenophylla* and *Pteronia incana*.

Estimated returns per ha for Essential Oil Plants:

- Buchu R300,000 per ha
- Tagetes Minuta R30,000 per ha
- Rose Geranium R30,000 per ha
- Artemisia Afra R30,000 per ha

11. Fig Production Potential

Figs require a climate of warm dry days and cool nights. Summer day temperatures should be in the vicinity of 35 degrees centigrade with the winter day temperature ranging between 20 and 25 degrees centigrade. Figs need heat and dry sunny days to ripen and produce sweet fruit Figs like well drained soil with a neutral pH.

The market for figs is both local and for export. The export markets is growing rapidly especially in Europe for fresh packed figs. The local markets concentrated mainly on dried figs, fig preserves, fig role and some fresh figs.

Dried fig prices are about R30.00 per kilogramme and are packed into 500g and 1 kg packets or 20 kg bags for bulk buyers. Because of the above the rural projects can process this commodity themselves and with a bit of help with marketing can set up a very lucrative export enterprise.

12. Pomegranate Production Potential

Free radicals are one of the main buzz words in health conscious people vocabulary. Free radicals enter the body and react with the body cells causing problems such as cancer etc. Science has found certain products that absorb or get rid of these free radicals within the body.

This compound is also found in pomegranates and its concentration is about three times higher in pomegranates than in any other known food. Consequently, pomegranates are

very sought after on the European market and used extensively in salads, deserts and as fruit.

The climate in the majority of Europe is not conducive for the production of pomegranates consequently most of this fruit must be imported. New cultivars have been developed that are pips less which are very sought after.

Pomegranates used to be common in the Eastern Cape in the past and the fruit is commonly known amongst the local rural people as "Granaat". This product could easily be grown in irrigation projects throughout the BCM bringing very high returns with the correct management.

13. Citrus Production Potential

The potential for the growing of citrus in the BCM is high. However when evaluating the international market and the pricing received for the South African product with the strengthening Rand the future of this enterprise does not look very good.

This is one of the reasons that a lot of the commercial citrus farmers are looking at the possibility of getting out of citrus production into alternative crops. The only type of citrus that is holding its own to a certain extent is navel oranges. Navels need a certain amount of cold in order for the fruit to change colour. Consequently there is not many areas in BCM that will be ideally suited for the growing of navels.

14. Pineapple Production Potential

The potential for the growing of pineapples in the BCM is high. However when evaluating the international market and the pricing received for the South African product with the strengthening Rand the future of this enterprise does not look very good.

This is one of the reasons that a lot of the commercial citrus farmers are looking at the possibility of getting out of pineapple production into alternative crops. The only type of pineapple product that is holding its own to a certain extent is pineapple juice.

15. Chicory Production Potential

The area for the production of chicory in South Africa is in port Alfred. In consultation with the chicory factory management, they are looking for communities to get involved in the production of chicory. They have established that chicory can be grown successfully in the BCM coastal areas and still be profitable because the distance from BCM to the factory is within 150 km. The factory management is prepared to assist in supplying the expertise and access plant material for projects within the BCM.

16. Vegetable Production Potential

The growing of vegetables throughout the BCM is a very viable enterprise under irrigation. This is of special importance when consideration is given to the fact that the Eastern Cape imports most of its vegetables from outside of the province.

At present there is a drive to establish an air link between Southern Africa and Europe for the supply of fresh vegetables. The pilot projects are going to be in East London and Port Elizabeth for the growing of vegetables that can be transported through the local airports to Johannesburg and then on to Europe. The project that needs to be established in East London area needs to be in the vicinity of 200 ha of vegetable production.

The school nutrition programme within the Department of Education is a huge captive market for local black cooperatives to produce vegetables. The size of this market is excess of about 130 million rand per annum.

17. Massive Food – Cereal production

Because of the limited amount of arable land available in the high rainfall areas of the BCM there is not that much potential for the production of these types of crops within BCM. The Massive Food Production Scheme has identified a very small area within the BCM that it wants to concentrate on for the production of these cereals. This area is in the Eastern Coastal areas as depicted on the map.

A total of 400 ha have provisionally been granted in the BCM for Massive Food Production. This is spread over 8 villages namely:

- Majali
- Jikolo
- Pirrie
- Tyhusha
- Ngqinisa
- Ncera
- Douw
- Dyam - Dyam

Cereal production is normally done under large areas of dry land where the rainfall is high enough resulting in a high enough crop yield to make the project economically viable. This is because of the high input costs which result in relatively small profit margins. Another factor that keeps the price for these crops low is the international price. Some international countries can produce cereals far cheaper than South Africa which results in companies importing grain rather than buying local product.

Rather than produce cereals under irrigation, there are far better alternative crops that can be produced that are far more profitable

18. Aquaculture

1.1 Abalone

There is a big potential for aquaculture in the BCM especially when consideration is given the existing and planned aquaculture projects such as the Abalone farm and the fish farm farming with cob..

Abalone occurs naturally of the BCM coast. Testimony to this is the large number of Abalone shells found on the deserted beaches left behind by the Abalone poachers. The value of Abalone on the international market from South Africa is about \$80.00 USD per Kg. This translates to R560.00 per kilogramme. Three to four size Abalone will make up a Kg.

There is a huge demand for Abalone on the world market especially in the Far East in countries like Japan, China, etc. This market is growing at a rapid rate and there is not enough supplies from the wild stock to supply this demand. The only alternative is to produce Abalone in Abalone farms to supply this market. Presently there is an Abalone project that has been erected in the East London IDZ. There is enough opportunity for the erecting of other similar farms in the surrounding area.

1.2 Marine Fish Farming

There is a huge market for fresh fish both locally and internationally. As the natural fish stocks are becoming depleted by unscrupulous fishing the demand is increasing continuously. Japan imports a tremendous amount of fresh fish all year round. Locally, fish was seen as a cheap meal, but not any longer. The fish prices in the restaurants are on a par with red meat and in some cases a lot more expensive.

There is currently an investor that is looking for ground to erect a fish farm on which he wants to farm with cob, a marine fish species. The main constraint for this investor is that the fish farm needs level ground relatively close to the sea at a cheap enough rate that will make the farm viable. Unfortunately, most of this ground in the BCM is already occupied and because of its prime location is very expensive. If the ground issue can be overcome then a viable fish farm will be erected in the BCM.

1.3 Fresh Water Fish Farming

Because of the mild climate that exists in the BCM it is ideal for fresh water fish farming. Fish like the *Tilapia mozambicensis* is an ideal fish species for this type of farming. It breeds and grows well in water that does not get too cold, is mostly a plant eating fish, and when cooked has a very nice flavour. Other fish like the catfish can also be considered in this type of farming.

This type of farming also has the added advantage of attracting tourists that enjoy fishing. Many people, both local and foreigners will travel great distances to be able to catch fish.

This type of fish can be farmed in all the major dams of BCM as well in all the dams on the local farms. This type of farming could especially be considered if macro rural projects erect dams for irrigation purposes. These dams could then have the alternative use of being used as a fish farm supplying the local market and restaurants with fresh fish.

1.4 Oysters

Oysters are already farmed in South Africa especially in places like Knysna which are famous for their oyster production. Oysters are also farmed in Port Elizabeth but on a smaller scale.

With all the estuaries along the BCM coast there are many opportunities to erect such farms that could benefit the local communities. Care must be taken to ensure that all the environmental aspects of such a farm are taken into account otherwise this could destroy these estuaries.

19. Other opportunities

There are many other opportunities that exist in aquaculture that could be researched and developed to assist the development of the local rural economy similarly to the Taiwanese such as:

- Fresh water crayfish
- Different types of prawn
- Crabs
- Muscles
- Ornamental fish
- Etc.

20. Organic farming

There is a big market in first world countries for organically produced products. These are products that are produced using natural fertilizers and insecticides. BCM has a particular advantage in this regard as the authorities are considering opening up an air bridge between South Africa and Poland. The air bridge in South Africa is to start in East London, Port Elizabeth and Durban to Johannesburg where products will be flown out to Poland.

The only drawback to organic farming at present is that the different countries' requirements relating to organic farming are different. So in order to enter into this market, specific crops will have to be organically produced under specific growing conditions for specific international markets. Organic vegetables and fruit like strawberries are very sought after in markets like Germany, Holland, England, etc.

21. Game farming

Many people have mentioned the possibilities of game farming in BCM. However, the high potential of commercial farm land in the BCM together with the small size of the farms does not present many suitable options for game farming which require extensive areas of farm land. There is the opportunity that some farmers have taken where they have enclosed relatively small pieces of farmland on which they farm with game. Most of these farmers do this as a side line and not as their main source of income.

These farms are too small for this type of venture as in breeding takes place very rapidly unless it is not very well managed. Another problem with game farming in the BCM is the parasite and tick problem that occurs in the livestock industry. As in commercial livestock industry animals can be dipped but game is very difficult to dip and thus become threatened with disease.

Game that is kept on a farm for wildlife tourism in itself is not profitable. The tourist industry is very seasonal and tourists paying money to come and view a couple of different species of wild animals by themselves is not very profitable. Most of these ventures that have started in BCM and the surrounding areas make their money from the Restaurants that they have on these farms and the wildlife is an added attraction to get people to visit the restaurants. All of these types of farms need to have an added attraction such as a touch farm where people can play or touch baby hand reared wild animals or other attractions where animals are kept in confined spaces more like a zoo where people can get close to them.

Setting up game farms in the community areas would be a problem as the game would be competing with the community cattle for grazing. As the community livestock play an important cultural role in community life it would not be easy for the community to get rid of their livestock and replace it with game.

22. Fruit and Vegetable Markets

A brief scanning of local markets for vegetable and fruit suggest that there is an opportunity in three categories of markets namely: Private Sector in the form of supermarkets; grocery stores; vegetable shops, restaurants, hotels, etc, secondly, Public Institutions in the form of hospitals; prisons; boarding schools and the school feeding scheme and thirdly, the general public and hawkers where direct selling could be done.

The Eastern Cape Government has taken a decision that all the Departments will prioritise their procurement from emerging cooperatives. This is a huge captive market if the cooperatives can supply.

The markets mentioned above would buy more from local suppliers if they could source vegetables "in season" of the right quality, packed properly and they are keen to rely upon serious suppliers to give them a consistent and reliable supply. Similarly this is the case with Public Sector Markets.

Such markets necessitate that a PACKHOUSE be established to receive vegetables / fruit from growers, grade the product and pack according to a buyer's label. This would facilitate access to such markets if the region grows enough product and suppliers such a PACKHOUSE on a regular and reliable basis.

It is very difficult for a small individual grower to market his product and such a PACKHOUSE could be the answer to a variety of small growers – almost like a co-operative marketing business.

Obviously in all matters quality of product, reliability of supply, properly presented and correctly priced products are the key issues because the Shopkeepers will only add value by way of the margin they take and do not want to repack or reprocess.

The establishment of such a pack house would form part of the functions of the Umqokozo Farmers Support Centre.