Industrial Modernization Centre

LOCAL ASSESSMENT STUDY OF THE

HERBS AND SPICES SECTOR

GENERAL NOTES

Project No:	IMC / PS - 105
Title:	A preliminary study to the preparation of a detailed sectoral development strategy on Herbs and Spices
Section:	Local Assessment
Client:	Industrial Modernization Centre
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Status:	Final

Data supplied to the project team for a number of companies and markets investigated does not meet international standards. Where this is the case, extensive efforts have been made to cross-check and validate the relevance and accuracy of supplied data. PBC cannot accept responsibility for inaccuracies in the data supplied by any other party. The conclusions and recommendations in this report are based on the stated data and assumptions.

Where field investigations have been carried out these have been restricted to a level of detail required to achieve the stated objectives of the work.

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I. EXECUTIVE SUMMARY

The current study has determined the herbs and spices production of Egypt to be around 180 thousand tons of which 34 thousand tons were exported last year (USD 40 million).

The current report also presents the findings of the industry survey undertaken to assess the present performance of the Egyptian herbs and spices industry. The survey involved interviewing 20 local Egyptian herbs and spices professionals to understand the current state of the industry and the key issues affecting its performance. The survey covers topics both domestic and international, including supply chain, customers, regulatory framework, business environment and technology. The survey aims to give a picture of the herbs and spices industry in Egypt and those factors which directly affect it.

The picture that emerges from the survey is one of an industry that is heavily focused on agriculture and basic processing using simple manufacturing and/or converting technologies. Herbs and spices sold locally and exported are not branded and often sold in bulk according to the herb or spice name and not a “brand”.

The industry if facing continual price wars among producers and exporters and accordingly, is continuing to suffer reduction in margins and profits. Other markets are now arising and are posing even more threats to Egypt’s capability to export herbs and spices.

A number of key issues are consistently raised during the survey interviews. These issues include farming problems, modest product development efforts, access to funding, and lack of market data.

As an overall conclusion of this survey, a full sector study is necessary to be conducted covering herbs and spices and also taking into consideration the organic sector, and benchmarks Egypt with a number of countries who have recently outperformed Egypt. This sector study is necessary to identify sector competitiveness drivers much more clearly to allow for the practical and effective development planning of the sector.

II. ASSESSMENT METHODOLOGY

Objective

The objective of this survey is to gain a good understanding of the current state of the Egyptian herbs and spices industry.

Methodology

In order to build a clear and structured understanding of the Egyptian herbs and spices industry, it is necessary to:

- Define the product groups to be included
- Develop a target interview list that covers all the product groups and also looks at the suppliers, buyers, and other participants in the value chain
- Design a questionnaire that is compatible with the framework of the methodology but gives enough flexibility to uncover the more subtle issues.

The advantages of this approach:

- Builds on consistent, international classifications
- Recognizes particular characteristics of the Egyptian market
- Allows for comparison with industry reports and conduct a meaningful SWOT analysis.

Questionnaire Design

The aim of the interview process is to highlight the key issues affecting the performance of the Egyptian herbs and spices industry. The interview questionnaire is designed to cover all the areas of the value chain as outlined in the survey scope, from suppliers/inputs to buyers/outputs. It also covers business environment, regulatory framework and international competition.

The interview questionnaire is designed to capture a high level of detail including as much information as is available. This framework enables data to be captured for use in later stages when carrying out the SWOT analysis exercise.

Number of people/companies interviewed: 20

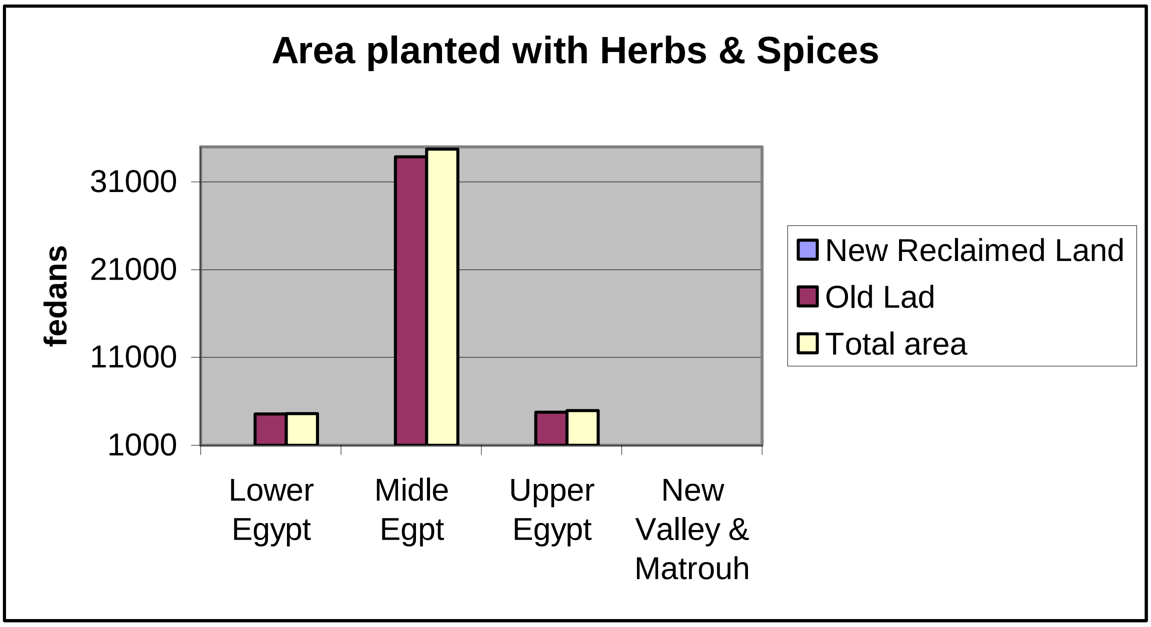
Ahmed Rashad	Agriculture Manager	Sekam	Organic herbs
Amr Fares	Managing Director	Green Land Industries	Dried onions
Sherifa Rashad	Vice President	Fakhry & Co.	Organic council
Hosam Shalaby	Managing Director	Arcotrade	Herbs & spices
Eshida members	10 members		
Dr. Ibrahime Shalaby	Ministry of Agriculture		
Agriculture export	Sherif Rashed		

council			
Hassan Alam	Managing Director	Tawabel Abu Ali	Spices
Sherife shindidi	Owner	Shindidi trading	Herbs & spice trading
Dr Ahmed Abdel Raouf	Agricultural Expert	FAO	
Advanced Food Industries	Mohamed Salem	Manager	Herbs & spice trading

III. LOCAL ASSESSMENT FINDINGS

III.1. The Herbs and Spices Industry in Egypt

Egypt has been a producer and exporter of herbs and spices for many years. Total annual production is estimated to be around 176[1] thousand tons. Around 78% of Egypt's production (43 thousand fedans) comes from the southern governorates, Giza, Benisuef, Menia and Fayoum.
The rest is distributed almost evenly between Lower Egypt and middle Egypt with 10% roughly of the total area for each. This is all considered "old land", new reclaimed land however has not been significantly developed where only 1.5 thousand fedans have been planted, which is less than 1% of the total area.



Source: AEC, table 29 Area, yield and production of aromatic & medical plants, 2003

[1] Ministry of Agriculture, Agriculture export council, Extension of export promotion program report, 2005

III.2. Range of products:

Egypt produces a large variety of herbs and spices. Herbs and spices can be divided as follows,

III.2.a. Egypt's top thirteen products

Chamomile
Fennel
Anis
Peppermint
Spearmint
Coriander
Caraway
Sage
Marjoram
Basil
Parsley
Carcadeh
Cumin

III.2.b Dehydrated fruits and vegetables

Egypt's main production of dehydrated fruits and vegetables is onions. Almost all local production is exported. Worldwide, there are three methods of drying.

- Sun dried, mainly in less developed countries where the climate permits. Problems with contamination do exist.
- Freeze drying, which is done through freezing and them placing in a hot vacuum. This is the best and most sophisticated way of drying which eliminates any contamination possibilities. This technology however is not available in Egypt.
- Dehydrating, through spraying of hot air. This is the most widely used in Egypt.

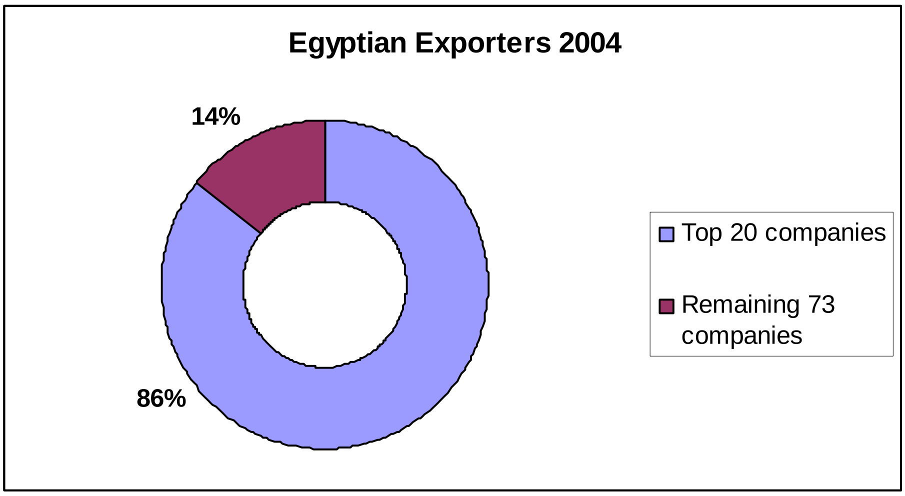
There are roughly nine companies operating in dehydrating vegetables in Egypt. Out of the one million tons of onions produced, roughly 250 thousand tons are directed to the dehydrating industry. This equates to around 25 thousand tons of exports of dehydrated onions (Around $ 36 million).

III.3. Market Size

There have been several conflicting figures with regards to market size. It is estimated that Egypt produces around 176 thousand tons a year. In trying to reach a more accurate figure, we will divide the market into exports and local production.

In 2004, 93 companies exported herbs and spices to foreign countries. Of theses companies only a handful produce for the local market as well. But the most common scenario is that there are specialized producers for supplying the local market and others specialize in the export business.

In 2004 Egypt exported 33.7 thousand tons (around $40 million) in comparison to 22.8 thousand tons in 2001[2]. It is worth noting that the top 10 companies were responsible for 80% of the total exports and the remaining 75% were responsible for only 20% of exports[3]. It is alleged that some of those 20% are responsible for the price wars that are squeezing the margins. Some of those traders work once and go out of the market completely but after doing damage which is hard to repair. The price wars however are not the only problem they cause but the fraud and cheating that takes place is even a bigger problem. Often such irresponsible traders ship product below standard and claim that it is for example grade A while in fact it is grade D. This causes a very bad reputation for Egypt and underlined loss of business for other hard working exporters is huge.



Source: export development council. Subsidies for 2004

For the same year local production was roughly 127 thousand tons. The number of local producers however is very difficult to tell because many of them are not registered anywhere. In principle, a figure of 80 has been estimated. This point needs to be further investigated to reach a more accurate figure.

Type of ownership:

Players in this market are divided as follows:

A. Farmers:

Fragmented ownership, 20 fedans is the maximum you find, mostly squeezed between high cost of rent (around 3000/year per fedan), and depressed prices they sell at. Typically these small farmers have bad agriculture practices which cause a lot of problems regarding contamination of the product.

B. Farm owners/exporters:

Another form of ownership is educated farmers who have access to foreign importers and therefore export directly the product from their land (after drying) and buy more from other farmers /traders.

[2] Ministry of Agriculture, Agriculture export council, Extension of export promotion program report, 2005
[3] Export development fund, 2003

C. Traders /suppliers:
These traders collect the production from different small farmers. They separate them according to quality and sell them to exporters or local traders. There are over 300 of such suppliers, however only a few of them work according to proper business ethics.

D. Factory owners/exporters
This category is responsible for the bulk of the production/exports. Typically they have inherited land on which the father had built a small production plant and they managed to grow the business with more focus on the exports and adding value to the product rather than growing the plants on their own land. Most of them have opted to outsource the agriculture arm of the business. In their factories they sift, cut prepare and package the products according to the specs of the importer. They widely face the problem of contamination.

On the whole, the industry is very fragmented due to the nature of the land ownership and that it is typically family business and ownership over the years.

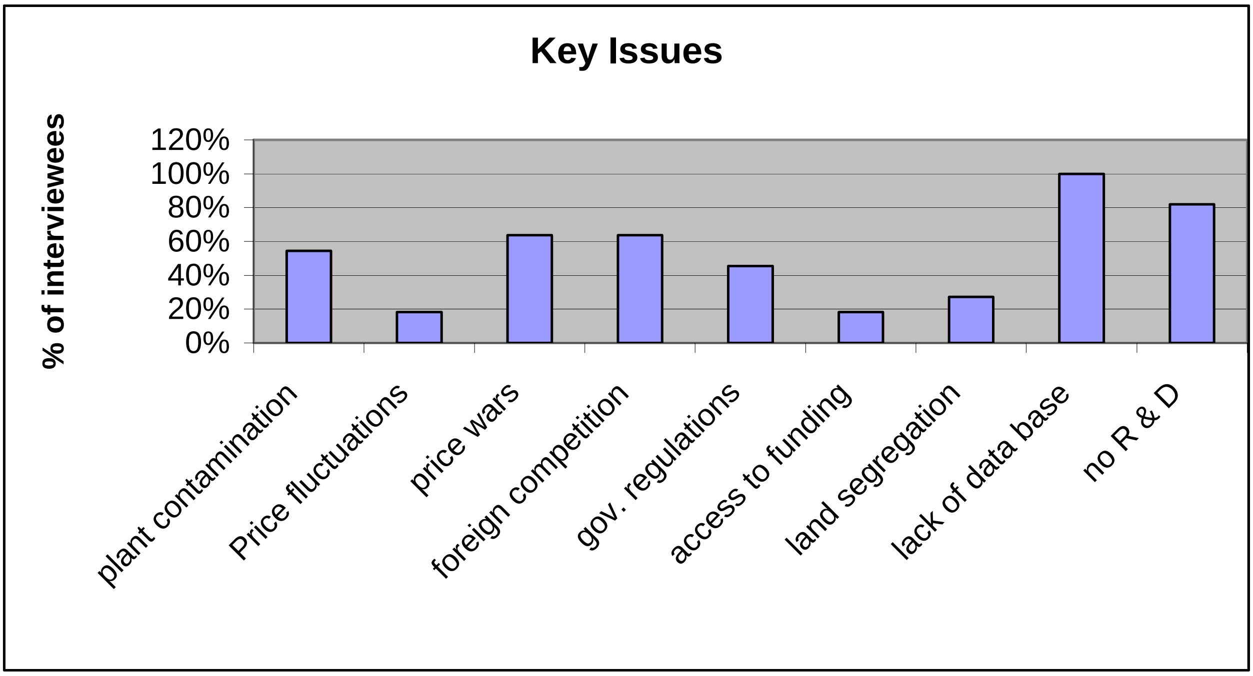
III.4. Key Issues

There are a number of common issues widely agreed on. The top nine most common concerns from the interviewees were:

1. **Plant contamination**: this problem is related to poor agricultural practices at the farmer level which causes the plant to become contaminated either with pesticides or micro biological matters. This problem especially faces herbs and spice exports and hence relatively the low percentage score. However amongst exporters the percentage was as high as 100%. Producers for the local market do not have to deal with this problem because there are no rules governing such issues, although it can cause serious illnesses for humans.
2. **Price fluctuations**: this concerned more the dehydrated fruits and vegetables where the price of the crops fluctuates significantly from one year to another.
3. **Price wars:** a problem facing mostly exporters. The issue arises when some local traders with no experience or capabilities for dealing with international clients, considerably reduces prices just to get a certain deal. Typically the foreign importer would rarely use them but rather use their quotations to squeeze the reputable producers' prices. Not only do they reduce the price but they also spoil the reputation for other honest exporters because in many cases they export poor quality and grades lower than they would have agreed on! As a result Egypt has a poor reputation of mistrust and has put foreign importers in a position where always to mistrust what ever comes from Egypt.
4. **Competition from abroad:** India, China, Morocco, Pakistan, Romania, Australia and Canada are posing serious threats to the local industry. Although some of the Egyptian products are irreplaceable to a certain degree, but as we mentioned earlier demand is not very elastic. Importers will resource to other countries when necessary to meet their quality and cost targets. These places are able to produce cheaper and with higher yields than Egypt and therefore have become an issue for consideration.
5. **Government regulations:** such as restrictions on importation of seeds, forcing exports to analyze there products in the government lab before getting export permission.
6. **Access to funds:** Although this is a labor intensive industry and although the way it is run in Egypt is not a high cost one, and it is mostly small family run business highly fragmented, some reports highlight that producers had problems raising money. However, this is not an industry related issue. It is a problem with the banking system in general. Due to the recent complications that the banks went through, they have imposed very tough measure and have made it very difficult for businesses to approach them.
7. **Land fragmentation**: not only is the price of agricultural rents amongst the highest in the world but it is one of the most fragmented in the world. This fragmentation of ownership does not allow for economies of scale. This also causes significant fluctuations in the supply which makes it difficult to plan and

have proper export commitments. In case of organic, this causes huge problems with pesticides contaminations from neighboring non-organic farms.

8. **Lack of database**: this was the most popular issue earning 100% of the votes. No producer, farmer, or retailer or exporter knows their market share, the actual size of the market, where they stand with regards to their competition, etc. this is a problem facing many other industries in Egypt. It becomes extremely difficult to plan one’s production, expansions or even downsizing.
9. **No proper research and development**: producers feel very strongly about this point. It is alleged that the seeds which are being used are old and week with relatively low yields. There have been no innovations either on the way of growing or on the type of seeds or even importing highly demanded products that can be produced here.
10. **Increasing tighter international regulations**: a greater challenge facing the industry is the increasingly enforced regulations for herbs and spices importation in Europe in particular. For example the traceability requirements of the European Good Agricultural Practices regulation are currently impossible to implement. This regulation is required for presentation by the manufacturer/exporter but must be implemented by the farmer.



IV. PROBLEMS

IV.A. Plant Contamination:

IV.A.1. Micro-biological

The biggest problem which needs to be addressed with great priority is the micro-biological contamination issue. This problem as previously mentioned is triggered by bad farming practices and poor hygiene. No proper toilet facilities are available for workers at the field, especially at harvest time. Many of these workers are young children who relief themselves in the field leaving it open for e-coli bacteria to flourish. Severs cases of e-coli contamination can cause human blindness.

The other bad practice is allowing the animals and chicken to run in the fields producing all kinds of germs and waste. This is a major cause of salmonella contamination. Severe cases of salmonella contamination could cause human death.

The only long term solution to this problem is by investing a great deal of resources into teaching the farmers about hygiene practices. This is obviously a long term plan and will take some time to achieve even if we were to start right away.

The immediate solution to this problem is to establish a serialization plant in Egypt. At the moment, there are two methods of removing contaminated products.

- By radiation, this is currently done in Egypt through gamma rays available with the army facilities. This method is only accepted in USA. The European market refuses to accept this method.
- The other method is through sterilizing. This technology is not yet available in Egypt. The products are sent to Turkey (which is the nearest sterilizing plant) where it gets sterilizes, repacked and sent to the importer in Europe. Not only is this procedure costly (an additional 40% to the cost Euro 350/ton) and time consuming, but it deteriorates the quality of the plant. The natural color of the product changes and the oil content in the plant is reduced by 30%.

This problem however is on its way to being solved. A LE15 million is being invested in a new sterilizing facility to be completed by December 2006. The project is jointly financed by the ministry of agriculture (which is providing the building, the USAID providing the hardware and the IMC providing the software. As previously mentioned this is a short term solution. For Egypt to compete in the international market, this problem has to be eliminated from the start.

IV.A.2. Pesticides

This is another serious form of contamination. The problem stems again from bad farming habits. Farmers have gotten used to blindly spraying pesticides without attention to; neither the appropriate amounts nor types. This problem is often detected at the local lab. Some exporters, however, go ahead with shipping the product despite contamination. As a result the problem is detected in the market they are exporting to and either gets shipped back at the expense of the exporter or gets sterilized in Europe also at his expense.

The government has already taken some positive measures in this direction by banning most internationally banned pesticides. Further steps need to be taken to ensure total elimination of this problem.

IV.A.3. Drying

This is an essential stage; the plant has to go through in the preparation for exports. In Egypt, this is done through several ways. Unfortunately none of them is up to the international standards, which is potentially going to cause many problems for Egyptian exporters.

- Flattening out on the road. This is the most shockingly unhygienic way for drying. By this method, the farmers lay out the fresh plants on the asphalt road hoping cars will pass over it to facilitate the drying procedures!!! This method has to be totally band by the government.
- Drying on a concrete floor amongst the farm or on roof of buildings. This method is open for all sorts of contamination and pollution.
- Some more sophisticated farmers put a fence around the concrete floor.
- Moving a stem further, other farmers place the plant in open containers sometimes stacked on top of each other.
- The most sophisticated way is using specially designed ovens.

In short, this whole process needs to be revisited and regulated whether to be able to compete in the international markets or to provide local consumers with uncontaminated products.

IV.B. Prices

Profit margins exporters are being more and more squeezed. The new rules and regulations constantly being introduced by the European and American importers are the reason behind that. More quality specifications related to impurities are being imposed which are leading to the increase in costs which in turn are reducing the competitiveness of Egypt. Some of these regulations have been mentioned before. The most recent regulation is “traceability”. The exporter must be able to provide the history of the product he is supplying. This means that he should be able to provide data as to where the product came from, which governorate, which district, which farm, and which area within the farm the product was produced from. This farm will need to accredit. Exporter will also be required to keep prices records of his suppliers which also have to be accredited. These regulations are not fully implemented yet but when they are, Egypt will have a big problem competing.

IV.C. Lack of standardization and quality control

One of Egypt's major problems is the lack of effective rules and regulations governing exports or products that are locally consumed. With regards to export regulation, the only requirement prior to export is to receive a certificate from the ministry of agriculture lab, (the only lab in Egypt). This certificate only gives analysis of the level of pesticides and microbiological content in the sample. The sample is drawn by a committee which goes to the exporter's warehouse. This naturally opens the door for corruption. Nevertheless, if we assume the samples were drawn correctly, the result of the analysis is nothing but informative. No matter how high the contamination level is, no one has the right to stop the shipment from being exported.

The other problem is that there are no guidelines and regulations for producers to work with, leaving ample room for fraud. The definitions of grades need to be developed and implemented. Exporters need to be accredited. In conclusion, there are many ways to regulate the industry none of which is being adopted.

IV.D. Labs

There is one lab in Egypt belonging to the ministry of Agriculture. Originally it was optional for exports to send samples to be analyzed. The logical procedure for professional exporter was to analyze each batch before preparing for export rather than be unpleasantly surprised at the end. The cost of per sample is LE 200 (LE175 is paid by the export development fund). It is alleged that the lab was encoring losses and therefore the regulation changed and forced exporters to do the testing in order to receive the certificate without which they may not export. The lab is not accredited, the results are not considered abroad, they do their own tests regardless of the result of this lab. It is as previously mentioned the only lab in Egypt and often takes quite some time to get results back. This leads us to ask question about the necessity of this costly and time consuming procedure.

More labs which are internationally accredited are needed to ease and speed up the procedure.

IV.E. Lack of new products

Egypt has not been able to introduce newer and more in demand products. They are still planting and exporting the same traditional products for many years. This is primarily due to lack of proper research and development facilities. Another cause to this problem is the lengthy regulations placed on the importation of seeds. In order to import a certain seed the ministry of agriculture has to examine it for three full years before it can give an approval, by which time it might not even still be in demand. Curley parsley for example is highly in demand in the American market. Egypt has not been able to produce it due to restrictions on importation of seeds. There are many more such examples. This is not to say all regulations must be removed. Some necessary ones need to remain in place but the destructive procedures need to be eliminated.

IV.F. Marketing

One of the key parts of any business and especially export business yet one of the most neglected. It can be argued that marketing internationally is rather a big expense and difficult for small business to support. This is a fair comment; however, there are ways around it such as group marketing efforts. The biggest problem however is the negative marketing that happens. Several exporters have been complaining that from other less ethical ones, that they would call up the same client and undermine the others quality, price and credibility. Such negative marketing is very harmful to the whole industry and in fact to the whole country. A possible solution to this issue is that all the NGO's involved in the industry get together and organize information seminars strongly condemning such actions and pointing out the negative impact it has on all exporters including the one who is doing the harm. If the problem persists maybe issue letters stating that the company which continues to engage in such harmful activities will risk being de-listed from all governing bodies involved.

The above mentioned efforts will avoid the negative impact. However, most importantly is focusing on marketing efforts. The first start which many producers have already recognized is having a website. But it is equally important to have a professional web site with no spelling mistakes and proper foreign language basics, not mentioning a professional and user friendly design.

Secondly, group efforts.

V. ORGANIC FARMING IN EGYPT

Organic farming first came about due to the increasing threat on human health from excessive use of pesticides. With the increasing awareness and health conciseness, consumers started looking for a better option. Organic products became very popular and world demand is continuously on the rise. It is worth mentioning that it was organic farming that opened people's eyes in Egypt to the harm excessive use of pesticides. This triggered a few important laws and regulations banning certain types of pesticides and putting regulations to the use of others. There is however several issues related to organic farming in Egypt. Assuming the farmers are honest and do the best they can to ensure proper organic farming, there are several external issues outside the farmer's control which negatively impact the industry. Following are a few of them;

- Due to the segregation of land ownership and the lack of closed boarders between neighbors it is very difficult to control the effect of neighboring farms using pesticides. One farm can be fully organic yet the plants have pesticides residual drawn from the soil of the neighboring farm. One company resorted to offer spraying the neighboring farms from all boarders with organically approved pest controls. This is naturally a costly procedure but unfortunately was unavoidable.
- Irrigation water is sometimes saturated with pesticides when it was used to irrigate a conventional farm which is than adsorbed by the plant.
- Large parts of soil in Egypt have been contaminated by the previous use of DDT. This chemical is said that it can remain in the soil for over 30 years before it is completely washed out. This is also transferred to the plant thus causing an unacceptable level of pesticides.
- The lack of qualified and accredited labs to perform proper analysis on the level of pesticides in the plant. The current existing labs do not have the capabilities to detect very low levels of pesticides which cause the consignment to be rejected as an organic product. Exporters are forced to send samples to be analyzed abroad which costs Euro 200 per sample. This is surly a costly and time consuming process that needs to be urgently addressed.
- The lack of research and development for organic pest control systems as a substitute for conventional pesticides.
- The availability of organic seeds. According to the laws of organic farming farmers are allowed to attain exemptions for not being able to source organic seeds. Such exemptions cannot go on forever. Enough organic seeds have to become available soon in order to be able to grow the organic market. And thus unnecessary restrictions on the importations of organic seeds must be lifted.

Organic farming in Egypt and all over the world has helped upgrade conventional farming. There will continue to be both methods in the future but certainly the gap with health concerns are going to decrease. Organic farming in Egypt has great potential but unfortunately due to its limited value at the moment there is not enough attention being directed to this field.

VI. GOVERNING BODIES

There are several governing bodies and NGO's in place to assist farmers and exporters of agriculture products. The most common and widely known ones are the following

- Government bodies
    - Agriculture Export Council (AEC), the council is responsible for providing members with information needed to assist them in the export process. On regular basis the council provides information on shipping issues, international markets etc. the council was founded by a special law from the government and has a significant weight and respect. Any issues related to agricultural exports are usually resolved through the council.
    - General Union for exporters and producers of agricultural products.
    - Chamber of foods industries; herbs and spices producers and exporters fall under the umbrella of this chamber. The chamber's role is to facilitate and resolve any issues related to herbs and spice industry. Although most of the producers are members in the chamber they have not fully utilized the potential assistance the chamber could offer.
    - Export development fund. The export development plan has proved to be most successful and has been a tremendous aid to herbs and spices exporters. It has given them the push needed to boost and affirm Egypt's name in the international markets. The 8% of total value of export grant has been extended for a second period of three years ending 2007.

- NGO
    - Eshida; is the only body that is formed by the stake holders themselves and thus is the most efficient and effective. All 26 members are committed to attend their weekly meeting with no obligations from anywhere. Eshida has been the initiator for several projects that are or will be beneficial to the entire sector such as the sterilizing plant which is currently being built.

In order for all the governing bodies to become more useful and effective it is necessary for them to coordinate the rolls of each one. This way they can avoid double work and ensure each one carries out its responsibility more efficiently.

VII. FOCUS PLANTS FOR EGYPT[4]

In this study we will focus on seven of the most common plants that Egypt produce. They have been chosen mainly because Egypt has a competitive edge in producing them. And if Egyptian producers are not careful and take the necessary measures in the right direction it can easily lose its market share as has happened in many cases before. Following are the plants which will be the focus of the study;

1. Coriander
2. Marjoram
3. Chamomile
4. Basil
5. Fennel
6. Peppermint / spearmint
7. Onions

Some of the above mentioned plants are better grown in Egypt because of its climate. Others, because they are labor intensive, while others simply because Egypt has been specializing in for many years. Whatever the reason may be, they all seem to have one common problem which is lack of proper rules and regulations to guide producers and exporters. Exporters do not have regulations they have to abide by and rules to work under. It is alleged that some unknown exporters go to the shipping companies and find out where the big exporters are shipping to and trying to contact the importers and offering them unreasonably low prices. Naturally the importer in most cases refuses to deal with them but uses the offer as a bargaining tool to reduce the price. This and previously discussed issues such as fraud call for immediate actions to regulate the export industry in way so as not to become an obstacle but rather a helping hand to all parties involved.

VII.1. Coriander

Background:

Egyptian coriander is world renowned for its superior quality, light color and exclusive flavor. Egyptian climate is ideal for this plant. It is mainly grown in the south of Egypt, Menia and neighboring areas. The weather is ideal for drying. What can take a few days to dry in other areas can dry in a few hours in the south. This fast drying process helps the plant maintain it green color.

Egyptian coriander seeds are famous for its light color. Coriander is grown in many places around the world but the lightest color comes from Egypt. This is especially useful for specific industries such as white sausages widely produced in Germany and Scandinavian countries.

[4] All information has been provided by Eshida, Mr. Hosam Shalaby, board member and Mr. Amr Fares.

Price:
Egyptian coriander is more expensive than other countries. Importers are happy to pay a higher price for the premium in quality. The price in Egypt ranges between $750/ton and $1000/ton depending on the specifications and the level of impurities. The standard 3% impurities are sold for $750/ton. Coriander from other countries averages between $400/ton to a maximum of $700/ton. It is apparent that Egypt will not be able to compete in price and therefore must always maintain the superior quality in order to keep its market share. However demand is not endlessly elastic. If the price gap between Egyptian and non Egyptian coriander is to further increase, importers will divert to the cheaper product.

Production:
Egypt produces roughly around 8000 thousand tons of coriander per year. Around 7000 tons are being exported and the remaining local consumption. Main exports around 50% goes to Germany and Scandinavian countries, around 40% heads off to the Arab world and the remaining 10% between Japan and the rest of the world.

Competition:
Several countries have recently started growing coriander for export purposes. Canada and Australia are the newest comers to the market. Both have large plots of land. Their planting process is fully automated which helps in keeping costs to a minimum. Canada has easy access to the American market which is one of the largest consumers while Australia caters for the other biggest market which is Asia. Morocco is another competitor which deliberately keeps its prices below the Egyptian in order to gain market share. So long as Egypt maintains the premium quality of the seeds Egypt will be able to continue to compete in the market. However, Egypt's focus should be diverted into the production of cilantro (the coriander leaves) where Egypt's edge is in the labor factor which is highly needed in the handling of the leaves, unlike the seeds which has become a mass production industry.

Future:
The expansion of coriander planting economy is highly recommended. The areas around Menia are the best climate for coriander growing. Expansions in the desert areas must be seriously considered if Egypt was to maintain and grow its market share. Several studies and experiments have been done around that area and have produced very good results. There are problems of water supply which also need to be considered. Another area which was tested and produced wonderful results is Sharq el Owinat. However problems such as locust invasions, which the area is a common route for must be looked into. It is recommended to study the seriousness of this issue and whether it is economical to put nets and other methods of preventing locust from destroying the crops. Production results in this area have proven a huge success. If such issues were resolved, it would become the future for mass production of coriander.

VII.2. Marjoram

Background:

Egypt has a considerable edge in the growing and processing of Marjoram. Competition is quite minimal and specs and standards are set according to Egyptian standards. The plant is originally of European origin and some eastern European countries are still large growers. But the Egyptian marjoram has adapted to the local climate and has become one of Egypt's key spices for exports

Price:

Egyptian marjoram averages from \$1200 to \$2000/ton. Where Egypt is able to sell one kilo of marjoram for \$2, the eastern European equivalent sells for €6 /kilo. Egyptian price can be increased significantly had it not been for the local competition.

Production:

Egypt produces roughly 2000 tons which are all exported. The processing of marjoram is a fairly tedious process and is quite polluting to the environment. The marjoram plan has a rough surface which lets the leaves carry large amounts of dust. In processing, dust is let into the air which causes pollution and harms the environment. This might be one of the reasons European countries have chosen to neglect growing the plant.

Competition:

There is almost no competition in the marjoram from other countries. Is has been and still is the world leader for this spice. Around 10% to of Egypt's exports go to North America, 5% to the Arab countries and around 5% to Far-East and Australia.

Future:

In order for Egypt to maintain its position and for it to be able to keep the price levels or even further increase them, there must be some sort of regulations once again governing the export market. Price wars cause significant drops in prices which can be easily avoided if regulations were in place.

Another threat to Egypt's yield is the mixing up of various origins and types of the plant. In one field you may find several types of seeds which reduce the yield. Measures must be taken to ensure the same type of plant is planted in the field.

VII.3. Chamomile

Background:
Egypt historically had a huge competitive edge in the chamomile growing. Egypt was known for the best hand-picking of the chamomile flower. There used to be trained workers who know how to pick the flowers with a certain stem size (no longer than 1 cm). Naturally this method of hand-picking was and still is most expensive. Unfortunately demand for such hand-picked flowers has reduced significantly and therefore the level of trained labor was reduced as well.

Price:
Egyptian chamomile is the cheapest in the market. Whole flower is sold for $4/kg where as chamomile residual (teabag cut) from Argentina is sold for $4/kg. the Egyptian equivalent is sold for around $1.

Production:
Egyptian exports averages 6000 tons/year wheras local consumption reaches 500 tons of chamomile flowers and it's by products. The most common use for this plant is in the form of teabags. Egypt's yield is considered very high due to hand picking which allows for 3 to 4 picks over the period of 4 months. This advantage disappears with mechanical harvesting.

Competition:
Egypt has an estimated market share of 60%. The next two major competitors are Argentina and Eastern Europe with a market share of around 20% each.
Main importers of Egyptian chamomile are Germany which alone imports more than 30% of Egypt's production. The rest of Europe imports roughly another 30% leaving 40% to be divided amongst the rest of the world.

Future:
World wide demand for this plant is increasing due to the increasing health awareness which presents the medical benefits of this plant. The most common form of use is the teabag and therefore teabag cuts will be in highest demand. however demand for whole hand picked flowers has been reducing. In order for Egypt to remain a key player Egypt must start the process of mechanically harvesting the plant. Currently the plant is delivered as hand picked which means a higher cost to start of with. But due to lack of trained labor the plants arrive in a bad condition with large variations of the stem size. Only 30% of the harvest can be sold as whole flower and the remaining 70% gets sold as teabag cuts after having paid the full price for it.
It is therefore highly recommended to expand the planted areas and transfer them into mechanical harvesting to avoid the high prices which can draw Egypt out of the market.

VII.4. Basil

Background:

Egypt once again dominates the market in the basil trade. Basil is a labor intensive summer plant which needs a lot of post harvesting handling. Egypt grows two types of basil. The local which is characterized by a smaller leaf and slightly stronger flavor. The French which has a bigger leaf and is more rich in oils. They are both sold for the same price and are considered the same quality.

Price:

Egyptian basil is sold for a very competitive price. The American alternative is sold for $6/kg in comparison with $1/kg for the Egyptian alternative.

Production:

Production reached a rough figure of 7000 tons, mostly for the export market.

Competition:

There is hardly any competition for the Egyptian basil. Other countries grow the plant but mainly for domestic consumption.

Future:

With proper regulations like most other cases, Egypt can remain and grow as the world's leader in basil production and exports.

VII.5. Fennel

Background:

Fennel is most widely used by bakeries, medicine companies, confectionaries and spice packers. Germany is the only country which Egyptian fennel is banned from being used in babies anti colic medicine. This is due to it's high content of its active ingredient. It is feared that other countries will follow suite. Indian fennel however is allowed to be used for such medicine.

Price:

Egyptian fennel is sold at an average of $1000 to $1300. the Indian fennel is sold at 15% more.

Production:

Most of Egypt's production is exported. The united states is the biggest importer consuming around 4000 tons of Egyptian fennel/year. The remaining 4000 tons of Egypt's production is distributed amongst the rest of the world.

Competition:

Egypt's biggest competitor is India. Egypt is renowned however for best cleaning of the seeds. Along the years Egyptians have gained experience in this process and have become the best in it. However it is only a matter of time until the Indians learn how to master the trick the fennel trade market is split between Egypt and India. Egypt's share is between 65 to 70% leaving the remaining 35 to 40% for Indian fennel.

Future:
Indian fennel has a lighter color and is in general a better kind than the Egyptian. If Egypt is to succeed in importing the Indian seeds and plant it in Egypt this would immediately boost Egypt's exports. However the tedious restriction on importation of seeds has been hindering this process. Once more proper regulations should be in place to deal with this issue in a constructive manner.

VII.6. Peppermint / Spearmint

Background:
Spearmint and peppermint are very similar in size and shape and a lot of their characteristics. They differ only in their use. Peppermint is only used for in food industries, while spearmint is used to produce menthol which is used in industries such as toothpaste, vicks etc. china is the biggest producer of menthol and supplies most of the world's industries.

Price:
Price of peppermint in general is around 50% to 60% higher than spearmint. Both plants vary widely in price according to specifications and level of pesticides. The whole leaves which by default have to comply with EU regulations for the allowed level of pesticides are sold at $1500. Crushed leaves free from pesticides are sold for $1700 which is the highest price in the market. Crushed leaves complying with EU regulations are sold at $1300. Egypt for the first time this year is able to export peppermint complying with EU regulations.

Competition:
Egypt is one of the largest exporters in the world and offers the cheapest prices. The climate in Egypt allows for this plant to grow all year round which places Egypt in a very good position. Egypt only deals in the leaves. Around 75% of Egypt's exports are spearmint and 25% peppermint. Egypt exports around 1000 tons of both peppermint and spearmint.

Future:
Egypt can continue to dominate the market and grow it, if once more proper regulations were to be put in place to ensure the standard and quality of the exported product. If the issue of mixing up peppermint with spearmint can be resolved at the field level a lot of problems will be avoided.

VII.7. Onions

Background:

Egyptian onions are known for its unique strong aroma. Having dehydrating factories in a country which has such a unique flavor is a large asset which must be fully utilized. Some customers have developed a mix between Egyptian onions and Indian onion to benefit from the strong Egyptian flavor and the cheap Indian prices. Egypt has two crops per year. One starts in mid-December and finishes mid-May. The other starts in April and can be stored fresh up to 9 months. The United States which is the biggest producers of onions worldwide, only harvests one crop per year. Their dehydrating factories operate 90 to 100 days as opposed to 280 days in Egypt.

Price:

In the 1990's, price of Egyptian dehydrated onions reached $2200/ton versus $2600/ton for the American equivalent. Due to the increase of capacities and the devaluation of the Egyptian pound, Egypt was able to reduce the price to $1550 in 2005. The cheaper onions come from India which sells for $1300/ton. American onions are sold for a significantly higher price reaching $2200 and so are the French onions which are traded at $1900.

Production:

Production of onions varies from year to year worldwide according to the crops. This naturally impacts the dehydrating industry on volumes and prices. On average, Egypt produces 1 million tons of onions per year. Local consumption averages around 500 thousand tons/year. The remaining tons are split between fresh and dehydrated onion exports. Egypt's exports in dehydrated onions reached 25 thousand tons which is equivalent to 250 thousand tons of fresh onions. The shelf life of dehydrated onions is very high which allows producers to store it up to two years and then resell the stock when market conditions are more favorable to them.

Competition:

In the 70s Egypt was among the three major players in the world. The United States, Egypt and Hungary were the market leaders. In the mid 80s, India was able to crack into the market by grabbing market share from Egypt. At the time, Egypt was producing 14,000 tons. This figure was reduced to 8000 tons by the end of 1990s even though international demand started to grow. But USA and India were increasing their market share. This was due to many factors including the high value of the Egyptian pound at that time and the lack of efficient local production facilities. By the late 90s, this picture started to change. The Egyptian pound was devalued and investments started pouring in this field. Mean while cost of growing onion in hungry was on the rise and it became economically impossible for them to continue planting it. Hungary's share went to Egypt. Now Egypt's production reached 25000 tons.

Future:
According to ALAB, world demand for dehydrated onions is on the rise. In fact, there is a gap between supply and demand of about 20000 tons. This places Egypt in a very good position. With proper planning, Egypt can easily increase its exports by this amount.
Recently there have been talks that Israeli investors want to capitalize on the QUIZ agreement between Egypt and Israel which promotes Israeli-Egyptian cooperation. Currently, Egyptian dehydrated onions have to endure a 33% protection duty on its imports to the US. Using the QUIZ agreement means that if onions grown and dehydrated in Egypt had as little as 13% Israeli component, this tariff will be completely removed thus opening huge doors for Egyptian-Israeli exporters.