

SEED INDUSTRY IN EGYPT

SHORT-TERM CONSULTANCY

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By

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Terms of Reference

The overall task is to conduct a baseline survey on the seed sector of Egypt in general and specifically in the following areas:

- Standard for seed certification.
- Variety evaluation, release and registration.
- Phytosanitary measures.
- Plant Variety Protection (Intellectual Property Rights).
- Seed import/export documentation and procedures.

Abbreviations and Acronyms

AFSTA	The African Seed Trade Association
AOSCA	Association of Official Seed Certifying Agencies
APSA	Asia Pacific Seed Association
ARC	Agricultural Research Centre
BC	Before Christmas
CAPQ	Central Administration of Plant Quarantine
CASC	Central Administration for Seed Testing and Certification
CASP	Central Administration for Seed Production
COMESA	Common Market for Eastern and Southern Africa
DUS	Distinctness, Uniformity and Stability
ESAS	Egyptian Seed Association
EU	European Union
GDP	Gross Domestic Product
IPPC	International Plant Protection Convention
IPRs	Intellectual Property Rights
ISTA	International Seed Testing Association
LE	Egyptian Pound
MALR	Ministry of Agriculture and Land Reclamation
OECD	Organization for Economic Cooperation and Development
PBDAC	Principal Bank for Development and Agricultural Credit
PVP	Plant Variety Protection
UPOV	International Union for Protection of New Varieties of Plants
VCU	Value of Cultivation and Use
WANA	West Asia and North Africa
WTO	World Trade Organization

SEED INDUSTRY IN EGYPT

1- OVERVIEW

Egypt is located in Northern Africa, bordering the Mediterranean Sea, between Libya and the Gaza Strip, and the Red Sea north of Sudan, and includes the Asian Sinai Peninsula. Egypt is the most populous country in the Arab world and the second-most populous on the African Continent. Nearly all of the country's 79 million people live in Cairo and Alexandria; elsewhere on the banks of the Nile; in the Nile delta, which fans out north of Cairo; and along the Suez Canal. These regions are among the world's most densely populated, containing an average of over 3,820 persons per square mile (1,540 per sq km), as compared to 181 persons per sq mi for the country as a whole.

Egypt borders the Mediterranean Sea to the north, the Gaza Strip and Israel to the northeast, the Red Sea to the east, Sudan to the south, and Libya to the west.

The great majority of its estimated 82 million live near the banks of the Nile River, in an area of about 40,000 sq km (15,000 sq m), where the only arable agricultural land is found. The large areas of the Sahara Desert are sparsely inhabited. About half of Egypt's residents live in urban areas, with the majority spread across the densely populated centres of greater Cairo, Alexandria, and other major cities in the Nile Delta.

Egypt is famous for its ancient civilisation and some of the world's most famous monuments, including the Giza pyramid complex and its Great Sphinx. The southern city of Luxor contains numerous ancient artefacts, such as the Karnak Temple and the Valley of the Kings. Egypt is widely regarded as an important political and cultural nation of the Middle East.

Egypt, sometimes referred to as the 'Motherland of the World' and the 'Land of Civilisations,' is famous throughout the world for its ancient civilisation and 7,000-year history along the Nile River. It is an important political and cultural centre of the Middle East.

2- COUNTRY, POLITICAL, AND ECONOMIC PROFILE

2-1 Geography

At 1,001,450 sq km (386,660 sq m), Egypt is the world's thirty-eighth-largest country. In terms of land area, it is approximately the same size as all of Central America, twice the size of France, four times the size of the United Kingdom, and equals the combined size of the U.S. states of Texas and California. Nevertheless, due to the aridity of Egypt's climate,

population centres are concentrated along the narrow Nile Valley and Delta, meaning that approximately 99 per cent of the population uses only about 5.5 per cent of the total land area. Alexandria is Egypt's second largest city. Egypt is bordered by Libya to the west, Sudan to the south, and by the Gaza Strip and Israel to the east. Egypt's important role in geopolitics stems from its strategic position. Its coast line is along the Mediterranean Sea and the Red Sea; a transcontinental nation, it possesses a land bridge (the Isthmus of Suez) between Africa and Asia, which in turn is traversed by a navigable waterway (the Suez Canal) that connects the Mediterranean Sea with the Indian Ocean via the Red Sea.

To summarise the data:

Area: 1,001,450 sq km (386,000 sq mi); approximately equal to Texas and New Mexico combined.

Cities: Capital—Cairo (pop. estimated at 20 million).

Other cities: Alexandria (6 million), Aswan, Asyut, Port Said, Suez, Ismailia, Mansoura.

Terrain: Desert, except Nile valley and delta.

Climate: Dry, hot summers; moderate winters.

2-2 People

Nationality: Egyptian(s).

Population (July 2007 est.): 80,335,036.

Annual growth rate (2007 est.): 1.72 per cent.

Ethnic groups: Egyptian, Bedouin Arab, Nubian.

Religions: Muslim 95 per cent,

Languages: Arabic (official), English, French.

Education: Years compulsory—ages six to fifteen;

Health Infant mortality rate (2006 est.): 31.33 deaths/1,000 live births.

Life expectancy (2006 estimate): Seventy-one years.

2-3 Government

Type: Republic.

Independence: 1922.

Constitution: 1971.

Branches: Executive—President, Prime Minister, Cabinet; Legislative—People's Assembly (444 elected and ten presidentially appointed members) and Shura (consultative) Council (176 elected members, eighty-eight presidentially appointed).

Administrative subdivisions: Twenty-eight governorates.

Principal political parties: National Democratic Party (ruling); Principal opposition parties—New Wafd Party, Liberal Party, National Progressive Unionist Grouping (Tagammau), and Nasserite Party.

Suffrage: Universal at eighteen.

2-4 Economy

GDP (2007 est.): \$118-120 billion.

Annual growth rate (2007 est.): 7.2 per cent.

Per capita GDP (2007 est.): \$5,400.

Natural resources: Petroleum and natural gas, iron ore, phosphates, manganese, limestone, gypsum, talc, asbestos, lead, zinc.

Agriculture: Products—cotton, rice, onions, beans, citrus fruits, wheat, corn, barley, sugar.

2-5 Industry

Types: Food processing, textiles, chemicals, petrochemicals, construction, light manufacturing, iron and steel products, aluminum, cement, military equipment.

Trade (FY 2005): Exports—\$27.4 billion: petroleum, clothing and textiles, cotton, fruits and vegetables, manufactured goods.

Major markets: EU, United States, Middle East, Japan.

Imports: \$40.48 billion—machinery and transport equipment, petroleum products, livestock, food and beverages, paper and wood products, chemicals.

Major suppliers: EU, United States, China.

2-6 Agriculture

Agriculture is a key sector of the Egyptian economy and the central component of the rural economy. Agriculture contributes about 17% of overall GDP and 20% of total exports and foreign exchange earnings. Industries related to agriculture, such as processing and marketing and those that supply inputs account for another 20% of GDP and a substantial portion of the labor force. An increasing share of Egyptian agriculture is devoted to export production.

The ancient Egyptian civilization was based on agriculture and structured farming existed as far back as 10,000 years ago around desert wells and along the Nile river. Almost all 7 million feddans (1 feddan = 0.42 ha) of arable land is irrigated and crop production now comes from the old land. The GoE has plans to expand arable land to 10 million feddans by the year 2020, reclaiming 150,000 feddans of new land per year. In Egypt, about 95% of the average farm holdings are 5 feddans (2.1 ha) or less. At present, agriculture employs 33% of labor force and contributes 20% of GNP. It provides livelihood for the rural population, which produces

half of the food consumed locally and most of the cotton used by the industry. Agriculture is the source of revenue and hard currency to the national economy through export of cotton, fruits, vegetables and seed.

3- HISTORICAL BACKGROUND ON SEED INDUSTRY

The ancient Egyptians recognized seed as a key input for crop production and practiced seed selection and trade as a means to improve crop yield and quality. Manually shaken sieves were used to clean seed, baskets and silos were used to store seed mixed with fine ashes; and some seed was even supplied by specialized farmers as early as 3200 BC.

The Egyptian Seed Industry has begun in 1922 when a seed production and distribution unit was established for cotton in the Ministry of Agriculture. Later, activities of this unit were expanded to include seed production of other crops. This (Unit) was progressively upgraded to a (Branch) in 1957, a (Directorate) in 1960 and in 1980 to an (Under- Secretariat) i.e the (Central Administration for Seeds affairs).

Similarly, the seed laws were amended in line with the developments of the seed sector. The Seed Law No. 5 (of 1926), enacted to regulate cotton seed production and trade, was followed by Law No. 123 (of 1946) to promote seed production of major field crops. Moreover, Law No. 52 (of 1957) was enacted to regulate seed testing and handling. The Seed Law No. 53 of 1966 is an all-inclusive agricultural act and gave the Ministry of Agriculture the statutory responsibility for the seed sector in Egypt. The seed law is now amended defining the role of MALR and reflecting recent changes in the liberalized seed sector.

Seed has been recognized as an important input in raising agricultural productivity. The MALR is supporting and strengthening the infrastructure for the seed industry. During the last 15 years over LE 200 million was invested in the seed sector. Moreover, the MALR encouraged the participation of the private sector by liberalizing the national seed sector.

At present more than 700 thousand tonnes of seed are used per year which includes 450 thousand tonnes for field crops, 240 thousand tonnes for vegetatively propagated crops and 5,500 tonnes for vegetable crops

4- NATIONAL SEED INDUSTRY POLICY

The main objectives of the national seed industry policy are to encourage and facilitate the establishment of an efficient and effective seed sector with participation of the private investments to enhance agricultural development. The national policy is aimed at the following reforms:

- ✓ Establish an independent agency for testing and release of new varieties.
- ✓ Reduce government investments and support in seed production of self-pollinated crops.
- ✓ Terminate the involvement of the ARC in seed production, processing and marketing.
- ✓ Evaluate pilot schemes to determine conditions for entry of private sector and bring better management and efficiency into the seed sector.
- ✓ Encourage the seed producers union and seed trade association to provide a forum for exchanging views to support the national seed industry.

5- NATIONAL SEED COUNCIL

The NSC was established by Ministerial Decree No. 820 (of 1988), but reconstituted by Decree No. 588 (of 1991) to represent all stakeholders of the seed industry and to advise the Ministry of Agriculture on policies and issues related to the seed sector. The Council is responsible to lead, guide and monitor the reform of the seed sector.

6- SEED CERTIFICATION

The Central Administration for Seed Testing and Certification (CASC) implements seed quality control, certification and law enforcement. It has five general directorates: (1) Seed Measures and Development, (2) Field Inspection, Testing and Retesting, (3) Seed Testing Affairs in the Governorates, (4) Gins and Oil mills; and (5) Seed Certification.

CASC administers seed certification and law enforcement units in all governorates through 22 regional seed certification directorates and three main (Giza, Tanta and Minia)

Seed certification is conducted according to standards established in various decrees: (1) conditions and procedures for licensing seed production (Decree No. 513 of 1994); (2) field standards for seed certification of major crops (Decree No. 1550 of 1994); (3) seed testing rules and standards (Decree No. 90 of 1967); legal tool for organizing seed certification, trade, import, export, processing and storage (Decree No. 38 of 1997) and seed health testing standards for seed-borne diseases (Decree No. 236 of 1997). Above all, Decree No. 368 of 1998 is considered the bible for seed testing and certification in Egypt.

Minimum seed certification standards (Field standards and Seed standards) are annexed (Annex 1)

Seed legislation is under continuous review to meet the developments of the seed industry.

All seed testing stations are well equipped. ISTA procedures and methods are used to ensure reliability, uniformity and efficiency of seed testing. Control plot testing is carried out in

Sakha and Sids to verify seed lots used for further seed multiplication and monitors the efficiency of seed certification (field inspection). CASC charges fees for field inspection, seed testing and for licensing seed producers and traders.

In Egypt, the Association of Official Seed Certifying Agencies (AOSCA) seed certification scheme is followed. There are four classes of seed production, namely; breeder, foundation, registered and certified seed.

7- VARIETY EVALUATION, RELEASE AND REGISTRATION

The Agricultural Research Center (ARC) is a semi-autonomous research institution governed by a board of directors chaired by the Minister of Agriculture. The ARC comprises a well-distributed network of 16 institutes, 8 central laboratories, 10 regional stations and 46 specific research stations, 23 research administrations, 4 research extension and training centers to cover all agro-ecological zones of Egypt. Moreover, research and agricultural experiments stations are distributed throughout six regions, they are: North Delta, Central Delta and Greater Cairo, West Delta, East Delta, Middle Egypt, New Valley and El-Fayoum, and Upper Egypt. ARC staff includes about 6582 researchers holding Ph.D., Master and Bachelor degrees, in different agricultural science branches, in addition to 27.4 thousand technician and administrative employees.

ARC has a primary responsibility for agricultural research, crop improvement and variety testing throughout the country. The main field crop breeding programs are cereals, legumes, fiber crops, oilseed crops, fodder crops, sugar cane and horticultural crops. In addition, the ARC manages breeder and foundation seed production on its own farms totaling 27,000 acres under the supervision of the Horticultural Services Unit. Further more, the National Research Center, and the Agricultural Faculties also have limited crop improvement research. More recently, the private sector started introducing and testing foreign bred varieties. Eight seed production companies are licensed to acquire research stations.

According to Seed Law No. 53 of 1966 and Ministerial Decree No. 935 of 1988, all agricultural and vegetable crop varieties in Egypt should be tested through the MALR variety trial system before approval for seed production, marketing and certification. The Ministerial Decree No. 82 of 1998 and its amendments (Ministerial Decree No. 1205 of 2006 and Ministerial Decree No. 1399 of 2007) specify the protocol for variety testing and evaluation for different crops, requested seed samples and evolution and registration fees. A minimum of three years is required for DUS and VCU tests. Vegetable varieties imported from OECD member countries should be tested for adaptability for not longer than one year.

Ministerial Decree No. 769 of 2009 dealing with the policy and procedures of the release of crop varieties developed by Agricultural Research Center.

According to the Permanent Committee for Variety Registration data, total number of registered varieties is 1264 (428 field crops and 836 vegetables). ARC developed the majority of field crops and smaller number of vegetable crop varieties.

However, variety registration, through participation of some private elements and the universities in the Variety Registration Committee, has already opened for a more pluralistic structure. The Secretariat of the Variety Registration Committee is appointed to the Central Administration for Seed Certification (CASC). There was also considerable progress made in the past five years to establish a modern variety release system that goes in line with a liberalized seed market and with international standard procedures and practices in order to facilitate Egypt's participation in international organizations and trade schemes (OECD, UPOV, WTO/TRIPS agreement).

Permanent Committee for Variety Registration

The technical and administrative procedures for variety registration were modified and its management transferred from ARC to CASC. Decree No. 937 of 1995 was issued to broaden its functions and membership, which include heads of research institutes (ARC), CASC and representatives of Egyptian Seed Association (ESAS) and four seed companies. Decree No. 867 of 1997 assigned responsibility of variety description tests (DUS) and variety performance tests (VCU) to CASC. Variety Release Advisory Committee consisting of 9 members drawn from ARC (3), private seed companies and ESAS (3), Central Administration for Seed Production (CASP) (1), CASC (1) and the Egyptian Association of Plant Breeders (1) (Ministerial Decree No. 82 of 1998).

8- PHYTOSANITARY MEASURES

To maintain their competitiveness in the International Market, Egyptian producers and suppliers of agriculture products must meet phytosanitary requirements set by importing countries (including EU Member States). Egypt is however facing some challenges in complying with EU import standards particularly those relating to residues of pesticides in plant products, potato brown rot bacteria, and permissible levels of aflatoxin contamination in peanuts (in 2008 alone, Egypt received more than 20 EU interception notifications concerning presence of aflatoxins in peanuts). This in turn had implications on Egyptian exports of

Agricultural products to the EU which witnessed a decrease in terms of its percentage to total trade from 10.2% in 2004 to 6.7% in 2008.

Accordingly, the enhancement of the plant quarantine regime has been set high on the agenda of the Government of Egypt. Special emphasis in this respect is being placed on strengthening capacities to (1) support domestic industry's ability to meet phytosanitary measures required by trading partners, (2) implement trade related phytosanitary obligations, and (3) participate in phytosanitary -related trade discussions in international standard-setting organizations and the WTO. This in turn entails reforms of (1) infrastructure (legislation, laboratories, etc.) and (2) systems (plant health inspection arrangements), specific technical requirements (testing compliance of a maximum residue limit) as well as building human capacities of those entrusted to undertake phytosanitary related functions.

In Egypt, the phytosanitary control is mainly the responsibility of the Central Administration of Plant Quarantine (CAPQ), a subdivision of the Egyptian Ministry of Agriculture and Land Reclamation (MoALR) that reports directly to the Agricultural Services and Follow up Sector. In particular, CAPQ's mandate includes the following:

1. Inspection of consignments of plants and plant products moving in international trade and, where appropriate, the inspection of other regulated articles, particularly with the object of preventing the introduction and/or spread of pests;
2. Disinfection of consignments of plants, plant products and other regulated articles moving in international trade, to meet phytosanitary requirements;
3. Issuance of certificates relating to the phytosanitary regulations of the importing party for consignments of plants, plant products and other regulated articles;
4. Reporting the occurrence, outbreak and spread of pests to the International Plant Protection Convention (IPPC)
5. Conducting pest risk analyses, management and communication.
6. Monitoring the imported plant/plant parts for propagation under post-entry quarantine.
7. Establishing lists of regulated quarantine and non quarantine pests.
8. Implementing appropriate phytosanitary measures on imported consignments (clearance, rejection, re-export, destruction, treatment...).

As illustrated in Annex 2: Organizational Structure, the CAPQ currently employs 540 Agricultural Engineers (Phytosanitary inspectors), 20 technicians and 140 administrative staff.

In order to effectively achieve the above mentioned mandate, the CAPQ cooperates closely with numerous entities within the MoALR as well as other Ministries (a list of major counterparts is included in Annex 3).

The Central Administration for Seed Testing and Certification (CASC) active partner with Central Administration of Plant Quarantine (CAPQ) to control seed pathology. Being ISTA member the analysts using ISTA manuals, procedures and methods to test and seed health. Decree No. 236 of 1997 specifies seed health testing standards for seed-borne diseases in different crops and different seed classes (Annex 1) while, Decree No. 285 of 1995 specifies bacterial and virus diseases standards of vegetative propagated crops potato, banana and strawberry. To ensure food security of rice in Egypt the Decree No. 1787 of 2000 did not allow any percent of black smut disease in rice seed production fields in all seed classes breeder, foundation, registered and certified seed in field inspection and seed certification.

9- PLANT VARIETY PROTECTION (INTELLECTUAL PROPERTY RIGHTS)

Before 2002, in Egypt, if a plant breeder developed a new variety of plants, there is no means for him to patent that new variety and there is no law applied to prevent others from copying his variety and selling it to others. The breeder has no rights, reward or encouragement. The government of Egypt worked to correct this imbalance situation. In June 2002 the Government issued a section for plant variety protection through a new law includes all intellectual property right in Egypt.

The new law gives breeders of new varieties an exclusive intellectual property right over their new varieties for a limited time under certain controls. When a breeder develop a new variety and protects it with PVP title, any company that wants to multiply and market his variety will have to negotiate a license and pay royalties to the breeder.

At legislation level, all Intellectual Property Rights in Egypt included in one law, LAW ON THE PROTECTION OF INTELLECTUAL PROPERTY RIGHTS (law 82/2002). It has four books dealing with different types of Intellectual Property Rights as follows:-

Book one: Patents and Utility Models, Layout-Designs for Integrated Circuits, and Undisclosed Information

Book two: Marks, Tradenames, Geographical Indications and Industrial Designs

Book three: Copyright and Related Rights

Book four: Plant Varieties (Annex 4).

Following to Law 82 of 2002, The Prime Minister issued his decree 492 of 2003 to establish PVP office and decree number 1366 of 2003 for executive protocol for the implementing the law 82/2002 while, the Minister of Agriculture and Land Reclamation issued Ministerial decree 2813 of 2003 to establish the Plant Variety Protection office within CASC and the formation of the permanent advisory council for PVP. The relationship between Plant Variety Protection office, CASC, advisory council for PVP and Variety Registration committee are illustrated in Annex (5)

It is very important to mention here although Egypt has effective PVP law, executive protocol for the implementing the law 82/2002 and plant variety protection office in place as well as human resources trained and qualified to handle the PVP application, examination and issuing the certificates. However, Egypt did not UPOV membership this is because there are some conflicts between the Egyptian law and UPOV convention. Currently Egypt revised its law to be in harmony with UPOV convention and send these amendments to the Parliament for approval in next round then apply for UPOV membership again.

The opportunity to join UPOV should not be missed. This because establishing a system of plant Breeder's Rights will help the farmers to access more improved varieties and thereby increases their productivity and incomes. Plant Breeder's Rights serve as a stimulus to the local development of new varieties and encourage international companies to supply Egypt with their new and best varieties. Breeder's Rights also will encourage further investments and job creation in research and seed production in Egypt. By joining UPOV, Egypt can send a clear message to the world and its own breeders-Egypt is a land where the development and dissemination of new varieties is rewarded and encouraged.

The Procedures & Conditions of issuing plant variety protection certificate as follows:-

- ✓ Application should be submitted on the prescribed.
- ✓ Review applications and decide on the basis of the availability of conditions for granting protection.

- ✓ Technical review of the questionnaire and the proposed name of the variety and decide.
- ✓ The payment of granting variety protection.
- ✓ Delivery of a representative sample of the variety in a timely manner and for the period of assessments to test the variety and payment of administration fees for the test
- ✓ Received the test results the first year and received the final results of the variety testing.
- ✓ If results were positive, protection granted and certificate granting the right of new variety protection issued after the fulfillment of the conditions.
- ✓ The period of the granting of a new variety protection right in accordance with the rules, according to the crop.
- ✓ Received requests for appeals whether there is a need.

A detailed follow chart on procedure and system how the breeder get the PVP certificate is annexed (Annex 6)

10- SEED IMPORT/EXPORT DOCUMENTATION AND PROCEDURES

The current seed market in Egypt is worth and the estimated value of the domestic seed market in is 140 million US\$ (June 2008). The total seed exports are 2 million US\$ while the total seed imports are 35 million US\$ (International Seed Federation Data). Egypt is very big seed trade market and the licensed traders are 11538 while the exporters are 99 licensed companies.

Seed imports are mainly from USA, the Netherlands, UK, France, Denmark, Spain and Japan while, seed exports are directed originally to Gulf and Arab countries, Pakistan and some European countries

Exported amount of seeds in Egypt from 2003 to 2009 year are annexed in Annex (7) and imported amount seeds in Egypt from 2004to 2009 year are annexed in Annex(8)

The Agricultural Crop Seed Committee is working within the framework of Seed Law No. 53 (of 1966) and Ministerial Decree No. 726 of 1993 regulating seed export (packaging, sealing, issuing international certificates) and Ministerial Decree No. 700 of 1994 regulating seed import. Both decrees amend Decree No 90 and 91 of 1967 for seed export and import respectively.

Conditions of obtaining the trade license:

- ✓ An application should be submitted to CASC on the prescribed form, the attachment documents of the application form are the following:
- ✓ A copy of the commercial record, stating seed trade activities
- ✓ A copy of tax record of the license.
- ✓ The company establishment contract and the name and authority of the responsible director of such company
- ✓ Renting or ownership contract for the licensed place
- ✓ A copy of performing commercial or industrial activities as for seed trading and storage
- ✓ A written statement from the applicant not to trade in any other material but seeds under the provision of the Law No. 53 of 1966.
- ✓ A copy of the personal identification card of the license owner and a copy of personal identification card of the director in charge who must be an agronomist.
- ✓ A committee from CASC set the croaky and the inspection minutes.
- ✓ The receipt of the payment of the established fees.
- ✓ The license is valid for five years
- ✓ The licensed trader should maintain in the licensed place two registers, one to show all seed quantities to be trade and the second to show seed sales. For each seed sold, the trader should provide an invoice in two copies, one for the purchaser and the second to be kept in the shop.

Procedures & conditions for importing seeds

It is prohibited to license for importing unregistered variety seeds. It may be permitted for scientific or research firms or for private use to import unregistered seeds for scientific purposes or breeding new varieties within the quantities and measures prescribed by the

Agricultural Crop Seed Committee. This should be valid for the private use, which should be supervised by the Designated Authority. The product of such cultivation should not be used unless the said variety should be registered and seed should be certified according to the provisions of the Decrees, an application form for the licensing of imported seeds is submitted to CASC, The submitted application should include the following:

- ✓ The seed-importing license.
- ✓ Registration number in the Register of importers.
- ✓ A copy from the valid seed trade license.
- ✓ The seed quality, kind, variety, seed class requested for importing.
- ✓ A copy from the Agriculture Crop Seeds Committee importing license.
- ✓ A copy from the initial invoice confirmed from the Committee.
- ✓ A copy from the final invoice.
- ✓ A copy from the bill of lading.
- ✓ A copy from the weighting list.
- ✓ A copy from the packing list.
- ✓ International seed testing certificate or a testing certificate issued from an official inspection station abroad including the variety, the degree of purity and the germination percentage and seed grasses and its type.
- ✓ OECD certificate if the seeds are imported from one of OECD countries.
- ✓ If the said seed shipment meets the lab testing national standards The Designated Authority issued a permission of customs clearance.

Procedures & conditions for exporting seeds:

It is prohibited to export any agricultural crop seeds without obtaining the proper license from the Agricultural Crop Seeds Committee, except for the following crops:

Flax - Castor bean-Melon - Swiss chard – Cabbage – Cauliflower -Turnip- Rocket – Radish – Leek - Jew’s mallow – Lettuce - Spinach-Endive – Chicory - Common Purslane - Egyptian mallow- Okra – Celery – Parsley – Dill – Anise – Cumin – Fennel- Coriander.

It is prohibited to license for exporting seed without obtaining the proper license as seed trader, the application should be submitted to the concerned Authority including:

- ✓ The seed exporting license.
- ✓ Registration number in the register of exporters.
- ✓ A copy from a valid seed trade license.

The shipment should be packed in new and uniform package and from material could tolerate storage and transportation conditions. It should be written on the packages with clear Arab littering and one of the foreign languages:

- ✓ Seed kind and variety after the word seed.
- ✓ Gross and net weight.
- ✓ Lot No.
- ✓ Country of production (Arab Republic of Egypt).
- ✓ The name of exporter and his trade mark if there is.

In case of small packages, stickers should be used with the same information.

CASC may issue the Seed Testing International Certificate against the payment of the issuance fees

11- SEED LAWS AND REGULATIONS

The Seed Law No. 53 of 1966 is an all-inclusive agricultural act and covers: (a) organization of crop production, (b) registration of crop varieties, and (c) seed production and marketing. The Law and related Ministerial Decrees issued pursuant to provisions in the law include allocation of seed production areas (zoning), establishment of seed processing facilities, quality control and certification and control of seed trade. In 1967 several decrees were issued including Decree No. 25 (seed production of agricultural crops), Decree No. 87 (crop seed processing stations), Decree No. 88 (processing and treatment of cotton seed), and Decree No. 89 (control of cotton seed for industrial purposes), Decree No. 90 (seed testing), Decree No. 91 (import and export of seed).

The Law gave the Ministry of Agriculture the statutory responsibility for the seed sector in Egypt. Seed legislation is under continuous review to meet the developments of the seed industry.

Some of the Laws and key Ministerial Decrees issued to improve the seed industry are listed below:

- ✓ Law No 53 of 1966 deals with seed production and supply, Certification system for seed, specifying seed sampling and testing procedures, regulating the construction and operation of seed processing and controlling the import and export of seed.
- ✓ Ministerial Decree No. 293 of 1990 dealing with field inspection of seed crops.
- ✓ Ministerial Decree No. 726 of 1993 covering the control of seed export.
- ✓ Ministerial Decree No. 1517 of 1993 defining certification of horticultural, medical, aromatic and vegetatively propagated crops.
- ✓ Ministerial Decree No.513 of 1994 setting rules and conditions for certified seed production of agricultural crops.
- ✓ Ministerial Decree No. 1550 of 1994 setting field inspection standards for certification of field crops and vegetable crops.
- ✓ Ministerial Decree No. 1064 of 1995 specifying crops to be registered for seed production.
- ✓ Ministerial Decree No. 926 of 1995 reorganization of CAS and the establishment of CASP and CASC as separate organizations.
- ✓ Ministerial Decree No. 706 of 1996 granting legal authority for seed marketing control officers of CASC.
- ✓ Ministerial Decree No. 38 of 1997 assigning CASC as the official seed certification authority stipulating various operations of the seed industry (handling, processing, storage, trade, import, export).
- ✓ Ministerial Decree No. 326 of 1997 setting standards for seed-borne diseases
- ✓ Ministerial Decree No. 867 of 1997 assigning CASC the responsibility for coordinating variety description tests (DUS) and variety performance tests (VCU). It limits the role of public research to produce parental material and breeder seed.
- ✓ Ministerial Decree No. 868 of 1997 authorizing CASC to set specifications for seed packages to control fraud. It prohibits seed trade except for those involved in seed production.
- ✓ Ministerial Decree No. 82 of 1998 defining crop variety registration protocols and procedures

- ✓ Ministerial Decree No. 368 of 1998 setting seed testing standards and procedures for certification
- ✓ Ministerial Decree No. 1648 of 2001 determining the testing period for new vegetable varieties imported from OECD countries.
- ✓ Law No 82 of 2002 on the protection of intellectual property rights (IPRs law).
- ✓ Ministerial Decree No. 1205 of 2006 and Ministerial Decree No. 1399 of 2007 specify the protocol for variety testing and evaluation for different crops, requested seed samples and evolution and registration fees.
- ✓ Ministerial Decree No. 769 of 2009 dealing with the policy and procedures of the release of crop varieties developed by Agricultural Research Center.

12- INTERNATIONAL MEMBERSHIP

Egypt is a member of the International Seed Testing Association since 1952. The Giza Seed Testing Station becomes an accredited member of ISTA and issues international certificates.

Egypt is a member of OECD Seed Schemes for cereals, maize and sorghum, vegetables, herbage and oil.

The national seed trade association, ESAS, is a member of International Seed Federation (FIS), African Seed Trade Association (AFSTA) and Asia Pacific Seed Association (APSA).

Egypt is a founding member of the West Asia and North Africa (WANA) Seed Network and plays a key role as it hold the chairmanship of its Council and Steering Committee.

Egypt is not a member of UPOV.

13- CONCLUSION

The Ministry of Agriculture and Agrarian Reform has started the liberalization or privatization of the seed sector in a gradual and coordinated manner. It restructured and reorganized the Central Administration for Seeds and the entire seed sector and took active measures to implement the economic reform program in the agricultural sector. The agricultural reform programs can be summarized as follows:

- ✓ Removing government control on farm output prices, crop areas and procurement quotas for all crops

- ✓ Increasing farm gate prices for cotton and sugarcane to international market level
- ✓ Removing agricultural input subsidies for farmers
- ✓ Lifting government restrictions on private sector import, export and market of farm inputs and agricultural crops
- ✓ Changing the role of Principal Bank for Development and Agricultural Credit (PBDAC) to the agricultural credit agency
- ✓ Limiting public ownership of land and selling reclaimed land to private sector and adjust land tenancy system
- ✓ Limiting the role of MALR to agricultural research, extension and economic policies

The economic reform program aims at releasing the agricultural sector from all restrictions and distortions, improving agricultural trade; stimulating private sector participation; encouraging use of modern technology; increasing cultivated land, productivity, farm income and exports to raise the share of agriculture for economic and social development of the country. Moreover, the reform will make high quality seed of improved varieties available in sufficient quantity, at reasonable price, at the right place and time to serve the seed industry in Egypt.

The private sector has been dominant in production, import and distribution of vegetable and forage seed. They also have already gained a major share in the supply of hybrid seed of maize, sunflower and sorghum. Moreover, the private sector began producing seed of self-pollinated crops such as wheat, rice and faba bean where the share now reached 30-40% of the commercial seed market.

Finally, harmonization seed regulations and policies in its 19 Member States of The Common Market for Eastern and Southern Africa (COMESA) according to the declaration of COMESA Ministers in Seychelles in March 2008 will be of great benefit to seed sector in all countries. However, in the case of Egypt there are efforts going on to harmonize the seed regulations and policies at WANA region, including those of North Africa (Algeria, Libya, Morocco, Tunisia), the Nile Valley and Red Sea sub-region (Egypt, Eritrea, Ethiopia, Sudan), West Asia (Cyprus, Iraq, Jordan, Lebanon, Syria), the “ highland” countries (Iran, Turkey), and the Arabian Peninsula countries.

Annex 1 Minimum Seed Certification Standards
1) Wheat

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	5	5	5
Other varieties (max. %)	0.05	0.1	0.2
Other species (max. %)	0.05	0.01	0.01
Noxious weeds (max. %)	0	0.01	0.02
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)	0.1	0.5	1
Weed seeds (max. %) ^a	1	1	1
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)			
a Wild oats			

Annex 1: continued.....

2) Barley

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	5	5	5
Other varieties (max. %)	0.05	0.1	0.2
Other species (max. %)	0	0.01	0.02
Noxious weeds (max. %)	0	0.01	0.01
Infected plants (max. %)	0	0.02	0.05
Loose smut			
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)	0.1	0.5	1
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)			

Annex 1: continued.....**3) Rice**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	5	5	5
Other varieties (max. %)	0.01	0.02	0.1
Other species (max. %)			
Noxious weeds (max. %)			
Red rice	0	0	0
Infected plants (max. %) ^a	0	0.01	0.02
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)			
Weed seeds (max. %) ^a			
Red rice	0	0	0
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %) ^b	15	15	15

a Blast per head

b Moisture content should be 15% during October and November

Annex 1: continued.....**4) Maize**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	300	300	300
Other varieties (max. %)	0	0.1	0.5
Other species (max. %)			
Noxious weeds (max. %)			
Infected plants (max. %) ^a			
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)			
Weed seeds (max. %)			
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)	15	15	15

Annex 1: continued.....**5) Maize (hybrid)**

Standards	Seed Classes	
	Foundation	Certified
Field Standards		
Rotation (min. Years)	1	1
Isolation (min, meters) ^a	300	300
Other varieties (max. %)		
Female parent	0	0.1
Male parent	0	0.1
Other species (max. %)		
Noxious weeds (max. %)		
Infected plants (max. %) ^a		
Seed Standard		
Pure seed (min. %)	97	95
Other crop seeds (max. %)		
Weed seeds (max. %)		
Infected seeds (max. %)		
Germination (min. %)	85	85
Moisture content (max. %)	15	15
a Time isolation of 30 days in acceptable		

Annex 1: continued.....

6) Sorghum

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	400	300	200
Other varieties (max. %) Definite off-types	0.002	0.003	0.005
Doubtful off-types	0.005	0.01	0.1
Other species (max. %)			
Noxious weeds (max. %)			
Infected plants (max. %) ^a	0	0.1	0.2
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0.01	0.05	1
Weed seeds (max. %)			
Infected seeds (max. %)			
Germination (min. %)	80	80	80
Moisture content (max. %)			

^a Kernel smut (*Sporisorium sorghi*)

Annex 1: continued.....

7) Sorghum (hybrid)

Standards	Seed Classes	
	Foundation	Certified
Field Standards		
Rotation (min. Years)	2	2
Isolation (min, meters) ^a	400	400
Other varieties (max. %) Definite off-types	0.002	0.005
Doubtful off-types	0.005	0.1
Other species (max. %)		
Noxious weeds (max. %)		
Infected plants (max. %) ^a		
Seed Standard		
Pure seed (min. %)	93	93
Other crop seeds (max. %)	0.01	1
Weed seeds (max. %)		
Infected seeds (max. %)		
Germination (min. %)	80	80
Moisture content (max. %)		
^a Kernel smut (<i>Sporisorium sorghi</i>)		

Annex 1: continued.....**8) Sweet Sorghum**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	400	300	200
Other varieties (max. %)	0.1	0.5	1
Other species (max. %)			
Noxious weeds (max. %)			
Infected plants (max. %)			
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0	0	0
Weed seeds (max. %)	0	0	0
Infected seeds (max. %)			
Germination (min. %)	70	70	70
Moisture content (max. %)			

Annex 1: continued.....

9) Faba bean

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	3	3	3
Isolation (min, meters)	200	200	150
Other varieties (max. %)	0.1	0.3	0.5
Other species (max. %)			
Noxious weeds (max. %) ^a	0.05	0.1	0.2
Infected plants (max. %)			
BBTMV ^b	0	0.5	2
BBSV ^c	0	0.5	2
Virus diseases (total)	0	0.5	2
Seed Standard			
Pure seed (min. %)	93	93	93
Other crop seeds (max. %)	0.3	0.3	0.3
Weed seeds (max. %)	1.5	1.5	1.5
Infected seeds (max. %) ^b			
Germination (min. %)	85	85	85
Moisture content (max. %)			
a <i>Orobanche crenata</i>			
b BBTMV = Broad Bean True Mosaic Virus			
c BBST – Broad Bean Stain Virus			
NB Insect infestation of up to a maximum of 20% is allowed if seed is treated with pesticides and no live insects are present.			

Annex 1: continued.....

10) Chickpea

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	50	25	25
Other varieties (max. %)	0	0.01	0.1
Other species (max. %)	0	0.01	0.1
Noxious weeds (max. %) ^a	0.05	0.1	0.2
Infected plants (max. %) ^b	0	0.2	0.5
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0	0.5	1
Weed seeds (max. %)			
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)			
<p>a <i>Orobanche crenata</i> b <i>Ascochyta rabiei</i></p>			

Annex 1: continued.....

11) Lentil

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	50	30	10
Other varieties (max. %)	0.1	0.2	0.5
Other species (max. %)	0	0.01	0.1
Noxious weeds (max. %) ^a	0.05	0.1	0.2
Infected plants (max. %) ^b	0	0.5	2
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0.1	0.3	0.5
Weed seeds (max. %)			
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)			
<p>a <i>Orobanche crenata</i> b Pea mosaic virus</p>			

Annex 1: continued.....

12) Cowpea and pea

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	125	125	75
Other varieties (max. %)	0.1	0.02	0.04
Other species (max. %)			
Noxious weeds (max. %)			
Infected plants (max. %)	0	0	0.5
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)	0	0.5	1
Weed seeds (max. %)			
Infected seeds (max. %)			
Germination (min. %)	70	70	70
Moisture content (max. %)			

Annex 1: continued.....

13) Linseed

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	500	500	300
Other varieties (max. %)	0.02	0.05	0.1
Other species (max. %)			
Noxious weeds (max. %) ^a	0	0.01	0.01
Infected plants (max. %)			
Seed Standard			
Pure seed (min. %)	95	94	93
Offtypes	0	0.2	1
Other crop seeds (max. %)	0	0.5	1.5
Weed seeds (max. %)	0	0	0.5
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)			

^a *Lepidium sativum*

Annex 1: continued.....

14) Sunflower

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)			
Open pollinated	3000	3000	2000
Hybrids	3000		2000
Other varieties (max. %)	0	0.1	0.5
Offtypes			
Female parent	4/1000		4/1000
Male parent	4/1000		4/1000
Open pollinated Varieties	5/1000		5/1000
Fertile Plants in female parent	4/1000		4/1000
Other species (max. %)			
Noxious weeds (max. %)			
Infected plants (max. %) ^a	0	0.2	0.5
Seed Standard			
Pure seed (min. %)	95	94	93
Offtypes	0	0.5	1
Other crop seeds (max. %)	0	0.5	1
Weed seeds (max. %)			
Infected seeds (max. %) ^b			
Germination (min. %)	85	85	85
Moisture content (max. %)			

a Each for *Scloretina* and *Botrytis*

b *Botrytis cinerea*

Annex 1: continued.....

15) Alfalfa (Lucerne)

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	4	3	2
Isolation (min, meters)			
Different classes	10	10	10
Non-certified	500	300	100
Other varieties (max. %)	0	0.25	1
Other species (max. %)	0	0	0
Noxious weeds (max. %) ^a	0	0	0
Infected plants (max. %)	0	0	0
Seed Standard			
Pure seed (min. %)	95	94	93
Offtypes	0	0	0.5
Other crop seeds (max. %)	0.1	0.5	1.5
Noxious Weed seeds (max. %) ^a	0	0	0
Infected seeds (max. %)	0	0	0
Germination (min. %)	85	85	85
Moisture content (max. %)			
^a <i>Cuscuta planiflora</i>			

Annex 1: continued.....

16) Egyptian clover (Berseem)

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	5	3	2
Isolation (min, meters)			
Commercial varieties	500	400	300
Different certified varieties	300	200	100
Other varieties (max. %)	0	0.1	0.2
Other species (max. %)			
Noxious weeds (max. %) ^a	0	0	0
Infected plants (max. %)			
Seed Standard			
Pure seed (min. %)	95	94	93
Offtypes	0	0.3	1
Other crop seeds (max. %)	0.1	0.5	1.5
Noxious Weed seeds (max. %) ^a	0	0	0
Infected seeds (max. %)			
Germination (min. %)	85	85	85
Moisture content (max. %)			
^a <i>Cuscuta planiflora</i>			

Annex 1: continued.....**17) Cotton**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	1000	1000	500
Other varieties (max. %)	0	0	0
Other offtypes	0	1/35000	1/21000 ^a
Other species (max. %)	0	0	0
Noxious weeds (max. %) ^a			

Seed Standards ^b

a Standard for certified seed 2 is 1/7000

b Seed standard are defined annually by decree, but pure live seed (PLS) should not be less than 70%

Annex 1: continued.....**18) Sugar beet**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards	No field standards		
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0	0.5	1.5
Weed seeds (max. %)			
Infected seeds (max. %)			
Germination (min. %)	60	60	60
Moisture content (max. %)			

Annex 1: continued.....

19) Beans

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	1	1	1
Isolation (min, meters)	125	125	125
Other varieties (max. %)			
Definite offtypes	0	0.2	0.4
Doubtful types	0	0.1	0.4
Other species (max. %)			
Noxious weeds (max. %) ^a			
Infected plants (max. %)			
Anthracnose	0	2	5
Bean Yellow Mosaic	0	0	0.5
Bacterial brown spot and Bacterial wilt	0	0	0
Blight	0	0	0
Clover and bean mosaic	0	0	1
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)	0	0.5	1
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	75	75	75
Moisture content (max. %)			

Annex 1: continued.....

20) Cabbage

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards	No Field Standard		
Rotation (min. Years)			
Isolation (min, meters)			
Other varieties (max. %)			
Other species (max. %)			
Noxious weeds (max. %) ^a			
Infected plants (max. %)			
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)	0	0.5	1
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	70	70	70
Moisture content (max. %)			

Annex 1: continued.....

21) Carrot

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards	No Field Standard		
Rotation (min. Years)			
Isolation (min, meters)			
Other varieties (max. %)			
Other species (max. %)			
Noxious weeds (max. %) ^a			
Infected plants (max. %)			
Seed Standard			
Pure seed (min. %)	92	91	90
Other crop seeds (max. %)	0.5	1	3
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	55	55	55
Moisture content (max. %)			

Annex 1: continued.....**22) Cucumber**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	1500	1500	1000
Other varieties (max. %)			
Definite offtypes	0	0	0.2
Doubtful types	0	0.2	0.5
Other species (max. %)	0	0	0
Noxious weeds (max. %)			
Infected plants (max. %)			
Bacterial diseases	0	0	0
Bean Yellow Mosaic Virus	0	1	2
Cucumber Mosaic Virus	0	1	2
Dead Spot Melon Virus	0	1	5
Squash Mosaic Virus	0	1	3
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0	0.5	1.5
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	65	65	65
Moisture content (max. %)			

Annex 1: continued.....

23) Eggplant

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	3	3	3
Isolation (min, meters)	1000	1000	1000
Other varieties (max. %)			
Definite offtypes	0	0.2	0.4
Doubtful types	0	0.1	0.2
Other species (max. %)	0	0	0
Noxious weeds (max. %)			
Infected plants (max. %)			
Brown Rot and Blights	0	0	0
Clover Mosaic virus	0	0.5	2
Cucumber Mosaic Virus	0	0.5	2
Egg plant Mosaic Virus	0	1	3
Potato Virus Y	0	0.5	2
Tobacco Mosaic Virus	0	0.5	2
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0.1	0.5	1.5
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	65	65	65

Annex 1: continued.....**24) Onion**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	5000	3000	3000
Other varieties (max. %)			
Offtypes bulbs	0.5	0.5	0.5
Offtype plants	0.1	0.1	0.1
Other species (max. %)			
Noxious weeds (max. %)			
Infected plants (max. %)			
Onion Yellow Dwarf Virus	0	0.1	0.1
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0	0.5	1.5
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	70	70	70
Moisture content (max. %)			

Annex 1: continued.....

25) Pepper

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	3	3	3
Isolation (min, meters)	1000	1000	750
Other varieties (max. %)			
Definite offtypes	0	0.2	0.4
Doubtful types	0	0.1	0.2
Other species (max. %)	0	0	0
Noxious weeds (max. %)			
Infected plants (max. %)			
Bacterial diseases	0	0	0
Clover Mosaic Virus	0	0.5	2
Cucumber Mosaic Virus	0	0.5	2
Egg plant Mosaic Virus	0	1	3
Potato Virus Y	0	0.5	2
Tobacco Mosaic Virus	0	0.5	2
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0.1	0.5	1.5
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	55	55	55

Annex 1: continued.....

26) Potato

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	3	3	3
Isolation (min, meters)	1000 (North-West) – 500 (south-East)		
Other varieties (max. %)	0.1	0.1	0.1
Other species (max. %)	0	0	0
Noxious weeds (max. %)			
Infected plants (max. %)			
Apparent Virus Diseases			3
Bacterial wilt or Brown rot			0
Black Leg			0.1
Stem canker & Black scurf			2
Coloration of vessels			0.5
Seed Standard			
Potato tuber moth			0.5
Brown rot			0
Common scab & Black scurf			1
Dry rot			0.5
Powdery Scab			1
Silver Scurf			5
Other Fungal diseases			0.5
Root Knot nematodes			0
Virus diseases			1
Physiological disorders			
Coloration of vessels			0.5
Hollow heart & black scurf			1
Cracks			1
Secondary Growth			1

Annex 1: continued.....**27) Tomato**

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	3	3	3
Isolation (min, meters)	125	100	50
Other varieties (max. %)			
Offtypes bulbs	0	0.2	0.4
Offtype plants	0	0.1	0.2
Other species (max. %)	0	0	0
Noxious weeds (max. %)			
Infected plants (max. %)			
Bacterial diseases	0	0	0
Virus diseases	0	0.5	2
Seed Standard			
Pure seed (min. %)	95	94	93
Other crop seeds (max. %)	0.1	0.2	0.5
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	70	70	70

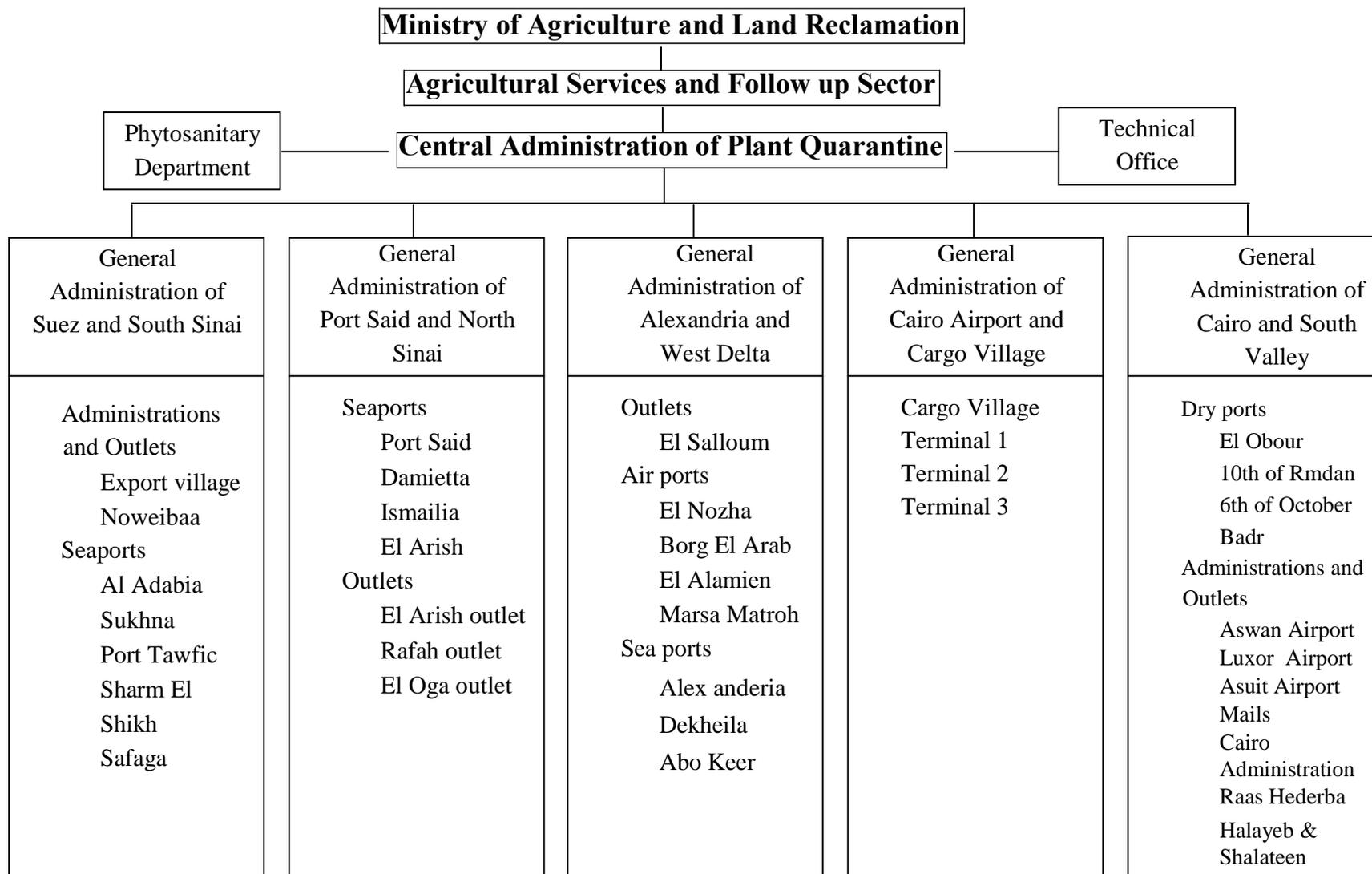
Annex 1: continued.....

28) Watermelon

Standards	Seed Classes		
	Foundation	Registered	Certified
Field Standards			
Rotation (min. Years)	2	2	2
Isolation (min, meters)	1000	1000	1000
Other varieties (max. %)			
Definite offtypes	0	0	0.2
Doubtful types	0	0	1.5
Other species (max. %)	0	0	0
Noxious weeds (max. %)			
Infected plants (max. %)			
Bacterial diseases	0	0	0
Bean Yellow Mosaic Virus	0	1	2
Cucumber Mosaic Virus	0	1	2
Melon Dead Spot	0	1	5
Squash Mosaic Virus	0	1	3
Seed Standard			
Pure seed (min. %)	97	96	95
Other crop seeds (max. %)	0	0.5	1.5
Weed seeds (max. %) ^a			
Infected seeds (max. %)			
Germination (min. %)	65	65	65

Annex 2

Organizational Chart of Egyptian Plant Quarantine



Annex 3: List of Egyptian Organizations involved in Phytosanitary Control

1. **The Ministry of Agriculture and land Reclamation** Several institutes of the ARC compliment and support the work of the CAPQ with regards to inspections and laboratory analysis. They assist CAPQ in the inspection of imported and exported plant consignments against plant quarantine pests (diseases, insects and weeds), provide advice to the CAPQ on phytosanitary measures needed to prevent entry of quarantine pests as well as cooperate with the CAPQ in conducting Pest Risk Analysis. The following institutes and laboratories are of particular note in this regard:
 - The Plant Pathology Research Institute
 - The Plant Protection Research Institute
 - The Weed Research Laboratory
 - The Date Palm Research Laboratory
 - The Horticulture Research Institute
 - The Central Administration for Pest Control
 - **The Central Administration for Seed Testing and Certification (CASC)**
 - The Central Laboratory for Analysis of Pesticide Residues and Heavy Metals is responsible for examining imported and some of the exported plant consignments against pesticides residues, heavy metals and aflatoxin. The results of these tests are reported to the CAPQ which in its turn takes the appropriate measures.
 - The Potato Brown Rot Project: A governmental body affiliated to ARC and Agricultural Services and Follow up Sector established in 1996 with the support of the EU. The objective of the unit is project is to improve brown rot control in Egypt dealing specifically with potato brown rot (*R. solanacearum*) in potatoes destined to the EU, to assure that potato exported to EU and other trading partners is free from potato brown rot disease.
 - The Foreign Agricultural Relations Administration serves as the Ministry of Agriculture's Enquiry Point for WTO notifications from Egypt and other WTO member states.

In addition to the above, the CAPQ undertakes its tasks in coordination to the following affiliates to the Ministry of Trade and Industry:

1. **The General Organization for Import and Export Control (GOIEC)** is a governmental body involved in export certification procedures by attesting the relevant documents and approving consignments for shipment. Some of the CAPQ inspectors are seconded to work under the umbrella of GOIEC by Presidential decree No.106.
2. **The Trade Agreements and Foreign Trade Sector** cooperates with the CAPQ in establishing bilateral agreements and trade concerns between Egypt and other countries.
3. **The Appeals Committee** which is responsible for handling the appeals of importers and exporters refers to the CAPQ on issues related to phytosanitary aspects.
4. **The Exporters' violation Committee** is responsible for investigating exporters' violations as well as imposing the proper sanctions. The committee includes representatives from all competent authorities (including the CAPQ) in charge of monitoring the exportation process.

5. **The Egyptian Commercial Service (ECS)** assists CAPQ in eliminating trade barriers facing the flow of agricultural products to foreign markets.
6. **The Agricultural Export Council (AEC)** is a semi-governmental organization representing the interests of agriculture exporters that serves as a channel of communication between CAPQ and exporters around local and international phytosanitary measures.

Annex 4: The quarantine pest list for Egypt

Table (1)
Unrecorded pests to be declined entry into Egypt
Insect pests

Order	Family	Scientific Name
Coleoptera	Anthribidae	<i>Araecerus fasciculatus</i> (De Greer)
Coleoptera	Chrysomelidae	<i>Chelymorpha cassidea</i> (Fab.)*
Coleoptera	Chrysomelidae	<i>Chrysomela scripta</i> (Fab.)*
Coleoptera	Chrysomelidae	<i>Diabrotica</i> spp.*
Coleoptera	Chrysomelidae	<i>Epitrix cucumeris</i> (Harris)
Coleoptera	Chrysomelidae	<i>Gastroides polygoin</i> (L.)*
Coleoptera	Chrysomelidae	<i>Leptinotarsa decemlineata</i> (Say)
Coleoptera	Chrysomelidae	<i>Oulema melariopus</i> (L.)*
Coleoptera	Chrysomelidae	<i>Typophorus viridicyanus</i> (Crotch)*
Coleoptera	Coccinellidae	<i>Epilachna</i> spp.*
Coleoptera	Curculionidea	<i>Anthonomus</i> spp.
Coleoptera	Curculionidea	<i>Cosmopolites sordidus</i> (Gorm.)
Coleoptera	Curculionidea	<i>Larinus</i> spp.
Coleoptera	Curculionidea	<i>Otiorhynchus</i> spp.
Coleoptera	Curculionidea	<i>Phyllobius</i> spp.
Coleoptera	Curculionidea	<i>Rhynchites</i> spp.
Coleoptera	Curculionidae	<i>Rhynchophorus</i> spp.
Coleoptera	Curculionidae	<i>Scyphophorus yuccae</i> (Hom.)*
Coleoptera	Curculionidae	<i>Sphenophorus ventatus</i> (Chitt.)*
Coleoptera	Curculionidae	<i>Sternochetus mangiferae</i> (F.)
Coleoptera	Dermestidae	<i>Trogoderma tarsalis</i> (M.)
Coleoptera	Ptinidae	<i>Mezium americanum</i> (Cast.)
Coleoptera	Searabaeidae	<i>Cotinus abdominalis</i> (Casey.)*
Coleoptera	Searabaeidae	<i>Oryctes elegans</i> (Prell.)
Coleoptera	Scarabaeidae	<i>Popillia japonica</i> (Newm.)
Coleoptera	Scolytidae	<i>Hypothenemus hampei</i> (Ferr.)**

Order	Family	Scientific Name
Diptera	Cecidomyiidae	Dasineura spp.*
Diptera	Cecidomyiidae	Mayetiola destructor (Say)
Diptera	Stratiomyiidae	Hermetia illucens (L.)*
Diptera	Syrphidae	Eumerus strigatus (Fall.)
Diptera	Syrphidae	Merodon equestris (F.)
Diptera	Tephritidae	Anastrepha spp.
Diptera	Tephritidae	Ceratitis spp.
Diptera	Tephritidae	Dacus spp.*
Diptera	Tephritidae	Rhagoletis spp.
Hemiptera	Coreidae	Leptoglossus spp.
Hemiptera	Lygaeidae	Blessus leucopterus (Say)*
Hemiptera	Pentatomidae	Eurygaster integriceps (Put.)
Hemiptera	Pyrrhocoridae	Dysdercus spp.*
Homoptera	Aphididae	Aphis pomi (Deg.)
Homoptera	Aphididae	Rhopalosiphoninus spp.
Homoptera	Coccidae	Eulecanium capreae (L.)
Homoptera	Diaspididae	Aspidiotus bromeliae (Newm.)
Homoptera	Diaspididae	Borchsiniaspis palmae (Cockerel)**
Homoptera	Diaspididae	Chionaspis evonymii (Sac.)
Homoptera	Diaspididae	Epidiaspis leperii (Sign.)
Homoptem	Diaspididae	Hemmiberlisia popularum (Marlatt)
Homoptera	Diaspididae	Lepidosaphes pistacheae (Arkh.)
Homoptera	Diaspididae	Pseudaonidia tesseratade (Charm.)
Homoptera	Diaspididae	Quadraspidiotus perniciosus (Comst.)
Homoptera	Phylloxeridae	Phylloxera vastatrix (Fitch.)
Homoptera	Pseudococcidae	Dysmicoccus alazon (Williams)
Homoptera	Pseudococcidae	Ferrisia claviseta (Ckll.)*
Homoptera	Pseudococcidae	Ferrisia setosa (Ckll.)*
Homoptera	Pseudococcidae	Planococcus kraunhiae (Kwvana)

Order	Family	Scientific Name
Homoptera	Pseudococcidae	Pseudococcus comstocki (Kuw.)
Homoptera	Pseudococcidae	Pulmicultor palmarum (Ehr.)
Homoptera	Pseudococcidae	Trionymus americanus (Ckll.)
Homoptera	Pseudococcidae	Trionymus bromi (Ferris.)
Homoptera	Pseudococcidae	Trionymus clandestinis (Me Connel.)
Homoptera	Psyllidae	Trioza buxtoni (Laing)
Hymenoptera	Cephidae	Cephus spp.*
Hymenoptera	Cynipidae	All members of family Cynipidae
Hymenoptera	Eurytomidae	Eurytoma spp.
Hymenoptera	Eurytomidae	Harmolita grandis (Riley)
Hymenoptera	Eurytomidae	Harmolita tritici (Fitch)
Hymenoptera	Formicidae	Iridomyrmex humilis (Mayr.)
Lepidoptera	Lyonetiidae	Leucoptera scitella (L.)*
Lepidoptera	Noctuidae	Busseola fusca (Fuller)
Lepidoptera	Noctuidae	Sesammia spp.
Lepidoptera	Pyralidae	Aphomia gularis (Zell.)
Lepidoptera	Pyralidae	Chilo spp.
Lepidoptera	Pyralidae	Diatraea spp.
Lepidoptera	Tineidae	Setomorpha margolaestriza (Keuch)
Lepidoptera	Tortricidae	Argyroploce leucotreta (Mayr.)
Lepidoptera	Tortricidae	Clysia ambiguella (Hb.)
Lepidoptera	Tortricidae	Laspeyrisia spp.

* Species added to table (1)

** Scientific name amended according to the latest nomenclature

**Table (1) cont.
Unrecorded pests and diseases to be declined entry to Egypt**

Plant Diseases (Fungal Diseases)

Wheat	Triticum aestivum
Ergot	Claviceps purpurea
Take-all	Gaeumannomyces graminis
Scab, Head blight	Gibberella avenae
Head blight	Gibberella zeae
Glum blotch	Septoria nodorum, S. tritici
Dwarf bunt	Tilletia controversa
Kernel bunt	Tilletia indica
Typhula blight	Typhula idahoensis
Barley	Hordeum vulgare
Ergot	Claviceps purpurea
Scab, Seedling blight	Gibberella zeae
Leaf and glum blotch	Septoria nodorum
Leaf spot	Septoria passerinii
Black root rot	Thielaviopsis basicola
Loose smut	Ustilago hordei
Sorghum	Sorghum spp.
Ergot	Claviceps sorghi
Stalk rot, red leaf	Colletotrichum graminicola
Leaf spot	Ascochyta sorghi
Downey mildew	Peronosclerospora maydis
Tomato	Lycopersicon esculentum
Anthraenose	Glomerella cingulata
Rice	Oryza stiva
Black ring	Balansia spp.
Foot rot	Gibberella fujikuroi
Brown or black sheath rot	Ophiobolus oryzinus
Maize	Zea Mays
Ergot	Claviceps gigantea
Blight	Cochliobolus heterostrophus

Anthracoze	Colletotrichum graminicola
Seedling blight	Diplodia spp.
Kemel & stalk rot	Gibberella fujikuroi
Grey ear rot	Botryosphaeria zea
	Mycosphaerella zea-maydis
Downey mildew	Peronosclerospora maydis
Sugar cane	Saccharum spp.
Red rot	Colletotrichum falcatum
Sugar beet	Beta vulgaris
Anthracoze	Colletotrichum dematium
Black leg	Pleospora betae
Potato	Solanum tuberosum
Powdery scab	Spongospora subterranean
Black wart	Synchytrium endobioticum
Strawberry	Fragaria spp.
Red stele	Phytophthora fragariae
Onion and Garlic	Allium spp.
Smudge	Colletotrichum circinans
Sunflower	Helianthus annus
Blight	Diaporthe helianthi
Leafspot	Leptosphaella helianthi
Wilt and white rot	Stromatiina subularis
Septoria blight	Septoria helianthi
Rape	Brassica spp.
White blister	Albugo candida
Black ring spot	Mycosphaerella brassicicola
White blight	Sclerotinia sclerotiorum
Cotton	Gossypium spp.
Ascochyta	Ascochyta gossypii
Anthracoze	Colletotrichum indicum
Flax	Linum usitatissimum
Anthracoze	Colletotrichum linicola

Pasmo, Rust blotch	<i>Mycosphaerella linicola</i>
Foot rot	<i>Phoma exigua</i>
Peanut	<i>Arachis hypogaea</i>
Black root rot	<i>Thielaviopsis basicola</i>
Broad bean	<i>Vicia faba</i>
Leaf and pod spot	<i>Ascochyta fabae</i>
Anthracnose	<i>Colletotrichum graminicola</i>
Chick pea	<i>Cicer arietinum</i>
Anthracnose	<i>Colletotrichum dematium</i>
Soybean	<i>Glycine soja</i>
Anthracnose	<i>Macrophoma mame</i>
Smut	<i>Melanopsichium nepalense</i>
Clover	<i>Trifolium sativa</i>
Southern anthracnose	<i>Colletotrichum trifolii</i>
Northern anthracnose	<i>Kabatiella caulivora</i>
Typhula blight	<i>Typhula idahoensis</i>
	<i>Typhula trifolii</i>
Cucurbits	<i>Cucumis melo</i> (melon, cantaloupe, musk melon), <i>Cucumis sativus</i> (cucumber), <i>Cucurbita</i> spp. (squash), <i>Citrullus lanatus</i> (water melon)
Gummy stem blight	<i>Didymella bryoniae</i>
Gladiolus	<i>Gladiolus communis</i> L.
Hard rot	<i>Septoria gladioli</i>
Dry rot	<i>Stromatina gladioli</i>
Sponge rot	<i>Botrytis gladiorum</i>
	<i>Phytophthora cactorum</i>
Rust	<i>Uromyces gladiolicola</i>
Tulip	<i>Tulipa gesneriana</i> L.
Grey bulb rot	<i>Rhizoctonia tuliparum</i>
Fire (botrytis) blight	<i>Botrytis tulipae</i>
Anthracnose	<i>Gleosporium thumenii</i> f. sp. <i>tulipae</i>
Basal rot	<i>Fusarium oxysporum</i> f. sp. <i>tulipae</i>
Iris	<i>Iris florentina</i> L.

Septoria disease	Septoria iridis
Narcissus	Narcissus poeticus L.
White mold	Ramularia vallisumbrosae
Leaf scorch	Staonospora eurtisii
Smoulder	Sclerotinia narcissicola
Fire	Sclerotinia polyblastis
White root rot	Rosellinia necartix
Basal rot	Fusarium oxysporium f.sp. narcissi
Black slime	Sclerotinia bulborum
Amaryllis	Hippeastrum vittatum Herb.
Leaf scorch	Stagonospora curtisii
Lily	Lilium spp.
Fusarium scale rot	Fusarium oxysporum f.sp. lillii
Scale tip rot	Cylindrocarpon radicola
Hippeastrum	
Armillaria rot	Armillaria mellea
Ornamental Palm Trees	Stagonospora curtisii
Wilt	Fusarium oxysporum f.sp. candriensis
Annelophora leaf spot	Annelophora phoenicis
Cylindrocladium leaf spot	Cylindrocladium spp.
Phytophthora leaf spot	Phytophthora spp.
Pink rot	Gliocladium vermoeseni
Pseudocercospora leaf spot	Pseudocercospora rhapsicola
Wilt	Fusarium oxysporum f.sp. albendinis
Basal stem rot	Ganoderma zohatum
	Cerenomyces spp.
Hyacinthus	Hyacinthus spp.
Black slime	Sclerotinia bulborum
Convallaria	
Leaf blotch	Mycosphaerella convallariae
Rust	Puccinia sessilis
Smut	Urocystis miyabeana

Rose	Rosa spp.
Armillaria rot	Armillaria mella
Brown canker	Cryptosporella umbrina
Anthracnose	Sphaceloma rosarum
Chrysanthemum	Silphium laciniatum L.
	Fusarium oxysporum f.sp. chrysanthemi
	Phyllosticta chrysanthemi
	Puccinia horiana
Euphorbia pulcherrima	Euphorbia pulcherrima
Scab	Sphaceloma poinsettia
Carnation	Dianthus spp.
Leafspot	Septoria dianthi
Powdery mildew	Oidium sp.
Downey mildew	Peronospora dianthicola
Fairy ring spot	Heterosporium echinulatum
Citrus	
Powdery mildew	Acrosporium tingitaninum (Carter) Subr.
Wither tip/Anthracnose	Colletotrichum gloeosporioides Penz.
Pink disease	Sphaceloma fawcetti var. scabiosa Jenkins
Ganoderma root rot	Botryobasidium salmonicolor (Berk. and Br.)
Limb breakage	Ganoderma lucidum (Lyess) Karst
Sphaeropsis leaf spots	Arbela tetraonis
Sour orange scab	Sphaeropsis tumefaciens var. citrum
Fruit spot	Elsinoe fawcetti (Bitan & Jenk).
	Pestalotiopsis versicolor
Scab	Elsinoe australis
Mango	Mangifera indica
Anthracnose	Colletotrichum gloeosporioides (Penz)
Pink disease	Erythricium salmonicolor (Bark & Broome) Burds.
Scab	Elsinoe mangiferae (Bitancour & Jenk.) (anamorph; Sphaceloma mangiferae)
Blight Red rust of mango	Macrophoma mangiferae Hingorani & Sharma the alga; Cephaleuros virescens Kunze

Dry rot of ripe fruits (Langra cv)	Boothiella tetraspora (Lodhi & Mirza)
Date palm	Ditylenchus spp.
Boyoud	Phytophthora sp.
Omphalia root rot	Omphalia spp.
Khamedj	Mauginiella scattae
Fruit rots	Macrosporium spp., Citryomyces remosus
Apple & Pear	Pomus malus L. & Pyrus communis
Phoma leaf and fruit spot	Phoma pomorum Thumen
Nectria twig blight	Nectria cinnabarina (Tode)
Armillaria root rot	Armillaria mellea (Vahl) Kummer
Calyx end rot	Sclerotinia sclerotiorum (Lib) de Bary
Wet core rot of apple after harvest	Penicillium spp., Mucorpiriformis, Fusarium spp.
Southern blight and root rot	Sclerotium rolfsii (Saca)
Blotch	Phyllosticta solitaria
Fruit rot	Glomerella cingulata, Coniothyrium spp.
Blue rot	Penicillium spp.
Canker of apple and pear Die-back of apple, pear peach, plum and apricot European canker of apple and pear trees	Botryodiploida juglandicola (Schw) Sacc Botryosphaeria rodina, B. abtusa (Botrvodiploida theobromae) Nectria galligena (Bres)
Apple scab	Venturia inequalis (Cooke) Wint.
Pear scab	Spilocaea state of Venturia pirina Aderh.
Powdery mildew of apple and pear	Podosphaera leucotricha (Ell. & Ev.) Salmon (anamorph; Oidium farinosum Cooke)
Rust of apple, pear & quince	Gymnosporangium spp. (more than 21 species)
Grape	Vitis vinifera L
Bitter rot of ripe fruit	Greeneria uvicola (Berk & Curt.) Punithalingam
White rot	Coniella diplodiella (Speg.) Petrak & Syclov
Rot Brenner	Pseudopezicula tracheiphila (Mull-Thurg) Korf & Zhuang
Anthracnose Black rot	Elsinoe ampelina (de Bary) Shear. Guignardia bidwellii (Ellis) Viala & Ravaz (anamorph; Phyllosticta ampelica (Engleman Von dear.)
berry rots	Aspergillus spp.

Grape	Vitis vinifera L
Ripe rot of mature grapes	Colletotrichum gloeosporioides (Penz.) Penz & Sacc.
Angular leaf spot	Mycosphaerella angulata Jenkins (anamorph; Cercospora brachypus Ell & Ev.)
Rust	Physopella ampelopsidis (Diet.& Syd.) Cumm. & Ramachar
Coniothyrium blight	Coniothyrium diplodiella (Speg.) Petr. & Syd.
Drying of grapevine. Zonate leaf spot. Leaf blotch Leaf blight or Isariopsis leaf spot. Tar spot. Brulure Eutypa dieback Black dead arm. Dematophora root rot Grape root rot.	Hendersomula toruloidea Natt. Cirstulariella moricola (Hino) Redhead Briosia ampelophaga Cav Pseudocercospora vitis (Lev.) Speg. Rhytisma vitis Schw. Anthostomella pullulans (de Bary) Bennet. Eutypa lata (Pers. Fr.) Tul & C.Tul. (anamorph; Libertella blepharis Smith.) Botryosphaeria stevensii Shoem Rosellinia necatrix Prix (anamorph; Dematophora necatrix Hartig.) Roesleria subterranea (Weinmann) Redhead.
Anthracnose	Elsinoe ampelina
Peach, Apricot	
Peaches scab	Cladosporium carpophilum
Powdery mildew of apricot	Podosphaera oxycanthae
	Sphaerotheca pannosa var. persica
Powdery mildew of peach	Monilinia fructigena
Manila fruit rots of stone fruits	Monilinia laxa Monilinia fructicola
Die back & shot-hole	Pseudomonas mors-prunorum
Leaf curl of plum	Taphrina pruni
	Glaeodes pomigena
Mushroom root rot of peach	Armillaria mellea
Wilt disease of peach & plum fruits	Verticillium albo-atrum
Peach and nectarine leaf curl	Taphrina deformans
Coryneum blight or shot hole of peach, nectarine and apricot	Coryneum beijerinckii
Peach scab Coryneum blight or shot hole of plum	Fusicladium carpophilum (Thuem) Quedem.
Banana	Musa paradisiaca L.

Leaf spot (Sigatoka disease)	<i>Mycosphaerella musicola</i> leach (<i>Cerospora musae</i> Zimm. As Imperfect stage)
Dothiorella fruit rot	<i>Dothiorella gregarig</i>
Freckle disease	<i>Macrophoma musae</i>
Fusarium tip rot	<i>Fusarium moniliforme</i> var. <i>subglutinans</i>
Deightoniella torulsa	<i>Oidium lactis</i>
<i>Cercospora koepkei</i>	<i>Cephalo thecium roseum</i>
Albugo sp.	<i>Aspergillus wentii</i>
Common speckle	<i>Ramichloridium musae</i>
Sclerotinia fruit rot	<i>Sclerofinia sclerotiorum</i>
Codna leaf spot	<i>Scolecotrichum musae</i>
Surinamme leaf disease	<i>Mycosphaerella musicola</i>
Black spot	<i>Helminthosporium torulosum</i>
Black rot	<i>Rosellinia bunodes</i>
Trunka stem rot	<i>Helminthosporium torulosum</i>
Clordo disease	<i>Fusarium moniliforme</i> var. <i>subglutinans</i>
Deightonilla leaf and fruit spot	<i>Deightonilla tonilosa</i> (Syd.) Ell (= <i>Helminthosporium torulosum</i>)
Fruit Anthraconse	<i>Colletotrichum musae</i>
Fruit depression	<i>Pyricularia grisea</i>
Fruit segatoca	<i>Pseudocercospora</i> spp. (<i>Mycosphaerella</i> spp.)
Black ftuit top	<i>Deightoniella torulosa</i>
Brown fruit spots	<i>Cercospora hayi</i>
Dothiorella rot	<i>Dothiorella ribis</i>
Phyllosticta rot	<i>Phyllosticta musarum</i>
Phytophthora rot	<i>Phytophthora nicotianaea</i>
Nigrospora rot	<i>Nigrospora oryzae</i>
Sclerotinia rot	<i>Sclerotinia sclerotiorum</i>
Bonnygate disease	<i>Sphaerostible musarum</i>
Dry rot	<i>Clitocybe</i> spp., <i>Poria</i> sp.
Stone fungus	<i>Laccocephalum basilapiliodes</i>
Big foot	<i>Ustilaginoidella oedipigera</i>
fig	<i>Ficus carica</i>
Canker	<i>Phomopsis cinerescens</i>

Leaf spot of fig	Cylindrocladium scoparium Morg.
	Phymatotrichum omnivorum
Black spots of fruits	Alternaria tenuis, Cladosporium herbarum
Anthraxnose	Sphaceloma fici-caricae Wani & Thirum
Leaf spot	Phyllosticta fici-carici
Olive	Olea sativa
Spongy dry fruit rot Quince rust	Colletotrichum dematim (Pers) Grove
Rocky mountain pear rust	Gymnosporangium clavipes (Cooke & Peck)
White root rot	Gymnosporangium nelsoni Arth.
Violet root rot	Scytinostroma galactinum (Fr.)
Valsa (Cytosporra) canker	Helicobasidium mompa Tanaka
Botryosphaeria	Coccomyces hiemalis
Gummosis	Valsa cinctal/V. leucostoma
Dieback	Botryosphaeria dothide a/B. obtusa
Anthraxnose	Gleosporium oliverum
Leaf spots	Cycloconium oleaginum
Avocado	Persea americana
Septoria Fruit rot	Pseudocercospora purpurea
Fruit Anthracnose	Colletotrichum gloeosporiodes
Dothioella rot	Dothiorella gregaria (Botryosparia ribis)
Fruit scape	Sphaceloma perseae
Fusarium fruit rot	Fusarium spp.
Botrydiplodia rot	Botrydiplodia theobromae
Pestalotiopsis rot	Pestalotiopsis versicolor
Phytophthora rot	Phytophthora citrophthora
Akaropeltopsis rot	Akaropeltopsis sp.
Persimmon	Diospyros kaki
Leaf and fruit spots	Alternaria spp. & Cladosporium spp.
Root rots	Fusarium spp. & Sclerotium sp.
Dieback	Botrydiplodia theobromae
Damping off	Rhizoctonia solani, Pythium spp. and Phytophthora spp.
Fruit rot	Aspergillus group, Penicillium group

Cherry	Muntingia calabura
Leaf spot on sweet cherry	Cercospora rubrotincta
Litchis	Litchi chinensis
Pestalotiopsis rot	Pestalotiopsis sp.
Aspergillus rot	Aspergillus flavus group
Peronophthora rot	Peronophthora litchii
	Ceuthospora litchi
	Pestalotia pauciseta
	Colletotrichum gloeosporioides
Aspergillus rot	Aspergillus niger group
Guava	Psidium guajava var. pyrifera L.
Fruit rot	Myxosporium psidii, Gleosporium psidii
Pestalotia psidii	Geotrichum candidum, Rhizopus nigricans
Wilt	Fusarium spp., Cephalosporium sp.
Anthraces	Gloeosporium psidii
Stem canker	Botryodiplodia psidii
Seedling blight	Rhizoctonia solani
White leaf spots	Cercospora psidii
Annona	
Leaf spots	Alternaria sp., Cladosporium sp., Cercospora sp.,
Die-back	Fusarium sp. Botryodiplodia sp.
Fruit rots	Rhizopus nigricans, Cladosporium sp., Alternaria sp., Phytophthora sp.
Annona flowers blight	Alternaria alternata
Wilt root rot	Fusarium spp.
Chestnut	Castanea mollissima
Aspergillus rot	Aspergillus flavus group
Aspergillus black rot	Aspergillus niger group
Armillaria rot	Armillaria mellea
	Botryosphaeria dothidea
Blight	Endothia parasitica
	Coryneum castanicola

	<i>Coryneum kunzei</i>
	<i>Coryneum pustulatum</i>
	<i>Colletotrichum gloeosporioides</i>
	<i>Cryphonectria parasitica</i>
	<i>Diaporthe eres</i>
	<i>Hendersonula toruloidea</i>
	<i>Laetiporus sulphureus</i>
	<i>Marssonina ochroleuca</i>
Leaf spot	<i>Alternaria</i> sp.
Avocado	<i>Persea americana</i>
Phytophthora root rot	<i>Phytophthora cinnamomi</i>
Dothiorella rot	<i>Dothiorella</i> sp.
Anthracnose	<i>Glomerella cingulata</i>
Aspergillus rot	<i>Aspergillus niger</i> group
Aspergillus black rot	<i>Aspergillus flavus</i> group
Black spot	<i>Colletotrichum gloeosporioides</i>
Stem end rot	<i>Phomopsis</i> spp., <i>Diplodia hatalensis</i>
root rot	<i>Fusarium</i> spp., <i>Rhizoctonia</i> spp., <i>Armillaria mellea</i>
Pine apple	<i>Bromelia ananas</i> L.
Penicillium rot	<i>Penicillium funiculosum</i>
Aspergillus rot	<i>Aspergillus niger</i> group
Thielaviopsis rot	<i>Thielaviopsis paradoxa</i>
Heart rot	<i>Phytophthora parasitica</i>
Fusarium rot	<i>Fusarium moniliforme</i> var. <i>subglutinans</i>
Fruit rot	<i>Fusarium moniliforme</i>
Wilt	<i>Fusarium oxysporum</i>
Root rot	<i>Armillaria mellea</i>
Papaya	<i>Carica papaya</i>
Anthracnose	<i>Colletotrichum gloeosporioides</i>
Fruit rot	<i>Phytophthora palmivora</i>
Fruit black rot	<i>Mycosphaerella caricae</i>
Black spot	<i>Cercospora papaya</i>

Stem rot	<i>Stemphylium lycopersici</i>
Corynespora rot	<i>Corynespora cassiicola</i>
Aspergillus rot	Aspergillus niger group
Aspergillus black rot	Aspergillus flavus group
Wilt and root rot	<i>Fusarium</i> spp.
Coconut	<i>Cocos nucifera</i> L.
Aspergillus rot	Aspergillus flavus group
Aspergillus black rot	Aspergillus niger group
Aspergillus rot	Aspergillus ochraceus
Penicillium rot	<i>Penicillium</i> spp.
Ginger	<i>Zingiber</i> spp.
Penicillium rot	<i>Penicillium</i> spp.
Pythium rot	<i>Pythium</i> spp.
	<i>Macrophomina phaseolina</i> , <i>Sclerotium rolfsii</i>
Grey rot	<i>Trichurus spiralis</i>
Red rot	<i>Verticillium luteo-album</i> , <i>Nectria inventa</i>
Rosellinia rot	<i>Rosellinia bunodes</i>
Black rot	<i>Memmoniella echinata</i>
Armillaria rot	<i>Armillaria mellea</i>
Fusarium rot	<i>Fusarium</i> spp.
Kiwi	<i>Actinidia deliciosa</i>
Phomopsis fruit rot	<i>Phomopsis actinidiae</i>
Phoma fruit rot	<i>Phoma</i> sp.
Botryosphaesia rot	<i>Botryosphaeria</i> sp.
Colletotrichum rot	<i>Colletotrichum</i> sp.
Almond	<i>Prunus</i> spp.
	<i>Monilinia fructicola</i>
	Aspergillus flavus group
	Aspergillus niger group
	Aspergillus ochraceus
	<i>Penicillium</i> spp.

Table (1) cont.
Unrecorded pests and diseases to be declined entry into Egypt

Plant Diseases (Bacterial Diseases)

Wheat	Triticum aestivum
Stem melanosis	<i>Pseudomonas cichorii</i>
Bacterial sheath rot	<i>Pseudomonas fuscovaginae</i>
Bacterial leaf blight	<i>Pseudomonas syringae</i>
Black chaff	<i>Xanthomonas translucens</i> pv. <i>graminis</i>
Barley	Hordeum vulgare
Basal glume rot	<i>Pseudomonas spinngar</i> pv. <i>atrofaciens</i>
Black chaff	<i>Xanthomonas translucens</i> pv. <i>graminis</i>
Sorghum	Sorghum spp.
Bacterial leaf streak	<i>Xanthomonas campestris</i> pv. <i>hocola</i>
Rice	Oryza stiva
Bacterial stripe	<i>Pseudomonas avenae</i>
Bacterial sheath brown rot	<i>Pseudomonas fuscovaginae</i>
Bacterial grain rot	<i>Pseudomonas glumae</i>
Bacterial leaf blight	<i>Xanthomonas campestris</i> pv. <i>oryzae</i>
Leaf blight streak	<i>Xanthomonas campestris</i> pv. <i>oryzicola</i>
Maize	Zea mays
Bacterial wilt	<i>Erwinia stewartii</i>
Bacterial stripe	<i>Pseudomonas andropogonis</i>
Sugar cane	Saccharum spp.
Gumming	<i>Xanthomonas campestris</i> pv. <i>ascolorum</i>
Sugar beet	Beta vulgaris
Bacterial blight	<i>Pseudomonas syringae</i> pv. <i>aptata</i>

Tomato	Lycopersicon esculentum
Bacterial canker and wilt	Clavibacter michiganensis
Onion & Garlic	Allium spp.
Internal brown staining	Pseudomonas aeruginosa
Sour skin of onion	Pseudomonas cepacia
Sunflower	Helianthus annuus
Crown gall	Agrobacterium tumefaciens
Cotton	Gossypium spp.
Angular leaf spot	Xanthomonas campestris pv. malvacearum
Gladiolus	Gladiolus communis L.
Bacterial scab	Pseudomonas gladioli pv. allicola
Soft rot	Pseudomonas gladioli pv. gladioli
Crown wall	Agrobacterium tumefaciens
Tulip	Tulipa gesneriana L.
Yellow pack	Corynebacterium oortii
Iris	Iris florentia L.
Soft rot	
Lily	Erwinia carotovora var. carotovora
Stem and leaf gall	Corynebacterium fascians
Rose	
Crown gall	Agrobacterium tumefaciens
Chrysanthemums	Silphium laciniatum L.
	Erwinia chrysanthemi
Carnation	Dianthus spp.
Wilt	Pseudomonas caryophylli

potato	Solanum tuberosum
Bacterial ring rot	Clavibacter michiganensis ssp. sepedonicus
Black leg	Erwinia carotovora spp. atroseptica 1%
Soft rot	Erwinia carotovora spp. carotova 1%
Brown rot	Ralstonia solanacearum (Pseudomonas solanacearum)
Common scab	Streptomyces scabies 5%
Citrus	
Citrus canker	Xanthomonas campestris citri
Citrus blast	Pseudomonas syringae syringae
Mango	Mangifera indica
Black spot	Xanthomonas campestris mangiferae
Apple & Pears	Pomus malus L. & Pyrus communis
Fire blight	Erwinia amylovora
Grape	Vitis vinifera L.
Bacterial blight	Xanthomonas ampelina
Banana	Musa paradisiaca L.
Head rot & root disease	Erwinia carotovora
Blood disease	Bacillus clebense
Moko disease	Ralstonia solanacearum
Olive	Olea sativa
Olive knot	Pseudomonas syringae savastoni
Cherry	Muntingia calabura
Crown gall	Agrobacterium tumefaciens
Bacterial leaf spot	Pseudomonas mors-prunorum
Avocado	Persea americana

Bacterial canker	Erwinia sp.
Pineapple	Bromelia ananas L.
	Acetobacter entrobacter
Papaya	Carica papaya
Bacterial canker	Erwinia sp.
Ginger	Zingiber spp.
Soft rot	Erwinia carotovora
Bacterial wilt	Pseudomonas selanaceamim

Table (1) cont.
Unrecorded pests and diseases to be dechned entry into Egypt

Plant Diseases (Nematodes)

Wheat	Triticum aestivum
Ear cockle	Anguina tritici
Rice	Oryza stiva
White tip	Aphelenchoides bessey
Dak - pora	Ditylenchus angustus
Potato	
Stern nematode	Ditylenchus destructor
Cyst nematode	Globodera pallida
Golden nematode	Globodera restochiensis
Lesion nematode	Pratylenchus destructor
Strawberry	Fragariae spp.
	Aphelenchoides fragariae
	Ditylenchus spp.
Onion, Garlic	Allium spp.
Bloat, Eelworm rot	Ditylenchus dipsaci

Soya bean	
Soybean cyst nematode	Heterodera glycines
	Radopholus similis
Grape, guava, citrus	Tylenchulus spp.
Grape, banana, cheny, papaya, date palm, grape	Meloidogyne spp.
Date palm	Ditylenchus spp.
Apple, pear	Pratylenchus spp.
Grape	Xiphinema spp.
Banana	Helicotylenchus multicinctus
Fig	Heterodera fic

Table (1) cont.
Unrecorded pests and diseases to be dechned entry into Egypt

Plant Diseases (Viral Diseases)

Cereals	
Wheat	Barley stripe mosaic virus (BSMV)
Wheat, barley	Brome mosaic virus (BMV)
Wheat, barley, maize	Wheat streak mosaie virus (WSMV)
Wheat, sorghum, maize	Maize dwarf mottle virus (MDMV)
Wheat	Maize chlorotic mottle virus (MCMV)
Wheat	Maize dwarf ring spot virus (MbRSV)
Maize	Maize ring mottle virus (MRMV)
Sugar cane	Saccharum spp.
	Sugar cane dwarf virus (SCDV)
	Sugar cane Fiji virus (SCFV)
	Sugar cane mosaic virus (SCMV)
	Sugar cane streak virus (SCSV)
Sugar beet	Beet necrotic yellow vein virus (BNYVV)
Potato	Solanum tuberosum
	Potato yellow dwarf virus (PYDV)
	Potato spindle tuber viroid (PSTV)
Tomato	Lycopersicum esculentum
	Tomato bushy stunt virus (TBSV)
	Tomato black ring virus (TBRV)
Strawberry	Frageria spp.
	Strawberiy crinkle virus (SCV)
	Strawbeny vein-banding virus (SVBV)

	Strawberry ring spot virus (SRSV)
	Strawbeny mild yellow edge virus (SMYEV)
Pea & beans	
	Bean common mosaic virus (BCMV)
	Bean yellow mosaic virus (BYMV)
	Black Eye cowpea mosaic virus (BCMV)
	Cowpea green vein banding virus (CGVBV)
	Cowpea ring spot virus (CRSV)
Peas	
	Pea early browning virus (PEBV)
	Pea Enation mosaic virus (PEMV)
	Onion yellow dwarf virus (O YDV)
	Sunflower rugose mosaic virus (SRMV)
Broad bean	Vicia faba
	Broad bean mottle virus (BBMV)
	Broad bean stain virus (BBSV)
	Broad bean true mosaic virus (BSTMV)
	Red clover vein mosaic virus (RCVMV)
	Soybean mosaic virus (SMV)
	Pea seed-borne mosaic virus (PSBMV)
Peanut	Arachis hypogaea
	Peanut stunt virus (PSV)
	Peanut mottle virus (PMV)
Citrus	
	Citrustatterleaf virus (CTLV)

	Citrus Leaf rugose virus (CLR V)
	Citrus vein enation virus (CVEV)
	Citrus ring spot virus (CRSV)
Apple & Pear	Pomus malus L. & Pyrus communis L.
	Apple chlorotic leaf spot virus (ACLSV)
	Apple mosaic virus (AMV)
	Tomato ring spot virus (TRSV)
Grape	Vitis vinifera L.
	Grapevine chrome mosaic virus (GCMV)
	Grapevine corky bark virus (GCPV)
	Grapevine fleck virus (GFV)
	Grapevine leaf roll virus (GLRV)
Peach, Apricot	
	Plum line pattern virus (PLPV)
	Peach rosette mosaic virus (PRMV)
	Peach mosaic virus (PMV)
	Peach wart virus (PWV)
	Peach X virus (PXV)
	Peach mestern X virus (PMXV)
	Peach yellow virus (PYV)
	Peach little virus (PLV)
	Peach yellow bud mosaic virus (PYBM)
	Apricot (Moorpark) mottle virus (AMV)
Banana	Musa paradisiaca L.
	Banana streak virus (BSV)

	Banana bract mosaic virus (BBMV)
Fig	Ficus carica
	Fig poty virus (FPV)
	Fig S. Carla virus
olive	Olea sativa L.
	Olive latent ring spot virus (OLRSV)
	Olive latent 1 virus (OL 1 V)
	Olive latent 2 virus (OL 2 V)
Papaya	Carica papaya
	Papaya ring spot virus (PRSV)
	Papaya mosaic virus (PMV)
Gladiolus	Gladiolus latent virus (GLV)
Tulip	Tulip breaking virus (TB V)
Iris	Iris mild mosaic virus (TMM V)
	Iris sever mosaic virus (ISMV)
Rose	
	Rose mosaic virus (RMV)
	Rose streak virus (RSV)
	Rose Wilt virus (RWV)
	Rose ring spot virus (RRSV)
Chrysanthemum	Chrysanthemunt stunt viroid (CSV)
	Chrysanthemum chlorotic mottle viroid (CCMV)
	Chrysanthemum ring spot virus (CRSV)
Carnation	Carnation ring spot virus (CRSV)
	Carnation latent virus (CLV)
	Carnation vein mottle virus (CVMV)

Table (2)**Recorded pests to be declined entry into Egypt****Insects and mites****1. Insect pests:**

Order	Family	Scientific Name
Diptera	Tephritidae	Myiopardalis pardalina (Big.)
Diptera	Tephritidae	Silba virescens (Macq.)*
Homoptera	Aphididae	Anuraphis tulipae (Boyer)
Homoptera	Asterolecaniidae	Palmaspis phoenicis (Ram. Rao.)**
Homoptera	Ortheziidae	Orthezia insignis (Douglas)
Homoptera	Pseudococcidae	Nipaecoccus nipae (Mask)
Homoptera	Pseudococcidae	Pseudococcus maritimus (Ehr.)
Lepidoptera	Gelechiidae	Anarsia lineatella (Zell.)
Lepidoptera	Tortricidae	Lobesia botrana (Schiff.)*

* Scientific name amended according to the latest nomenclature

** Species transferred to table (2)

2. Mites:

Order	Family	Scientific Name
Prostigmata	Eriophyidae	Aceria sheldoni (Ewing)
Prostigmata	Eriophyidae	Phyllocoptruta olivora (Ashead)
Prostigmata	Tetranychidae	Bryobia rubrioculus (Sch)

Table (2) cont.

Unrecorded pests and diseases to be declined entry into Egypt

Plant diseases (Fungal Diseases)

Wheat	Triticum aestivum
Loose smut	Ustilago tritici
Barley	Hordeum vulgare
Loose smut	Ustilago nitida
Rice	Oryza stiva
Blast	Pyricularia oryzae
Brown spot	Helminthosporium oryzae
Covered smut, kernel smut	Tilletia baraclayana
False smut	Ustilaginoidea virens
Sugar cane	Saccharum spp.
Smut	Ustilago scitamina
Sugar beet	Beta vulgaris
Downy	Peronospora farinose f.sp. betae
Potato	Solanum tuberosum
Early blight	Alternaria solani
Dry rot	Fusarium solani
Silver scurf	Helminthosporium solani
Gangerine	Phoma exigua
Purple rot	Phytophthora erythroseptica
Late blight	Phytophthora infestans
Skin spot	Polyscytalum pustulans
Mack scurt	Rhizoctonia solani
Verticillium wilt	Verticillium alboatrum

Tomato	Lycopersicon esculentum
Stem rot	Didymella lycopersici
Wilt	Verticillium dahliae
Green beans	Vigna catjang
Anthrachnose	Colletotrichum lindemuthianum
Stem blotch	Diaporthe phaseolorum var. sojae
Peas	Pisum spp.
Leafy and pod spot	Ascochyta pisi
Blight	Mycosphaerella pinodes
Foot and call pot	Phoma medicaginis var. pinodella
Leaf blotch	Septoria pisi
Strawberry	Fragariae spp.
Anthrachnose	Colletotrichum fragariae
Wilt diseases	Fusarium oxysporum f.sp. fragariae
Wilt diseases	Verticillium albo-atrum
Leafspot	Mycosphaerella fragariae
Blight	Dendrophoma obscureans
Onion & Garlic	Allium spp.
Basal rot	Fusarium solani
Black rot	Aspergillus niger
White rot	Sclerotium cepivorum
Neck rot	Botrytis allii
Root rot	Pyrenochaeta terrestris
Smut	Urocystis cepulae
Sunflower	Helianthus spp.

Downy mildew	Plasmopara halstedii
Chick pea	Cicer arietinum
Ascochyta blight	Ascochyta vabiei
Soybean	Glycine soja
Anthracnose	Colletotrichum truncatum
Stem canker	Diaporthe phaseolorum
Pea	
Blight	Ascochyta lentis
Cucurbits	
Anthracnose	Colletotrichum laginarum
Wilt	Fusarium oxysporum f.sp. nivium
Cabbage	Brassica alba
White rust	Albugo candida
	Plasmidiophora brassica
Citrus	
Black rot of navel orange	Alternaria citri Ell. Pierce
Small fruit dropping and die-back	Botryodiplodia theobromae
Gummosis and root rot	Phytophthora spp. (P. citrophthora)
Diplodia	Diplodia natalensis
gummosis	Macrophomina phaseolina (Tassi) Goid.
Dry root rot	Diplodia natalensis and Fusarium spp.
Sooty mould	Capnodium citri & Chaetothyrium citri
Melanose	Diaporthe citri (Fawcett) Wolf
Damping off	Phomopsis citri Fawcett Rhizoctonia solani, Pythium sp., Phytophthora spp.,

Citrus fruit spots	Sclerotinia sp. & Sclerotium rolfsii Pestalotiopsis versicolor (Speg) Stewart
Leaf spot	Botryodiplodia theobromae
Root rot	Fusarium spp., Rhizoctonia solani,
	Phytophthora spp., Pythium spp.
Wilt	Fusarium oxysporum
Leaf spot	Alternaria spp.
Mango	Mangifera indica
Fruit rot	Guignardia mangiferae Gloeodes pomigena Phytophthora nicotianae var. parasiti
Dry rot	Boothia tetraspora
Fruit rot	Pestalotia mangiferae Actinodothium jenkinsii
Black blotch	Gloeodes pomigena
Apple & Pear	Pomus malus L. & Pyrus communis L.
Leaf and fruit spot	Phoma pomorum Thumen
Twig blight	Nectria cinnabarina (Tode) Fr.
Root rot	Armillaria mellea (Vahl) Kummer
Fruit rot, crown, collar and root rot	Phytophthora spp. (p.s) syringae (Klebahn) Kleba and P. cactorum (Lebert & Cohn) Schroter
Calyx rot and core rot	Penicillium spp. , Mucor piriformis, Fusarium spp. , Pestalotia laurocerasi westend, Botryosphaeria obtusa (Schwein) Shoemaker and Botrytis cinerea Pers.
Leaf spot	Mycosphaerella pyri (Auersw) Boerema
Phomopsis canker	Diaporthe pernicioso Em. Marchal
Fruit decay	Botryosphaeria stevensii Shoemaker

Canker & die-back	<i>Botryosphaeria stevensii</i>
Southern blight	<i>Sclerotium rolfsii</i>
Grape	<i>Vitis vinifera</i> L.
Downy mildew	<i>Plasmopara viticola</i> (Berk.& Curt) Berl & Det.
Leaf Spot	<i>Cercospora viticola</i> (Ces) Sacc.
	(<i>Mycosphaerella personata</i> Higgins)
Dead arm and led spot	<i>Phomopsis viticola</i> (Sacc) Sacc.
Blight (leaf spot)	<i>Althernaria vitis</i> Cavara
Powdery mildew	<i>Uncinula necator</i> (Schw.) Burr.
Root rot	<i>Armillaria mellea</i> (Vahl & Fr) Kummer
Verticillium wilt	<i>Phymatotrichum omnivorum</i> (Shear) Duggar
Crown and root rot	<i>Verticillium dahliae</i> Kleb.
Banana	<i>Musa paradisiaca</i> L.
Anthrachnose	<i>Fusarium oxysporum</i> f.sp. cubense Woll & Reink
Pink mould	<i>Colletotrichum musae</i> , <i>Fusarium</i> (Semitectum)
Root rot	<i>Trichothecium roseum</i> Link
	<i>Botryodiplodia theobromae</i> pat
Mali formed Fruits	<i>Fusarium moniliforme</i>
Fig	<i>Ficus carica</i>
Penicillium rot	<i>Penicillium</i> spp.
Aspergillus rot	<i>Aspergillus</i> spp.
Fruit soft rot	<i>Botrytis cinerea</i>
Rhizopus rot	<i>Rhizopus nigricans</i>
Root rot	<i>Macrophomina phaseolina</i>
Rust	<i>Cerotelium fici</i> (cast) Arth

Canker	<i>Nectria cinnabarina</i>
Die back	<i>Fusarium</i> sp. <i>Botryodiplodia theobromae</i>
Leaf spots	<i>Cercospora bolleana</i> , <i>Alternaria</i> sp. <i>Mycosphaerella bolleana</i>
Root rot	<i>Armillaria mellea</i>
Root rot	<i>Fusarium moniliforme</i>
Fruit rot	<i>Aspergillus niger</i>
Wilt	<i>Fusarium oxysporum</i>
Olive	<i>Olea sativa</i> L.
Wilt	<i>Verticillium albo-atrum</i>
Peacock eye spot	<i>Spilocae olegina</i> (cast) Hugh
Root rot	<i>Armillaria mellea</i>
Wilt	<i>Verticillium albo-atrum</i>
Cherry	<i>Muntingia calabura</i>
Wilt	<i>Verticillium albo-atrum</i>
Wilt	<i>Fusarium oxysporum</i>
Brown rot	<i>Monilinia</i> spp.
Corneum blight (shot hole)	<i>Stigmia carpophila</i> <i>Cladosporum carpophil</i>
Leaf spot	<i>Alternaria</i> spp.
Litchis	<i>Litchi chinensis</i>
Leaf spot	<i>Botryodiplodia theobromae</i>
Root rot	<i>Fusarium</i> spp., <i>Rhizoctonia solani</i> , <i>Phytophthora</i> spp. <i>Pythium</i> spp.
Wilt	<i>Fusarium oxysporum</i>

Leafspot	Alternaria spp.
Wood trees	Fomes igniarius
White rot	Armillaria mellea
Root rot	Ceratostomella

**Table (2) cont.
Unrecorded pests and diseases to be declined entry into Egypt**

Plant diseases (Bacterial diseases)

Apple, pear, fig	Erwinia amylovora
Grape, fig, olive	Agrobacterium tumefaciens

Table (2) cont.
Unrecorded pests and diseases to be declined entry into Egypt

Plant diseases (Nematodes)

Sugar cane	Meloidogyne spp.
Date palm	Meloidogyne spp.
Apple & Pear	Ditylenchus spp.
	Pratylenchus spp.
	Xiphinema spp.
	Tylenchulus sp. (T. semipenetans)
	Ditylenchus spp.
	Pratylenchus sp.
Grape	Vitis vinifera L.
	Meloidogyne spp. (M. javanica, Tylenchulus sp. (T. semipenetans)
Banana	Musa paradisiaca L.
	Meloidogyne spp. (M. javanica)
	Helicotylenchus spp.
	Tylenchulus sp.
Fig	Meloidogyne sp.
	Xiphinema spp.
Olive	Olea sativa L.
	Meloidogyne spp.
	Tylenchulus semipenetans
Bulbs & Omamental	Meloidogyne spp.
	transplants
	Pratylenchus spp.

	Ditylenchus spp.
	Rotylenchulus reniformes

Table (2)
cont.
Unrecorded pests and diseases to be declined entry into
Egypt

Plant diseases (Viral diseases)

Citrus	
	Citrus tatter leaf virus (CTLV)
	Citrus leaf rugose virus (CLRV)
	Citrus vein enation virus (CVEY)
	Citrus ring spot virus (CRSV)
Grape	Vitis Vinifera L.
	Grapevine fan leaf virus (GVFLV)
Peach, Apricot, Plum	
	Plum pox virus (PPV)
	Prune necrotic ring spot virus (VNRSV)
	Prune dwarf virus (PDV)
	Tomato ring spot virus (TRSV)
	Peach rosette mosaic virus (PRUV)
	Arabis mosaic virus (AMV)
Banana	Musa Paradisiaca L.
	Banana bunchy top virus (BBTV)

Table (3)
Pests recorded but will only be admitted after disinfection

Insect pests

Order	Family	Scientific Name
Coleoptera	Anobiidae	Lasioderma serricorne (Fab.)
Coleoptera	Anobiidae	Stegobium paniceum (L.)*
Coleoptera	Anthicidae	Egyptian members of family Anthicidae
Coleoptera	Bruchidae	All members of family Bruchidae
Coleoptera	Cicindelidae*	All members of family Cicindelidae
Coleoptera	Cleridae*	All members of family Cleridae
Coleoptera	Cryptophagidae	Cryptophagus affinis (Sturm)*
Coleoptera	Cucujidae	Ahasverus advena (Waltl.)
Coleoptera	Cucujidae	Laemophloeus spp.*
Coleoptera	Cucujidae	Oryzaephilus surinamensis (L.)**
Coleoptera	Curculionidae	Balaninus spp.
Coleoptera	Curculionidae	Calandra spp.
Coleoptera	Curculionidae	Sitona spp.
Coleoptera	Dermeestidae	Egyptian members of family Dermestidae
Coleoptera	Dytiscidae	All members of family Dytiscida*
Coleoptera	Histeridae	Egyptian members of family Histeridae
Coleoptera	Lathridiidae	Enicmus (=Lathridius) minutus (L.)*
Coleoptera	Nitidulidae	Egyptian members of family Nitidulidae
Coleoptera	Mycetophagidae	Typhaea stercorea (L.)*
Coleoptera	Ptinidae	Gibbium psylloides (Czemp.)*
Coleoptera	Scarabaeidae	Aphodius lividus (Ol.)
Coleoptera	Scarabaeidae	All members of family Staphylinidae*
Coleoptera	Tenebrionidae	Alphitobius diaperinus (Panz.)*
Coleoptera	Tenebrionidae	Al. laevigatus (F.)*
Coleoptera	Tenebrionidae	Curmimosphena vilosus (Haag.)*
Coleoptera	Tenebrionidae	Gnathocerus cornutus (F.)*

Order	Family	Scientific Name
Coleoptera	Tenebrionidae	Latheticus oryzae (Wat.)*
Coleoptera	Tenebrionidae	Palorus ratzeburgi (Wissm.)*
Coleoptera	Tenebrionidae	Tenebrio molitor (L.) *
Coleoptera	Tenebrionidae	Tribolium spp.
Coleoptera	Tenebrionidae	Zophosis abbreviata (Sol.)*
Coleoptera	Tenebrionidae	Z. punctata (Brulle)*
Coleoptera	Trogositidae	Tenebroides maritanicus (L.)
Coleoptera	Collembola	All members of order Collembola
Dermaptera	Forficulidae	Euborellia annulipes (Lucas)*
Dermaptera	Forficulidae	Forficula auricularia (L.)*
Dermaptera	Labiduridae	Labidura riparia (Pall.)
Diptera	Drosophilidae	Drosophila melanogaster (Meig.)
Diptera	Phoridae	All members of family Phoridae*
Diptera	Scatopsidae	All members of family Scatopsidae
Diptera	Syrphidae	Eristalis aeneus (Scop.)
Diptera	Syrphidae	Er. Tenax (L.)*
Embioptera	Embiidae	All members of family Embiidae*
Hemiptera	Corixidae	All members of family Corixidae*
Hemiptera	Pentatomidae	Carpocoris purpureipennis (De Geer).
Hemiptera	Pentatomidae	Eusarcoris inconspicuus (H.S.)
Hemiptera	Pentatomidae	Nezara viridula (L.)
Homoptera	Aleyrodidae	Bemisia tabaci (Gen.)
Homoptera	Asterolecaniidae	Asterolecanium sambuci (Ckll.)
Homoptera	Cicadellidae	Empoasca spp.
Homoptera	Coccidae	Ceroplastes floridensis (Comst.)
Homoptera	Coccidae	C. rusci (L.)
Homoptera	Coccidae	Coccus hesperidum (L.)
Homoptera	Coccidae	C. longulus (Douglas)
Homeptera	Coccidae	Eulecanium berberidis (Schr)

Order	Family	Scientific Name
Homoptera	Coccidae	Kilifia acuminate (Sign) **
Homoptera	Coccidae	Pulvinaria psidii (Mask.)
Homoptera	Coccidae	Saissetia coffeae (Wlk.) **
Homoptera	Coccidae	S. (= Parasaissetia) nigra (Niet.)
Homoptera	Coccidae	S. oleae (Bem.)
Homoptera	Diaspididae	Aspidiotus destructor (Sign.) ***
Homoptera	Diaspididae	A. hederiae (Vall.)
Homoptera	Diaspididae	Aonidia lauri (Bouche)
Homoptera	Diaspididae	Aonidiella aurantii (Mask.)
Homoptera	Diaspididae	Aulacaspis rosae (Bouche)
Homoptera	Diaspididae	Au. tubercularis (Newstead)
Homoptera	Diaspididae	Chionaspis striata (Newm.)
Homoptera	Diaspididae	Chrysomphalus aonidum (L.) **
Homoptera	Diaspididae	Ch. dictyospermi (Morg.)
Homoptera	Diaspididae	Ch. personatus (Comst.)
Homoptera	Diaspididae	Diaspis boisduvalii (Signoret) *
Homoptera	Diaspididae	D. bromeliae (Kein.)
Homoptera	Diaspididae	Dynaspidiotus britannicus (New.) **
Homoptera	Diaspididae-e	Hemiberlisia cyanophylli (Sign.)
Homoptera	Diaspididae	H. latania (Sign.)
Homoptera	Diaspididae	H. rapax (Comst.) ***
Homoptera	Diaspididae	Lepidosaphes ulmi (L.)
Homoptera	Diaspididae	Melanaspis inopinata (Leon.) **
Homoptera	Diaspididae	Parlatoria blanchardii (Targ.)
Homoptera	Diaspididae	P. oleae (Colv.)
Homoptera	Diaspididae	P. pergandii (Comst.)
Homoptera	Diaspididae	P. proteus (Curt.)
Homoptera	Diaspididae	P. ziziphus (Lucas.)

Order	Family	Scientific Name
Homoptera	Diaspididae	Pseudaulacaspis pentagona (Targo.) **
Homoptera	Diaspididae	Quadraspidiotus ostraeformis (Cu.)
Homoptera	Margarodidae	Icerya aegyptiaca (Douglas)
Homoptera	Marcgrarodidae	I. purchasi (Mask.)
Homoptera	Margarodidae	I. seychellarum (Westwood) ***
Homoptera	Pemphigidae	Eriosoma lanigerum (Hausm.)
Homoptera	Phoenicoccidac	Phoenicoccus marlatti (Cock.) **
Homoptera	Pseudococcidae	Dysmicoccus brevipes (Cock.)
Homoptera	Pseudococcidae	Ferrisia virgata (CM.) **
Homoptera	Pseudococcidae	Maconellicoccus hirsutus (Green)
Homoptera	Pseudococcidae	Nipaecoccus vastator (Mask.)
Homoptera	Pseudococcidae	Planococcus citri (Risso)
Homoptera	Pseudococcidae	Pl. vitis (Niet.)
Homoptera	Pseudococcidae	Pseudococcus longispinus
Homoptera	Pseudococcidae	Trionymus lounsburyi (Brain)
Lepidoptera	Cossidae	Cossus L. niger (B. Backer.) *
Lepidoptera	Cossidae	Zeuzera pyrina (L.)
Lepidoptera	Gelechiidae	Phthorimea operculella (Zell.)
Lepidoptera	Gelechiidae	Sitotroga cerealella (Oliver)
Lepidoptem	Geometridae	Egyptian members of family Geometridae
Lepidoptera	Lycanidae	Virachola livia (Klug.)
Lepidoptem	Lyonetiidae	Lyonetia clerkella (L.) *
Lepidoptem	Pyralidae	Cryptoblabes gnidiella (Mill)
Lepidoptera	Pyralidae	Ectomyelois ceratonia (Zell.) **
Lepidoptera	Pyralidae	Ephestia spp. *
Lepidoptera	Pyralidae	Gallria mellonella (L.)
Lepidoptera	Pyralidae	Palpita unionalis (Hubner) **
Lepidoptera	Pyralidae	Plodia interpunctella (Hb.) *

Order	Family	Scientific Name
Lepidoptera	Pyralidae	Pyralis spp.
Lepidoptera	Tineidae	Members attacking wooden material from family Tineidae
Lepidoptera	Tortricidae	Cydia pomonella (L.)
Psocoptera	Tortricidae	All members of order psocoptera*
Thysanoptera	Phalaeothripidae	Haplotrips cahirensis (Tryp.)
Thysanoptem	Thripidae	Taeniothrips simplex (Morison)**
Thysanoptem	Thripidae	Thrips tabaci (Lind.)
Thysanura	Thripidae	All members of order thysanura*
Different	Different	All wood borers

* Species added to table (3).

** Scientific name amended according to the latest nomenclature.

*** Species transferred to this table from another table.

* Species added to table (3).

** Scientific name amended according to the latest nomenclature.

Table (3) cont.

Pests recorded but would only be admitted after disinfection
Mites

Order	Family	Scientific Name
Astigmata	Acaridae	Rhizoglyphus echinopus (Fum. & Robin)
Prostigmata	Eriophyidae	Eriophyes pyri (Pgst.)
Prostigmata	Eriophyidae	Er. vitis (Pgst.)
Prostigmata	Tenuipalpidae	Brevipalpus californicus (Bankes)
Prostigmata	Tenuipalpidae	Br. obovatus (Donn.)
Prostigmata	Tenuipalpidae	Br. phoenicis (Geijskes)
Prostigmata	Tenuipalpidae	Cenopalpus lanceolatisetae (Attiah)
Prostigmata	Tenuipalpidae	Ce. pulcher (C. & F.)
Prostigmata	Tetranychidae	Eutetranychus africanus (Tucker)
Prostigmata	Tetranychidae	Eu. orientalis (Klein)
Prostigmata	Tetranychidae	Panonychus ulmi (Kock) ***
Prostigmata	Tetranychidae	Tetranychus curcurbitacearum (Sayed)

*** Species transferred to this table from another table.

**Annex (5): Law 82 of 2002: LAW ON THE PROTECTION OF
INTELLECTUAL PROPERTY RIGHTS**

**BOOK FOUR
PLANT VARIETIES**

Article 189

Under the provisions of this Law, protection is granted to plant varieties, derived inside or outside Egypt, whether developed through biological or non-biological means, when registered in the special register of protected plant varieties.

Article 190

The Prime Minister shall establish an office to be known as the Office of Plant Variety Protection. The Office shall be competent to receive, examine and decide on applications submitted for the protection of plant varieties, in accordance with the rules and procedures stipulated in the establishment decision.

Article 191

Without prejudice to international conventions in force in Egypt, any natural person or legal entity, Egyptian or foreign, belonging to, domiciled or active in a country or an entity that is a member of the World Trade Organization or that applies reciprocity to Egypt, shall have the right to protection of plant varieties as prescribed in this Book.

Article 192

To be eligible for protection a variety shall be new, distinct, uniform, stable and shall be subject of a denomination.

A variety shall be considered new if, at the filing date of the application, the vegetation propagation of the variety was not sold or otherwise transmitted to third parties by the breeder or with his consent for the exploitation of the variety. A variety shall not lose its novelty if it was exposed or circulated in Egypt for more than one year prior to the effective filing date of the application. Where a variety has been exposed or circulated outside Egypt, such period shall not exceed six years in case of trees and vines or four years for other crops. The variety shall also satisfy the condition of novelty where the sale or disposal to others, with the consent of the breeder, has taken place prior to the granting of protection to such variety.

A variety shall be considered distinct if it is distinguishable from other known plant varieties, by one or more obvious characteristics, provided that the variety maintains this characteristic after propagation.

A variety shall be considered uniform when the variations among its class remain within permissible limits.

A variety shall be considered stable, when replanted, if its essential characteristics do not change after repeated propagation for a period prescribed in the Regulations.

A breeder's right certificate shall be granted to the person, whether a natural person or a legal entity, who discovers the plant variety that fulfils the protection conditions.

Article 193

The term of protection for plant varieties shall be 25 years for trees and vines and 20 years for other crops.

The term of protection shall run from the date of the grant.

Nevertheless, a variety, for which a breeder's right is requested, shall be granted a temporary protection starting from the date of the filing of the application and expires on the date of the publication of the grant of the title. During this period, the breeder's right as stipulated in Article 194, shall be limited to a fair compensation as soon as such protection is granted, provided that the breeder has notified his application to the party that has been exploiting the plant variety prior to granting the protection.

Article 194

The holder of a breeder's right certificate shall have an exclusive right to the commercial exploitation of the protected variety in any form whatsoever. The production, propagation, circulation, sale, marketing, importing, exporting of propagation material shall not be allowed without the written consent of the variety breeder.

Article 195

The protection shall not prevent third parties from the following acts:

- (1) Non-commercial activities and use of the result of propagation material, by farmers on their own holdings for private propagating purposes;
- (2) Activities related to experiments and scientific research purposes;
- (3) Activities of breeding, cross-breeding and selection for the purpose of breeding new varieties;
- (4) Activities related to teaching and training purposes;
- (5) Activities of use, commercial exploitation and consumption of the crop material, prime and intermediate material and finished products, which are made or derived directly or indirectly from the crop material, whether the crop material is an entire plant or part thereof.

Article 196

The Office of Plant Variety Protection, on submission by the Minister of Agriculture and after the approval of a ministerial committee established by a decision of the Prime Minister, may grant non-voluntary licenses to use and exploit the protected variety without the consent of the breeder, when necessary to safeguard the public interest and where the breeder fails to produce the variety on his own or to provide the propagation material of the protected variety, and where he refuses to grant third parties license for the exploitation of the variety, despite the appropriate conditions offered, or where he practices unfair competition.

The breeder is entitled to fair compensation for the use and exploitation, by third parties, during the non-voluntary license period. The assessment of such compensation shall take into consideration the economic value of the variety.

Article 197

In accordance with the provisions of Article 196, the licensee shall, during the period of the license, abide by the conditions of the license and shall not assign the license to a third party or prejudice other rights of the breeder.

The license shall lapse at the end of its duration or where the licensee does not comply with any of the terms of the license.

Article 198

The breeder's rights on the material of the protected variety shall lapse if offered by him or by his consent for circulation outside Egypt. In this case, third parties are entitled to circulate, sell, commercialize, distribute or import the protected variety whether in the form of propagation material or crop material from an entire plant or part thereof or products derived or manufactured from the crop or other plant components.

The breeder has the right to prevent others from exporting the protected variety if such exportation would lead to the propagation of the variety in a country where the variety does not enjoy protection.

Article 199

The Minister of Agriculture may, on the recommendation of the ministerial committee referred to in Article 196, limit the exercise of the breeder of all or some of his rights provided for in this Law in any manner with the aim of safeguarding the public interest, and in particular if it appears that the protected plant variety:

- (1) has harmful effects on the natural environment, the safety of biological diversity, the agricultural sector, the life or health of humans, animals or plants, in Egypt;
- (2) has harmful economic or social effects, hampers local agricultural activities, or it appears that its use is incompatible with the values and beliefs of the community.

Article 200

The breeder shall disclose the genetic source relied on to develop the new plant variety. The protection of the new plant variety requires that the breeder has acquired that source by legitimate means under the Egyptian law.

Such a requirement extends to traditional knowledge and experience accumulated among local communities the breeder could have relied on in his efforts to develop the new plant variety.

Likewise, the breeder who deals with Egyptian genetic sources, with a view to develop new varieties derived therefrom, shall undertake to obtain the approval of the relevant competent administrative authorities. He shall also undertake to acknowledge the Egyptian traditional knowledge as sources to what he could have achieved using such knowledge and experience, through the disclosure of the Egyptian source the breeder benefited from, and by sharing the profits gained with the interested party, as prescribed in the Regulations of this Law.

A register shall be established in the Ministry of Agriculture to include the genetic Egyptian plants, both wild and domesticated.

Article 201

The Office of Plant Variety Protection shall issue breeder's right certificates in accordance with the procedures prescribed in the Regulations, against a fee prescribed therein, not exceeding 5,000 pounds.

The grant of such a certificate shall be published, at the expense of the title holder, in a monthly gazette issued by the Office. Where an application is rejected, the applicant shall be informed of the rejection decision and the reasons thereof. Any interested

party may, within 15 days from the publication date or the date of notification, oppose the decision to grant a breeder's right certificate or to reject an application for the protection of a plant variety, as may be the case.

The Regulations shall prescribe the rules and procedures for the notification, examination of the appeal and the decision thereon.

Article 202

Where a variety loses one of the conditions required for granting a breeder's right, or when granted in violation of the provisions of this Law, the certificate of the breeder's right shall be cancelled in accordance with the rules and procedures as decided by the Minister of Agriculture.

Notification of this decision to the concerned parties shall be in a registered letter with acknowledgement of receipt, and may be appealed within 15 days from the date of notification.

The Minister of Agriculture shall issue a decision establishing the rules and procedures for examination and settlement of the appeal.

Article 203

Without prejudice to any more severe punishment under any other law, deliberate violation of the provisions contained in this Book shall be punishable by a fine of not less than 10,000 pounds and not more than 50,000 pounds.

In case of repetition, the punishment shall be an imprisonment for a period of not less than three months and not more than one year and a fine of not less than 20,000 pounds and not more than 100,000 pounds.

In all cases, the incriminated seeds and the propagating materials shall be confiscated.

Article 204

Upon the request of any concerned party, the president of the competent court considering the merits of the case, may issue a decision, by petition, to order one or more of the appropriate conservatory measures, and in particular:

- (1) Establishing infringement of a protected right.
- (2) Drawing a detailed inventory and detailed description of the infringing products and the implements used or may be used in the infringement.
- (3) Seizure of all articles stated in item 2.

In all cases, the president may designate one or more experts to assist the bailiff in charge of the execution of such measures. He may require the applicant to deposit an appropriate financial security.

Where the applicant fails to submit the merits of the case to the competent court, within 15 days following the date of the order, such order shall cease to have effect.

Article 205

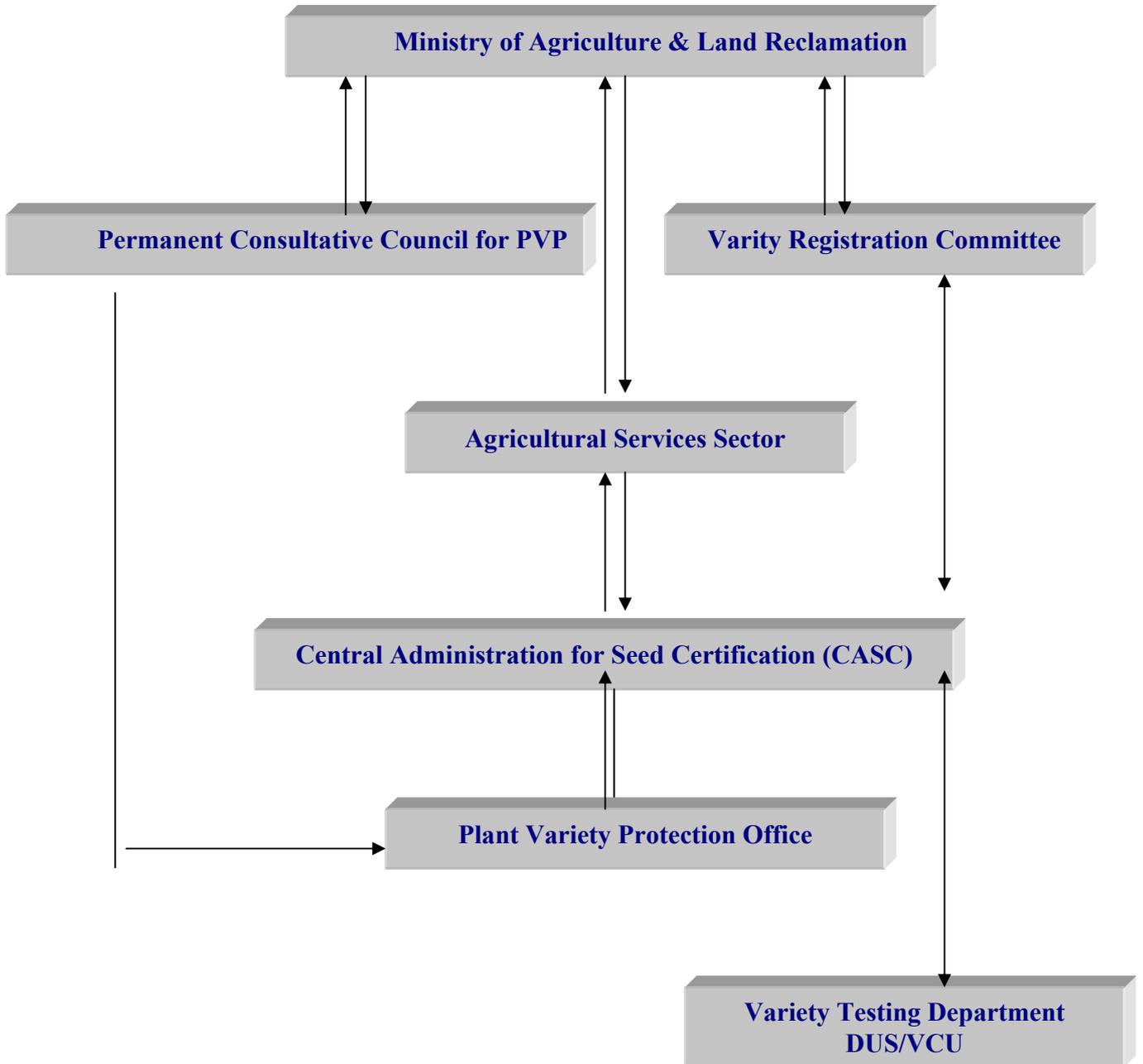
The concerned parties may, within 30 days from the date of issue or publication of the order, as may be the case, appeal to the president of the court who issued that order. The president may confirm or revoke the order totally or partly, in accordance with the rules and procedures provided for under the law of civil and commercial proceedings.

Article 206

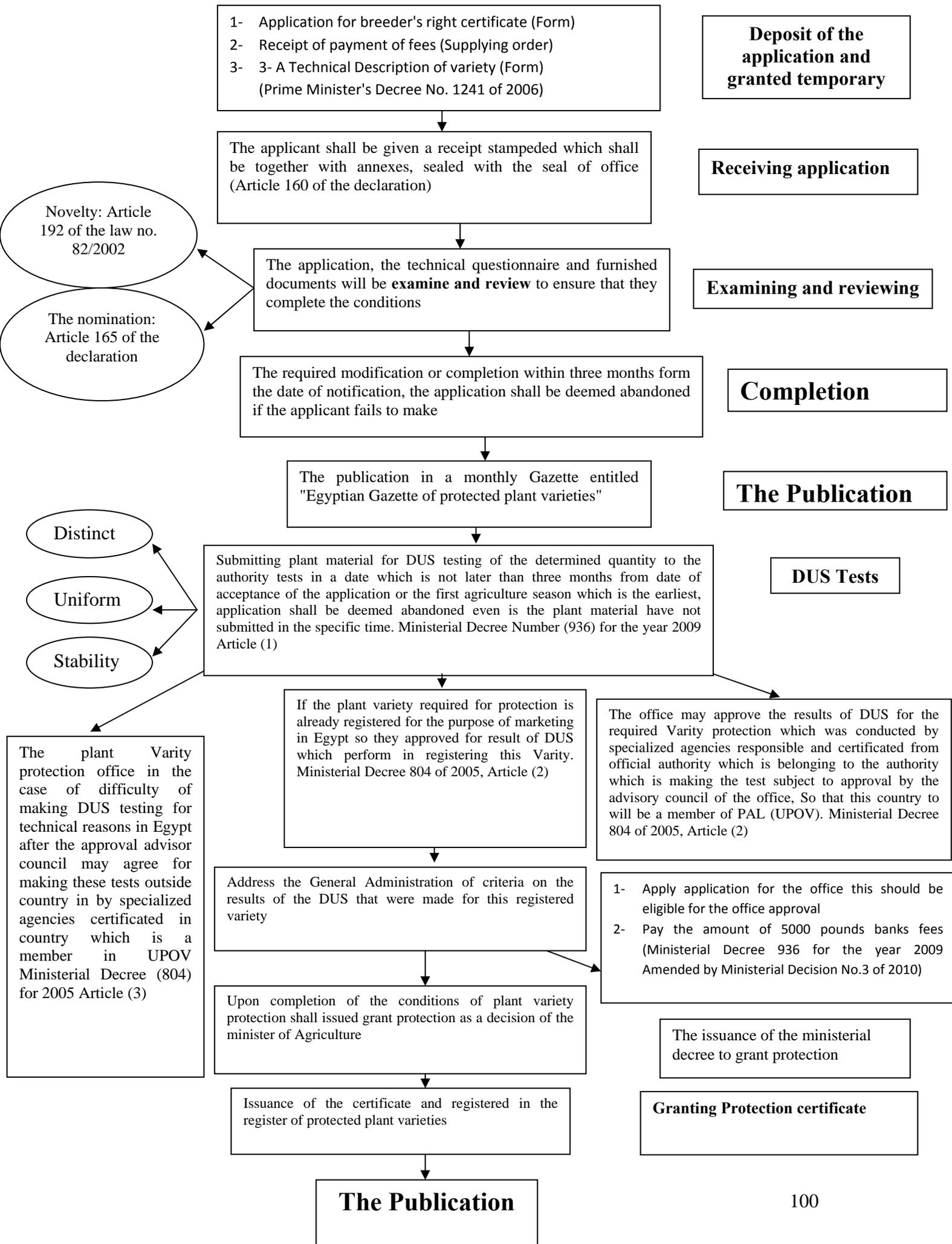
The Minister of Justice, in agreement with the Minister of Agriculture, shall issue a decision designating law enforcement officers for the purpose of implementing the provisions contained in this Book.

[End of document]

Annex 6: The Relationship between Plant Variety Protection office and different components of Seed System in Egypt



Annex 7: Steps for the breeder to get a certificate of breeder's right (PVP)



Annex 8: Exported amount of seeds in Egypt from 2003 to 2009 year by Kilogram

	2003	2004	2005	2006	2007	2008	2009
A) Vegetable Crops Seeds							
Jew's Mallow	623972	310100	270220	260820	373240	300850	141500
Parsley	60540	91020	87390	37605	87900	84001	83880
Watercress	151500	151828	156560	147230	171790	90650	97250
Purslane	29020	35490	31820	25300	28200	38000	25430
Leek	35950	26350	27470	20250	10100	13500	12100
Dill	16480	19850	17050	12900	38195	15250	16250
Coriander	5050	8980	8190	4995	8170	10760	19020
Spinach	29250	21050	29000	40600	396810	2000	7015
Radish	16200	11600	4961	14782	0	5900	11810
Pumpkin	1000	1500	1000	700	61490	0	0
Chard	18000	22500	35400	43128	100	27100	48775
Okra	18000	0	0	0	6400	500	5100
Turnip	2500	7000	2240	5500	0	2000	1500
Squash	1128	0	2250	3700	0	6864	2454
Celery	3000	250	0	26400	0	0	650
Egyptian Mallow	0	1500	0	0	480	0	1000
B) Field Crops Seeds							
Egyptian clover	5910432	11884000	918000	13994000	26526000	15135000	27577491
Alfalfa	177475	91500	137950	421000	492600	317150	241385
Maize	147366	68791	772719	115934	11190	261000	240942
Sorghum	0	0	4250	0	8000	1500	1200
Fenugreek	0	250	279	0	500	500	251
Sudangrass	825000	602950	894080	1171273	624803	571500	226925
Pearl Millet	0	15000	20000	0	3195	41541	0
Bermuda grass	3037	2000	14000	4000	0	1000	2000
Maize	2452	35120	0	0	353690	192904	0
C Medical and Aromatic Plants Seeds							
Marjoram	1625	7300	3600	4200	4956	2004	4306
Basil	325	100	263	2199	500	500	3350

Annex 9: Imported amount seeds in Egypt from 2004 to 2009 year by Kilogram

Type	2004	2005	2006	2007	2008	2009
A) Vegetable Crops Seeds						
Tomato	36004	7320	15867	41796	12360	11171
Cucumber	51463	62510	42483	70162	63282	60188
Melon	7347	10977	8581	13538	9617	13388
Cabbage	1346	1875	2038	2988	386	1864
Cauliflower	76	18	146	58	90	505
Watermelon	2286	4660	4198	4300	9080	7139
Bean	66825	53359	53625	72264	71222	62936
Pea	20325	16004	23595	176430	117867	95202
Sugar pea	5125	3500	8100	6000	12600	6350
Carrot	38359	45903	43305	62044	22715	38804
Eggplant	542	522	769	1243	1219	1280
Pepper	1556	717	1373	1978	1725	3801
Lettuce	183	85	125	756	452	744
Squash	7123	9187	23564	14436	21545	26324
Table beet	1475	450	2646	2650	867	1753
Parsley	52	64	40	2540	64	352
Okra	200	0	120	245	370	821
Radish	70	40	0	404	770	3890
Dill	19	66	11	17562	601	6862
Rocket	34	109	0	572	641	2374
Spinach	419	205	30	1051	100	4064
Chicory	20	21	10025	48	34	22
Pumpkin	1250	52	2024	161	937	1124
Turnip	3404	817	2950	6233	1150	486
B) Field Crops Seeds						
Alfalfa	41500	54400	12050	1659000	379494	154520
Sugar Beet	637500	834464	841446	1177428	802475	1316869
Fodder Beet	1825	2000	3000	1956	6003	3000
Yellow Corn	246492	121288	61938	58671	169174	89715
White Corn	145084	1944	0	4000000	0	0
Sweet Corn	1539	1626	415	50000	1797	500
☀Sunflower	150	832	195	0	0	80000
Onion	2975	2057	2977	6167	4357	4754
Sorghum	470375	421222	464500	740440	371190	1022570
Faba Bean	28823	2000	19720	1632	32760	46800
Peanut	55510	46865	18200	34125	0	14106
Flax	50000	200000	50500	50000	0	15000
C) Fruits Plants Seeds						
Peach	9862	10550	7660	3850	4807	4912
Pear	83	51	427	445	175	155
🍏Apple	33	165	332	265	80	40