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MALTA

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Introduction

The Maltese archipelago consists of three main islands: Malta, Gozo and Comino, the total area being merely 315 km². Malta, the main island, measures 246.6 km², Gozo 65.8 km² and Comino 2.8 km². Out of these 31500 ha just over 10 000 ha of the agricultural land is cultivated. It is estimated that about 8% is irrigated whereas the rest depends directly on rainfall. The annual average rainfall is about 550 mm of which the effective rainfall is 300 mm / year. Considering that the rainy season normally extends from September to March, vegetables and summer field crops are impossible to grow during the dry season ranging from April to August, unless irrigation is applied.

1. Agricultural Holdings

Agriculture accounts for 3% of the Gross Domestic Product (GDP) and 2% of employment.

Malta is self sufficient in fresh vegetables, pork, fresh milk and fresh eggs. The number of full-time farmers is constantly decreasing and accounts only about 1000 plus about 400 full time livestock breeders. The reason for this decrease is mainly due to the subdivision of the holdings as a result of inheritance. When the holding is subdivided from generation to generation it is no longer viable to sustain a living. This trend however does not seem to have a negative effect since the agricultural land is being well cultivated on a part-time basis. This subdivision of the holdings is however creating problems of fragmentation resulting in several fields or rather individual plots of land in the same fields.

2. Soil Aspects

Malta's agricultural land is characterised by the sloping terraced fields bounded by retaining rubble walls. These are very often, shallow soils normally ranging from 20 to 75 cm depth. There are also a few flat areas near valley beds which are very fertile such as at Pwales (Ghajn Tuffieha) and Burmarrad. These soils are of sediment origin and are over a metre deep but over a saline aquifer.

It is estimated that land areas under forage production total around 4500 ha. Production of fresh fruit and vegetables is about 75 000 tons

of which 6000 tons is fruit. This is all raised under conventional methods both in the open field and under plastics.

Livestock production totals around 40 million kg of fresh milk, 11.2 million kg of pork, and four million kg of broilers and 5.5 million eggs each year.

The main soil types are:

- (i) Terra Rossa Soil, red soils found on coralline limestone in the North (Mellieha) and in the South East (Kirkop / Zurrieq);
- (ii) Xerorendzina soils overlying blue clay rock in Rabat areas;
- (iii) Carbonate raw soils, white soils with high calcium carbonate.

However, over the years there has been an extensive movement of soils from one area to another for agricultural land reclamation and addition of soil to existing shallow fields. Hence, it is common to find a mixture of soil types in the same locality and even in the same field.

Water permeability in soils vary tremendously depending on the soil type, very low on clay soil to very high in terra rossa soils. Water retention is high only in clay soils and very low in all other soils. Considering the low soil depth of most of the terraced fields, soil water storage is quite low and, hence, there is a need for frequent irrigation sometimes even during the rainy season.

3. General Aspects

Organic Agriculture in Malta was not heard until a few years ago. However, in the last five years there has been a great interest in this subject, now that most people are conscious of the need to protect the environment and to consume healthy food. Farmers and growers have also shown limited interest in raising crops with controlled applications of chemical fertilizers and pesticides.

The first commercial attempt to grow crops organically was about four years ago when it was said that an organic soil conditioner can be sprayed on the field and all chemicals present in the soil would be neutralized. Few crops like tomato, potato, vegetables and melon were grown on various plots of land as a trial. However, since no organised marketing system of organic production has been set up, this production had to be discontinued as financial returns did not justify the added expenditure of treating the soil.

Recently a voluntary organization called Malta Organic Agriculture Movement (MOAM) was set up by some individuals who are attempting to create awareness towards organics. It seems that they are facing a difficult task to convince farmers and growers to convert into organics. This is understandable when taking into consideration the chara-

cteristics of the agricultural activity in the Maltese Islands, that is, the marketing system, land, fragmentation, lack of land, absence of organic matter in soils, non rotation systems of production and pest and disease persistence in a warm Mediterranean environment.

4. Regulatory Aspects

No regulation framework is present in Malta.

5. Structural Aspects

There are only some trial plots organically farmed.

6. Productions

Trial plots exist for the growing of vegetables such as lettuce and tomato, fruits such as melon and water melon, and some vines.

7. Agronomic Aspects

The main constraint relating to the management of soil fertility is the lack of organic manures produced in livestock farms. Moreover, due to the huge number of small holdings and to the lack of agricultural land, crop rotation and green manuring is hardly practised. Organic fertilizers which have to be imported are not readily available.

Due to the intensive farming and to the lack of rotation, persistent pests diseases, viruses and weeds are the major problem in the Maltese agriculture. Very little biological control of some pests is practised.

All synthetic fertilizers and pesticides normally commercialized in other countries can be imported. Constraints do exist to the importation as long as the normal procedures are followed.

All imported seeds or plants have to be sanitary certified.

Government institutions and private companies or individuals produce technical information (but in organic agriculture).

8. Marketing aspects

Marketing of organic products is not yet developed.