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Centre International de Hautes Etudes Agronomiques Méditerranéennes

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**La situation agricole et agroalimentaire en Méditerranée à l'horizon 2020**

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**Note d'alerte n°25**

***Constraints in the Maltese livestock sector***

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## **Introduction**

Malta became a full member state within the European Union in May 2004. The Maltese agricultural sector now has access to one of the largest markets, but in return had to remove all sorts of protectionism from inbound European products. As we stand to-date, two years post membership; the livestock sector is expressing a lethargic attitude and portraying an air of despair and confusion. This paper will attempt to identify and highlight shortfall fundamental for a sustainable livestock sector.

The set boundaries within which the Maltese livestock industry has to operate defines the parameter that limits animal production. The main constraints can be listed as following :

- availability of adequate land base
- availability of water suitable for livestock and crop production
- quantity and quality of feed and
- production and disposal of manure.

## **Land Base**

Malta's total territorial land base is defined at 316Km<sup>2</sup>. This area has to be shared amongst all the different land use categories that are associated with a developed country. The increase in space allotment for non agricultural use such as housing, industry, sports and tourism related projects occurs at the expense of precious arable land. Presently, about 11,620 hectares of different land classes are available for agriculture. Past policies encouraged part-time farming to the extent that there are now some 14,000 registered farmers, of which less than 10% are full-timers permanently engaged in agriculture. This influx of part-timers has had a significant overall negative effect of the sector. The average farm size now stands at 0.876 hectares and 45% of farms are between 0.1 and 0.5 hectare. The situation is further confounded with the nesting problems of *ownership*, *fragmentation* and the *tenancy act*.

Following the transfer of Church-owned property to the State, Government became the largest landowner, possessing some 2/3 of the national territory. The remaining 1/3 is owned by private sector, however only a low percentage (19.5% of holdings) of agricultural land are operated on a freehold basis. This structure of ownership is slow to change since Government wants to retained ownership of agricultural land to ensure that this space is not utilised for other purposes such as speculation and urban development. This style of ownership resembles more the formula of central controlled economies than that of free market, an essential ingredient within the European Union. The Malta Environment and Planning Authority is entrusted with the effective planning management and control of the national territory, thus in principle removes the need for Government to retain ownership so as to safeguard agricultural land.

In addition, the private sector tends to hold on to their property as a means of investment in the hope that someday their property might qualify for urban development. The shortage in supply of freehold land coupled with heavy pressure from development for locals and tourist facilities creates artificially high purchase prices. The prevailing high land prices together with a lack of interest on the part of the younger farming community to continue working the land, have induced several farmers to either sell the land, leave it idle or simply grow wheat (to be later transformed into straw). Under this system of land tenure, farmers make productivity enhancing investment only in farmer owned land and perhaps on government owned land which until recently was considered to be securely leased land with low probability of being evicted. Privatisation of state owned

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agricultural land would be an attractive option, as farmers would tend to invest more in their private property rather than in land held on tenure. Such an initiative would also have positive repercussions, by increasing land supply there by decreasing price.

The traditional pattern of inheritance of farmland involves the division of land equally amongst all the heirs. This has led to the present situation whereby farms are increasingly fragmented and composed of an increasing number of smaller fields. While such a system could be judged as one that is most fair amongst the heirs as they are all left equal shares, it give rise to a serious of complex situations.

Specific problems associated with this scenario include:

- increasingly complicated access arrangements (with their legal implications, as well as environmental impacts due to multiple access routes),
- lowered long-term tenement viability
- limitations on the range of farming methodologies that can be adopted (e.g. restrictions on mechanisation even where topography is not a major limiting factor, n fact 45.3 % of all tractors are 0 hp,).
- problems in relation to access roads, water share, agricultural investment and tenancy rights.

Tenancy rights are totally in favour of the tenant and are inherited in similar manner to ownership i.e. it is divide equally so that each child gets an equal share of the land, without obligation of informing the landlord. Under such situations, many farms are losing their economic viability and abandonment is on the increase. New employment opportunities in other sectors compound the problem and contribute to a general shift towards part-time work in agricultural activity.

Summing up all the forces in play, one can easily conclude that the average farm of 0.876 hectares may 1) in whole or in part be property of third parties, 2) not be in one parcel of land, and 3) since the tenant is protected by the tenancy act, the tenant may be using farming as an excuse to retain access to the land for activities other than farming, very often related to hunting. This unique situation is of particular significance to the livestock sector. The super micro-scale of the production surface base is the main culprit for: 1) the evolution of highly dense highly intensive production systems; 2) the huge challenge of manure storage and disposal, and 3) roughage production.

### **Water Availability**

Since Malta lacks any form of permanent surface fresh water bodies, only 8-11% of farm land is classified as irrigated, the majority of crops are rain fed. The semi-arid nature of the islands is characterized by wet winters and hot, dry summers, with a predominance of rainfall during the month of October. The average annual rainfall is approximately 550mm, and water availability is normally less than the water demand. Another complication lies in the fact that precipitation provides moisture during a period when demand by crops is relatively low, i.e. when rate of plant growth is at its slowest. Conversely, when the potential for plant growth is high, natural moisture is almost completely absent. Furthermore, the high variability in rainfall patterns could have a drastic effect on crop quantity. All grains intended for livestock feeding are imported.

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A constant and reliable water source may be the utilisation Treated Sewage Effluent. With the introduction of new and larger sewage treatment plants, more irrigation water will be made available. Land that has access to water could be intensively worked and three crops a year are possible.

### **Roughage Production**

As discussed above, the livestock farmer in Malta lack adequate land base, and hence is at the mercy of third parties to supply him with roughage, a fundamental ingredients in ruminant nutrition. The livestock breeder has very little say on what and how fodder is produced. The intention of the fodder producer is to produce the maximum amount of bales per unit area of field. This concept is heavily leans towards the production of bulk rather than the production of quality roughage. Fodder quality is significantly correlated to time of harvest. Taking sulla (*Hedysarium coronarium*) as an example, it reaches maximum nutritive values at 10% bloom, and hence should be harvested at this stage of maturity. In reality, this fodder crop is harvested at a much later stage, when the plant would have reached maximum bulk at the expense of nutritive value. The bulk would be highly lignified and the only nutritive parts i.e. the flower and leaves are so brittle that they snap off and are lost during harvesting. Only the highly lignified portion would eventually be harvested. Quality roughage is a fundamental prerequisite for efficient ruminant production.

### **Manure Handling**

The small land-based animal production units, are the main driver responsible for the evolution of the highly intensive livestock system. Very often complications of inadequate farm design, animal flow, lack of automation and high stocking densities are characteristics of the average animal farm. The manure patch is usually an enclosure bordered by a low perimeter wall. Since animals are stall fed, it is possible to collect every bit of dung, letting it dry in the sun for later use as field manure. The high stocking density makes manure handling a top priority in every aspect of animal husbandry. Furthermore, manure storage, handling and disposal are challenges faced by the majority of production units due to a lack of adequate land base. All these factors combined pose a serious threat to the general production efficiency, including animal health and welfare.

### **Conclusion**

These issues mentioned above summarise concisely the most fundamental problems confronting the livestock sector, and to a great extent all other sectors of agriculture. None of the identified constraints are a direct consequence of Malta's membership within the European Union. The foremost concern is to consolidate the performance of the agricultural sector, with particular emphasis on retaining the land base for productive and ecological purposes.

To achieve this consolidation the following measures have been recommended:

- Improvement in the management of land resources;
- improvement in the management of water resources;
- introduction of high yielding, cost effective and environmentally acceptable production techniques;
- improvement in marketing of agri-products;
- Review land tenure system as it particularly affects the level of technology applied to the production of annual and perennial crops, thereby indirectly affecting milk and meat production and propose measures for improvement.

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These obstacles need to be tackled urgently by the competent authorities to establish solid foundations conducive to the proper development of a sustainable livestock enterprise. Our smallness and the physical isolation from main land Europe provides us with unique market niches for our livestock sector since high health could easily be achieved and maintained. Following such a reform, the livestock sector would not only survive, but also be in a position to capitalise on the fact that we are an island EU member state in the middle of the Mediterranean.

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