

Sustainable Farming in Guernsey

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The maintenance of sustainable and traditional agriculture in island communities is becoming increasingly difficult, faced with the globalisation of trade in agricultural products. The increasingly industrialised and large-scale farming operated in some parts of the world can supply these products at a price well below the cost of production in most island communities. This obviously undermines local production and can, as evidenced by the recent Foot and Mouth Disease epidemic in Britain, cause food safety and security concerns about imported food, whilst raising questions about the continuing role of farming in the rural community.

The Channel Islands characterise many of the problems faced by island communities throughout Europe. Production and marketing costs are high due to high transport charges and the distance from mainland markets and consequently island producers must look to their own population to consume their produce. This means that the producers must be constantly aware of changing consumer attitudes and be prepared to adapt to what their consumers require. Farm practices and consumer attitudes are changing and the industry accepts that there must be an equitable balance between environmental protection, wildlife conservation, economic viability and social values in a sustainable agricultural system.

Increasingly, on the mainland, there is division in the market for foodstuffs. The market has divided into high volume - lower price and to lower volume speciality food at a higher price. Few people ask how cheap imported chicken or pig meat is produced but they want to be sure that locally produced meat is produced in welfare friendly systems. Organic production and local 'farmers markets' are part of this trend towards higher 'quality' sustainable local production. Local farmers, producing high quality food for a relatively affluent island population, are ideally situated to benefit from this movement.

Farming in Guernsey

Agriculture in Guernsey is traditionally dairy farming, based on the Guernsey island breed of cattle that has been exported around the world, and the production of dairy produce for the home market. Agriculture in the island is constrained by insularity and by the particular nature of the island, which is characterised by small fragmented farms, small fields with traditional hedge banks, and an absence of security of land tenure. There is also considerable urban development and farming is carried on in largely urban areas, often in very close proximity to dwelling houses. In this situation farming is said to maintain the 'green lungs' – the green spaces - for the urban community.

The community has supported dairy farming because it has preserved a more traditional way of life, the island breed of dairy cow and a working semi-natural landscape. The landscape is still one of small fields and the concern is that without agriculture as a viable industry to utilise and maintain the open land, there would be an insatiable demand for industrial, office and housing development on the open spaces. Even the development of large gardens change the 'feel' of the island from one of a relatively open landscape to that of a manicured urban community. But the increasing size of farms and improving efficiency has led to growing concerns about environmental degradation and water pollution, whilst others are becoming increasingly concerned about the welfare of animals in intensive farming systems.

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In the future, agriculture will be as much concerned with the conservation of wildlife habitats and biodiversity within the island, and the genetic survival of the island breed of cattle, as it is with the production of milk and locally produced dairy products.

This will not mean that agriculture will need less land. The current agricultural production is very intensive. Cow numbers may decline slightly but a much greater proportion of the food consumed by the cows should be produced in the island rather than imported as concentrate feed from England. Likewise, the intention is to reduce water pollution by the application of less imported fertilisers and the spreading of organic manures over a greater area of land and at a time when the nutrients in the manure can be utilised for plant growth. This means that whilst there might be fewer cows producing milk there will need to be more land used for productive agriculture.

The Guernsey Breed

Indigenous breeds of dairy cattle are under threat throughout the world as the Holstein breed becomes even more predominant and this is a very real threat to genetic diversity. Guernsey is the home of the island breed of dairy cattle which is renowned for the high quality of its rich milk, its ease of calving and longevity. The purity of the breed, and the health status of the cattle, is protected by ancient laws that prohibit the importation of cattle into the island. The island herd is tested free of Tuberculosis (TB), Brucellosis (contagious abortion), Enzootic Bovine Leukosis (EBL), Bovine Viral Diarrhoea (BVD), Infectious Rhinotracheitis (IBR) and *Leptospira hardjo*; diseases that still occur in other countries within Europe. However, the island is second only to the United Kingdom in the number of cases of BSE that have been identified, due entirely to the importation of concentrated cattle feeds from feed mills in the south of England.

The Island was the origin, or home, of the worldwide Guernsey breed. This was almost certainly bred from a number of genetic sources, chief among which were the 'Froment de Leon' cattle from Brittany and Isigny cattle from Normandy. It is widely believed that these were imported to Guernsey by French monks when they set up their Abbeys in the island during the middle ages. There are also reports of Dutch cattle and others being in the island in the 18th Century. Local breeders then selected the characteristics that they valued most highly and determined the characteristics of the Guernsey breed.

Farming with Welfare and Wildlife in Mind

Agriculture not only produces food but also shapes the rural environment. The countryside is a managed environment generated by the pattern of farming and land use. Increasingly the sustainability of the countryside is becoming a major public concern, as is the high standard of animal husbandry within the island.

In Guernsey, high value pastoral farming is the predominant land use. Wildlife conservation is dependent upon the continuity of less intensive farming practices. The island has resolved to prevent further environmental degradation, the loss of bio-diversity, and pollution of water, soils and air. To this end the Agriculture and Countryside Board is promoting a Countryside Management Scheme. This voluntary scheme encourages each farmer to take part in a 'farm biodiversity action plan', to undertake a 'manure management plan' to store and spread waste in an appropriate manner, and to calculate an annual 'farm nutrient budget' to monitor surplus nutrients and avoid water pollution. Although voluntary, the scheme is so attractive that all dairy farmers supplying milk to the States Dairy have joined the scheme.

A typical dairy farm in Guernsey has 50 milking cows with 30 young-stock that are being reared to enter the dairy herd. However, the range in the size of farm businesses is from a farm with just three cows up to farms with 130 cows. There are now six farms that have more than 100 milking cows in the herd and these larger farms now produce most of the milk consumed in Guernsey.

The average farm would have about 35 hectares of land in total, but as the owners of smaller farms retire, the average farm size is increasing significantly, and this trend is likely to continue over the coming years. Most farms are not integral units with mainly owned farmland surrounding a central group of farm buildings, but a conglomerate of individual fields acquired from different landlords on annual tenancies. This has resulted in a very fragmented field structure with land being rented from many different landlords. The size of individual fields is very small. Most fields are less than half a hectare in size with traditional earth banks surrounding each one.

The land fragmentation, land tenure system and proximity to dwelling houses all increase the workload and the amount of travelling needed to work farms in Guernsey. It also makes farming in Guernsey much more vulnerable to outside pressures. The high cost of farming these small fragmented fields adjacent to houses should not be underestimated. Although the profitability of farming in Guernsey is undoubtedly higher than in England or France, it takes more time and effort to operate a small fragmented farm in Guernsey than it would to farm a much larger business on the mainland.

Farming cannot stand still. It has to improve its practices and become more efficient, whilst at the same time ensuring that the cattle are well cared for, with every regard for their welfare. Likewise, that the countryside is maintained taking the greatest regard for the improvement of wildlife habitats and the avoidance of water pollution.

In the past most cows were kept in traditional tie-up cow stables where the cows were housed, fed and milked throughout the winter months. In recent years the farms have been developing in size and improving the buildings and facilities. New 'cubicle' buildings have been erected to house the larger herds in greater comfort and new milking parlours erected to improve the speed of milking and improve the standard of hygiene in the production of milk. Grass or forage maize is made into silage as the main winter feed for cattle, and the Agriculture and Countryside Board is encouraging all farmers to provide at least four months storage so that animals slurry and manure need not be applied to the land during the autumn and winter months.

Wildlife habitats

The soils in the island are mainly deep loamy or sandy soils, although they can be very wet and waterlogged in the low lying west and north of the island. The soil tends to be poorly drained in the valley bottoms and in the north and west of the island. This landform has affected the native vegetation, the improved grassland, wet meadows, wildlife habitats and trees.

There are several clearly defined habitats on farms in Guernsey:

1. Grassland
 - improved grassland;
 - semi-improved grassland;
 - unimproved grassland.
2. Hedge banks
 - dry earth banks
 - tall hedgerows
 - hedge trees
3. Wetlands
4. Watersides – streams and ditches; and
5. Country lanes

Grasslands may be divided into three main groups: old unimproved grassland, of which there is very little in Guernsey; semi-improved grass and improved grassland. Some of the grassland on Guernsey farms has been improved but is now managed as permanent pasture, but most is currently intensively managed as improved grassland:

- Improved grassland has some wildlife value but particularly the field edges support small mammals and breeding birds.
- There is potential to create wildlife strips or wildlife corridors that link wild or rough areas. This might be most appropriate at the base of boundary banks and hedges.
- The erection of an electric fence 1 metre from the base of a boundary bank can create an ungrazed area for small mammals and other wildlife and provide undisturbed pathways for them to move around the farm. This will encourage voles, skylarks and meadow pipits.
- Consideration should be given to harvesting silage and hay crops at a time when it will reduce the mortality of ground living or nesting birds and animals.

Hedgebanks may be divided into dry earth banks that are covered with wildflowers in the spring time, much taller hedgebanks that have mature trees and shrubs, and some excellent gorse hedges. The hedgebanks are perhaps the most important historical and wildlife habitat feature that we have in Guernsey. The intention is not to deliberately encourage the formation of any one type of bank but to acknowledge that there is merit in diversity.

Conservation and environmental protection is becoming an increasingly important element of modern farming. In the future a Farm Biodiversity Action Plan will be drawn up for each farm, a farm pollution risk assessment and a Manure Management Plan has been prepared every farm, and new manure storage facilities are being planned. Currently farmyard manure and slurry is spread on land throughout the winter but in the future the increased storage capacity will mean that manure can be stored ready for application to crops during the growing season when the nutrients can be better used.

The Agriculture and Countryside Board's Policy

The Board's policy includes several elements in a new 'Farm Management Contract'. This includes the following elements:

1. A dairy contract to supply a known annual amount of milk to Guernsey Dairy. This is an individual farm milk contract whereby milk produced within the farm contract (that is, milk that is required for consumption within the island) is valued at an 'A' price. Milk that is produced in excess of the farm contract (mainly destined for manufacturing for export), is subject to a 'B' price that reflects the true costs of manufacture and export. This will prevent the over-production of milk.
2. A Dairy Quality Assurance Scheme that will ensure that milk is produced in an appropriate environment to meet known hygienic quality objectives. This will be regularly monitored by an independent assessor.
3. An implementation plan to work towards the proposals contained in the Manure Management Plan over an agreed time scale. Grants and farm loans are available to help farmers to make the necessary investments in slurry storage so that it need not be applied during the winter months when run-off can cause water pollution. Slurry and manure should then only be applied for the growth of crops, on land specified in the plan and in quantities that are not likely to cause nutrient leaching to the water courses.
4. The Guernsey Countryside Management Scheme. The objective of the scheme is to achieve a net environmental gain for the island of Guernsey and to contribute to an island Biodiversity Action Plan. Each farmer must agree to co-operate in the provision of a Biodiversity Action Plan on his farm and to implement it. This plan will be prepared during the first year of the Farm Management Contract and will include all the land owned or used by the farm. The plans will be monitored and revised annually to maintain

and enhance wildlife and countryside conservation. It is anticipated that a thorough monitoring exercise will be carried out after the initial five-year period.

5. Farms must not exceed an annual maximum stocking rate of 2.0 livestock units (equivalent to 2 dairy cows) per hectare on the available grazing and forage conservation areas. This includes the land used for grazing cattle, and for growing grass and forage maize for conservation as hay or silage.
6. Field boundaries and hedgerows have been identified as the most important individual habitat on farmland and as such specific management prescriptions have been included in the initial farm contracts.
7. Farm records of fertiliser, slurry and pesticide use will be kept.
8. An agreement to co-operate in the calculation of a 'farm-gate' nutrient balance. This will take account of the input of purchased fertilisers and feeds and the output of milk and other crops from each farm. All farms have a surplus of nitrogen and phosphorus but by calculating the surplus each year it is possible to compare the 'efficiency' of the farm compared with other farms locally, and between one year and the next to see how different years compare. The surplus may build up as organic matter in the soil whilst some may leach out of the farm system. Losses of nutrients from the soil and to the atmosphere will be calculated.
9. Improved animal welfare. Provisions to ensure the continued delivery of high standards of animal welfare will be agreed and monitored. An Animal Welfare Assurance Scheme will ensure that the welfare of farm livestock is well above the requirements of international legislation and it is hoped that all farmers will join the RSPCA 'Freedom Foods' Assurance Scheme within the foreseeable future. Each farm will be monitored by an independent assessor to ensure that it complies with the requirements of the Animal Welfare Assurance Scheme.

What changes are likely in the future?

The Guernsey Countryside Management Scheme will need to be revised and improved each year. Initially subsidy payments will be made mainly for complying with the regulations, for taking part in the Biodiversity Action Plan and for playing a full part in all the other components listed above.

Each farmer has until 31st December 2003 to install appropriate slurry storage facilities on his farm. Farms become ineligible for grant aid after that date. It has been agreed that farms should have a minimum storage capacity of 4 months winter production of slurry and manure. It is likely that after that date the States Water Board will ban the field application of farm slurry and manure from 1st October to 31st December each year. If the Water Board took this action then the Agriculture and Countryside Board might consider it inappropriate to pay subsidy to a farm that failed to comply with this key objective.

Many of the individual components of the Contract will need to be updated, revised or monitored each year. There are also new elements that will be developed as the initial requirements are met. For instance, the information about each farmer's land holding is currently being recorded and mapped using the 'Digimap' computer system as part of the Manure Management Plan. This will be revised and updated in the future but as farmers comply with the requirement to construct much larger slurry storage facilities, a new element of fertiliser planning will be developed. This 'Fertiliser plan' will provide advice on the nutrients required for crop growth and will be a key part of helping farmers to reduce the surplus nutrients currently applied to the land.

A Farm Nutrient Balance will be calculated each year to record the surplus nitrogen produced on each farm and this might be used as an amalgamated island index, or Island Nutrient Balance. This information could be utilised so that the subsidy payment provided for each farm more closely reflects the actions being taken by that farmer to reduce the environmental impact of the farm and to enhance wildlife.

The Biodiversity Action Plan will need to be updated and new proposals made for the enhancement of wildlife on the farm. This may take the form of additional payments for the management of priority habitats such as species rich grassland, wetlands, woodlands, field boundaries, the reduction of pesticide and fertiliser use, for increased buffer zones, or for area based supplements to recognise the importance of Sites of Nature Conservation Interest. The Board will also need to consider whether to recommend the extension of the scheme to land that is currently used by other livestock keepers or vegetable growers.

The standard of hygiene and the welfare of the animals on each farm will be monitored on a regular basis to provide consumers with a measurable assurance of milk quality and high standards of animal welfare on island farms. These standards are likely to be enhanced in the future and it is hoped that many farmers will opt to have their farms monitored in the RSPCA Freedom Foods Assurance Scheme.

Farmers will not be able to achieve all these major changes to their farming practices overnight. It will require substantial changes to the management of their farms and require considerable assistance and advice. The Agriculture and Countryside Board is well aware that it will need to provide continued information, encouragement and advice to help farmers to make the necessary improvements.

Conclusion

The Agriculture and Countryside Board's Policy is likely to evolve in the future. It is likely that there will be much greater emphasis on environmental concerns, the conservation of landscape and wildlife, enhanced animal welfare, organic production and food safety. It is also likely that there will be further moves to break the link between production and the payment for environmental and conservation benefits. The payment of agricultural subsidies will be conditional on each farm's compliance with the approved practices.

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