

## The Modern Development of the Agricultural Industry and Farming Enterprises in Jersey

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**Abstract:** The study considers the development of the Agricultural industry, as a principal sector of business activity, in 20th century Jersey. The perceived decline in Agriculture due to too much concentration on one crop and competition from other areas is considered. Also, the development of the Finance industry from the arrival of the first merchant bank in the 1960s to its present day standing providing 55% of GNP and the continued importance of the Tourism industry are considered in relation to the Agricultural industry. The aims of the study are to determine the factors involved in the modern development of the Agricultural industry and farming enterprises in Jersey.

**Key words:** Development, agriculture, industry, farming, enterprises, Jersey

### INTRODUCTION

This study considers the development of the Agricultural industry and farming enterprises in Jersey in the 20th century. There has been the perceived decline in Agriculture due to competition from other areas. The aims of the study are to determine the factors involved in the modern development of the Agricultural industry. A number of research methods have been used including secondary data to assess the industrial environment, which has existed in the 20th century and quantitative methods to determine the different factors involved in the development process of the Agricultural industry. Semi-structured qualitative methods have been used to examine, in detail, the nature and importance of these factors. The research has been carried out in 4 distinct stages. The first stage has assessed the industrial environment, which has existed in Jersey in the 20th century involving Agriculture. It has drawn primarily on archival material, existing research and secondary data sources. Secondary data sources include existing literature in the area, which consists of both published material and 'grey' literature. The second stage has considered the factors involved in the development of the Agricultural industry and has consisted of 3 main tasks. The first has been to collate data on the development of the industry in Jersey. The second has been to analyse

the data using quantitative methods to measure evolutionary change and significant events. The final part has involved the determination of trends to develop a longitudinal framework over the time period of the 20th century. The third stage of the research has examined the nature and importance of the factors and has provided a detailed qualitative analysis of the issues regarding the development of the Agricultural industry. This has involved both internal (island) and external (international) influences on evolution. From this, a summary of the salient issues arising from trends has been made, enabling direct analysis and comparisons. The final stage has involved the documentation of the research findings.

It is one of the primary aims of the research to understand the development of the Agricultural industry in terms of a sustainable development strategy for the future. The study is both of academic and practical significance to the body of understanding on the processes involved in the modern development of the Agricultural industry in Jersey.

Jersey is the largest, most important and southerly of the Channel Islands in the English Channel (Learmouth *et al.*, 2001; Government of Jersey, 2002a; Merret and Walton, 2005). It is located 49 13 N 2 07 W (WFE, 1990) off the north-west coast of France with Normandy 14 miles to the east, Brittany 30 miles to the

south and the nearest point of the English coast 85 miles north (RFR, 1998). The greatest length east to west is about 12 miles and the breadth is 7 miles. Jersey has a total surface area of 116.2 km<sup>2</sup> (28,717 acres or 44.87 square miles) (Government of Jersey, 2002a; RFR, 1998; Merret and Walton, 2005). Some 53% of the surface area is in agricultural or horticultural use and valleys, water reservoirs, headlands and dunes account for most of the remaining surface area (RFR, 1998). The Island has a gently southwards sloping plateau at an elevation of 60-120 m which is divided by valleys running north to south (Robbins, 2000). Jersey has a varied, good quality landscape and environment with a strong rural character with more than half the land which is very fertile used for agriculture (Government of Jersey, 2002a). The coastline is rugged, steep and precipitous in the north (rocks, reefs, tides and currents make navigation difficult) with sandy bays in the East, West and South and harbours including St Aubin and St. Helier the principal town and capital (TBEL, 1933). There is a mild climate with warm summers (EE, 1961). At the last census the Island had a population of 87,186 people (Jersey Census, 2001) and an estimated 68% live in the four southern parishes (RFR, 1998; Government of Jersey, 2002a). Between 1971 and 1996 through net immigration the population grew by 15,820 people (RFR, 1998). Whereas, there is concern over the adverse effects that a static or declining work force will have on the main sector of Finance there is also concern over harmful environmental effects through congestion and pollution due to an increase in population (Leammouth *et al.*, 2001). Figure 1 shows the growth in the population of Jersey from 1901-2001.

In 1996 out of a population of 85,150 (RFR, 1998) there was a labour force of 57,050 (67%) (Country Report, 2002). The largest population density of 8,280 persons per square mile is in St. Helier and the overall population density of the Island is 1,938 people per square mile (RFR, 1998; Jersey Census, 2001). Urban development is mainly in and around St. Helier and east and west from Gorey and St. Aubin respectively; in the west post war development has led to a second centre at Red Houses and Les Quennevais and there are a number of large rural settlements around local facilities and parish churches and since the 1960s some isolated housing developments (Government of Jersey, 2002a). Figure 2 shows the growth in the population density per square mile for Jersey from 1901-2001.

Political allegiance is to the English crown through the monarch holding the title of the Duke of Normandy. The political relationship with regard to England, France and the European Community (EC) for historical reasons has been complicated (Merret and Walton, 2005). Jersey's

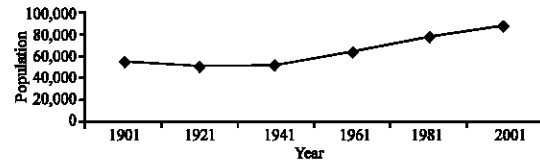


Fig. 1: Population growth of Jersey. Source: Jersey Census (2001)

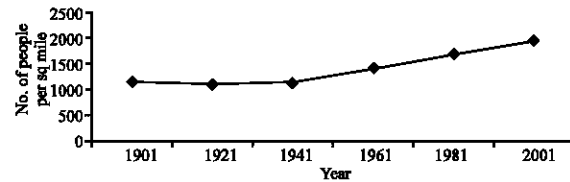


Fig. 2: Population density per square mile for Jersey, Source: Jersey Census (2001)

judicial systems are independent of the United Kingdom government's administrative systems and the English courts (Chief Adviser's Office, 1997). The Island therefore, has its own administrative, fiscal and legal systems and most laws are made by the States of Jersey as the representative assembly and public services are administered by the committees of the assembly (Merret and Walton, 2005).

The successful, strong and stable economy is dominated by the largely externally owned high quality financial services industry which provides a high standard of living (Government of Jersey, 2002a). The other 2 main industries are tourism (the Island is a popular tourist destination) and agriculture (involving the export of agricultural produce) (Leammouth *et al.*, 2001). The Island has free movement of agricultural and manufactured commodities with regard to the European Community and the Treaty of Rome and later treaties are not formally applicable to the Island (Merret and Walton, 2005). One of the primary aims of the research is to understand the development of the Agricultural industry in terms of a sustainable development strategy for the future. The study is both of academic and practical significance to the body of understanding on the processes involved in the modern development of the Agriculture industry.

Although, Jersey's economy appears to be healthy and Islanders have a good living standard, there are concerns over the future of agriculture and tourism and the finance industry being affected by external pressure that would affect the advantageous tax situation (Jersey Government, 2002a). Table 1 provides data on employment, wage income and Gross Domestic Product (GDP) for the three main industries for the year 1998. GDP

Table 1: Data on the Finance, Tourism and Agriculture Industries (1998)

Industry	Employment (%)	Wage Income (%)	Percentage of GDP (%)
Finance*	17.0	28.0	50
Tourism	10.9	6.1	20
Agriculture	4.3	2.5	5

\*Includes: Banks and Building Societies, Investment Trusts and Fund Managers, Insurance Companies Sources: Government of Jersey (2002c), Jersey Government (2002b), Learmouth *et al.* (2001)

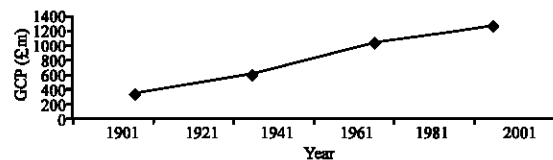


Fig. 3: Growth of Jersey gross domestic product (GDP), Source: Review of Financial Regulation in the Crown Dependencies -Part 2 (1998)



Fig. 4: Growth of Jersey gross domestic product (GDP) per head, Source: Review of Financial Regulation in the Crown Dependencies -Part 2 (1998)

at market prices is defined as the value of output produced within an economy over a 12 month period in terms of the prices actually paid (Sloman, 2001).

The state of the Island's economy is directly linked to the activity of the finance, tourism and agriculture industries. The finance industry is the main factor in the economy and now accounts for more than 20% of the Island's workforce, greater than 50% of national income and indirectly or directly most tax revenues come from this sector (Jersey Government, 2002a). GDP calculations have been used to monitor change and provide guidance for the contribution individual sectors make to Jersey's national income to help in the formulation of policy for the economy (RFR, 1998). Figure 3 charts the growth of GDP for the years 1980 (£345 m), 1985 (£610 m), 1990 (£1,050 m) and 1995 (£1,280 m).

Figure 4 depicts the growth of GDP per head for the years 1980 (£4,570), 1985 (£7,650), 1990 (£12,575) and 1995 (£15,095).

Figure 5 illustrates GDP as a percentage of UK GDP per head for the years 1980 (111%), 1985 (121%), 1990 (129%) and 1995 (125%).

The Fraser of Allander Institute of the University of Strathclyde has reviewed Jersey's national income estimates as part of an economic/environmental model (Learmouth *et al.*, 2002). An input/output table, full social

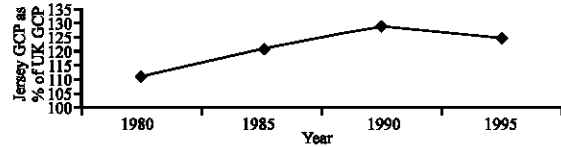


Fig. 5: Jersey gross domestic product (GDP) as % of UK GDP per head. Source: Review of Financial Regulation in the Crown Dependencies -Part 2 (1998)

accounting matrix and set of accounts from the matrix, including GDP and GNP estimates have been produced followed by analysis of the economy including investigating internal linkages and intensive policy simulation, labour market, fiscal, sectoral and sustainability impact studies (The Fraser of Allander Institute, 2002).

## MATERIALS AND METHODS

The research methodology used the process of historiography (Seldes, 1985) to study the modern development of the Agricultural industry which was undertaken in 4 distinct stages. A case for the usefulness of history through the interpretation of what has happened was substantiated through explaining the past to provide insight into the future (Sheeley, 2002). The systematic process of historiography (Umphrey, 2002) concerning the 4 research stages (Table 2) did not involve a single definable method but the most appropriate method for the research stage (Schumaker and McMillan, 1993). The research question addressed "what are the processes involved in the apparent decline of the agricultural industry in relation to the growth of the finance industry in Jersey in the 20th century?" In order to consider this question primary sources (census data) and secondary sources (work of historians) were investigated (Young, 1987; Montgomery, 1999; Leedy, 2001) in the first stage to obtain an understanding of the modern development of the Agricultural industry. Analysis of data and synthesis of information (Sheeley, 2002) were undertaken in stage 2 to determine the different factors and historical trends. The third stage of the research involved examination in detail of the nature and importance of factors to formulate conclusions. This provided an historical overview of the trends and developments (Engels, 1980). The final stage involved the documentation of the research findings. Table 2 shows the research strategy adopted for the study.

The research stages described in Table 2 have considered the following aspects of the development of the Agricultural industry.

Table 2: Focus of the study into the modern development of the Agricultural industry in Jersey

Research stage (RS)	Research focus and questions	Research methods
RS1	Industrial environment which has existed in the 20th century.	Retrieval/photocopying of historical material. Compilation of secondary data to assess the industrial environment.
RS2	Determination of the different factors involved in the development process of the Agricultural industry.	Use of quantitative methods for the analysis of data to determine trends.
RS3	Examination in detail of the nature and importance of the factors.	Use of qualitative methods to describe trends in the development of the Agricultural industry.
RS4	Documentation of the research findings on the modern development of the Agricultural industry.	Presentation of the findings in this study.

**RS1-an assessment of the industrial environment which has existed in Jersey in the 20th century:** The research has set out to assess the industrial environment, which has existed in Jersey in the 20th century. It has drawn primarily on historical material, existing research and consultancy and data sources. Secondary data sources have included existing literature in the area, which consist of both published material and 'grey' literature.

**RS2-factors involved in the development of the Agricultural industry:** This part of the research has consisted of three main sub tasks. The first has been to collate data on the development of the agricultural industry. The second sub task has involved the analysis of the data using quantitative methods to measure evolutionary change and significant events. The final part has concerned determination of the development of the agricultural industry over the time period of the 20th century.

**RS3-examination of the nature and importance of the factors:** The objective of this stage of the research has been to undertake a detailed qualitative analysis of the issues regarding the development of the agricultural industry. The analytical process has examined the issues involved in the development of the industries including both internal (island) and external (international) influences on evolution. From this a summary of the salient issues arising from the historical trends has been made.

**RS4-documentation of the research findings:** The last stage of the research has involved the documentation of the research findings on the modern development of the agricultural industry in Jersey. The output of this stage has taken the form of this study.

## RESULTS AND DISCUSSION

Since 1946, agriculture in Jersey has seen continual decline due to increasing pressure on local farmers, the increase in regulations for the export market and subsidies being paid to competitors (Bellows, 2002b). Farming has remained different to the UK since it is labour intensive in

many sectors with hand labour common in many tasks (States of Jersey, 2006). Outdoor intensive cultivation has prevailed on small holdings which have seldom exceeded twenty acres (EE, 1961). In the 20th Century there was intensification of agriculture and specialisation (States of Jersey, 2006). The Island had long standing privileges for exporting crops including flowers, fruit, tomatoes and potatoes to the UK without import taxes (EE, 1961; Government of Jersey, 2002c). The 2 main export crops were early potatoes and tomatoes and these were grown outdoors and often in succession during the season (EE, 1961). Crops have been able to maintain a competitive edge as long as they can reach export markets such as the UK before the later English produce in order to generate profits (Bellows, 2002b). Change has been slower than in the UK although there has been a decline in both mixed farming systems and traditional techniques (States of Jersey, 2006). Improved farming techniques in the UK have meant earlier crops and European markets supplying the UK have also meant competition with timing (Bellows, 2002b). Wheat was the principal cereal grown in Jersey and large quantities of pears, melons, peaches and grapes were exported (TBEI, 1933). The land has been very fertile due to sensible husbandry supported by the regular use of seaweed (vraic), animal manure and artificial fertilisers (EE, 1961).

Two main aspects now dominate the Island's agricultural economy and these are Jersey Royal potatoes and Jersey cattle (States of Jersey, 2006). Jersey's climate has allowed the potato crop to reach maturity a number of weeks earlier than in Britain resulting in the domination of the early potato market (Government of Jersey, 2002c; States of Jersey, 2006). The early crop has been helped by south facing slopes (côtils), fertile soil, a good climate with high rainfall and little frost (Government of Jersey, 2002c). In the 1930s production peaked with one third of the Island's acreage being given over to the crop (States of Jersey, 2006). There was a pre-War annual average of around 60,000 tons of potatoes exported to the UK (EE, 1961). Following the Second World War a quarter of the acreage has annually been set over to the early potato (States of Jersey, 2006). Recently, there has been concern about the reliance on one crop and there have been attempts to diversify the arable sector

(Matthews and Wimberley, 1999; States of Jersey, 2006). Even though crop and dairy subsidies, funded from direct tax revenues, were introduced they could not counter the size of the European Union (EU) subsidies and they only enabled farmers to maintain their incomes rather than increase these through being more competitive (Bellows, 2002b). The Jersey Royal potato, however, is likely to continue as the main crop of agriculture since it has become a brand name (States of Jersey, 2006; Matthews and Wimberley, 1999).

Dating from the early years of the 20th Century the tomato industry became a major source of income between the World Wars (States of Jersey, 2006). Figure 6 shows the export of tomatoes to the UK for the years 1937 (25,000 tons of tomatoes) and 1947 (44,590 tons of tomatoes) (EE, 1961).

A major part of the crop can be grown in the open due to Jersey's climate but in recent years the crop has become less profitable with a decline in total acreage with an increasing amount of crop under glass (States of Jersey, 2006). Some 53% of Jersey's area (14,938 acres) is in agricultural/horticultural use and there are 433 farm holdings with 34.5 acres average size (Government of Jersey, 2002c). Farm holdings which are less than 50 acres (Broadwell, 2005) can be considered as small farming enterprises (SFEs) (Thomas *et al.*, 2004). With the post War contraction of the potato industry there has been a rapid increase in acreage devoted to broccoli, other brassicas (cauliflowers) and courgettes (States of Jersey, 2006; Government of Jersey, 2002c). Unfortunately, these crops have become uncompetitive compared to European and African countries (States of Jersey, 2006; Government of Jersey, 2002c). A large amount of grain was grown up to the mid nineteen fifties but the present acreage is a small coverage although it has been increasing in recent times due to barley grown from potatoes for late summer silage (States of Jersey, 2006). Pasture and hay have given way to fodder maize and silage due to changes in the dairy industry (Freeman, 2000). In fact, fodder maize is becoming an important silage crop and the practice of double cropping where two crops are harvested from the same land in a growing season is also becoming popular (States of Jersey, 2006; Freeman, 2000).

The flower and bulb industry experienced good recovery in the nineteen twenties and thirties following the effects of bulb eel worm in the earlier years of the 20th century (States of Jersey, 2006). Introduction of new bulb varieties following the Second World War due to the loss of bulb stocks to increase occupation food production gave a boost to the flower industry now under glass (Jersey Government, 2002b; States of Jersey, 2006).

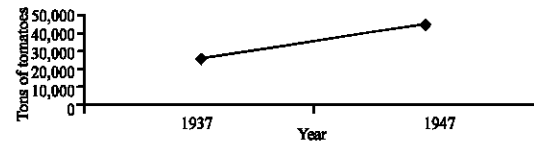


Fig. 6: Export of Jersey tomatoes to the UK in the 1930s and 1940s. Source: EE (1961)

Table 3: Export of Jersey cattle in 1946

Country	No of cattle
England	1,687
Canada and the USA	151
South Africa	118
Total	1,956

Source: The Royal Jersey Agricultural Society (2000)

Over the last one hundred and twenty years careful breeding of Jersey cattle has resulted in a near perfection of form (Stevens and Jee, 1987). The butter tests which started in 1883 became an important way of assessing the production qualities of cattle with 126 animals undertaking the butter test in 1910 and 1912 was the first year that official milk recording commenced which provided a valuation of the production potential of the Island (The Royal Jersey Agricultural Society, 2000). During the Great War the cattle industry in the Island had problems with limited food available and between the Wars there were some good and bad years (Stevens and Jee, 1987; The Royal Jersey Agricultural Society, 2000). One of the main advantages of the Jersey is that it is more or less disease free and this has been helped by breeders, veterinary surgeons and the Jersey Government which has established the operation of a testing system (Stevens and Jee, 1987; The Royal Jersey Agricultural Society, 2000). Prior to the Second World War there was continuous development of Jersey cattle with the growth in the demand for rich milk and butter and laws were made to protect the breed (standards secured by breeding organisations) (EE, 1961; Stevens and Jee, 1987). Cows of the breed were reared and exported (TBEI, 1933). The Second World War halted the progress of the Jersey but following the War there was an "upturn" in export sales of Island cattle to the United Kingdom which became the main export destination instead of America (Table 3).

In the post War years the dairy industry has seen marked change with more intensive larger herds (States of Jersey, 2006). Around one thousand cattle were exported a year to the UK, USA, Australia and New Zealand and the cattle population on the Island was about ten thousand (EE, 1961; WFE, 1990). The boom in the export of cattle continued to the mid nineteen fifties with 14,000 cattle being exported in the ten years after the War and following this the breeding of cattle for export has been replaced by breeding cattle for Island milk production

although 8% are still exported a year (The Royal Jersey Agricultural Society, 2000). Rather than being tethered the herds now tend to be managed with electric fences and through “wintering” (Stevens and Jee, 1987; States of Jersey, 2006). In 1968 artificial insemination was introduced on the Island which enabled breeders in other parts of the World to use a pure Island sire for their herds (The Royal Jersey Agricultural Society, 2000). Since the cattle start to lose characteristics after four or five generations of breeding overseas this provides further demand for the Island’s cattle (EE, 1961). Early in the 20th century there were about thirty small private dairies on the Island collecting and selling farm milk for consumption by the public (Jersey Dairy, 2006). Through the prevention of outside milk imports the dairy market was protected although other dairy products and UHT milk were allowed to be imported (Bellows, 2002b). A Jersey Milk Marketing Board (JMMB) was formed by the States in 1954 under the Milk Marketing Scheme (Approval) (Jersey) Act 1954 with the closure and combining of dairies (Bellows, 2002b). As a farmer’s co-operative the JMMB established a dairy responsible for collection, production, distribution, quality control, sales and marketing of Island milk (Jersey Dairy, 2006). In 1969 the States Department of Agriculture took over the Milk Recording Scheme established by the Royal Agricultural Society in 1912 (The Royal Jersey Agricultural Society, 2000). This was followed in 1981 by linking to the scheme of the Milk Marketing Board of England and Wales and 96% of the milking stock (all of the Island’s recorded cattle) are now calculated by the Milk Marketing Board’s computers (The Royal Jersey Agricultural Society, 2000). In addition to the decline in the consumption of milk the States also had to enforce the same quality control for the dairy industry as the European Community to prevent embargoes on the export of cattle and dairy products (Bellows, 2002b). From 1990-2000 the number of herds of Jersey cattle fell by more than 40% but there has nearly been a doubling of the average number of cattle per herd (Jersey Government, 2002b). Table 4 shows the head of cattle and the number of farms sending milk to the Jersey Dairy for the years 1973 and 2003 (Jersey Dairy, 2006).

Although, sheep were kept in previous centuries only a few were in evidence early in the 20th century and in more recent times they are no longer part of the agricultural industry (States of Jersey, 2006).

Farm land involves a mixture of crops for the cultivated area of the Island (States of Jersey, 2006). There has been a concentration of land buildings and the loss of mixed farms due to policies relying on the intensive production of a few crops (Freeman, 2000). Figure 7 shows

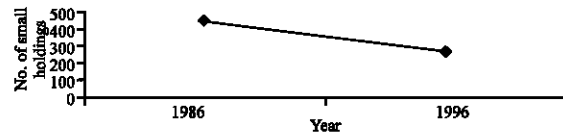


Fig. 7: Fall in the No. of Jersey small holdings from 1986-1996. Source: Jersey Government (2002c)

Table 4: Head of cattle and number of farms sending milk to the Jersey Dairy

Year	Head of cattle	No of farms	Av. No. of cattle per farm
1973	8,000	344	23
2003	3,500	35	100

Source: Jersey Dairy (2006)

the decline in the number of small holdings from 442 in 1986-264 in 1996 (Jersey Government, 2002b). In this context a small holding can be defined as less than 50 acres (0.2 km<sup>2</sup>) and is a piece of land with adjacent living quarters for the small holder and stabling of farm animals, on a smaller scale than that of a farm but larger than an allotment (Bunnett, 2002).

Prior to the Second World War farming technology had shown little change in Jersey with potatoes planted and dug by hand although the horse was being replaced by the tractor (States of Jersey, 2006; EE, 1961). Côtils were cultivated and vraic (seaweed) was still harvested (States of Jersey, 2006). Following the War synthetic fertilisers replaced vraic, average field size increased, there has been increasing use of glass and polytunnels and seasonal use of polythene for the potato crop (EE, 1961; States of Jersey, 2006). The agricultural industry now accounts for about 5% of the GDP of the Island and the States have a policy of maintaining the current level of cultivated land in order to sustain the industry as viable with support mechanisms including an advisor from the Department of Agriculture and Fisheries (Government of Jersey, 2002c). In 1996, the value of export sales was £45.4 million most of which came from the United Kingdom (Jersey Government, 2002b).

The rise of the Finance industry in the second half of the 20th century has impacted in a number of ways on the Island and on the agricultural industry. This has involved the employment of qualified staff from outside as the finance sector has grown increasing immigration and requiring higher salaries resulting in increasing prices in housing and commodities and the migration of the work force into the finance sector and away from agriculture and tourism (Bellows, 2002a). A SWOT analysis of the Agriculture industry has been undertaken to show the main internal strengths and weaknesses and external opportunities and threats. This provides a summary of the analysis of the industry and informs the setting of sustainable objectives. The process helps to match

attractive external opportunities with strengths highlighting weaknesses to be tackled and threats to be avoided. Problems that have been highlighted are the “crowding out” effects of the offshore finance industry. The “crowding out process” (Christensen 2002; Christensen and Hampton, 2005) describes an externally driven process in response to internal factors. From the research undertaken in this study it appears that a more appropriate process to describe the effect of the finance industry on the agricultural industry is an “activity exchange process” which is an internally driven response to external factors. Opportunities are the development of a market strategy concentrating on infrastructure and the environment as a major resource. Threats involve market economic factors and effective marketing by competition. Table 5 provides a SWOT analysis of the Agriculture industry.

The Agriculture industry strengths are early crops which can reach export markets such as the UK before the competition, the brand name of the Jersey Royal potato and the recognised status of the Jersey breed of cattle. Weaknesses include the increase in the regulations regarding the export market and subsidies paid to competitors. Opportunities are presented to the industry in terms of diversification and exploitation of new markets. Threats involve improved farming techniques in the UK which have meant earlier crops and European markets supplying the UK resulting in competition with timing. Table 6 provides a summary of the current situation regarding sustainability for the Agriculture industry of Jersey.

Agriculture is still seen as an important industry and it affects the cultural and social fabric of the countryside.

There has been significant change to the structure of the industry in recent years with a reduction in dairy farms with larger herds due to social factors and economies of scale. Environmental initiatives in Agriculture have been driven by external quality requirements. Due to being labour intensive Agriculture is experiencing adverse market conditions and there are likely long term impacts due to global warming and environmental change. Table 7 illustrates the issues arising for the Agriculture industry regarding sustainability which are of importance for the strategic development of the rural economy.

Similar to the Economic Growth Plan (States of Jersey, 2005a) the Rural Economy Strategy (States of Jersey, 2005b) aims to deliver greater diversification and increased efficiency for the countryside. Included in the strategy it is planned to enable the glass house sector (mainly tomatoes) and the dairy sector to become more efficient and less dependent on the support of the States. It is also aimed to improve the performance by up to 20% of the Island milking herd, create incentive for entrants who are new to the industry through the small holder as a new form of occupant of agricultural land and to introduce a Rural Initiative Scheme for rural economic growth through the support of innovation and enterprise (the creation of a Genuine Jersey Meat Industry, is an example) (States of Jersey, 2005b).

The issues arising for the sustainability of the Agricultural industry show that there is a need to diversity farm income and to determine the actual contribution of agriculture and tourism to the wealth of Jersey. There is a need for a flexible work force to improve productivity, public and private partnerships, private sector awareness of the consequences of not adopting

Table 5: SWOT analysis of the Agriculture industry in Jersey

	Positive	Negative
<b>Internal</b>	<b>Strengths</b>	<b>Weaknesses</b>
	1. Fertile land	1. Increasing pressure on local farmers
	2. Good climate with high rainfall and little frost	2. Increase in regulations for the export market
	3. Crops have been able to maintain a competitive edge as long as they can reach export markets such as the UK before the later English produce in order to generate profits	3. Subsidies being paid to competitors
	4. Brand name of the Jersey Royal potato	4. Change has been slower than in the UK
	5. Recognised status of the Jersey breed of cattle	
<b>External</b>	<b>Opportunities</b>	<b>Threats</b>
	1. Diversification	1. Improved farming techniques in the UK have meant earlier crops and
	2. Exploitation of new markets	2. European markets supplying the UK have also meant competition with timing

Table 6: Current situation regarding Sustainability for the Agriculture Industry of Jersey

Industry/Economy	Situation
1. Agriculture	1.1 Still important and affects the cultural and social fabric of the countryside 1.2 Significant change to the structure of the industry in recent years 1.3 Reduction in dairy farms with larger herds due to social factors and economies of scale 1.4 Environmental initiatives in agriculture driven by external quality requirements
2. Agriculture and Tourism	2.1 Due to being labour intensive experiencing some adverse market conditions 2.2 Likely long term impacts arising from global warming and environmental change

Source: Jersey Government (2002c)

Table 7: Issues arising for the Agriculture industry regarding sustainability

Industry/Economy	Situation
1. Agriculture	1.1 Investigate whether the present agriculture system in the long term is sustainable and the need to diversify farm income
2. Agriculture and Tourism	2.1 Determine the actual contribution of agriculture and tourism to the wealth of Jersey
3. Agriculture and the Jersey economy	3.1 Flexible work force to improve productivity
	3.2 Public and private sector partnerships
	3.3 Private sector awareness raising of the consequences of not adopting long term sustainable policies
	3.4 Overall sustainable gains for the community through market force led changes
	3.5 Diversification of Island service and manufacturing activities
	3.6 Need to keep pace with current IS/IT developments

Source: Jersey Government (2002c)

long term sustainable policies, overall sustainable gains for the community through market force led changes, diversification of Island service and manufacturing activities and the need to keep pace with current IS/IT developments. Sustainable development will require a population limit determined by the States with continued full employment, the generation of wealth for the maintenance/enhancement of the quality of life using resources efficiently, learning and training to support a qualified work force and a public private sector partnership (Jersey Government, 2002c).

### CONCLUSION

It is intended that following publication of the results presented in this study funding will be sought for a full study to be undertaken on the development of the agricultural industry in Jersey.

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