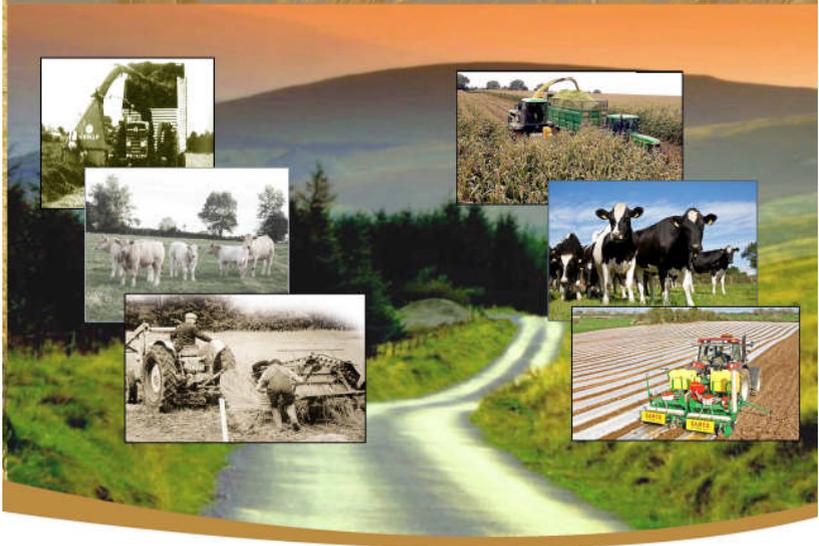


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40 Years of Irish Farming since joining the European Union

A journey with the Teagasc National Farm Survey 1972 - 2012



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AGRICULTURE AND FOOD DEVELOPMENT AUTHORITY

**40 years of Irish farming since joining the
European Union:**

**A journey with the Teagasc National Farm
Survey 1972 to 2012**

Thia Hennessy and Anne Kinsella

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Foreword

This publication marks two significant milestones. First, the 40th anniversary of Ireland's accession to the European Union, or the European Economic Community as it was then known, and the second, the 40th year of the Teagasc National Farm Survey. Accession to the European Union brought with it an obligation to establish an annual survey of farm incomes. The National Farm Survey, which is Teagasc's longest running research project, was established in 1972 and every year since then it has been used to produce annual estimates of farm income.

These estimates thus provide an excellent overview of the economic fortunes of the sector over the period of our membership of the Union. This publication charts the highs and lows of EU membership, as recorded by the NFS, from the golden era for milk production in the 1970s to the imposition of the milk quota in 1984. The National Farm Survey tells the story of the introduction of the first direct payment to farmers in the 1970s and traces their development to the current day, where they now comprise over 100 percent of income on many farms.

Apart from the production of annual farm income estimates the National Farm Survey database was exploited for several landmark studies over the years and many of these are cited in this publication. The NFS enabled studies to be conducted on the potential impact of the introduction of farm taxation in the 1970s; the competitiveness of our main farm enterprises; part-time farming; poverty on Ireland's farms; the distribution of farm and household

income; the carbon foot-printing of Irish farms; the evaluation of agricultural education and advisory programmes such as Discussion Groups; and, in more recent times, the impact of the banking crisis on farm investment.

The acknowledged consistent high quality of the data generated by the Survey underlines the professionalism of the successive teams of recording staff over the years. It is a testament to the dedication of the entire staff of the National Farm Survey, both past and present, that they have adapted to embrace and exploit the opportunities that information and communication technologies have offered over the 40 years and that the scope of the Survey has continued to evolve to meet the demands of an ever-changing agricultural sector. From the beginnings of a pencil and farm account book in 1972 and the publication of average farm income, to the present day recorders who access individual farmer information online and input data directly to a lap-top on the kitchen table of hundreds of farm homes across the country.

While the National Farm Survey was primarily established to provide statistics to Brussels on developments in Irish farm income, it soon became an invaluable resource for agricultural economists and rural sociologists and indeed can be considered “the laboratory of Teagasc economic research”. The countless pieces of data collected over the years have been examined and re-examined by numerous PhD students, many in the Teagasc Walsh Fellowship programme, and researchers, including myself, at the early stage of my career. It has formed the basis of many important policy submissions and has been used to guide the position of Irish negotiators at many Common Agricultural Policy reform debates.

On behalf of Teagasc, and on the many users of National Farm Survey data, I would like to congratulate the staff on reaching this significant milestone and express my deepest appreciation to the many staff members who worked diligently on this project over the years. Many, such as John Heavey, Dick Power, Mick Brannick and a number of farm recording staff are sadly no longer with us but many, we are pleased are, like Brendan Kearney, Maurice Roche, Mick Harkin, Liam Connolly, Andy Conway and Bart Hickey, to mention just a few.

Finally it is worth noting that without the cooperation of so-many farmers over the last 40 years, this unique resource would not have been made available for the benefit of Irish agriculture. These farmers were partners, along with Teagasc, in this project and deserve huge acknowledgment for their generosity.

Professor Gerry Boyle,
Director, Teagasc
June 2013

“Anniversaries are better used for genuine reflection, rather than self congratulation on what has been achieved.”

*Richard Burke European Commissioner
(1977-1980 & 1982-1984) speaking on the
10th anniversary of Ireland’s accession to the
European Union*

Chapter 1

Introduction

The Irish people made a good decision - in those 40 years we have travelled well and far, we have never looked back.

An Taoiseach Enda Kenny

Speaking at the European Parliament January 2013

Marking 40 years of Irish Membership of the European Union

This year, 2013, marks the fortieth anniversary of Ireland's accession to the European Union, Ireland's seventh Presidency of this Union and the fortieth publication of Irish farm income figures through the Teagasc National Farm Survey. When Ireland joined the European Economic Community in 1973, there was a statutory obligation to establish an annual survey of farm incomes. An Foras Talúntais, the predecessor to Teagasc, The Irish Agriculture and Food Development Authority, had extensive previous experience in farm surveys and so they were approached by the Department of Agriculture at the time to fulfil this role.

The first National Farm Survey (NFS) income results were then published in 1972 and have been published on an annual basis since then. Each Member State of the European Union at that time, including Ireland, became a member of the Farm Accountancy Data

Network (FADN) and our membership continues to the present day. FADN provides a harmonised platform for the collection of farm statistics across Europe and so the data collected by the Teagasc National Farm Survey is directly comparable to data for every other Member State.

This celebratory publication uses the Teagasc National Farm Survey to review the development of the Irish farm sector over the past 40 years and in particular to examine the impact of EU membership on such development. The evolution of the Common Agricultural Policy (CAP) over the past four decades is in turn reviewed. From relatively simple beginnings, a straightforward price support scheme underpinned by the desire to produce more food in Europe, the CAP has evolved into a complex, unwieldy and bureaucratic beast. While some may bemoan the officious and sometimes seemingly illogical nature of the Policy, the production constraints it has imposed on some sectors of farming, the environmental regulations it has established and the ostensibly endless record keeping and paperwork it has introduced, there is no doubting the fact that Irish farming has benefitted beyond all expectations from the CAP. Indeed, in the 40 years of Ireland's membership of the European Union, it is estimated that Irish farmers have received almost €50 billion in funding through the Common Agricultural Policy.

In addition to charting the development of the farm sector since 1972 the Teagasc National Farm Survey has also proved to be an invaluable source of agricultural data for a large number of important and influential studies since that time. This anniversary publication provides an overview of this research and recounts how

National Farm Survey data was used to influence policy making at the highest levels at key points in time.

The publication proceeds as follows; Chapter 2 describes and outlines the events leading to Ireland's accession to the European Economic Community. The following four chapters, Chapter 3 through to Chapter 6, chart developments in the Irish farm sector in chronological order, with a chapter devoted to each of the decades. These chapters not only document the development of agricultural policy and farm income over the past 40 years, but also discuss some of the most important contemporary farming issues of the day, as well outlining some of the more research pieces conducted using the Teagasc National Farm Survey data. Chapter 7 discusses the most recent developments within the sector and looks forward to the challenges that lie ahead. Finally, Chapter 8, a contribution by Liam Connolly, Head of the National Farm Survey from (2000 to 2010), reviews the development of the National Farm Survey over the years and recalls some of the major milestones and achievements.

Chapter 2

Joining the European Economic Community

“For God’s sake, vote yes. Entry into the Common Market will mean new hope, new life, a whole new world of confidence and progress for Irish agriculture and especially small farmers who will have nothing to look forward to if we remain outside the EEC”

Dr Tom Walsh (Director of the Agricultural Research Institute) in response to a question on how he would be voting on the referendum on EU Accession, 1972

On January 1st 1973 Ireland, along with Denmark and the United Kingdom, joined the European Economic Community or what has since become known as the European Union. The path to Ireland’s membership was a protracted and bumpy one with the initial application rejected twelve years previously in 1961 as the country was viewed by some Member States in the Community as “*an under-developed economy*” with highly protectionist policies, incompatible with the free trade philosophy of the EEC, Fitzgerald (2000). A further unsuccessful Irish application for membership in 1963 was unsuccessful when President De Gaulle of France vetoed

British entry. This had implications for Ireland as its desire to join the Community was very much influenced by the position of its nearest neighbour. This was encapsulated by the then Taoiseach, Seán Lemass in 1961: “because of the close inter-relationship of the economy of Ireland and that of the United Kingdom, and the vital interest of Ireland in agricultural trade, the Irish government would wish to have the discussions for the admission of Ireland to the Community completed at the same time as those for the United Kingdom”, a statement that demonstrates both our reliance on the British market and the importance of agricultural trade at the time.

Eventually, in 1969 French President, Georges Pompidu, successor to Charles de Gaulle, agreed to re-open negotiations on EEC enlargement. Negotiations began in 1970 with the Treaty on Accession signed in January 1972. There followed an Irish referendum on the issue of membership in May of that year. While the campaign was a lively one, the majority were in favour and the “yes” vote put forward by the Fianna Fáil government of the time garnered support from both opposition parties and the farm organisations. An overwhelming, 83 percent of the electorate were in favour of EU membership and some eleven years after its initial application, Ireland finally became a member of the European Economic Community/EEC.

Richard Burke, Irish European Commissioner 1977 to 1980, described the accession process as “a long and frequently anguished phase during which we wanted to join, tried to join, were rebuffed, tried again, were accepted in principle, began to negotiate, were delayed, were finally given terms on which as a people, we could decide, did so, waited one more year – and at last achieved our end,

a little tired from all the waiting, but with – I think - some sense that a page in our history was being turned”.

Agriculture, in 1973 accounted for 18 percent of Gross Domestic Product (GDP) and 40 percent of all exports. Membership of the EEC offered Irish agriculture (the country’s most important trade sector) an opportunity to prosper, with independence from the British market – the main trading partner of the time. Despite its undoubted importance the Anglo-Irish relationship was one wrought with difficulties throughout the 1950s and 1960s due to Britain’s assertion of its monopsonistic position.

The signing of the Anglo-Irish Free Trade Area Agreement in 1965 did much to improve trade relations. This resulted in the elimination of tariffs between the two countries and at the time of joining the EEC, almost 70 percent of Irish food exports were destined for the British market. Given Ireland’s relatively isolated position from mainland Europe (a situation that had its roots in the decision to remain neutral in the Second World War) accession to the EEC promised to deliver substantial new trade opportunities, with agriculture cited as the sector most likely to benefit from such.

Indeed a government white paper published in 1972 predicted a doubling of income from farming between 1970 and 1978. It is not surprising then that accession to the EEC was warmly welcomed by Ireland’s farming community, which at the time constituted over one-fifth of the population.

Agriculture in the EEC

At the time of Ireland's accession, agriculture in Europe enjoyed a special position as a sector to be supported and protected, indeed a situation which continues today. Following the ravages of food shortages resulting from the Second World War, the objectives of the Common Agricultural Policy were enshrined in the Treaty of Rome, the founding agreement of the EEC. In short, the objectives were:

- (a) to increase agricultural productivity by promoting technical progress and by ensuring the rational development of agricultural production and the optimum utilisation of the factors of production, in particular labour
- (b) to ensure a fair standard of living for the agricultural community and in particular by increasing the individual earnings of persons engaged in agriculture
- (c) to stabilise markets
- (d) to assure the availability of supplies
- (e) to ensure that supplies reach consumers at reasonable prices

These objectives were pursued through a number of key mechanisms. Intervention prices were set for the main commodities throughout the community, thereby setting a 'floor' price in the domestic markets. Threshold prices were also in operation, which were, in effect, minimum import prices and variable levies imposed to bring the price of agricultural imports up to these domestic prices. Subsidies were also paid on exports to bridge the difference between internal European prices and prices on the wider international/export market. Crucially, from an Irish perspective, for the first time since the Independence of the State, EEC membership from 1973 ensured that Irish agriculture had access to an unlimited market at favourable

prices. Irish farm prices pre-accession were considerably less than the prevailing common EEC administered price level and the transitional steps upwards towards that common level were guaranteed, while at the same time annual price increases were almost taken for granted (Kearney 2010). Although a basic transition period of 5 years was required and the move to substantially higher agricultural prices was phased over this period, Ireland benefitted immediately from the price support system and the farm export subsidies.

Chapter 3

The 1970s - A New Era of Opportunity

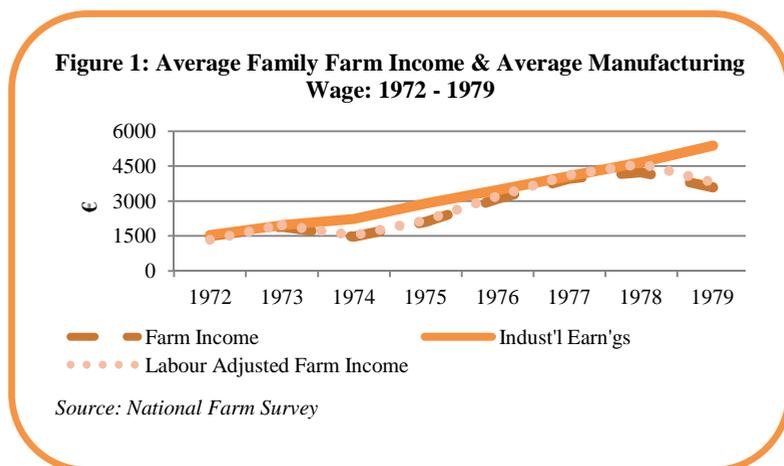
From Ireland's initial entry to the EEC in 1973 to the end of the transition period in 1978, substantial increases occurred in agricultural gross output, gross product and average farm incomes. In fact agriculture had already begun to benefit from EEC membership before membership had even occurred. Between 1970 and 1973 there was a sharp increase in the real value of farm income partly because of anticipation of the effects of EEC membership but also because of the very buoyant world markets around that time.

At the time of Ireland's accession to the EEC, about 95 percent of the CAP funds were absorbed in price and market support through the CAP Guarantee Fund. Irish farmers could avail of these higher support prices and this evoked a very positive reaction from farmers, especially in the dairy sector. From 1972 to 1978 average family farm income increased almost 3 fold in nominal terms, however, it should be borne in mind that average industrial earnings increased at a similar rate over the same period.

Farm income dropped substantially in 1979 and remained at these lower levels for the early part of the 1980s. The 1973 Teagasc National Farm Survey report concluded "in all, 1973 was a golden year in Irish farming when compared with its predecessors. It will be remembered on the twin scores of the year of entry to the European Economic Community and the year in which farm incomes not only

maintained the steady increase apparent in previous years, but in this case, the upward movement in incomes exceeded all expectations”.

When Ireland joined the EEC in 1973 there were approximately 250,000 farms in the country and agriculture accounted for over one-quarter of the total workforce. The farm population comprised a large number of small farms and in 1973 the Teagasc National Farm Survey (NFS) estimated that almost half of these farms were part-time, that is employing 0.9 of a labour unit or less. Average family farm income was just less than €1,500, in nominal terms, and the average farm had just 0.86 of a labour unit. Figure 1 displays the development of average family farm income compared to the average industrial earnings from 1972 to 1979.



Even when average family farm income is adjusted to reflect labour input, it can be seen that farm incomes compared quite favourably with those in the industrial sector throughout the decade. Although

average agricultural earnings lagged well behind those of other sectors in the 1960s earnings began to converge in the early to mid 1970s, a development which Professor Alan Matthews refers to as the “*EEC effect*”, (Matthews 1982).

The 1970s represented the “productivist” era of Irish agriculture. It was a time characterised by technological developments, farm modernisation and the expansion of output in a policy regime dominated by high price supports for many commodities. Indeed this productivist attitude permeated the annual National Farm Survey reports of that decade. In 1974 the survey authors wrote “we must not miss any opportunity to emphasise repeatedly the overriding importance of achieving a widespread volume increase of farm production”.

After the initial euphoria associated with EEC membership in 1973, the Teagasc National Farm Survey described 1974 as a “shattering experience made all the more difficult after the hype and pomp of Ireland’s entry to the EEC”. 1974 was a year of very poor weather conditions and a crisis in the cattle market. Farmers were subjected to the classic price-cost squeeze, in that the general level of prices fell whilst the unit cost for most inputs increased enormously. Input expenditure increased by over 25 percent from 1973 to 1974 and average family farm income fell by 23 percent.

Incomes improved in 1975 due to the general rise in agricultural prices. The average creamery milk price increased by 28 percent from 1974 to 1975 alone, and sugar beet and potato prices also increased substantially. The recovery in the farm economy that began in 1975 continued at an unexpected pace in 1976 driven

mostly by rising cattle, milk and potato prices. 1975 also saw the introduction of the Farm Modernisation Scheme. The scheme funded, inter alia, land improvement and new farm buildings. Headage payments for livestock were also introduced in 1975. This was the first direct payment scheme, the main objective being farm income support in disadvantaged areas.

The proportion of output consumed by production costs was approximately 40 percent in 1972. This peaked in both 1974 and 1979, much of this was driven by energy costs, in particular the price of crude oil increased by three to four fold in 1974 alone, and to a lesser extent the removal of the input subsidies following EEC membership.

An analysis by Sheehy (1980) highlighted the price and volume changes which occurred in the early years following EEC accession, Table 1.

Table 1: Changes for selected products from average of 1969/70/71 to 1976/77/78

	Price Change
	%
Cattle	+246
Milk	+260
Pigs, poultry and egg	+174
<i>All Livestock products</i>	+237
Wheat	+182
Barley	+220
<i>All Crops</i>	+206

Source: Sheehy, S. (1980)

In relation to livestock products, the greatest gains were in milk, with price increasing a staggering 260 percent and volume increasing by a more modest 38 percent. Equally, cattle prices increased by a sizeable 246 percent over the period. In total the volume of crop production increased by 11 percent but barley expanded at the expense of wheat which actually declined by 37 percent.

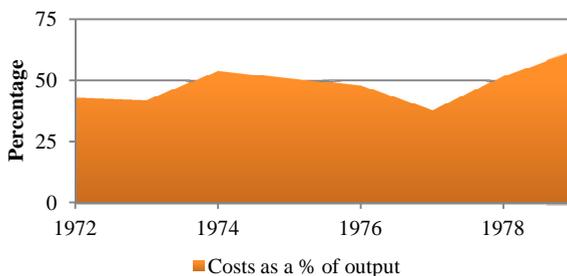
Following four years of substantial growth, the sudden income drop in 1979 came as a surprise to many in the sector and incomes were to remain at this low level for the early part of the next decade. In 1978 the transition period to full EEC membership was complete and as a result there was no further upward alignment in product prices. In 1979 Ireland joined the European Monetary System (EMS). This curtailed the “*green pound*” devaluations which up to that point had adjusted Irish farm prices in line with inflation. From this point on, Irish farmers could only receive price increases similar to other EMS countries and as inflation in Ireland was increasing at a faster rate than in other countries, prices were comparatively lower in Ireland in real terms.

By the late 1970s, the realisation grew that the intensification of agriculture across the EEC was leading to product surpluses as well as environmental problems and the Community began to adapt its overall approach. A co-responsibility levy was introduced in 1977 and a ‘prudent price policy’ was put in place which severed any link between support prices and inflation.

It is difficult to discern the real impact of EEC membership as the price increases received by farmers were dominated by inflation. In

nominal terms the prices received in 1978 were three times higher than the 1970 level. However, input prices increased nearly as fast as output prices. This input price inflation resulted in a loss of efficiency in the 1970s. The ratio of output to input prices, sometimes referred to as the ‘terms of trade’ of farming, followed a general favourable trend in the 1950 to 1980 period, with the exception of two crisis periods in 1973-4 and 1978-80, Matthews (1982).

Figure 2: Total Production Costs as a Percentage of Output: 1972-1979

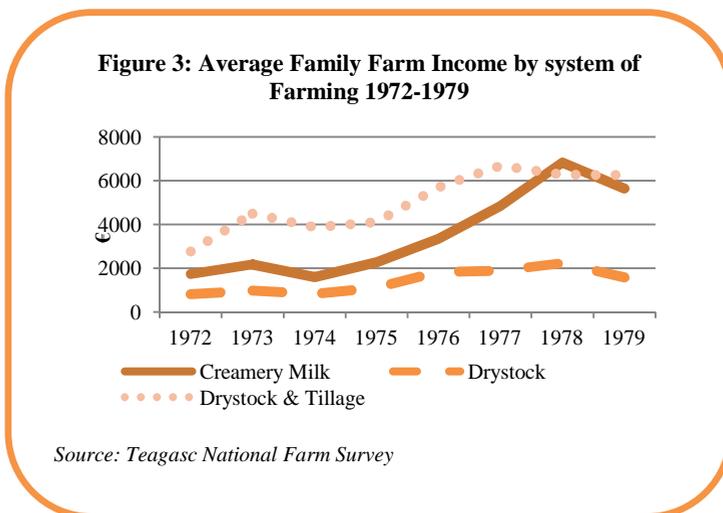


Source: Teagasc National Farm Survey

Income by System of Farming

While income on all Irish farm systems improved throughout the 1970s some sectors benefitted from EEC membership more than others. This is illustrated in figure 3. In particular, the initial years of EEC Membership were considered a golden era for the dairy sector. Starting from a position significantly behind the Drystock and Tillage systems, incomes on the “Mainly Creamery Milk” farms

increased substantially, almost 4 fold from 1972 to 1978, surpassing the Drystock and Tillage system in 1978. However, Dairy farmers were most severely impacted by the price-cost squeeze of 1974 with income on mainly creamery farms falling by 27 percent. The value of gross output on these farms fell by 5 percent, while input costs increased by almost 40 percent.



Conversely, a running commentary throughout the 1970s National Farm Survey reports focuses on the problems of low profitability and productivity in the drystock farming sector, “we must face the fact that we are depicting year after year a low output situation, which is endemic. The economic and technical problems which must be solved are enormous, if such a large sector of the farming population is to survive and if beef production can become viable for farmers at prices the consumer can afford. ...The big question remains of how long this situation can continue. From all

experience, it can not be for long if the present technical and economic problems in the production sector are unsolved.” It is somewhat ironic that the authors commented that this problem could not continue for long when one considers that the 2012 publication continues to describe the cattle farming sector as one wrought with problems of low profitability and productivity.

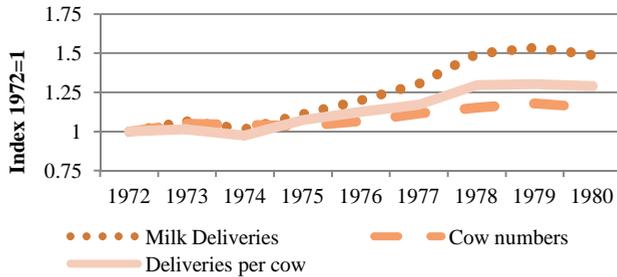
Sheepmeat was the only important agricultural commodity, from Ireland’s perspective, that was not supported by the CAP at the time of accession. Without the benefits of an EEC market support regime, sheep production went into decline in the 1970s, as producers abandoned the enterprise in response to poor prices and market conditions. However the market outlook changed with the establishment of a common market for sheep meat in 1980.

A Golden Era for Milk Production

The productivist mantra was most keenly embraced by the dairy sector. In the first eight years of EEC membership, total milk production increased by almost 50 percent, driven by both an increase in cow numbers and productivity per cow (as illustrated by Figure 4). Deliveries per cow averaged at just 2,140 litres in 1972, increasing by on average 3.75 percent per year up to 1980. Some consolidation of farm holdings also occurred over this period.

At the time of accession, there were approximately 83,800 creamery milk suppliers in Ireland with an average quantity supplied of 31,000 litres and an average herd size of 15 cows. By 1980 the number of suppliers had declined by 15 percent to 70,000, while the quantity of milk supplied per farm increased significantly by 86 percent.

Figure 4: Milk Deliveries, Cow Numbers and Deliveries per cow: 1972-1980



Source: Central Statistics Office

In 1977 alone, average gross output on mainly creamery milk farms increased by 42 percent (it is noteworthy that gross output on the mainly drystock farms only increased by 3 percent over the same period). However, dairy inputs also rose with expenditure on concentrate feed increasing by 60 percent in the same year. Although average stocking rates remained more or less unchanged, at 1.9 acres per cow, output was increasing with the new milk production system involving a growing reliance on purchased feed.

A Sector of two Halves

In 1971 Alan Dukes, then chief economist with the Irish Farmers' Association (IFA), noted that "in reality we have two agricultural sectors in this country. The first is the commercial farm sector composed of those farms which now yield satisfactory incomes to their owners in comparison to what is obtainable elsewhere in the economy. It also includes farms which can be developed so that they

eventually achieve this condition of viability”. This is a theme that runs throughout the National Farm Survey reports of the 1970s and beyond and indeed in 1978 the authors observed that “on joining the EEC and with the onset of rising product prices the gap between intensive and extensive farms has grown. At one end, there is the developing, commercial sector of farming making very rapid progress in financial terms, while at the other end there is the clearest evidence of the existence of a static and low income sector, unaffected by all that is happening in the rest of the agricultural economy”.

The very substantial price increases for both outputs and inputs in the 1970s led to a greater increase in output on large farms primarily. Over the period, those farms of 200 acres or more recorded over double the average percentage increase in income. Matthews comments that “in 1974, 11 percent of farmers operating holdings of over 100 acres contributed 39 percent of sector income. Assuming that price support was uniformly distributed across commodities, they also received 39 percent of price support expenditure. The tentative conclusion is that agricultural price policy is more likely to redistribute income from the relatively poor to the relatively well-off”.

The extent to which EEC membership addressed the growing divide in Irish farming is questionable. Matthews (1982) concluded that much of the additional support Irish farming received in the 1970s resulted in greater numbers remaining in agriculture, rather than higher per capita farm incomes, and the benefits that did accrue in the form of higher farm incomes, went in the main to larger farms.

Contemporary Issues of Importance

Apart from providing an annual, objective and representative record of farm incomes over the last 40 years, another key function of the Teagasc National Farm Survey has been the collection of economic data for research purposes. Teagasc National Farm Survey data has been used over many decades to explore topical economic and policy questions, and this was also true of the 1970s.

One of the key topics of interest and debate in the 1970s was that of farm taxation. Between 1970 and 1978 the incidence of income tax on the average industrial worker increased from 9.3 percent to 16 percent of gross income. Over the same period, income tax was introduced for farmers for the first time, but in 1978 it still amounted to only 1 percent of aggregate income. Even when other taxes were considered such as rates on land and Value Added Tax on inputs which was not refunded, the total tax burden on farmers stood at 7.7 percent in 1978, Sheehy, (1980). While the debate on farm taxation raged, the Teagasc National Farm Survey was the frequently cited source of farm income figures.

Chapter 4

1980s – an era of surpluses and food mountains

“The CAP has become unwieldy, inefficient and grossly expensive. Production of unwanted surpluses safeguards neither the income nor the future of farmers themselves.”

*Margaret Thatcher. Prime Minister of
the United Kingdom . (1979-1990)*

The Bruges Speech. 1988

The general economic situation in Ireland deteriorated seriously during the 1980s with the farm sector faring no differently. By the early 1980s the honeymoon period of EEC membership was coming to an end and there were warning signs of difficulties on the horizon. The very favourable price support systems in place in the Common Market led to a considerable increase in food production across the Community, resulting in mounting product surpluses. The Community struggled to deal with the so-called butter and beef mountains and milk and wine lakes. Alongside this an ever increasing CAP budget seemed to be running out of control. As a result, a moderation in CAP price increases was therefore inevitable. This, together with the reduced possibility of obtaining Green Pound devaluations after EMS entry in 1979, combined to expose farming to a crippling and prolonged cost/price squeeze in the 1980s, (Kearney 2010).

In an attempt to curtail EEC milk production, which was, even then a cause for concern, the milk super-levy was introduced, penalising milk production above certain levels. The imposition of milk quotas then followed, effectively limiting further development and entry into dairy farming. Dairy farmers across the EU have, since then, lived within the confines of the milk quota system.

From the outset, the Irish government opposed the milk super levy and quota proposals with all its diplomatic resources. Austin Deasy, the then Minister for Agriculture, recalled that “we refused to go along with this agreement and continued to maintain our demand for special treatment”.

According to FitzGerald (1991), Deasy argued that the country “had a vital and essential national interest in the milk sector and we made that clear. We also had a vital interest in the survival of the CAP and that is what was at stake”, (FitzGerald, 1991). Such efforts on the part of government led to the derogation by Ireland from the 1984 reforms. Other Member States had to base their production rights on the 1981 year, however, Ireland, owing to the uniqueness of agriculture in the economy and the importance of dairying within the sector was permitted to adopt the position based on 1983 production plus an additional approximate 5 percent.

Despite this, the milk quota system put a halt on the fastest growing sector in Irish farming. This stimulated some expansion in the beef and sheep enterprises with farmers responding to EEC direct payments for suckler cows and the Ewe Premium Scheme for sheep, which was introduced under the EEC's Sheepmeat Regime,

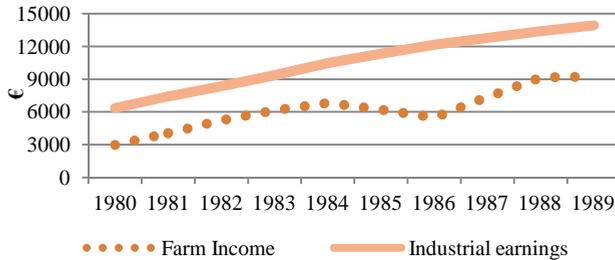
established in 1980. In addition to milk quota, the restrictive stabiliser mechanism was also in operation during the decade; this set a maximum guaranteed quantity within which products such as cereals would attract a higher price but with penalties in the form of price reductions where this was exceeded.

Development of Farm Incomes

Figure 5 displays the differential between family farm income and average industrial earnings throughout the decade. The divergence between farm income and average industrial earnings started in the late 1970s and by 1980 industrial earnings were over double average farm income. The gap closed somewhat over the decade and by 1989 industrial earnings were 50 percent ahead of average farm income.

Following a decade of almost uninterrupted progress in farming, incomes showed a substantial decline during 1980 for the second year in succession. Furthermore, coming in a period of high inflation, both in farming costs and general living expenses, the purchasing power of farm incomes declined substantially in the late 1970s and early 1980s. The rental price for conacre had increased for many years throughout the 1970s but suddenly levelled off in 1980 signifying a downturn in sector-wide confidence. As concluded by the authors of the 1980 Teagasc National Farm Survey report “there is little to enthuse about farm incomes in this year as increases in the value of products was more than offset by rising costs of production.”

Figure 5: Average Family Farm Income & Average Manufacturing Wage: 1980 - 1989



Source: Teagasc National Farm Survey

Economic conditions improved and income levels rose from 1981 to 1984, a period characterised by rising output prices (in spite of a rapid increase in input prices over the same period). Notwithstanding this, Teagasc National Farm Survey authors observed that “it is a measure of the severity of the crisis affecting farming finances in recent years that even with an increase of 36 percent in the average family farm income per farm in 1981, incomes are still only just restored to the 1978 level, without any allowance for the falling value of money in the meantime”. In real terms, the 1981 income was still about 40 percent below the 1978 level. Interestingly, the 1982 income figure was the highest level recorded in current values since the survey began, however, in real terms incomes had still not recovered to the 1978 level.

The unfavourable weather conditions of 1985 and 1986 adversely affected farm incomes in those years. Despite increases in gross output, average farm income declined by 9 percent from 1984 to

1985 and a further 11 percent in 1986. The unilateral devaluation of the Green Pound within the European Exchange Rate Mechanism (ERM) in the summer of 1986 paved the way for a substantial Green Pound devaluation and a resultant robust increase in farm incomes and a recovery came in 1988 when average income levels improved considerably, increasing by 25 percent. Such improvement was however not experienced uniformly across systems with dairy farm income increasing on average by 70 percent and sheep incomes showing a recovery of just 3 percent.

The development of the Suckler Cow Premium and Ewe Premium Schemes proved significant throughout the decade and in 1989, for the first time, the National Farm Survey acknowledged the growing importance of headage payments and premia (which accounted for 15 percent of farm income on average in 1989) and began to highlight these components separately in output.

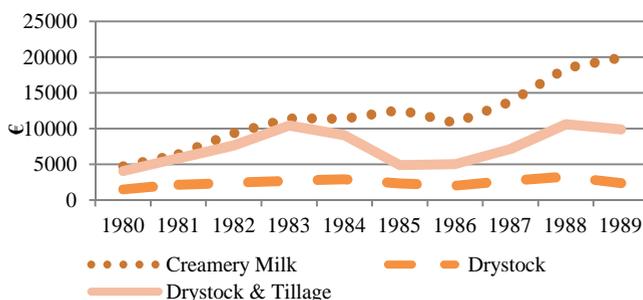
In 1980 there were approximately 223,000 farm holdings in the country and agriculture was the main sector of employment for over 16 percent of the labour force. By the end of the decade farm numbers had declined to less than 170,000 holdings. Despite the contraction in the sector, the value of gross output from the sector increased and its contribution to exports remained more or less static. This represented a major productivity gain in the 1980s.

Income by System of Farming

Income on Drystock and Tillage farms increased in the early part of the decade and kept pace with income on Creamery Milk farms. Between 1980 and 1983 income on Drystock and Tillage farms more than doubled. Increasing input expenditure and inclement

weather led to a reversal of this trend and in 1985 incomes were back to the 1980 level. Although incomes recovered again after 1985, the recovery was not sufficient to converge with the dairy sector. Incomes in the Drystock and Tillage farm system were considerably more volatile than the other systems.

Figure 6: Average Family Farm Income by System of Farming: 1980 - 1989



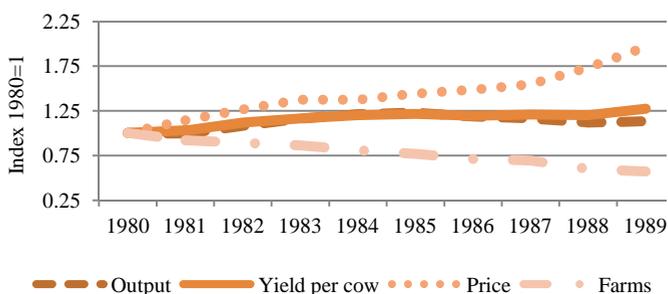
Source: Teagasc National Farm Survey

Low levels of profitability and productivity continued to plague the drystock sector with little improvement in incomes experienced over the decade. Income on Drystock farms remained around the €2,000 mark throughout the decade with very little deviation and by 1989 the average income on Creamery Milk farms was more than 8 times higher than Drystock farms.

The 1982 National Farm Survey report highlights the importance of the expanding dairy sector to the viability of the farm sector as a whole, and joined in voicing concern over the mooted milk quota system warning that “any curbs on production, of whatever variety,

would remove the only real hope for long-term improvements in the standard of living of the majority of farm families in this country.”

Figure 7: Milk Output, Deliveries per cow, Milk Price and Dairy Farm numbers: 1980-1989



Source: Central Statistics Office

Despite the subsequent introduction of milk quota and the limit it placed on supply, income on Irish dairy farms continued to rise throughout the 1980s and indeed had increased almost five-fold by the end of the decade. Although aggregate sector milk output was relatively static from 1984 onwards, Figure 7 indicates that milk price increased rapidly and productivity per cow rose modestly over the period thus representing substantial economic gains across dairy farms. Simultaneously, the number of dairy farms almost halved resulting in an increase in total output per farm.

Contemporary Issues of Importance

In the early 1980s, interest rate increases accelerated bringing rates to over 20 percent. Tom Clinton, a former IFA President referred to

this period in Irish farming history as Ireland's farm credit crisis, saying that "from 1979 onwards, the only thing expanding fast in Irish farming circles was debt. If not serviced, debts to be repaid to banks could double in four or five years; a lesson which 10,000 farmers learned the hard way. Some 5,000 of them learned the dreaded new words in Irish farming, "restructuring" and "write-off", Clinton (2002).

Throughout the 1970s farmers undertook considerable farm investment resulting in a rapid increase in interest payment expenditure during the 1980s, reflecting both the high level and considerable cost of borrowing. Expenditure on interest payments more than doubled between 1979 and 1982 and for the first time, in 1981, such payments comprised the highest proportion of farm overhead costs. On larger farms (those over 200 acres) interest payments became the second largest item of costs, exceeding even concentrate feed payments in 1981. Farmers struggled to pay out nearly a quarter of their declining incomes on such payments. According to Clinton (2002) the situation proved manageable for some who "worked their way through, but farmers who expanded rapidly, purchased land at high prices, had cattle disease outbreaks or had expensive family settlements never had a chance, particularly so after the EEC introduced milk quotas in 1983".

During this challenging period the government initiated a number of programmes to reduce the interest burden on farmers including the Reduced Interest Scheme for farmers in severe financial difficulty, which became known as the Rescue Package. This allowed farmers to restructure their debts and avail of lower interest rates. However,

the application process proved prohibitively complex for many and by its conclusion, only 7,000 farms (approximately) had availed of the scheme.

In 1989 the Teagasc National Farm Survey conducted a Banking and Insurance questionnaire for the first time. Results indicated that by the end of 1989 almost one-third of farmers were current borrowers (for farming purposes). This represented a low overall level of farm indebtedness by EEC standards. In Ireland borrowings represented about 25 percent of current assets compared to 44 percent for the Community as a whole. The survey revealed that a small number of farmers were in a serious situation of overborrowing with declining incomes further affecting their ability to repay outstanding loans.

Applications of Teagasc National Farm Survey data in the 1980s

For many years the National Farm Survey has conducted additional questionnaires on farmers' future production plans with a view to predicting sector development pathways. Boyle and Collier (1984) conducted one such study examining the accuracy of these farmer intentions surveys in predicting actual production outcomes. Using data collected on farmers' production intentions between 1979 and 1983 and data on actual production levels subsequently recorded by the NFS, the authors applied regression analysis to assess the relationship between intention and actual behaviour. They concluded that farmers in general tended to be over optimistic in their expectations and that farmers who were more conservative in their expectations, i.e. those indicating a contraction or maintenance of their output levels, tended to be in fact more accurate. As a result, Boyle and Collier recommended that if intentions surveys were to be

used to provide a quantitative indication of future commodity levels, then it would be appropriate to adjust stated intentions downwards by a factor of 0.5.

This study is of particular interest at present as a similar approach was undertaken by Kinsella and Hennessy (2013) who assessed the accuracy of the stated intentions of farmers following the decoupling of direct payments by comparing these to their subsequent production decisions using data available through the NFS. Despite the almost 30 year gap, the findings were remarkably similar, indicating that although agriculture has evolved, much remains the same. Farmers tend to be over exuberant in their future expectations and may suffer from what is referred to in the literature as “reality bias”. The latter study was extended further to examine the characteristics of farmers with more or less accurate/realistic expectations. The authors found that there was a weak statistically negative association between profit and exuberance, that is less profitable farmers were more likely to overestimate their future production levels. The research further concluded that the accuracy of intentions was highly influenced by the timing of the surveys and the prevailing market conditions.

The persistent dichotomy in the farm sector of low income, vulnerable farms and progressive, high-income farms (as outlined in the previous chapter) continued to stimulate debate and academic interest in the 1980s. Using NFS data Higgins (1986) examined the distribution of farm income to determine the impact of EEC membership on the income gap between farmers/producers at either end of the scale. The study showed that there was a widening of the absolute and relative income gaps post-EEC membership with large

profitable farms growing faster than their smaller low-income counterparts. He stated that this was not unexpected given that policy supports over this period favoured larger farms. Using Gini coefficients, an accepted measure of income equality in the literature, Higgins presented evidence that farm income distribution became more unequal between 1973 and 1983. The top 20 percent of farm households earned 61 percent of farm income in 1983 compared to 57 percent of income ten years earlier. It should be noted however that the author did warn of the misleading nature of examining farm income in isolation and he supplemented the farm survey with other data sources to arrive at total household income estimations. The study concluded that the failure to close the income gap in farming could be viewed as one of the major deficiencies of the Common Agricultural Policy.

Chapter 5

The 1990s – the arrival of the cheque in the post

“Shortly after becoming Agricultural Commissioner in 1989 I reached the conclusion that a radical departure from past policies was the only way to save the CAP.”

*Ray MacSharry European Commissioner for
Agriculture (1989-1993)*

The biggest development to affect the farm sector in the 1990s was the 1992 CAP reform negotiated and implemented under the Irish Commissioner, Ray MacSharry. The MacSharry reforms were a watershed in European farm policy marking the phasing out of price support in favour of direct income support, or what has widely become known as the “cheque in the post”.

The MacSharry policies were designed in response to both the growing cost of the CAP and the demands emanating from GATT, the General Agreement on Tariffs and Trade. Most importantly, GATT proposed to limit certain types of trade distorting agricultural support, such as price support which was largely utilised by the European Community.¹ From a virtually exclusive reliance on making transfers to farmers through market mechanisms by keeping market prices artificially high, under MacSharry the EC embarked

¹ The European Economic Community became known as the European Community following the Maastricht Treaty in 1992.

on a partial substitution of market price support by direct payments to farmers, a less trade distorting policy, Matthews (2000).

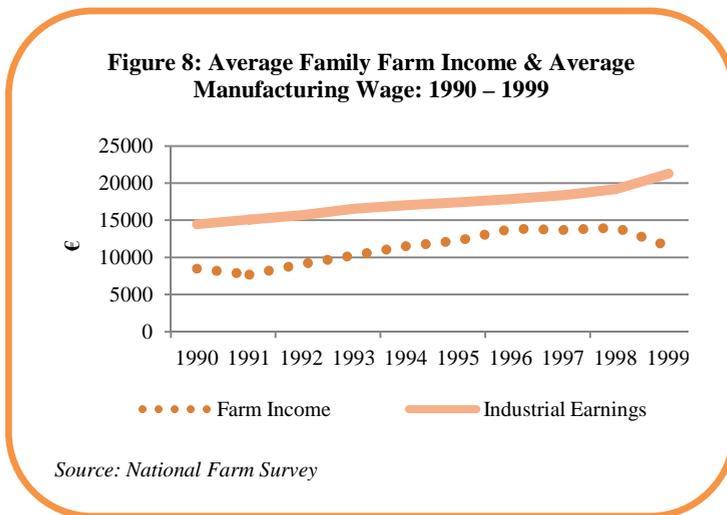
The most significant adjustments were the reduction in support prices for cereals and beef (30 and 15 percent respectively over 3 years) with partial compensation for that decline at fixed rates of payment through direct area and livestock payments. On the other hand, the dairy policy regime emerged from the MacSharry reforms virtually unscathed and direct price support for dairy products continued. Compensatory payments to cereal farmers were conditional on set aside and quotas were placed on sheep and suckler cow payments. Increased payments to beef farmers were available at lower stocking rates through the extensification scheme.

MacSharry originally sought to limit the total level of set aside compensation paid to individual farmers as well, however this was met with fierce opposition from the UK in particular, where the proposal was derisively referred to as the “*Sligoisation*” of European agriculture, a reference to the relatively small size of farms in MacSharry’s home constituency in the West of Ireland. The MacSharry reforms also included a set of accompanying measures: agri-environmental, early retirement and afforestation schemes.

The development of farm income in the 1990s

Figure 8 displays the differential between family farm income and average industrial earnings throughout the 1990s. Average industrial earnings were almost 70 percent ahead of average farm incomes in 1990. This gap closed somewhat over the years and by 1998 the income differential was approximately 30 percent. The deterioration

in farm income in 1999 however, served to widen the gap once again.



Given the reductions in price support agreed under the Mac Sharry reforms, the outlook for farm output prices and farm income was not overly optimistic in the early 1990s. However, buoyant world market and trading conditions boosted world prices and when combined with a devaluation of the Green Pound in 1993, prices were maintained at a much higher level than anticipated at the time of the CAP reform in 1992. In fact cereal prices increased as world grain prices peaked in 1995. Beef market prices, instead of falling by 15 percent between 1992 and 1995, actually rose by some 10 percent. Contrary to expectations, output trends generally moved strongly upwards and had a particularly good run from 1992 to 1996. This coincided with the introduction of the direct payments and so farmers were essentially compensated for price reductions

that did not transpire, so that farmers experienced what Professor Sheehy controversially referred to as very substantial “windfall gain” in those years. An era which the farm organisations predicted would be catastrophic for Irish farming, in fact turned out to be a good period for farming, Matthews (2000). Or as Professor Seamus Sheehy so eloquently put it, “the benign outcome belied the doomsday forebodings.”

In fact income from farming in 1996 was higher in real terms than at any time since the previous peak in 1979. However, the following two years 1997 and 1998 brought a downturn in incomes. Milk and cereal prices fell by 7 percent and 5 percent respectively in 1997 and average farm income fell by 1 percent that year. Such a reduction in income would have been greater were it not for a 3 percent increase in direct payments in the same year. The autumn and winter of 1998 were difficult for farmers. Against the backdrop of a virtual collapse in the cattle and sheepmeat market, inclement weather led to a fodder crisis which was particularly severe in the West of Ireland. Family farm income from the market place declined by 24 percent but total income, including direct payments, was more or less unchanged on the 1997 level. Average family farm income fell further by almost 20 percent from 1998 to 1999. The value of direct payments in 1999 fell by 12 percent due to a pre-payment made in 1998, adversely affecting income, as did the falling cattle prices and increased feed expenditure following the fodder crisis of the previous autumn.

As with previous decades, farm numbers declined in the 1990s. According to the 1991 Census of Agriculture there were 170,600

holdings in the country and by the end of the millennium this had declined to approximately 140,000 farms.

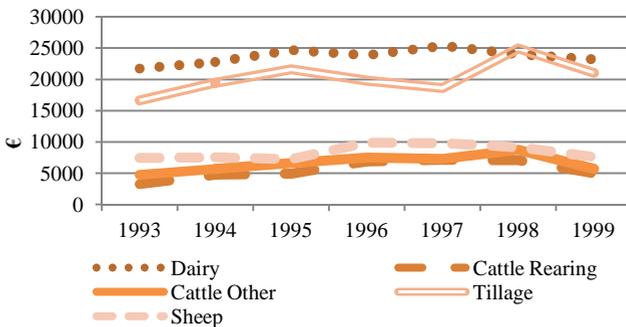
The importance of agriculture as an employer also declined over this period. Primary agriculture accounted for 14 percent of the total labour force in 1990 and this had declined to less than 9 percent by the end of the decade. Furthermore, the contribution of agriculture to the wider economy contracted in the 1990s, accounting for almost 8 percent of Gross Domestic Product at the start of the decade, and declining to just over 5 percent ten years later. This however was driven more by the rapid expansion of other sectors of the economy at the time rather than the contraction of agriculture.

Income by System of Farming

The method of classifying farms into the various farm systems changed in 1993 and hence a consistent series is not available for the whole decade. Figure 9 presents average income levels by system of farming from 1993 to 1999.

The most striking feature of the figure is the vast difference between Dairy and Tillage and the drystock farm systems. Tillage farm incomes enjoyed an upward trend throughout the decade due in part to the relatively generous direct payments that were phased in from 1992. Tillage farm incomes increased up to 1995 when world grain prices peaked but started to increase again from 1997. By the end of the decade the average income on Tillage farms was comparable to Dairy. Dairy farms were largely unaffected by the MacSharry reforms and as such dairy farm income remained relatively static in the 1990s.

Figure 9: Average Family Farm Income by System of Farming: 1993 - 1999



Source: Teagasc National Farm Survey

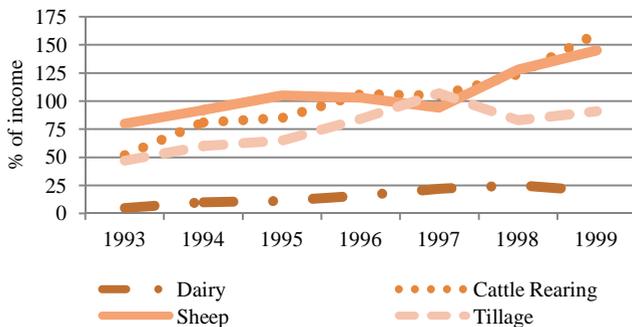
Although lagging considerably behind Dairy and Tillage farms, in general the 1990s was not a bad decade for dry-stock farming. With the exception of 1999 which was a dreadful year for all farm systems, income on the two Cattle farm systems increased every year and in the period 1993 to 1997 income increased by more than two-fold.

Cattle farmers were benefitting from the direct payments introduced in the MacSharry reforms in 1992, which increased in value from 1992 to 1996. Furthermore cattle prices remained relatively strong. Income on sheep farms followed the same upward trend, although not to the same extent as the Cattle farm systems. Average income on Sheep farms was more than one-third greater in 1997 than 1993.

A new and growing reliance on direct payments

In 1992, prior to the MacSharry reforms, direct payments contributed less than one-third of average farm income. These payments were mainly available through the headage scheme in disadvantaged areas and the ewe and suckler schemes. By 1996, the first year of fully phased in CAP reform payments, direct payments comprised almost double that on average, at over 59 percent of farm income across all farm types. The figure further increased to almost three quarters of average farm income by the end of the decade.

Figure 10: Direct Payments as a percentage of Farm Income: 1993-1999



Source: Teagasc National Farm Survey

The reliance on direct payments varied quite considerably by farm system in the 1990s, see Figure 10. On Dairy farms direct payment accounted for less than 10 percent of farm income in the early 1990s and by 1999 payments still accounted for less than a quarter of total income, reflecting the lack of any direct income support programme for dairy products in the MacSharry reforms. Tillage and Drystock

farms on the other hand, increased their reliance on direct payments to astronomical levels.

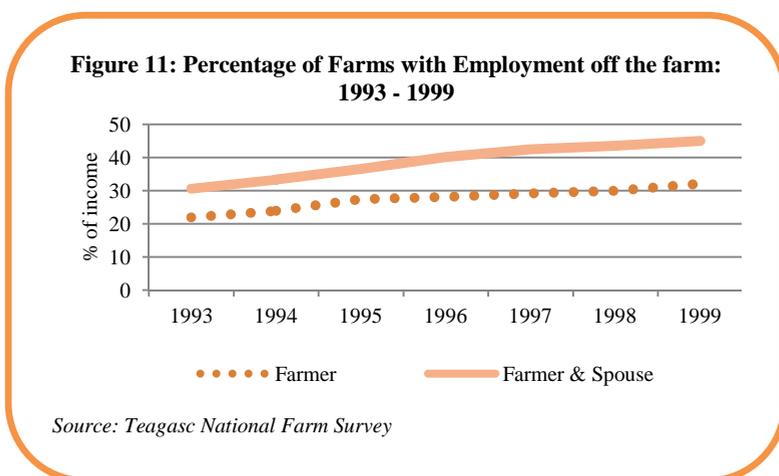
Even before the MacSharry payments were fully phased in, direct payments were accounting for over 50 percent of income on Cattle and Sheep farms. Direct payments comprised over 100 percent of farm income on cattle and sheep farms for the first time in 1996. The authors of the 1996 National Farm Survey report provided an explanation of this new phenomenon, explaining that this could occur if the market-based gross output was insufficient to cover total costs. An explanation that has been necessary in every published report since that time.

Over the period 1992 to 1995 the tillage farm system showed a significant increase in direct payments, from situation where direct payments comprised 47 percent of income in 1993 to payments comprising to 90 percent of income just four years later. Tillage farmers were also the recipients of the largest direct payments, averaging at a total of €20,686 in 1998 compared to just €5,895 on dairy farms.

In 1997 direct payments to Ireland as a nation exceeded €1 billion and represented 48 percent of farm income. Joe Walsh the then Minister for Agriculture and Food said “this is a remarkable degree of direct support and is unmatched in any other sector of the economy. Nor should it be lost sight of that part of these payments are specially geared to improving farm structure and protecting the environment”.

Contemporary Issues of Importance

The phenomenon of the increasing incidence of off-farm employment and the growing importance of non-farm income to the viability of a large number of farm households was acknowledged by the National Farm Survey and for the first time in 1993 data was published on the number of farmers and/or spouses participating in off-farm employment.



In that year 31 percent of farm households reported that either the farmer and/or the spouse were engaged in off farm employment. The occurrence of such off-farm employment has been well documented over the period and this figure had increased to 45 percent by the end of the decade. The proportion of farmers and spouses employed off-farm from 1993 to 1999 are displayed in Figure 11.

Although the National Farm Survey made the data available on the incidence of off-farm employment, the level of income generated from such employment was not made available in the 1990s or indeed to the present day, a practice that attracts some controversy from time to time. One of the biggest criticisms of the National Farm Survey measure of income is that it is of the farm business alone. In a sector where the incidence of off-farm employment is so significant, the farm income measure can therefore paint an inaccurate picture about the true economic status of farm families. However, it should be said that the overarching objective of the NFS has been, and continues to be, to collect data on output, input and income in farming and not necessarily of farm households.

Given the rapid growth in off-farm employment throughout the 1990s there was a growing interest in arriving at a more accurate evaluation of total farm household income. A Eurostat report from the time states that “an income measure which aims to be a proxy for the standard of living of the agricultural community, though clearly not an exact one, will need to cover income from all sources, not just that from farming activity”. Despite the many requests to expand the survey to collect farm household data, the NFS stayed steadfast to its initial remit.

As early as 1982, Hill wrote “concern over the income of farmers has been a fundamental but ill-defined component of agricultural policy. Current income from farming is only a partial measure of the potential spending power of farmers: many have off-farm sources of income which must be taken into account when, for example, assessing poverty. A prime requirement appears to be a more precise

statement of the aims of income policy and the use of income measures most appropriate to the circumstances.”

A paper presented by Brendan Kearney to the Agricultural Economics Society of Ireland (AESI) in 2000 reviewed the developments in off-farm employment in the previous decade. Kearney surmised that part-time farming was likely to become a permanent feature of Irish farming and he concluded that this was due to a combination of push and pull factors. The persistence of relatively lower farm income in Ireland relative to incomes of other sectors was the principal ‘push’ factor in the Irish farm labour force while the “pull” factor was the expanding labour market and employment opportunities outside of the sector in rural Ireland.

In 1998, the majority of farm operators were employed in the building and construction industry and the agriculture and primary sector with a minority participating in services and the professional labour market. Another paper presented to the Society by Phelan and Frawley (2002) examined the characteristics of farmers participating in off-farm employment. They found that those who worked off the farm were typically operating farms that were smaller than ‘full-time farms’ and predominately specialised in cattle or sheep rearing. From an analysis of variables such as age, marital status and number of household members, they developed a profile of a typical part-time farmer. Irish Farmers engaged in off-farm employment were found to be on average younger, more likely to be married, and they usually had a greater number of household members than their full-time farming counterparts.

A growing interest in environmental issues

The environmental impacts of intensive agriculture, favoured by the CAP, could no longer be ignored. The Mac Sharry reforms accompanying measures made allowance for an agri-environmental scheme. The Rural Environment Protection Scheme (REPS) was introduced in 1994, and was to run for 5 years initially. The REPS represented a major turning point in Irish agriculture policy. REPS I ran from 1994-99 and by 1999 more than 50,000 farmers were participating with total expenditure reaching €450 million.

Following the introduction of the REPS scheme, the NFS published an annual analysis of REPS and Non-REPS farms. This analysis has tracked the success of this environmental scheme and examined payment distributions. It was used extensively by the Department of Agriculture and other environmental bodies to track the success of this

Applications of the National Farm Survey data in 1990s

PhD research conducted by Dr Mary Keeney in the late 1990s, under the supervision of Professor Alan Matthews and Dr James Frawley, used National Farm Survey data to conduct a detailed examination of the impact of direct payments on farm income distribution. Of key interest was whether direct payments reduced the underlying disparity in farm incomes. Similar to the approach adopted by Higgins in the 1980s, looking at CAP reform Keeney analysed the distributional effects of the different components of Irish farm income using a Gini comparison method that disaggregated the overall Gini coefficient of income inequality by income source. The author found evidence of favourable movements in the Gini coefficient following the introduction of direct payments,

which targeted less well-off farmers. Keeney found that Compensatory Allowances (Headage) were the most egalitarian support scheme in terms of the current distribution of support benefits. By design, the payments accrue mainly to livestock farmers in areas facing natural handicaps to production, those at highest risk of low farm income.

Keeney concluded “the old CAP had a number of negative effects which were only partially corrected by the 1992 reform. Not least of these, total CAP support remains unequally distributed between farms and is not well targeted. Payments that are targeted to low income farms will improve the overall distribution of farm income on two counts. First, increasing targeted direct payments will ensure that low income farms benefit disproportionately and augment farm income equality, Second, increasing the share of direct payments in farm income decreases the role of market-based income streams which has the most unequalising effect on income distribution.

A number of studies used NFS data from the 1990s to explore the international competitiveness and productivity of Irish agriculture; Boyle et al (1992), Boyle (2002) and Thorne (2004). These projects were among the first to exploit the advantages of FADN membership, and in particular the harmonised nature of the FADN data, as they used data from a number of different Member States to assess Ireland’s relative competitiveness and productivity. All three studies followed a similar approach, assessing the cost, both cash costs and economic costs, of producing a unit of output in each of the countries analysed as well as compiling a number of partial productivity indicators.

The Thorne study concluded that the competitive position of Irish agriculture in the 1996 to 2000 period was positive for all four commodities examined, dairy, beef, sheep and cereals, as Irish producers had lower cash costs as a percentage of output, relative to the average of all countries examined. Furthermore, Irish beef rearing, beef fattening, and sheep farms actually appeared as the lowest cash cost producers (as a per cent of output) compared to the other countries examined in the study. However, when imputed charges for owned resources, that is land and labour, were considered the competitive ranking for Irish agriculture slipped relative to the other countries, for all commodities examined. This was in keeping with the findings of the Boyle (2002) study, which attributed Ireland's high economic costs to the relatively small scale of farming in combination with the relatively high opportunity cost of land and labour.

Chapter 6

The 2000s – severing the link between production and support

“Those outside farming have no idea of the Byzantine complexity of the rules which govern how much support an individual farmer can get.”

Alan Matthews.

Professor Emeritus of European Agricultural Policy

Trinity College, Dublin, Ireland

2003 Irish Times article

Three major policy developments occurred in the 2000s. First the Agenda 2000 policy which was essentially an extension of the MacSharry reforms, whereby support prices were cut further but offset by compensation measures. The policy placed a strong emphasis on “multifunctionality” and the “European Model of Agriculture”. It included a strengthening of structural, environmental and rural development policies and their incorporation into a ‘Second Pillar’ tasked with responsibility for rural development and the multi-functionality of farming. ‘Modulation’ was also introduced on a discretionary basis whereby funds could be transferred from Pillar 1 (market support and direct payments) to rural development measures (Pillar II) by means of a modulated cut in direct payments above a certain level.

The second policy reform of the 2000s was somewhat unanticipated. What was originally intended to be a Mid-Term Review of Agenda 2000, transpired to be one of the most far-reaching reforms of the CAP to date. The Mid-Term Review, also referred to as the Fischler reforms after the then European Commissioner, Franz Fischler, broke the link between direct payments and production, a development referred to as decoupling. Farmers were to receive a Single Farm Payment (SFP) per hectare, the level of which was determined in one of a number of ways. In the Irish case, it was based on total direct payment receipts in a reference period. Some Member States opted for a regional average whereas others chose to partially link the payment to production. The payment of the SFP was conditional on adherence to good environmental practices, cross-compliance, and was subject to modulation, albeit at marginal rates.

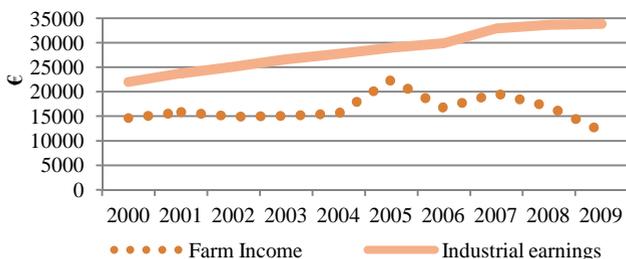
While some Member States chose partially coupled payments requiring some continued production for their receipt, Ireland opted for full decoupling and so all direct payments for cattle, sheep and arable crops were fully decoupled from production from 1 January 2005. All existing Livestock Premia and Arable Aid Schemes were abolished with effect from January 1st 2005. The Rural Environment Protection Scheme (REPS), and the Disadvantaged Areas Compensatory Allowances, (Formerly Headage Payments Schemes) were not included in the Single Payment Scheme and were to continue as before. There was no specific requirement to keep livestock after 2005 to qualify for the decoupled payments. However, farmers were required to keep their holdings in good environmental and agricultural condition and to comply with certain statutory management requirements.

A third policy development in this decade was the Health Check of the CAP in 2008 which, inter alia, continued the trend towards decoupling and agreed the elimination of milk quotas by 2015. Compulsory set-aside was also eliminated. Other measures agreed included the raising of the common modulation rate from 5 percent to 10 percent and extending the period to 2013 over which New Member States could apply the Single Area Payment System.

The development of farm income in the 2000s

Figure 12 displays the average family farm income and average industrial earnings from 2000 to 2009. Average industrial earnings were almost 50 percent ahead of average farm incomes in 2000 and grew by on average 6 percent per year from 2000 to 2007. The gap between farm and industrial earnings widened over this period. Although industrial earnings began to level off from 2007 to 2009, farm incomes deteriorated significantly over these years and as such the gap continued to widen.

Figure 12: Average Family Farm Income & Average Manufacturing Wage: 2000 - 2009



Source: National Farm Survey

The gradual dismantling of CAP price support policies served to expose Irish farmers to greater price risk and as a result farm income grew increasingly more volatile in the 2000s. Historically, large trading blocks like the US and the EU withheld product from the market when prices were low and accumulated stocks, which they then released on the world market when prices rose thus dampening any price increase and smoothing out price volatility. This stock piling mechanism provided a form of market stability, preventing large price volatility. However, in the early 2000s world stocks were being depleted due to a number of “freer trade” policy reforms and steady increases in world demand. The depletion of stocks meant that there was less scope to stabilize the market and hence the increased volatility in farm income in the 2000s.

Incomes were relatively high and stable in the early part of the decade. Despite the problems caused by Foot and Mouth Disease, farm incomes remained relatively stable in 2001 and income on cattle farms actually increased in that year. Falling output prices and increased production costs conspired to reduce farm incomes by 6 percent in 2002 and income remained relatively static in the following years, 2003 and 2004.

Between 2004 and 2005 family farm income increased by a phenomenal 44 percent. However, this dramatic increase was due primarily to a once-off overlap between payment of arrears on 2004 premia schemes and payment of the bulk of the Single Payment Scheme in December 2005. Understandably, incomes increased by a greater extent on those farm systems most reliant on direct

payments. Following this once-off overlap, incomes reverted to more traditional levels in 2006 when a 26 percent average reduction was experienced.

Farm incomes increased again in 2007, and were on average up 18 percent on the previous year. This can be explained by strong prices on world markets for dairy products and cereals. Prices for these commodities in particular, rocketed, outstripping previous price records partly due to the growing competition in land use for the production of biofuels.

The milk price paid to Irish farmers increased from approximately 25 cent per litre in the summer of 2006 to 35 cent per litre in 2007, while wheat prices were almost 75 percent higher in 2007 than a year earlier. High oil prices and climate change were mooted as the main driving forces behind this turn around in agricultural commodity markets. In response to the concerns surrounding “peak oil”, the US introduced a number of policies to promote the production of bio-ethanol and energy crops around this time. The impact of this was declining grain exports from the US.

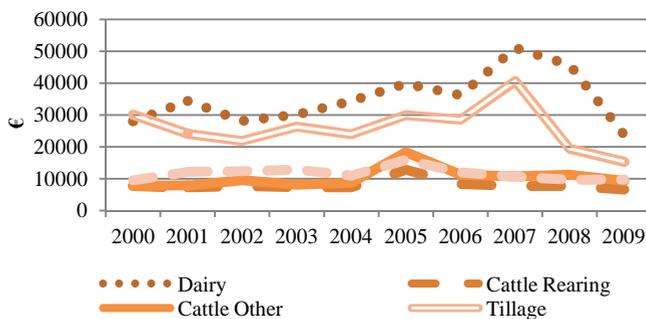
The substantial increases in commodity prices did not go unnoticed by the consumer. High cereal prices led to “tortilla riots” in Mexico and “pasta protests” in Italy. Nevertheless, the agricultural boom was short-lived and the unusually high prices of 2007 and 2008 led to an upward adjustment in supply with producers responding to the market signals. Commodity prices returned to more established levels in 2009. Furthermore, grain-based inputs remained very expensive that year following the elevated harvest prices of the

previous years. As a result, farm income suffered a catastrophic collapse in 2009, falling by 30 percent.

Income by System of Farming

The volatility in farm income between 2003 and 2009 for Dairy and Tillage farms is evident from Figure 13. Both farm systems followed a similar income path over the decade, equally reaping the benefits of the commodity boom in 2007 and suffering the full force of the ensuing price collapse in 2008 and 2009.

Figure 13: Average Family Farm Income by System of Farming: 2000 - 2009



Source: Teagasc National Farm Survey

Strong international grain and dairy markets in 2007 led to an increase of over 40 percent on incomes on Dairy and Tillage farms. Commodity prices collapsed in the second half of 2008. It was fortuitous for Irish dairy farmers that, due to the seasonal nature of milk production, the majority of the Irish milk pool had been delivered before milk prices collapsed. Tillage farmers were not as fortunate and a staggering 55 percent income drop was recorded on

Tillage farms in 2008. Economic conditions were no better in 2009 and by the end of the decade, average income on Tillage farms was about half of what it was ten years earlier, in nominal terms.

By comparison, income on drystock farms remained relatively static throughout the period. Incomes peaked in 2005 as a result of the double payment of direct payments, increasing most significantly on Cattle Other farms, up over 100 percent, thus demonstrating the greater reliance of this system of farming on direct payments.

The commodity boom of 2007 passed the drystock farming sector by and farm incomes on average declined by 8 percent from 2006 to 2007. Interestingly, the Sheep system was the only one to maintain farm income levels in 2009. Demand for sheepmeat remained strong in that year and while European sheep flocks had been in decline for many years, 2009 proved to be the tipping point where sheepmeat prices increased.

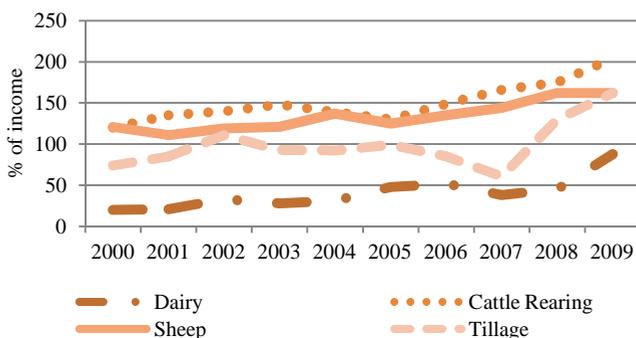
Reliance on Direct Payments

As already eluded to, the proportion of family farm income derived from direct payments increased throughout the decade. This can be seen in Figure 14. Across all farms, such payments comprised 68 percent of income in 2000, increasing to 143 percent by 2009. The significant drop in output prices in that year consequently accentuated the importance of direct payments to income.

Cattle Rearing farms remain the most reliant on direct payments and the proportion of income generated by such payments rose steadily from 2006 to 2009 following decoupling. By the end of the decade the average direct payment on cattle rearing farms was €13,396

while family farm income stood at only €6,536. Given that payments were now decoupled from production and farmers could receive them regardless of production levels, the fact that so many cattle farmers continued to engage in loss making production perplexed many agricultural economists and was the topic of many research papers at this time.

Figure 14: Direct Payments as a percentage of Farm Income: 2000 - 2009

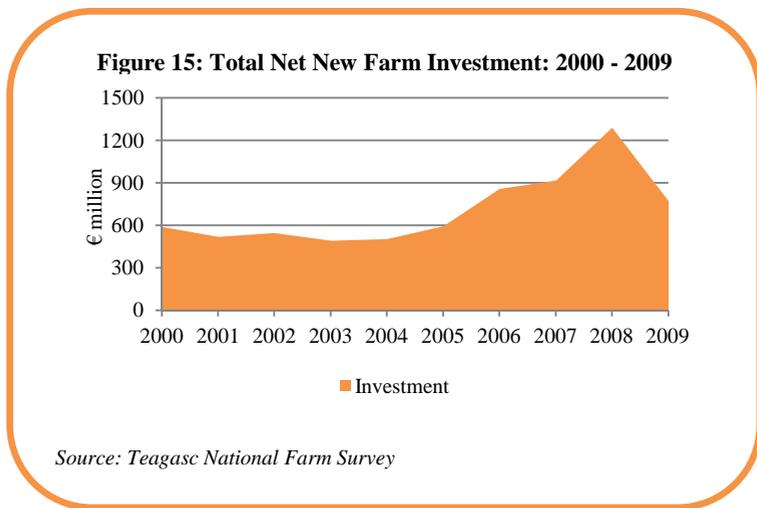


Source: Teagasc National Farm Survey

Dairy farms tend to be least reliant on direct payments. In the first part of the decade direct payments constituted between 20 and 30 percent of income. Reliance by dairy farmers on such payments increased significantly in 2009 following the dairy price collapse, thus demonstrating the stabilising impact of direct payments in this instance. Tillage farmers also benefited from the stabilising nature of these payments in that year.

Contemporary Issues of Importance

Total net new investment at the farm level as recorded by the National Farm Survey from 1996 to 2010 is presented in Figure 15. Net new investment is defined as all capital expenditure, less sales of capital and grants received. It includes investment in machinery, buildings, quotas and land improvements but does not include land purchase.



As can be seen, there was very little change in the level of investment between 1996 and 2005, with the annual aggregate figure averaging about €550 million. Generally over this period investment in machinery was almost double the level of investment in buildings. Nonetheless, investment activity accelerated in the 2006 to 2008 period with spending on buildings outstripping machinery. This increased investment activity was largely policy driven. Cross compliance obligations introduced under the Nitrates

Directive meant that many farmers were then obliged to invest in farm waste management facilities and the Irish Department of Agriculture, Fisheries and Food (DAFF) operated the Farm Waste Management Scheme at this time. This made available grant aid of up to 70 percent, in certain cases.

Investment fell significantly in the years that followed, 2008 and 2009, coinciding with the overall downturn in the economy, a collapse in farm incomes and the closure of the grant schemes available for farm buildings.

The sustainability of agriculture has emerged as a key area of interest for agricultural and environmental economists during this period. Indeed the principle of ensuring the sustainability of agriculture was firmly enshrined in the founding objectives of the Common Agricultural Policy through its aims of sustaining an adequate standard of living (for the agricultural community) and a secure food supply. Research undertaken by Dillon et. al. in 2010 using Teagasc National Farm Survey data over a 10-year period (1996–2006) involved the development of farm-level sustainability indicators encompassing the multidimensional nature of sustainability: economic, environmental and social.

The authors found that in terms of economic viability, apart from a one-off increase or decrease in some indicators in single years (due for example to the payment of a carry-over of arrears from coupled payments from previous years in 2005), the general trend was a decline in farm viability and market return over the reference period. In line with previous work by O'Brien et. al. (2008) it could be speculated that the general decline in the economic sustainability of

family farms over the period was offset to some extent by the well documented increase in off-farm employment (by dry-stock farmers in particular) in the booming construction sector. As previously outlined within this publication, when individual farming systems were taken into account, some were found to perform better than others. From an environmental perspective, the more intensive farming systems (primarily dairy) were found to pollute more on average, while in more general terms the levels of methane emissions produced per hectare fell over the time frame examined. This research also found that there was very little change in demographic viability across farming systems over the time period examined, with only a slight decline in the number of households with at least one household member below 45 years of age. This work highlighted the complexity of the concept of farm sustainability and reinforced the importance highlighted in the literature of integrating economic, environmental and social aspects when addressing sustainability issues of agricultural systems.

Following commitments to reduce greenhouse gas emissions made by the Irish government under the Kyoto Protocol as well as the introduction of the EU Emission Trading Scheme (ETS) in 2005 Ireland's ability to supply its energy needs using alternatives to fossil fuels ignited a debate around the potential use of Biofuels in the country. Within this context Clancy et. al. (2009) utilising Teagasc National Farm Survey data designed an econometric model to identify the socio-economic characteristics of farmers who may be willing to adopt energy crop production in replacement for conventional agricultural enterprises. Additional survey data collected in 2006 which explicitly asked farmers had they

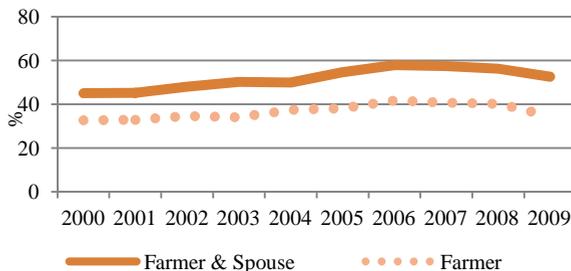
“considered or investigated converting land to energy producing crops?” was also utilised by the authors in this regard.

Results suggested that a farmer’s adoption decision depended not only on the financial rewards from growing energy crops but also on a number of personal or farm specific factors. The current system of farming, the agricultural education of the farmer and the existence of a successor were all likely to weigh heavily on any decision to switch to energy crop production. Aside from the financial aspect, the logistics of transporting willow and miscanthus to the midland power stations identified was found to be the greatest barrier to the achievement of the national co-firing targets. Given the high cost involved in the transporting of biomass energy the potential area in which the production of willow and miscanthus can be economically viable is limited. This therefore has a limiting effect on the potential amount of farmers whose optimal enterprise is to grow these crops. The authors found that the cost of transporting biomass crops needs to be calculated in order to generate a viable zone within which it is optimal to produce willow and miscanthus in Ireland.

Farming and the Celtic Tiger – from Boom to Bust

In the 1990s and early 2000s agriculture benefited from the growing macro-economy, mostly through the increased availability of off-farm employment in rural areas. The incidence of off-farm employment grew throughout this time however, the recession which hit the Irish economy in 2008 and 2009 adversely impacted this trend.

Figure 16: Percentage of Farms with Employment off the farm: 2000 - 2009



Source: Teagasc National Farm Survey

As can be seen from Figure 16 the incidence of off-farm employment reached its highest level in 2006. In that year 58 percent of farm households also had a non-farm income source.

Due to a contraction in the overall economy and in the labour market in particular, the incidence of off-farm employment has been in decline since the peak in 2006. The number of farmers engaged in off-farm activity fell quickly and dramatically, whereas the decline in off-farm labour opportunities for spouses was not so immediate. During the Celtic Tiger era farmers were typically employed in low-skilled roles particularly in the construction sector. These jobs were the most vulnerable to the recession and unemployment increased most rapidly within this sector.

An extensive study of the many dimensions to part-time farming and off-farm employment was conducted by O'Brien et al in 2008 using NFS data. The study examined the relationship between off-farm income and farm investment and concluded that in households

where spouses were employed off the farm, investment in the farm business tended to be higher, other things being equal.

The O'Brien study also examined the relationships between off-farm employment and productivity and found that farmers that also worked off the farm were no less or more efficient than their full-time farming counterparts. Direct payments were found to have a statistically significant impact on the likelihood of a farmer working off the farm and the authors concluded that the decoupling of direct payments was likely to act as another push factor in the growing trend of off-farm employment. The report concluded with a discussion of the relatively low education levels in farming and the particular vulnerability of farmers to the recession which was just emerging at the time of publication.

Applications of National Farm Survey data in the 2000s

At the time of decoupling, Ireland was free to choose from a suite of policy options, namely full decoupling using the historical model, full decoupling using a national or regional flat rate payment or partial decoupling. The Irish Department of Agriculture requested that the FAPRI-Ireland models be used to assist in the selection of the optimal model for Ireland. The FAPRI-Ireland models had been developed in the 1990s in conjunction with the University of Missouri with the objective of providing timely and relevant, evidence based policy advice. The FAPRI-Ireland farm level model, in particular, was based entirely on National Farm Survey data. These models were used to analyse the various policy options and were cited at the time as being instrumental in the final decision to adopt full decoupling.

In the early 2000s agricultural economists and policy analysts in Ireland, and indeed across the EU, were grappling with the question of the production inducing effects of decoupled payments. The extent to which such payments would affect farm production was an important issue. First, there was an interest in gaining an ex-ante understanding of how the Fischler reforms were going to impact on production levels in an Irish context and second, it was an important policy question in the context of the World Trade Organisation (WTO) and the on-going reform of the Common Agricultural Policy (CAP). The “green boxing” of decoupled payments, within the WTO discipline, hinges on the criterion that these payments have no, or at most minimal, trade-distorting effects or effects on production.

In a paper titled “How decoupled are decoupled payments? The evidence from Ireland.” Hennessy and Thorne (2005) used National Farm Survey data to compare farmers’ production plans post decoupling to the output of a farm-level profit maximisation model. The results showed that a significant number of Irish farmers planned to use their decoupled payments to continue or expand economically non-viable production post decoupling. An econometric analysis revealed that the decision to maintain production levels post decoupling was not significantly influenced by current or future projected profitability levels. The analysis pointed to the likely widespread cross subsidisation of unprofitable production post decoupling but that aggregate production was still likely to decline relative to coupled, but production-limiting, blue box payments. Hennessy and Thorne concluded the majority of Irish farmers were unlikely to view the payments as decoupled and were more likely to maintain production levels at pre-decoupling levels.

One of the most significant developments in the wider macro economy in the late 2000s was the credit crunch. The banking crisis was having serious repercussions for economic activity across the spectrum of sectors in the Irish macro-economy. In his Doctoral research, Teagasc Walsh Fellow Conor O'Toole used National Farm Survey data from the 2000s to examine the impact of the credit crunch on investment in farming. He developed an econometric model to identify the factors that had a significant effect on farm investment. Not surprisingly, government grants were found to be the single most important determinant of such investment.

The econometric model was used to test whether financing frictions had a different impact on farmer investment during the Celtic Tiger era as opposed to the Credit Crisis era of the late 2000s. The results showed that there was no significant relationship between investment and debt overhang during the pre-crisis period but that there was a significant negative relationship between these two variables in the latter part of the 2000s. This finding suggests that the ongoing difficulties in the Irish financial system at that time, were inhibiting the ability of Irish farmers to access credit for investment and expansion purposes.

An extensive examination of the productivity of Irish agriculture was conducted by Matthews et al in 2007 using National Farm Survey data from the previous twenty years. The authors concluded that in absolute terms, the overall productivity performance of Irish agriculture between 1984 and 2000 was poor when compared to our main competitors internationally. The Irish growth rate in multi-factor productivity was 1.3 percent over the period, lagging behind the European average of 1.7 percent.

In an article published in the Irish Times around this time, Matthews attributed much of the relative loss in the competitiveness and productivity in Irish farming to the prevailing policy climate. He said, “it is impossible to overstate the damage which the CAP, in providing income support to producers, has caused to the competitive position of Irish farmers. Production decisions are driven by premiums and support considerations rather than market returns.” He went on to say that it was not surprising that the productivity of the cattle and sheep sectors had diminished when farmers must reduce animal numbers to meet artificial extensification criteria to qualify for the maximum level of premiums.

Chapter 7

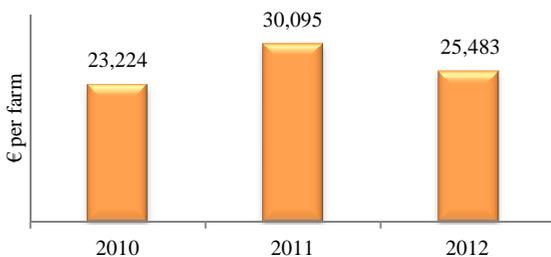
Back to the future

Throughout the Celtic Tiger years the contribution of agriculture to Gross Domestic Product (GDP) and employment declined as other sectors of the economy advanced and even boomed. Many agricultural stakeholders bemoaned the diminishing status of the sector at that time. However, against the backdrop of a number of difficult years for the Irish Macro-economy, a renewed interest in agriculture has evolved. The sector attracted considerable attention in 2009 and 2010 given its strong export performance whilst other exporting sectors were in the doldrums. In addition, large income increases recorded in 2010 and 2011 attracted interest, coming at a time when earnings in most other sectors of the economy were in decline.

Following the turbulent year that was 2009, farm incomes increased substantially the following year. Average family farm income in 2010 was estimated at €18,022. While this represented an increase of 48 percent on 2009 this was reflective of the difficulties encountered in that year and was in fact a relatively modest increase of 6 percent on the 2008 figure. In fact, the average income figure for 2010 concealed the mixed fates across the various farming sectors in that year. Whilst family farm income increased substantially on dairy and tillage farms, up 92 percent and 119 percent respectively, cattle and sheep farms did not fare as well. The former benefitted from the substantial recovery in global dairy

commodity and grain markets with gross output increasing by 23 percent on Dairy farms and 21 percent on Tillage farms.

**Figure 17: Average Family Farm Income by System of Farming:
2010 - 2012**



Source: Teagasc National Farm Survey

There followed a further increase in family farm income on average in 2011, with levels up almost one-third, reaching unprecedented levels in both real and nominal terms. Income increases were entirely driven by output gains as production costs increased and the value of direct payments declined marginally. Favourable conditions persisted on international dairy markets, in particular in 2011, and as a result average incomes on dairy farms increased substantially by 36 percent to €68,570, the highest level ever recorded. On the back of strong cattle prices, income on cattle farms also increased in 2011.

Following the highs of 2011, 2012 proved to be a difficult year. Rising input costs and inclement weather contributed to difficult production conditions, while increased price volatility on output

markets exacerbated the uncertainty facing farmers. Drought in the US and poor weather conditions in Europe significantly reduced the supply of grain across world markets leading to higher prices for grain based products. While this should have been good news for Irish cereal farmers, the price rise was insufficient to offset the poor yields achieved due to the unfavourable growing conditions experienced in Ireland over the summer months of 2012. While on average, family farm income increased by more than 30 percent from 2010 to 2011, most of these gains were eroded in 2012. Incomes were thus restored to levels more customary to the sector, falling by 15 percent. This decrease in income was entirely driven by input expenditure as gross output declined by less than 1 percent on average.

Looking to the future

At this point, the long-term outlook for agricultural markets and farming remains positive. As the world population continues to grow, so too does demand for food and for other products competing for land use, such as energy crops and so forth. It is generally accepted that the demand for food is likely to grow at a faster pace than its supply. Growth in supply is further likely to be curtailed by climate related issues with many reports indicating that the area of the world suitable for the profitable and sustainable cultivation of crops will decline over time. Tellingly, even over the past number of years production and exports from the southern hemisphere have suffered due to drought-related issues.

Whilst the outlook is positive, this buoyancy on the output side is likely to be coupled with input price inflation. Many of the key inputs to food production are also likely to increase in price over

time, for example grain based products required for animal feed, fertiliser required for the cultivation of crops, energy required in the production and transportation of food and finally the cost and availability of water is very likely to become a critical issue. As such, the cost-competitiveness of food producing countries will be a key determinant of who will benefit from growing commodity prices.

It was in the context of this relatively optimistic outlook for agricultural markets that the Irish Department of Agriculture, Food and the Marine published the Food Harvest 2020 report in 2010. This visionary document has set ambitious targets for the expansion of the Irish Agri-Food sector, amounting to a 33 percent increase in agricultural output, a 40 percent increase in value added and a 42 percent increase in exports between 2010 and 2020. Much of this ambition is underlined by the impending removal of milk quota and the opportunity to expand milk production for the first time in thirty years. Consequently, the Food Harvest 2020 report set the ambitious target of increasing milk production by 50 percent by 2020.

The Teagasc National Farm Survey data has been used extensively to explore the possibility and the benefits of achieving the growth targets set out in Food Harvest. A recent paper by Laepple and Hennessy (2012) used NFS data on dairy farms to estimate the likely production response of dairy farmers following milk quota removal and the sensitivity of production to market conditions. Additionally, research by Miller (2012) used National Farm Survey data to explore the wider economic benefits of achieving significant expansion in dairy output and in particular quantified the impact for employment in the wider economy.

While there are many reasons to be optimistic about agriculture's role in Ireland's economic recovery, it is important to be realistic and to identify some potential bumps in the road ahead. The growing requirement to reduce the negative environmental externalities associated with agriculture and the need to make farming more sustainable is likely to present some challenges for the future development of the sector. Growing concerns about climate change have led to a number of significant policy proposals. Specifically in relation to greenhouse gas emissions, the EU is committed to a reduction of 20 percent by 2020. Agriculture accounts for almost 40 percent of these emissions in Ireland and as such it is expected to have to contribute to this reduction. This may curtail Ireland's ability to expand the livestock sector and some forecast that environmental constraints may become the new "milk quota".

Teagasc has an active programme of research in emissions abatement and is committed to ensuring that any expansion in production will be achieved in a sustainable manner. Again the Teagasc National Farm Survey has been used in a number of studies to estimate the cost of abatement and to analyse the potential effects of a limit on greenhouse gas emissions. One such study, Breen (2010), used NFS data to examine how a limit on greenhouse gas emissions might impact Irish agriculture and how to such a limit could effectively be implemented. He concluded that a cap and trade system would be the most economically efficient mechanism for controlling greenhouse gas emissions. Essentially this would involve allocating an emissions quota to each farmer and then allowing

farmers to trade these quotas. Emissions quotas would then move to the farmers with the highest abatement costs.

Despite the optimistic outlook for Irish agriculture the undeniable fact remains that the vast majority of Irish farms would not be economically viable were it not for subsidies and this is another major challenge the sector faces. At an aggregate level, subsidies, mostly coming from Europe, amounted to approximately €1.7 billion in 2010 or almost 70 percent of sector income. As this report has clearly demonstrated, some sectors of farming are more reliant on subsidies than others. Over many decades the drystock farming systems have been plagued with problems of poor productivity and low incomes, resulting in a substantial reliance on subsidies. The future development of direct payments to farmers will play a critical role in the long-term economic sustainability of the majority of cattle and sheep farmers in the country.

At the time of writing, another round of CAP negotiations are nearing conclusion under the auspices of the Irish Presidency of the European Union. The latest proposed reforms involve shifting decoupled payments to a uniform flat-rate per hectare payment model, known as “internal convergence”. The Commission’s communication from October 2011 proposed a shift to such a national flat rate payment per hectare in each Member State. This was met with considerable controversy in Ireland. Given that Ireland had opted for the historical payment model at the time decoupling was introduced, payments per hectare continue to vary across farms according to the production decisions taken in the reference period. A move to a flat-rate payment model would lead to a significant redistribution of payments between farmers, mostly from more

productive to less productive farms, as farmers that were relatively intensively stocked in the reference period continue to have relatively higher Single Farm Payments per hectare. Indeed an analysis published by Shrestha et al (2007) used NFS data to quantify the significant redistributive effects of such a policy move.

Concerns have been expressed by some farming organisations that the a shift of support away from productive farmers may lead to a contraction of economic activity in the farm sector and thus have negative consequences for the wider economy, a point that economists are finding extremely difficult to prove, or indeed disprove. Following pressure from the farm organisations, the current Minister for Agriculture, Simon Coveney, managed to secure agreement from the Council of Ministers for some moderation to this “internal convergence” process. At the time of writing these proposals are being considered by the European Parliament, Commission and Council of Ministers in what is referred to as a “tri-log” process. Without doubt, the Teagasc National Farm Survey will prove a useful resource, once again, when analysing the various policy options open to Ireland.

An ever-changing sector – an ever-changing survey

And so, as the Irish farm sector has undergone continuous change over the last four decades as documented in this publication, the Teagasc National Farm Survey has proven to be an invaluable source of reference in charting these developments. Over this 40 year period, NFS data has been used in a number of landmark studies that have gone on to influence agricultural policy decisions taken in both Europe and Ireland, rural development policy decisions taken by the national government and domestic funding

decisions for agricultural education and advisory programmes. As the farm sector has evolved over the last 40 years so too has the Survey and many of these developments are outlined in the ensuing chapter.

Looking to the future, there is no doubt that the farm sector will continue to develop and adapt to an ever-changing policy and market environment. It is envisaged that the Teagasc National Farm Survey will continue to evolve in response to the ever-changing needs of the farm sector. In response to the growing importance of environmental sustainability in recent years, the Survey has significantly expanded the range of environmental data being collected on farms and indeed Ireland has become a leader in the FADN (Farm Accountancy Data Network of the EU) group of countries in this regard. The NFS will publish a carbon foot-print of milk production for the first time in 2013 and this is likely to prove a major development, likely to be of value from both a policy and international marketing perspective. And so as the sector continues to evolve we look forward to another 40 years of a versatile, relevant but above all consistently accurate Teagasc National Farm Survey.

Chapter 8

The History of the Teagasc National Farm Survey

Liam Connolly

The first national survey of Irish farms was conducted and published by the Central Statistics Office in 1955. The Rural Economy Research Centre of An Foras Taluntais carried out individual farm enterprise studies during the 1960s. A detailed farm survey commenced in 1966 and continued to 1968 on a random sample of farms, which was undertaken by the Rural Economy Research Centre. A team of full time farm recorders completed and analysed a detailed farm account book on each selected farm. A stratified random sample of 1800 farms was selected by the CSO. 1400 farms co-operated each year. 888 farms remained on the survey over the three years. This survey provided detailed results by farm system, size region and soil type and also enterprise gross margin data, which were published in annual reports with a final 1966-68 report. However no overall national average farm data were calculated or published. Due to financial cutbacks the survey ceased in 1968 with farm recorders taken off the road and assigned to other duties and centres.

Ireland's entry to the EEC in 1973 brought with it an obligation to provide and deliver to the Farm Accountancy Data Network (FADN) an annual file of farm data collected on a random sample of farms, that were representative of Irish agriculture. The Department

of Agriculture had overall responsibility for the delivery of the Irish FADN data and they requested An Foras Taluntais to establish a farm survey to collect, analyse and deliver the FADN data on an annual basis. A Surveys Unit was established within the Farm Management Department of the Rural Economy Centre, which had responsibility for the Farm Management Survey in 1972. The Central Statistics Office selected a random sample of farms, which were chosen and weighted by size to represent the main size categories. The sample provided 2000 holdings over 5 acres selected on a stratified random basis.

Participation in the survey was voluntary and substitutes were provided in the event of non co-operation. All farming activities of selected farmers were recorded. The country was divided into 18 recording areas and the project was given priority for staffing and funding. The farm recorders from the 1966-68 survey were assigned to the new survey. The individual farm data was recorded in a computerised farm account book to facilitate analysis and farms were visited four times each year. In contrast to the 1966 to '68 survey the recording year was January to December. The books were closed and submitted in the first four months of the subsequent year. A computerised analytical program validated them and analysed the farm account books and generated a detailed farm report, which was given to each participating farmer.

In 1972 the Farm Management Survey staff comprised of 18 farm recorders, 8 technical analysts, 4 research officers and a number of secretarial and administrative staff, making it the largest research project within An Foras Taluntais and comparable to the National Soil Survey project.

The main objectives of the survey were to determine

- (a) the level of farm outputs, costs and incomes arising in agriculture and the variation in these between region, sizes and farm systems
- (b) the structure of farm outputs and expenses for similar classifications
- (c) the standards of performance for the main farming types and sizes
- (d) to provide Irelands farm data requirements to the EEC Farm Accountancy Data Network

The survey was designed to collect and analyse information relating to farm activities as its primary objective but also collect other socio-economic data on the farm family.

FADN required farm level data in relation to agriculture in each country, but it was decided by the farm survey team of the Rural Economy Centre to record sufficient data to enable individual farm enterprise profit margins and technical performance to be calculated. This was a major achievement as the survey became a valuable source of information on all the main farming enterprises. Another positive aspect of the 1972 Farm Survey was that for the first time, it was possible to calculate and publish an overall national average farm output, costs and income from the farm survey results. This issue was the cause of much debate as prior to 1972 data on agriculture output, cost and incomes was for the agricultural sector as a whole was provided by the Central Statistics Office.

A detailed four year Farm Management Survey Report 1972 to 1975 was published in 1977, and since then a farm survey report has been published annually without fail.

EEC FADN also required additional detailed data not previously recorded – male/female details on cattle herd, chemical application to crops, farm household composition, detailed asset register.

There were many teething problems in relation to collecting the data and calculating the various performance indicators and ranking criteria. Inventory change, depreciation, returns to labour, management and investment were discussed and decided on.

There have been many changes to the survey over 40 years. The data recording system was revised in 1987 to enable easier recording and the collection of more detailed farm data. Up to 2005 all farm data was recorded manually on hard copy. A new computerised farm recording system was gradually introduced from 2005 to 2008. This enabled data to be collected directly to laptop, validated and analysed more efficiently with a smaller staff complement. The computerisation also made it much easier to include additional data to be recorded and meant that data could be checked by recorder before submitting.

The sample has been provided by the Central Statistics Office on an on-going basis but here again the methodology changed a number of times. Initially the full sample was replaced every 4 to 5 years to avoid sample bias. However, from 1983 onwards, a gradual replacement annually was adopted with percentage of farms dropped and replace with substitute farms obtained from the CSO. In the

mid 1980s it was decided to change selection by size of farm measured in acres to size measured by economic size – the concept of Economic Size Units and to exclude very small farms i.e. those below 2 ESU threshold from the sample. This was the threshold until 2011, when the threshold was increased to €8,000 SGO (Standard Gross Output) excluding smaller, less financially viable farms. A smaller sample with a reduced number of farm recorders can now collect representative farm data for the country. Other changes included the calculation of depreciation, valuing assets, collection of off-farm income by the farmer and or spouse.

A major NFS/IT project was undertaken in 2005 to modernise the suite of NFS analytical programs which were based on FORTRAN. This project has been completed and the NFS computer system is now based on modern suite of programmes, which creates and updates a number of data bases. This linked into the newly developed computerised recording system. These continue to deliver the annual file of data to FADN as well as providing a Reporting Database from 1984 to 2011 for researchers and users of NFS data.

The National Farm Survey has become a key source of data on Irish agriculture due to the volume of micro data collected at farm level, the number of years for which comparable data is available, the reliability of the data and its representativeness. It is a key source of data for administrators in agriculture research and for providing data which form a basis of national statistics. The key to its success is the reliability of the data provided on a voluntary basis by participating farmers and the accuracy and dedication of the Teagasc staff who record, analyse and publish the data. The ongoing success

of the National Farm Survey into the future depends on its ability to change to meet new and additional data requirements by all its Stakeholders, continue to update and expand its IT capacity to enable data to be collected more efficiently and make the data collected more widely available and use of by increasing its customer base.

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