In reviewing the modern economic history of Scottish agriculture between 1950 and 1980, eight main themes stand out in terms of their significance for any account of Scottish agriculture in the post-War period. These eight themes are:

- the expansion of output;
- the significant reduction in labour input;
- differential technical progress;
- the growing structural dualism and indeed pluralism within agriculture;
- the growing spatial dualism between rich and poor agricultural regions;
- the changing economic, policy, and political, framework within which agriculture has to function, including
- the entry of the UK into the European Community in 1973, and subsequent transformations of the Common Agricultural Policy
- the collapse of the post-war consensus between government, consumers, and farmers regarding the role of agriculture, the necessity of government support for the industry, and the nature of that support.

In this paper some aspects of Scottish agriculture are explored which shed light on these eight themes. It starts with an assessment of trends in output and income from Scottish Agriculture, moving from there to look at aspects of production of some of the main commodities produced. This is followed by a brief review of the regional aspects of agrarian change. It then turns to changes in the labour force and farm structure, and comments on the environmental impacts of agriculture. It concludes with a brief analysis of policy shifts.
THE EXPANSION OF FARM OUTPUT

The output of Scottish agriculture in current prices increased from about £100 million in 1950 to just over £1,500 million by 1990. The proportion of output from arable crops and horticulture has increased from about 26% to 31%, and that from livestock and livestock products has correspondingly declined from about 74% to 69%.

Much of this expansion resulted from increased prices, particularly marked during the 1970’s. Although the data have not been converted into constant prices, it is to be noted that the retail price index in the UK increased by 1515% between 1950 and 1990. A glance at column C of Table 1 shows that the real prices of all agricultural products at the ‘farm gate’ therefore declined over the period, in some cases substantially.

However, significant increases in physical output also occurred over the period. The tonnage of cereals more than doubled, output of fatstock increased by 85%, the wool clip by 28%, and output of milk and milk products by some 17%. Most of this increase took place in the period to 1980. For some arable crops, yield increases were substantial—cereal yields more than doubled from 2.29 tonnes/ha in 1950/51 to over 6.2 tonnes/ha in 1990; potato yields also more than doubled from 19 tonnes/ha in 1950/51 to 43 tonnes/ha by 1990. Yield increases also occurred in livestock and livestock products, particularly milk, due to breed changes and increased productivity in grassland utilisation. However, although difficult to measure in overall terms, livestock yields do not appear to have increased as much as those for crops.

The increase in physical output also required substantial increases in inputs, particularly fertilisers and costs relating to machinery and equipment. Although it is very difficult to obtain consistent time series on inputs, it is clear that the efficiency of input utilisation also increased over the period—better use was being made of fertilisers, animal feed, and machinery in 1990 than it was at the beginning of the period.

Livestock and livestock products dominated Scottish agricultural output in 1990, as they did in 1950, but the balance had swung towards the arable sector, especially cereals. The reasons
**TABLE 1**

**SCOTLAND: INDICES OF TOTAL OUTPUT, PHYSICAL OUTPUT, PRICES, YIELDS, CROP AREAS, LIVESTOCK NUMBERS (1950/51=100), 1990.**

<table>
<thead>
<tr>
<th>Commodity</th>
<th>A Index of Total Output (Current prices)</th>
<th>B Index of Physical Production</th>
<th>C Index of Prices (A/B)</th>
<th>D Index of Yield</th>
<th>E Index of Crop areas or of livestock numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cereals</td>
<td>2,303</td>
<td>220</td>
<td>1,047</td>
<td>271.5</td>
<td>102.4</td>
</tr>
<tr>
<td>Milk, Milk products</td>
<td>739</td>
<td>117</td>
<td>629</td>
<td>145&lt;sup&gt;a&lt;/sup&gt;</td>
<td>115&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Fatstock</td>
<td>1,755</td>
<td>185</td>
<td>948</td>
<td>138&lt;sup&gt;b&lt;/sup&gt;</td>
<td>130&lt;sup&gt;c&lt;/sup&gt;</td>
</tr>
<tr>
<td>Clip wool</td>
<td>393</td>
<td>128</td>
<td>308</td>
<td>107&lt;sup&gt;d&lt;/sup&gt;</td>
<td>119&lt;sup&gt;e&lt;/sup&gt;</td>
</tr>
<tr>
<td>Eggs</td>
<td>216</td>
<td>90</td>
<td>241</td>
<td>141&lt;sup&gt;a,f&lt;/sup&gt;</td>
<td>82&lt;sup&gt;a,f&lt;/sup&gt;</td>
</tr>
<tr>
<td>Potatoes</td>
<td>779</td>
<td>58</td>
<td>1,332</td>
<td>221</td>
<td>35</td>
</tr>
</tbody>
</table>


**Notes**

- <sup>a</sup> 1980, 1990 not available. For milk, etc., Milk Marketing Board data was used.
- <sup>b</sup> beef production/total cattle
- <sup>c</sup> total cattle plus 0.15xsheep plus 0.20xpigs
- <sup>d</sup> clip wool production/total ewes
- <sup>e</sup> ewe numbers
- <sup>f</sup> egg production/total fowls less broilers and other table birds
- <sup>g</sup> total fowls less broilers and other table birds
appear to be associated with changes in technology and with relative prices, both of which favoured the arable sector over livestock. There evidently remains some truth in the old adage ‘up corn, down horn’, even if it is only part of the story! The shift in comparative advantage to arable crops did however have serious consequences for Scottish agriculture as a whole, and, as we shall see, for the regions within Scotland with their various specialisms and production constraints.

This tendency was not a uniform one throughout the period, however. In the 1950’s, cereals prices actually declined, and although production increased, it did so at a lesser rate than milk and milk products and fatstock. In the 1960’s, prices for both cereals and livestock increased significantly, but although the relative advantage was again in favour of livestock, cereals production increased at a faster rate than livestock production. In the 1970’s, prices for both cereals and livestock increased substantially, but with the exception of milk, production expanded less rapidly. In the 1980’s relative prices shifted in favour of cereals.

**NET FARM INCOME**

Net farm income or value-added in agriculture, comprises wages, salaries, net rents, interest on commercial borrowings and net farming profits. The terms of trade swung against agriculture in the late 1970’s, and during most of the 1980’s, with input prices rising more rapidly than output prices during this period. Moreover, the composition of value-added also changed significantly after 1970.

In 1971/72, net rent and interest absorbed about 6% of value-added; by 1979, this proportion had increased to 22%; by 1990 they absorbed 26%. Most of this increase is accounted for by interest payments, reflecting both higher general rates of commercial interest and higher levels of indebtedness.

The share of labour appears to have increased somewhat over the period as a whole. Astonishingly enough, net farm income in 1990 was slightly lower than it had been in 1982, and only marginally higher than it had been in 1975.

In retrospect, the 1970’s appear as a period of prosperity for much of Scottish farming, but one which has been eclipsed in
the subsequent period. Two factors were important here, namely the entry of the UK into the European Economic Community in 1973, and a series of favourable seasons in the mid-1970's. Since 1990, the situation has improved again due to the favourable impact of the 1992 reform of the Common Agricultural Policy, and the devaluation of Sterling against the ECU following 'black wednesday' and the subsequent withdrawal of sterling from the European Exchange Rate Mechanism (Bryden et al 1993). These, however, are likely to be temporary, windfall, gains.

**Commodity Aspects**

The most notable increase in crop production has been the growth in cereal production from some 1.1 million tonnes in 1950/51 to 2.3 million tonnes in 1980. Production in 1990 was no higher than in 1980, however, and most of the increase took place between 1960 and 1980. The area of land devoted to cereals decreased between 1950 and 1960, increased between 1960 and 1980, and declined thereafter. As a result, the area devoted to cereals in 1990 was only marginally higher than it had been in 1950. However, the composition of cereals production changed markedly over the period. The main loser has been oats. Up until 1980, oats were largely replaced by barley, but since 1980 there has been a marked shift into wheat. Again since 1980, oilseed rape (canola) has been an important growth crop, used as a break crop in continuous cereals rotations, and encouraged by the European policy regime. From a negligible production in the 1970's, by 1990 over 45,000 ha was devoted to oilseed rape.

Technological changes were particularly important for barley and wheat. In the 1950's and 1960's mechanisation proceeded rapidly - the combine harvester almost completely replaced the binder over this period. Early ripening short-strawed winter-hardy varieties of barley and wheat were developed which particularly suited combine harvesting and drier conditions of eastern Scotland. Further yield advances through improved plant breeding techniques continued through the 1970's and 1980's, with some relative advantage to wheat. The policy regime also offered relatively stable farm gate prices, and guaranteed outlets for almost any level of production during much of this period. Throughout the period there has been a growing con-
centrination of cereal production on larger arable farms in Scotland.

Potatoes are the next most important crop for Scotland after cereals. Although physical output declined significantly over the period, yields more than doubled. As with cereals, both potato breeding and mechanisation have been important technological changes. Varietal changes have both allowed increased yields and improved resistance to common diseases. The policy framework was also important, and the Potato Marketing Board played an important role in managing supply, market intervention and controlling imports until the early 1990’s, although its role was increasingly curtailed after the 1970’s. Potato production has become heavily concentrated on fewer and larger farms, and merchants have played an increasing role in production. This last tendency has not been recorded in the statistics.

Other significant commercial crops were sugar beet, production of which ceased in 1972 with the closure of the sugar beet factory at Cupar in Fife, oilseed rape which became significant in the 1980’s, and vegetables and other horticultural crops. The area under vegetables for human consumption doubled in the period under review, and although figures are not available it seems likely that significant yield increases occurred in this group also. Most vegetable production is located in SE Scotland from Angus to the Lothians, and cooperative marketing structures gave an important boost to this sector as did mechanisation from the 1970’s on. At the same time, traditional glass house crops, particularly tomatoes in the Clyde valley, almost disappeared after EEC entry in the 1970’s, and only partially replaced by a growth in other forms of horticulture, such as nursery stock for domestic and municipal gardens.

Traditional crops for livestock feed have been of declining importance in Scotland since the late 1950’s. The area under turnips and swedes fell from 116,000 ha in 1950 to 26,000 ha by 1990. That under cabbage, kale and rape for stock feeding fell from 17,500 ha in 1950 to 8,900 ha by 1990. This general decline reflects the increasing significance of grass silage in animal feed since the 1950’s. Grass yields have increased very significantly as a result of management changes and rapidly increasing fertiliser applications. The tonnage of silage produced on Scottish farms
increased more than ten-fold from the 1950's to the 1980's, whilst the tonnage of hay also increased.

Livestock production has also undergone significant changes in the post-war period. Scotland was and remains primarily a meat producer—and especially a producer of beef and lamb. Fatstock and store stock accounted for just under half of the value of output of Scottish agriculture in 1990, compared with 35% in 1950. Fatstock production almost doubled in the period 1950 to 1990, although most of this increase occurred in the period to 1980, and especially during the 1950's. Prices increased by about nine times their 1950 levels, although this was less than the increases for potatoes and cereals. It is more difficult to assess yield increases, but the indications are that both yields per hectare and yields per animal increased significantly, but again by lower magnitudes than were apparent for cereals and potatoes. The character of beef production also changed in important respects. The post-war period saw both they heyday and eventual decline of pedigree beef breeding herds like Aberdeen-Angus, Galloway and Shorthorn, and the growth of cross-breeding using Continental bulls like the Charolais, Limousin and Simmental. Thus the proportion of bulls of continental breeds at the famous Perth bull sales was below 1 per cent in the 1950's and 60's, but exceeded 70% by 1983. There has been some tendency toward concentration in beef herds and in feeding cattle enterprises.

Dairying has gone through significant structural changes, marked by the disappearance of house cows and small herds and the rapid concentration of dairy cows in herds with over 100 cows. This process has been speeded up by the introduction of milk quotas in 1984, and the fact that these quotas could be traded within Milk Board Areas. The recent abolition of the Milk Boards in the UK is likely to lead to further rapid restructuring and a spatial movement of both quota and production within Scotland. Productivity increases have been substantial as a result of the almost total switch out of Ayrshires and into Fresian-Holsteins, significant efforts at breed improvement pioneered by the Milk Boards, improved management of feed, and investment in new milking parlours.
Sheep are one of the most widespread enterprises on Scottish farms, and the main output of the hill and rough grazings which dominate the Scottish landscape. Numbers of breeding ewes increased rapidly in the 1950's when the Hill Farming Act and the Marginal Agricultural scheme were both introduced. However, between the mid-1960's and the mid-1970's breeding ewe numbers fell again. After 1976 they increased steadily again as a result of increased access to the French market and restrictions on imports from New Zealand, both consequences of EEC entry. In 1979 the EEC introduced a Sheepmeat regime, which gave a further boost to the sector. However, much of the increase has been in the better hill farming areas favoured by the possibility of land and management improvements and by higher profitability partly as a result of the support regime. Increases in productivity occurred—accounted for almost equally by increases in lambing rates and increases in carcase weights. Wool output, a joint product, was largely exposed to imports and world market prices. Despite its ubiquity, there has been a tendency towards concentration in the sheep sector, flocks over 1000 ewes gaining at the expense of those under 300 ewes.

Pigs and poultry are now the most concentrated forms of production in Scottish agriculture. In the 1950's practically every farm in Scotland had pigs and hens. By 1980 over 86% of laying hens and pullets were on only 104 production units with flock sizes of over 5,000. By the same year, about 2/3 of all feeding and 86% of breeding pigs were accounted for by a mere 116 units.

**Regional Effects**

Analysis of regional changes in agricultural output and income in Scotland are severely hampered by boundary changes, and the lack of consistent time series data. However, the following table summaries the main changes in the proportion of crop areas and livestock numbers in four main agricultural regions in Scotland.

Mackenzie's analysis of changes in the value of regional agricultural output between 1951/52 and 1961/62 suggested that the share of Scottish Output remained fairly constant in the Northeast and Southwest, increased in the Southeast and de-
### Table 2


<table>
<thead>
<tr>
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<tr>
<td>Cereals</td>
<td>Down</td>
<td>Down</td>
<td>Down SL*</td>
<td>Up</td>
<td>Up**</td>
<td>Up</td>
<td>Down</td>
<td>Down</td>
</tr>
<tr>
<td>Potatoes</td>
<td>Down*</td>
<td>Down SL</td>
<td>Up*</td>
<td>Up</td>
<td>Up***</td>
<td>Up</td>
<td>Down</td>
<td>Down</td>
</tr>
<tr>
<td>Vegetables</td>
<td>Down</td>
<td>Down SL</td>
<td>Down</td>
<td>Down</td>
<td>Up*</td>
<td>Up</td>
<td>Down</td>
<td>Down</td>
</tr>
<tr>
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<td>Up n/a</td>
<td>Down</td>
<td>n/a</td>
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<td>n/a</td>
<td>Down</td>
<td>n/a</td>
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<tr>
<td>Dairy herd</td>
<td>Down**</td>
<td>Down</td>
<td>Up**</td>
<td>Up SL</td>
<td>Down**</td>
<td>Down</td>
<td>Up**</td>
<td>Up</td>
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<td>Other Cattle</td>
<td>Down* n/a</td>
<td>Up***</td>
<td>n/a</td>
<td>Down***</td>
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<td>Up**</td>
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<td></td>
</tr>
<tr>
<td>All sheep</td>
<td>Down***</td>
<td>Down</td>
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<td>Up SL</td>
<td>Down SL</td>
<td>Down</td>
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</tr>
<tr>
<td>All Pigs</td>
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<td>Down</td>
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<td>Up</td>
<td>Down</td>
<td>Down</td>
<td>Down</td>
<td>Down</td>
</tr>
<tr>
<td>All Poultry</td>
<td>Down</td>
<td>Down</td>
<td>Down SL</td>
<td>Up</td>
<td>Up</td>
<td>Up</td>
<td>Down*</td>
<td>Up SL</td>
</tr>
</tbody>
</table>

Notes: SL Slowly, i.e. less than 1% change in the regional share in time period.

Stars are indicators of regional specialisms:

- **Regional output was greater than 20% of total output in 1961/62**
- **Regional output was between 10 and 20% of total output in 1961/62**
- **Regional output was between 5 and 10% of total output in 1961/62**
- **Regional output was less than 5% in 1961/62**

No star indicates a regional output share of less than 5% in 1961/62.
creased in the Northwest (MacKenzie, 1966). Bryden and Houston’s analysis of changes in the Highlands and Islands (more or less coincident with the Northwest) covering the period 1950/51 to 1971/2 also indicated that a significant decline occurred in the share of Scottish output coming from this region (Bryden and Houston, 1976). Table 2 suggests that this tendency has probably continued in the period since 1971/2. The relative position of other Scottish regions is more ambiguous, since tendencies in different commodities are inconsistent. However, the southeast has gained from the trends in cereals, potatoes vegetables and poultry, whilst dairying, beef and sheep have become yet more important for the wetter South West, which is best suited for grass production. A broad brush interpretation confirms the view that changes in support regimes and technology have tended to favour the more fertile areas with larger farms.

**THE FARM LABOUR FORCE AND FARMING LIFE**

Between 1950 and 1980 the farm labour force declined by 60% to some 53,000 folk. Today it is probably closer to 40,000. The majority of this labour force comprises the farm occupier and other family members. The trends in labour force and in the significance of family labour continued in the 1980’s. With these changes have come changes in the gender divisions of labour in farm families, changes in social relations, and changes in agriculture’s contribution to Scottish cultural and political life. Although farmers are still predominately male, and male farmers still dominate the institutions of farming, there is a growing number of female farmers. Where farmers are male, female spouses are more likely to be working off the farm. Female spouses are less likely to have specific tasks like looking after small stock, or feeding farm labour, neighbours during harvest or clipping, or visiting salesmen or dealers. Offspring who work on the farm are most likely to receive a wage. There are no chaumers or bothies, bothiemen or ‘landgirls’ (a product of the war), and hence few new home grown ‘bothy ballads’ with their pithy comment on social relations.
Technological change and mechanisation was the major cause of labour loss. In 1950 there remained some 58,000 horses for agricultural purposes on the 70,000 or thereby Scottish farms. This number fell to 8,400 in 1960 and 1,402 by 1970. Tractors on the other hand increased from about 37,000 in 1950 to 60,000 in 1961. From the mid-1950’s the application of Harry Ferguson’s invention of the three-point linkage and hydraulic drie became very rapid and important for all crops, especially cereals, potatoes and silage (Fraser, 1972). New forms of storage and handling were also introduced for these crops.

Mechanisation was therefore a major factor. I have a photograph taken when I was a boy in 1953 on my Uncle’s mixed farm in Perthshire at haymaking time. There are nine people in the picture and the records show that we were harvesting 25 acres. At that time we had just changed from horses to the tractor, but were essentially using converted horse drawn gear and the same basic haymaking technique. Today, the same area would be easily handled by one person.

But mechanisation and changing technology was not the only factor at work. Drastic reductions in the diversity of farm enterprises found on many arable farms also took place after the 1960’s, and there was some general shift away from more labour intensive enterprises (Bryden, 1985; Bryden and Houston, 1976). In that same Perthshire farm, there were ten separate enterprises on 160 arable acres in 1970, and a regular labour force of about eight. By 1980, there were only three enterprises, dominated by cereals, and the labour force had been reduced to about two. This tendency towards specialisation was encouraged by the European Community policy regime which provided both higher returns for cereals and greater certainty of return. It was also encouraged by the development of selective chemical herbicides which reduced the need for break crops.

**Farm Structures**

In 1980, Scotland had 31,413 ‘significant’ and 18,332 ‘insignificant’ farm units. Between 1980 and 1990, the number of significant units changed very little, although this was partly because some units previously classified as insignificant were returned to the register.
However, between 1950 and 1980 between 20,000 and 25,000 units went out of production or were amalgamated with other farms in Scotland. This net loss of farm units occurred in every size group except for that comprising farms over 200 hectares. Significant concentration occurred such that it is now reckoned that roughly 80% of production comes from only 20% of agricultural holdings.

The greatest loss of holdings occurred in the Northeast and Southeast of Scotland, the lowest loss in the North West, where there remains a specific form of agricultural tenure—crofting tenure—which was formalised after the Napier Commission of Enquiry into the Condition of Crofters and Cottars in Scotland in 1886. Crofting tenure provided a very high degree of security of tenure, and protection against rack-renting by landlords. Outside the crofting counties, much of the reduction in farm holdings took place in the tenanted sector, and this occurred despite the strengthening of security of tenure for tenant farmers in the 1947 Agriculture Act.

The rate of farm loss appears to have slowed in the 1980’s. However, structural changes continued. In fact, farm families found diverse routes to economic survival, increasingly involving spouses and other family members taking up employment off the farm, or in a relative minority of farms, developing non-farming enterprises on the farm. Near to towns these have involved such things as providing recreational facilities or retail sales operations for urban populations; elsewhere various forms of tourism provision have been significant (Dalton & Wilson, 1989; Shucksmith & Smith 1991).

ENVIRONMENTAL EFFECTS

During the 1970’s and 1980’s there was growing public concern about the environmental effects of modern farming. These included the effects of chemical sprays, increased fertiliser applications, the shift away from straw based bedding for livestock into slatted courts and slurry, and increased farm specialisation on biodiversity and water supplies, the effects of the shift from hay to silage on birds (for example the corncrake, now almost extinct) populations, and the effects of specialisation on maintenance of stone dykes in arable areas. In addition,
overstocking of sheep in some areas has led to erosion and shrinkage of the heather moorland, and the increased offtake of organic matter as a result of continuous cereal production and intensive grassland management has also led to soil erosion on lighter soils and water course damage. In landscape terms, the introduction of oil seed rape has meant new brilliant yellow patches in the landscape; the reduction in heather cover has taken some of the purple glory of the hills away; the decline in traditional beef breeds has meant that the chances of seeing the magnificent herds of horned Highland cattle, black Aberdeen-Angus or Belted Galloway on green fields and hills are much reduced compared with the 1950's. In some areas too, the enlargement of fields, removal of hedges and earthen or stone dykes, reclamation of 'waste ground' and rough grazings, combined with increased monocropping and reduced diversity of farm enterprises has seriously affected biodiversity of plant, animal, insect and bird life (Fenton, 1987).

**Policy Changes**

Whilst agricultural techniques, specialisation, and structural change have been important factors, policy change has also been important. One can usefully delimit four broad sub-periods in the agricultural policy framework surrounding Scottish farmers. The first, the immediate post-War period, up to 1960 was a vital period of policy formation. It was also, as we have seen, a quietly successful period for the industry. Following the 1947 Agriculture Act, a system of guaranteed prices with deficiency payments was introduced for key commodities, the marketing board system was strengthened for milk, wool and potatoes, the Marginal Agricultural Producers Scheme was introduced to provide additional help for producers in marginal areas, and headage grants were introduced for hill sheep and cattle. Somewhat greater security of tenure was also offered to tenant farmers. In addition a system of Annual Reviews was introduced, conducted in close cooperation with the Farmers Unions. Finally, a series of important research institutes were strengthened or established to tackle agricultural problems, and the whole endeavour supported by a comprehensive and free advisory service linked to the three Colleges of Agriculture in the West, East and North of Scotland. The priority immediately after
the War was to raise self-sufficiency to provide greater food security in the event of further global conflict, to relive balance of payments problems, and to provide greater security of income to farmers.

This very success heralded some of the problems of the following decade which comprises my second period from 1960 up to the early 1970's.

In 1952, the then Secretary of State for Scotland (The Rt Hon James Stewart) was telling farmers that 'We must extend our tillage acreage and, as far as possible, strive towards self-sufficiency in feedingstuffs. Maximum feed from every farm must be our slogan'\textsuperscript{6}. By 1961, however, the climate was beginning to change and Selwyn Lloyd, then Chancellor of the Exchequer, stated that "We shall have to look critically at the level of agricultural support during the 1962 Review"\textsuperscript{7}. This was reinforced by the Prime Minister, Harold MacMillan, in February 1993 when he stated that there was a need 'to re-examine the present system of open-ended subsidy on a number of commodities with a view to bringing the Exchequer's commitment under greater control'\textsuperscript{8}. Standard quantities, which limited guaranteed prices to a fixed quantity of production, were introduced for key commodities, cereals, meat and milk. If production exceeded these standard quantities, prices were progressively reduced. Despite this, as we have seen, production continued to expand rapidly during the 1960's.

The third period, from the beginning of the 1970s to the early 1980s was dominated by the preparation for entry to the European Community in 1973, and the transition to the Common Agricultural Policy which largely replaced UK Agricultural Policy thereafter. The most noticeable feature was a return to emphasis on the expansion of output to ensure that UK agriculture was in a strong position to benefit from the Common Agricultural Policy. Thus in the 1971 Review, the value of agricultural guarantees was increased by L138 million, representing "full recoupment of increased costs of all the main commodities except eggs"\textsuperscript{9}. In the first part of this period prices increased rapidly, and production of most commodities, especially cereals and milk, expanded apace. However, costs also increased rapidly after the 1973 oil crisis. The shift from the UK system of
deficiency payments to the EEC system of import control and levies, and market intervention to remove surpluses from the market, had two major effects. First, it brought consumers, faced with higher food prices, into sharper conflict with farmers. Second, it brought the UK and eventually the EC into sharper conflict with traditional agricultural exporters, particularly the USA and the Commonwealth, including of course Canada. In addition, the continued intensification of production encouraged by high and secure price levels for unlimited quantities of produce, had inevitable effects on the environment, and led to growing criticism of both the policy regime and the agricultural industry by the environmental lobby, which grew in political strength during this period.

It has been argued earlier in this paper that the differential effects of technological change, support policies, and structural policies had combined and additive effects favoured larger farms in more favoured farming areas, and that this was reflected both in structural changes and in shifts in the relative importance of different Scottish regions. In addition, the logic of a set of policies which had been based first on the need for food security and second on the ability of the rest of the economy to absorb farmers and farm labour who were unable to make a living from farming was increasingly challenged by food surpluses and growing unemployment. These effects further increased public scepticism about agricultural support, and reduced the credibility of the industry’s claim that agricultural support was the foundation of a healthy rural economy, and hence the basis for rural development policy. Thus by the time the EEC’s agricultural policies came up for review in 1983, there appeared to be hardly a significant political voice in the UK which was prepared to speak up in support of Agriculture, and the media appeared to be almost at one in their condemnation of it.

The fourth period starts with the increasing strains on the Common Agricultural Policy in the 1980’s, due to the collapse of the US dollar which increased support costs, the increasing surpluses and export subsidies, the declines in real farm incomes and increasing disparities; and the growing differences between community prices in ECU, and nominal prices in
national currencies, caused by the system of ‘green currencies’, and increasing public and interest-group (environmental and consumer groups in particular) criticism of budgetary costs and environmental impacts of intensive farming.

The main responses started with the introduction of a guarantee threshold for cereals in 1982/3 leading to a co-responsibility levy in 1986/7 (from which ‘small producers’ were excepted). This was followed by the introduction of milk quotas in 1984. From 1984/5 on a restrictive price policy was enforced, limiting annual price increases and introducing stricter conditions for market intervention. Then, in 1987 the scheme for voluntary set-aside of cereal land was introduced.

In the 1985 ‘Green Paper’ on the future of agriculture, a fairly radical shift in policy thinking was indicated, which was reflected in subsequent policy developments, emphasising the need to bring production under control, the need to pay heed to environmental impacts, and the need to consider a wider set of rural development measures. The emphasis on ‘rural development’ as a spatial rather than an agricultural sectoral problem was further reinforced in 1988 by the publication of the European Commission’s discussion paper ‘The Future of Rural Areas’.

Finally in 1992, the CAP was ‘radically’ reformed with a view to “delinking” producer’s incomes from current production over a period of years and exposing farmers to a set of prices which would both follow world market prices and be closer to them. In compensation, income support would be paid both to small farmers and to large farmers who agreed to set aside cropland on a rotational basis. This direct income support would be based on computed production in the base year (eg. area of cereals multiplied by regional average yields). In addition, a set of “accompanying measures” were introduced to encourage farm forestry, farmer retirement and environmentally-friendly farming. Undoubtedly this reform arose both from the internal pressures of trading partners objecting to the ‘dumping’ of European surpluses on world markets. This CAP reform, not coincidentally, turned out to be ‘compatible’ with the subsequent agreement reached under the GATT Uruguay round, at least in the view of the European Commission.
CONCLUSION

The post-war period has been one of the most intensive periods of change in the history of Scottish agriculture. Production and self-sufficiency increased. Technical and structural change has been rapid. Prices, especially during the 1970s and early 1980s increased rapidly for both outputs and inputs. The labour force has been decimated as a result of technological and production changes. Production has become concentrated on fewer and larger farms, as well as regionally. Agriculture has had to contend with a series of shifts in policy partly, but not only, as a result of EC entry in 1973. Public attitudes towards the industry have changed significantly. The prerogatives which shaped post-War agricultural policy have been overturned with the shift from output expansion to output control, the new attention to environmental impacts of intensive agriculture, the change in macro-economic conditions and the delinking of agriculture from rural development.

There can, however, be little doubt that Scottish agriculture made a significant contribution to post-war recovery in the 1950s and 1960s both through the increase in production and productivity, and though the release of scarce resources to other economic sectors. But for this, the UK would have been less well placed at the beginning of the 1970s to take advantage of EEC entry. However, by the 1980s the benefits of increased land and labour productivity were increasingly challenged on both economic and environmental grounds, and the costs of agricultural support within the framework of the EC were becoming both insupportable and increasingly internationally divisive. Ironically, despite high and rapidly growing costs of agricultural support regimes, farmers and farm families were increasingly seeking solutions to their income problems outside agriculture. Although Scottish agriculture in general has probably been a net gainer in financial terms from the recent radical reform of the Common Agricultural Policy (Bryden et al. 1993), considerable uncertainty about the future remains as the fundamental basis for post-War policy, and the political consensus formed around that, has evaporated.

A major question remains about the extent to which the tendencies noted for Scotland reflect tendencies elsewhere in
the European Union. Certainly, as noted, Scottish Agriculture is heavily affected by the Common Agricultural Policy, and subject to its common rules and elements. It is also true that many of the tendencies noted with respect to regional and farm specialisation, structural change, outputs and inputs, farm labour and pluriactivity are more generally present at EU level (Tracy, 1989; Bryden et al. 1994). Yet Scotland retains particularities due to its prior history, the retention of control over institutions such as crofting and, more generally, land tenure, and the articulation of EU policies at UK and Scottish levels. The character of its rural labour markets, and the changing nature of demand for rural space, including increasing demands for recreational and environmental use, have also affected the particular ways in which Scottish agriculture has changed in the post war period. Thus, whilst Scottish agriculture has undoubtedly been heavily influenced by more general tendencies both within and increasingly outside the EU, and by European policies, it retains many characteristics which are recognisably ‘Scottish’.

A surprise to many is the fact that despite the loss of farms, farmers and farm labour, the population of many rural areas in Scotland, as elsewhere in Europe, actually increased in the 1970s and 1980s, even if it was the former market towns and their hinterlands which gained most from this increase, and even if some of the remoter islands and glens continued to lose population. Much of this growth in population has been associated with commuting, especially in rural areas near to the larger towns. However, there has also been a growth in other rural residents, some retiring to (or back to) rural communities, some living from the growth in new activities associated with new demands for rural tourism and recreation, some from small and relatively ‘footloose’ manufacturing activities, and some from the growth in fish farming, especially salmon. In addition, much of this later period saw significant increases in various forms of government employment in rural areas. Recently too, there has been a small but probably significant growth in teleworking and tele-enterprise based on new information technology and telecommunications technologies. It is on these other activities that rural populations in Scotland and in many other parts of Europe largely depend, and upon their future that the future of rural areas will largely depend. That is not, of course, to deny
that agriculture still has its place in the rural fabric, but that place has changed, and will change yet further in future as European agricultural policy comes under further pressure from the GATT and from enlargement to the East, and as demands on the countryside which are not about food production continue to increase.

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**Notes**

1. Based on a paper presented to the Guelph Scottish Conference, April 1994. The author is grateful to anonymous reviewers for helpful comments, some of which have been incorporated. He is also grateful to Richard Kelly of the Scottish Agricultural College, Aberdeen, for help in updating figures used in the tables.

2. Central Statistical Office: General Index of Retail Prices (UK).

3. It should be noted that Table 1 does not give the complete picture. In 1950/51, crops of all kinds contributed 26.1% of total output by value, compared with 30.6% in 1990. Livestock and livestock products therefore accounted for 73.9% in 1950/51 and 69.4% in 1990.

4. In 1975 and 1976, which, as has been noted, was a boom time for Scottish Agriculture in general, there was a boom in Scottish potatoes due to shortages elsewhere in the UK, which led to an additional windfall of some £100 million for potato producers over these two years, mainly shared amongst about 1,000 major producers. This additional purchasing power undoubtedly helped to fuel the investment boom at that time.

5. Insignificant units were those with less than 40 standard man days of work in 1973. After 1973 these units were excluded from the annual agricultural census although they were periodically surveyed thereafter. Some subsequent adjustments took place in this classification.
6. In the foreword to The Annual Review of the National Farmers’ Union of Scotland (Edinburgh) 1952.

7. The Rt Hon Selwyn Lloyd MP reported in the Farming Leader, NFU(S) Edinburgh, 1 September 1961.


REFERENCES


