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<th><strong>Title</strong></th>
<th>What's good for you might not be good for the country</th>
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What's good for you might not be good for the country

Food exports are vital for Ireland. Therefore, it is not surprising that certain foods are favoured for cultivation over others. But as countries adopt nutrition policies, we may have to change the emphasis of our food production. Dr T R Gormley and Professor E P Cunningham examine the implications.

Many countries advocate a national food and nutrition policy. Some implications of a food and nutrition policy for Ireland have been outlined by Matthews based on information from other countries. However, the term itself may be a misnomer in that a food and nutrition policy (FNP) embraces two concepts — a food policy (FP) and a nutrition policy (NP). These two dimensions may be in opposition to each other in some respects.

A food policy in Ireland means essentially a food production policy; a nutrition policy is concerned with consumption.

In our circumstances, FP would suggest that we continue to increase beef and dairy production since our soils and climate suit this form of agriculture. In contrast, NP would suggest reduced intakes of animal fat in the human diet, which would mean a reduction of some meat and dairy products, or at least substantial changes in the pattern of production.

The purpose of a national FP in an Irish context is to develop the agricultural and food industries in a planned way so that they will be of maximum benefit to the economy in the short, medium and long term. With Ireland’s economy so heavily dependent on food production, a national FP is therefore seen as a highly desirable objective. A national FP embraces a large number of concepts but the main ones are:

- Self sufficiency in as many food items as possible bearing in mind economic considerations.
- Programmed food production with emphasis on foods that can be produced to advantage in Ireland.
- Attain the highest possible level of food product diversification with maximum added value.
- Operate comprehensive quality assurance programmes in the agricultural and food industries with emphasis on creating a good national and international image of the country as a producer of top quality food.
- Establish top class promotional, marketing and market intelligence facilities to ensure maximum sales of nationally produced products and also to maximise exports.
- Establish national structures to ensure that the FP is correctly formulated, planned and implemented.

These general concepts could be applied to most countries, including Ireland, and are largely similar to those proposed for a food policy in Norway which has an agriculture also based largely on dairy, beef and other animal products.
The aim of a NP in Ireland would be to ensure that the population as a whole is consuming a prudent diet and that the needs of sub-groups at risk such as the very young, or very old, or others are being identified and satisfied.

Like other developed countries, the main dietary problem in Ireland is over-nutrition rather than malnutrition, and a NP would be aimed at balancing a dietary situation which is too high in fat, sugar and salt. In contrast, NP in third world countries is concerned with combating large scale malnutrition through increasing energy, and in particular, protein intakes.

While many aspects of nutritional recommendations are not yet beyond reasonable dispute, it is likely that any developments towards a NP in Ireland will broadly follow the lines already adopted in other countries. The pattern of the US dietary goals proposes carbohydrates, protein and fat (as a percentage of total calories) in a number of countries are shown in Table 1.

It was the only country with a fat intake approaching the US target figure of 30 per cent; it also had the highest carbohydrate figure of 54 per cent, but even here the proportion of refined to complex carbohydrate was too high.

However, the US target figure of not more than 30 per cent of calories from fat may be over-optimistic and values up to 35 per cent have been recommended by various government and professional bodies. A report1 by the Health Advisory Committee of An Foras Taluntais indicates that there is no evidence to show that fat levels up to about 40 per cent of calories are incompatible with good health provided that energy balance is maintained through high levels of expenditure.

Figure 1. Value of beef and dairy industries in Ireland (1980)

Milk
4,500 m litres
Exports £585 m

Dairy Herd
15 m cows
81,000 Farms

Dairy Processing
26 Major Plants

Meat Processing
(26 Plants)

Steers
12 m

Bulls
04 m

Cows
04 m

Exports £210 m

Home Market £276 m

Exports £535 m

Home Market £276 m

Live Cattle £208 m

Beef Herd
09 m
50,000 Farms

The figures for Ireland are fairly similar to those for most countries in Table 1 with about 38 per cent of calories from fat, 11 per cent from protein and 48 per cent from carbohydrate; sugar and preserves supplied about 11 per cent of energy.

This represents a shift in diet from 1946/48 (29.6 per cent of calories from fat), 1961 (30 per cent) to and from 1971 (35 per cent) in terms of increased fat consumption. Energy intakes were very similar in 1946/48 at 13.1 MJ to those in 1973 (13.0 MJ); the increased fat intake suggests a considerable reduction in carbohydrate intake.

Recent data for employees in An Foras Taluntais and their families show an even greater shift with the percentage of energy from carbohydrate protein and fat of 42 per cent, 15.5 per cent and 42 per cent respectively for over 19 year olds. Gibney and Upton11 estimated cholesterol intake in Ireland at about 500 mg/h/d which is considerably higher than the US dietary goal figures.

These data suggest that if NP was implemented in Ireland, based along the lines of the US dietary goals, it would result in considerable dietary change, especially in reduced intake of fat and cholesterol containing foods and in an increase in carbohydrate intake with emphasis on complex carbohydrate. At present this is only speculation as NP is not in operation, nor has one yet been formulated.

However, even in the absence of a policy makers' forum, there has been more concern about their fat, cholesterol and sugar intakes and the lack of dietary fibre in their diet and are modifying their eating habits accordingly. These trends are even more evident in other countries, especially in Germany. To a greater extent than any other country in Europe, Ireland's economy depends on food exports. Total agricultural exports in 1980 constituted 38 per cent of exports. Over 25 per cent of employment is in agriculture and food, as against 8 per cent average in the EEC. Agriculture generates 17 per cent of GNP, compared to the EEC average of 4 per cent. The general pattern of Irish agricultural output and the balance of dependence of the different commodities on the export market is shown in Table 2.

Dairy Sector

The dairy sector already fulfils some of the criteria outlined above under FP in that Ireland is self-sufficient in dairy products; the climate and agricultural systems are suitable for the production of dairy products, quality standards are high and Bord Bainne has been highly successful in marketing Irish products abroad.

However, problems at the marketing end are likely to increase. The imbalance between production and demand for dairy products in the EEC is well documented. Production of milk and butter has steadily increased; consumption of milk products as a whole has remained static but butter consumption has declined 13, 14.

The EEC support for milk represents about 38 per cent of all agricultural support expenditure and approximately 27 per cent of the total community budget. The crisis point is likely to be reached by 1983, when expenditure will exceed the EEC's self-imposed budgetary limits.

It is by now a standard recommendation that the Irish dairy industry must diversify its product range if it is to remain competitive. However, recent patterns show little evidence of such a trend. In 1970 about 30 per cent of the 511 million gallons of milk for manufacturing purposes was used in products other than butter while in 1979 only 29 per cent of the 882m gallons was used in non-butter products. The exaggerated seasonal milk supply is also a constraint on diversification, with a peak in May/June which exceeds the trough in December/January by as much as 14 to 1.

To some extent, diversification in dairy
products is further inhibited by current legislation. Milk is an immensely versatile raw material, but is often traded as a unitary product. A recent report on strategy for the UK dairy industry suggests that the concept of "natural" composition of milk for the liquid market and of "purity" in dairy products are no longer appropriate and should be abandoned; in addition it suggests that legislative and EEC directives should be amended so that they provide for clear labelling of products without inhibiting the development and sale of modified forms of liquid milk or dairy and product mixes.

Nutrition policy would militate against increased consumption, and therefore production, of dairy products, especially butter and cheese, in view of their high fat content. Even in the absence of a formal NP in most countries, many consumers have become very conscious of their fat intake and are evolving their own dietary regimes. These effects may be particularly noticeable in Europe, where dairy product consumption is some 30 per cent higher than in the USA.

Controversy still surrounds the unsaturated/saturated fat issue despite a number of leaned report. Recent work by Connolly et al indicates that fat intakes of dairy products do not appear to have an adverse affect on biochemical and anthropometric parameters conventionally used to assess coronary heart disease risk.

They suggest, therefore, that the current bias against dairy products in both policy formulation and educational programmes needs to be reconsidered. However, no mention is made in this report of the possible association between fat intake and cancer development.

To summarise on the dairy sector, it seems that Irish national interest, and hence FP should be to continue the development of the dairy industry with more emphasis on diversification. The current structure of the CAP is favourable to the industry, and therefore national policy should be aimed at retaining its essential free trade aspects in the face of any adjustments that may be needed to bring production into line with market needs. From a nutritional point of view emphasis should be more on the need for a balanced diet than on explicit attempts to reduce consumption of dairy products.

Beef sector

Ireland produces over six times its own requirements of beef and veal based on 1978 figures. The Irish Livestock and Meat Board (CBF) promotes Irish beef extensively and with increasing success in many countries. The beef enterprise is particularly suitable for Ireland given that grass is the crop which our soils and climate are best suited for. As in the case of milk the industry production is highly seasonal with a four to one peak to trough ratio.

The industry has a number of other major problems including the almost complete lack of diversification, periodic disruption due to adjustments of MCA's, boning allowances, etc. and competition from the live export trade. A National FP would tend to stabilise the industry and would help it to develop away from the uncertainties which at present inhibit investment at both production and processing levels.

The Coopers and Lybrand report and the Mckinsey study together with data from the CII, IDA, CBF, AFT, CTI, the Department of Agriculture and the recent IFAMES report provide an excellent foundation for establishing a national policy for the meat industry. However, an authoritative or person with sufficient powers to implement policy does not exist at present.

The result is that the development of a coherent national policy is inhibited, because any proposal by one sector of the industry immediately raises objections from other sectors which feel their particular interest is threatened.

Obviously the marketing of a range of diversified meat products is in itself a formidable task. The price of beef and meat products is rising all the time and must compete with analogues containing soya. Apart from price considerations, beef consumption is also being influenced by health considerations, and national nutrition policies in most European countries would probably recommend a reduction in at least the fat element in meat intake.

In the US recent surveys showed that beef consumption is falling because of the fear of cholesterol and its association with heart disease. However, another study in the US showed no association between high levels of meat intake and the development of cancer; however there was an association between incidence of cancer and lack of consumption of brassica vegetables.

In fact, current trends in beef production are in the general direction in which a NP would indicate - a product with less fat. In particular, the new national beef classification scheme clearly ranks carcasses for fatness, and excess fat now carries a price penalty for the producer.

In addition, the shift in breed use has led to a higher proportion of our beef animals coming from Friesian and Continental breed sources, rather than the fatter shorter, Hereford and Angus.

Pigs, sheep, poultry

A Food Policy here would embrace national self-sufficiency together with an export dimension in as diversified and fully processed form as possible. Again, attention must be given to leanness of carcasses in the case of pigs and sheep (lamb), especially those for export as the presence of fat has both organoleptic and nutritional implications.

As in the case of beef it is essential to have a more efficient pigmeat processing sector. However, this is difficult with a cyclical pattern of pig supply leading alternately to periods of glut and scarcity. In the case of lamb the experience with the French market is a very good example of the production of a product as required by a particular market.

The package, in terms of marketing at the level of leanness and carcass conformation required, was assembled and the necessary husbandry changes required to produce suitable carcasses were implemented quickly by both the Department of Agriculture and the producers.

Food policy as related to the poultry industry should be to maintain self-sufficiency, as is largely the case at the moment in an ever increasing home market. However, we have no particular advantage in poultry production, and the Irish industry would face serious competition from European producers were it not for the present veterinary restrictions on imports.

The nutritional quality of poultry is good and increased per capita consumption would not have any negative nutritional implications.

Plant foods

This sector refers to fruit, vegetables, potatoes and cereals. A major aim of national FP should be to have self-sufficiency in these items as far as possible. There are very ever-increasing imports of fresh horticultural products, notably apples, onions, tomatoes, and frozen vegetables.

This is due to free trade conditions permitted within the EEC but the position is exacerbated by poor quality Irish produce and lack of organisation at market and growing levels. In addition Irish processed fruit and vegetables are not competitive with imported products.

While the quantity of potatoes produced has remained about static in the period 1974-1979, there are increasing imports of potatoes at certain times of the year together with year round imports of potato

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**Table 1:** Artikle of carbohydrate, protein and fat (based on % of calories) in five products. (Source: Dietary goals, FAO, 1977)

<table>
<thead>
<tr>
<th>US Dietary goals</th>
<th>Carbohydrate</th>
<th>Protein</th>
<th>Fat</th>
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<tr>
<td>10% (12% 15%)</td>
<td>50% (55% 60%)</td>
<td>20% (22% 25%)</td>
<td>15% (18% 20%)</td>
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<tr>
<td>US (Actual)</td>
<td>4320C, 23B</td>
<td>12</td>
<td>45</td>
</tr>
<tr>
<td>UK</td>
<td>4829F, 23B</td>
<td>11</td>
<td>41</td>
</tr>
<tr>
<td>Germany</td>
<td>4329C, 23R</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>France</td>
<td>4839C, 18R</td>
<td>12</td>
<td>42</td>
</tr>
<tr>
<td>Italy</td>
<td>5439C, 19R</td>
<td>12</td>
<td>34</td>
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*C = complex carbohydrate (up to 50% desirable)  
*R = refined carbohydrate (below 15% desirable)

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**Table 2:** Pattern of Irish agricultural output and its disposal on home and export markets.

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<th>Controllability</th>
<th>Disposal % in Market</th>
<th>% of Agricultural output</th>
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<tr>
<td>Cattle &amp; Beef</td>
<td>20</td>
<td>82</td>
</tr>
<tr>
<td>Dairy produce</td>
<td>31</td>
<td>89</td>
</tr>
<tr>
<td>Pigmeat</td>
<td>70</td>
<td>32</td>
</tr>
<tr>
<td>Sheepmeat &amp; wool</td>
<td>55</td>
<td>45</td>
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**Note:**

- The shift in breed use has led to a higher proportion of beef animals coming from Friesian and Continental breed sources, rather than the fatter shorter, Hereford and Angus.
- The package, in terms of marketing at the level of leanness and carcass conformation required, was assembled and the necessary husbandry changes required to produce suitable carcasses were implemented quickly by both the Department of Agriculture and the producers.
- The nutritional quality of poultry is good and increased per capita consumption would not have any negative nutritional implications.
products, notably chips. This situation should be reversed and Ireland's historical association with the potato could prove an advantage at the market place, i.e., where better to site a large potato processing industry than in Ireland — "the home of the potato".

This position has not come about, despite much effort, for a number of reasons, not least of which is the general disorganisation that surrounds the whole potato business in Ireland right down to the level of implementation of grading standards. Considerable quantities of wheats are imported each year for breadcrumbing (£25m in 1979 at only 60-70 per cent of the grain is made up of Irish-grown wheat, even in a good production season. With a greater swing by farmers to growing winter wheats, which is less acceptable than spring wheat for breadcrumbing under current milling and baking practices, it is likely that a much greater proportion of imported grain will be used in the Irish market.

A major aspect of Irish FP should be to become as self-sufficient as possible in wheat for breadcrumbing; this would involve possible changes in milling and baking techniques and even in quality of the bread on sale to the consumer. However, new technologies and practices such as using farm-produced winter wheats, thereby making them suitable for breadcrumbing, must be tried out.

Obviously a major change in practice such as this cannot take place overnight. However, there is even less chance of it taking place in the absence of a FP or a food authority, as no framework exists at the moment where all the interested parties involved in such a change could be brought together.

From a human nutrition point of view a greater intake of foods of plant origin is to be strongly recommended for most people in developed countries. They contain complex carbohydrates and dietary fibre1 and are rich in minerals and vitamins. The beneficial effect of fruit and vegetables in relation to reducing cholesterol levels2,3 and controlling late-maturity onset diabetes4 has been shown.

Carrots and some of the brassicas have been spoken of as anti-cancer agents in view of their high beta-carotene content. The special position of bran in the diet as an excellent therapeutic agent5 should be noted and also the fact that brown bread is a good source of bran (and therefore dietary fibre). From the facts outlined above it follows that introduction of a NP would promote greater consumption of foods of plant origin.

Sugar
A national sugar industry is essential for any country, as sugar is used widely as an ingredient in so many foods and food products. Sugar is unique among agricultural products in Europe in that production is regulated by national quotas.

In recent years, Ireland has had difficulty in fulfilling the quota, which approximates to our national consumption. Sugar production has increased substantially in Ireland between 1974 and 1979 (175,000 tonnes in 1977). Difficulties with farmer-processing contractors and the lack of the most modern equipment for sugar extraction have caused problems for the industry in the last couple of years, as did competition from sugar derivatives such as syrups and molasses.

Future expansion of the market depends on the development of high value and strongly branded products (eg, confec-tionery products) for export markets which use sugar and chocolate crumbs resources. This will be difficult in view of increasing pressure on nutritional grounds for the population to reduce sugar intake. Sugar may, therefore, be another instance where FP and NP conflict.

Conclusions
National food and nutrition policies are essential if Irish agriculture and the Irish food industry are to realise their full potential. At the present time no single government minister or any group within the country has responsibility for food; this is a surprising situation for a country whose economy is so strongly based on food products and food processing.

Food policy as an aspect of economic policy is dominated by our position as exporting country. It is, therefore, more influenced by European policy and the CAP. Our best interests lie in maintaining the free trade aspects of the CAP.

National policies aimed at improving national health in Ireland would have relatively small impact on the pattern of agricultural production. However, the general trend of such a policy might be to curtail the dairy market. Current technological developments in beef production are in any case moving in the direction indicated by nutritional considerations.

References
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24. Drop in beef purchases by shoppers in USA, Supermarket News (USA), Nov 1980.