

FERTILISER ASSOCIATION OF IRELAND

Proceedings

***Blueprint for development of a new
Intensive Cattle Feeding Industry
in Ireland***

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NO. 7

MAY 1973

Fertiliser Association of Ireland



BLUEPRINT FOR DEVELOPMENT OF A NEW INTENSIVE CATTLE
FEEDING INDUSTRY IN IRELAND

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Published by the Fertiliser Association of Ireland,
54, Dawson Street, Dublin 2.

BLUEPRINT FOR DEVELOPMENT OF A NEW INTENSIVE CATTLE FEEDING
INDUSTRY IN IRELAND

(Paper presented at a meeting of the Fertiliser Association
of Ireland on 24th May, 1973)

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Ladies and Gentlemen: Gerry McCann has asked me to call upon my vast and unlimited reservoirs of ignorance about cattle feeding to make a presentation. I'm normally quite happy to give technical dissertations to my mother or to the local parent-teacher organisation - perhaps even to vocational students. Addressing a group of agricultural professionals is another story. Having accepted your kind invitation, I will put forth a few ideas - most not very conventional and even if there are some disputed points, perhaps leave a fresh approach.

There is in my view a new industry emerging in Ireland - intensive, year-round cattle feeding. Very few people are aware of this new industry. Cattle feeding is only seen as moving along in a continuous, slow development. I'm here to put forth the view that a radical change is occurring, will occur very rapidly, and will necessitate a complete re-think of many conventional ideas, laws, practices. Some predictions:

- (1) We will progeny test all bulls in the next few years.
- (2) Self feed silage systems will disappear.

- (3) The TB scheme will be radically revised.
- (4) The average age of slaughter animals will drop by 6 to 8 months within 5 years.
- (5) New specialised professionals will emerge - cattle vets, nutritionists, mill builders, slurry specialists.

In order to develop this theme, we will, in the next few minutes, do several things:

- (a) Develop a conceptual model of the 4 phases that cattle fattening generally takes,
- (b) look at which phase we are now in in Ireland,
- (c) share a few pictures and problems of one phase III/IV operation,
- (d) discuss how things will and must change as all of the industry moves to Phase IV.

I divide the possible ways of cattle fattening into progressive stages of assisting God. To put everyone on the same wave length, let's look at this chart for a moment.

Where are we now? I think variously in Phase II and Phase III with a few people considering Phase IV. There is some argument at the moment about Phase IV's economics - can a large feedlot operator feed efficiently enough to summer fatten cattle in a feedlot when his competitors are able to pasture fatten so easily? This is a short-term argument only. Our only important long-term question is

whether we can feed the world's population. Using 16 lbs. of dry matter, high cost food, to produce one pound of live cattle and less than ½ pound of human food cannot be tolerated by a burgeoning world population.

The real long-term question is whether cattle will become, even efficiently produced, a luxury no one can afford. Before cattle are extinct, however, I confidently predict that a new major industry will emerge in Ireland - large scale intensive cattle fattening somewhere in or beyond Phase IV.

Let's develop this concept by first gaining some understanding of key problems and management techniques in each Phase, especially land use and fertiliser application.

PHASE I Nature is really unmolested here, working at her own pace. I love as much as anyone wild untampered nature, but realise we must assist nature to produce if we have any hope of feeding the world's three billion souls. Nonetheless Phase I exists, even here. In Phase I, cattle get no veterinary help, land gets no fertiliser other than what drops, and clearance/drainage are minimal. Only naturally good land produces anything of value. In Phase I, you folks dont survive as no one buys any fertiliser, calls in any advice, buys any grass meal, etc. I'm not even sure the Farmers Journal gets read.

PHASE II Farmers here are making some hay, perhaps silage, and taking the very big step of using artificial fertilisers.

Perhaps 4 cwt. of 10-10-20 for the hay. The cattle grazing area now gets a little P and K in late fall, but no lime. Vets are asked to skull, perhaps to prescribe for parasite removal, to help in difficult calvings, even to treat the odd sick animal. Land use has improved slightly, but nothing to make big bumps in Department of Agriculture production figures.

PHASE III We are out of the wilderness and into very serious dedicated farmers here. To make silage is to plan and requires expertise. Problems arise and force awareness of the need for advice - advice from agricultural instructors, from salesmen, from other farmers, etc. Farmers who winter feed typically improve land use by drainage, fertiliser, lime and hedge removal. Vets are now regular visitors, doing some preventative work, advising operators. Cattle are now under stress; we begin seeing feedlot diseases.

PHASE IV The key aspect of this phase is efficiency. The Phase IV feeder is big, going beyond his own land. He buys grass, grain, etc. In fact, Phase IV feeder must feed nearly all purchased feed, year round, always in expensive houses, always with paid workers. This means he is automatically a fully costed operation. Every item must be accounted for to bankers, lenders, stockholders. By contrast, the Phase IV feeder's competition uses inherited land, enslaved sons for labour, trees for houses and employs the cattle to spread their own slurry. The competition is slow and inefficient, but has many costs that do not somehow count. This means

a Phase IV feeder must cut every corner, get every possible gain and save labour where possible if he is to survive and profit.

You ask how Phase IV comes about if the competition is under costed? Phase IV comes about because any less intensive approach ceases to be profitable. Beef prices can rise so far, then people begin to substitute pork, chicken, etc. Other meat industries are streets ahead in breeding, feeding and efficiency. Very soon the market place will force the less efficient producer out.

Once a consumer can have 15 month old tender beef, he balks at 33 month old beef. With E.E.C., price cycles flatten, and the economics of storing cattle turn very negative. With no more hungry stores to feed, conventional feeders must turn to smaller younger animals, animals with health problems requiring special attention. Soon everyone is either better or out of business.

Our session is about this new industry, and to further illuminate what Phase IV is all about, I propose to draw from our experience at Castlebellingham where we daily feed 5,000 head of cattle. We make no claims of being great or of having solved the problems but we do daily face some of the problems - as will other Phase IV feeders.

The changes in conception are enormous from Phase II to Phase IV. I am often amused when someone asks whether we would consider topless cubicles and self feed, but realise that the Phase IV concepts are fairly new. I have a few slides which will give some pictures of our operation and which may help to illustrate the key points of success or failure for a Phase IV feeder.

Rather than a day to day description of our operations, I propose to mention those areas in which we feel it absolutely critical to excel, so as to give dimensions to this new industry.

(1) Cattle Buying

We use 15 agents, covering the entire country, and held in check by daily changing price guidelines. It is critical that we get good quality and good value, and easy enough to fail on both counts. Our major problems here, in summary are :

- (a) Many cattle with fluke and worms on offer, hard to spot.
- (b) Many cattle sired by bulls who deserved castration at 3 months of age.
- (c) Many animals that have received a poor start and will never really thrive - always have DLWG below acceptable levels.

(2) Reception

We must size, sort, feed and water cattle immediately upon arrival or we face lots of problems. Big cattle ride little cattle, both get hurt, especially on slats. Stress of journey adds to stress of no feed and more hospital problems. With everything right, cattle take 3 weeks to return to mart weights - and can easily take 5 weeks.

(3) Preventative Medicine

Once the vet comes as a fireman, the damage is done. We must clear all parasites, external and internal, and maintain very high standards of hygiene to prevent any health problems from beginning. Our vet is a key adviser.

(4) Feeding

I tend to focus on this one as its contribution can be positive. A notion of how cattle gain is useful here. A 9 cwt. beast receiving enough energy to gain 2 pounds per day uses roughly 2/3's of his intake for maintenance energy, 1/3 for gain. Cut his intake by 10% and you lose 1/3 of the gain. Hence we keep ever fresh food in bunks, lights on at night, feed some salt, plenty of vitamin A and use any other technique we can to promote greater intake. Self feed is self defeating in this context.

Selecting the diet is equally critical and an area of too many unknowns. We need very accurate predictions of each food's energy value if we are to properly plan a diet.

Silage is so complex, and the interaction of silage and grain so baffling, that selecting the best diet, i.e. the diet that produces gain at the lowest cost to us, is most difficult. We accumulate data, refine estimates and hopefully get closer to optimum diets as we go. This field is a separate science, and one we, as a country, lack. I have great respect for An Foras Taluntais, but their present mandate is not to assist the Phase IV feeder. Hence too little relevant research on diets. Where Phase IV has become common, specialists in nutrition emerge, men who can specify exact vitamin, mineral, protein and energy levels for optimum gain. The easy notion that grass is a perfect food, and requires no supplement is just not realistic. We feel our protein-vitamin-mineral supplement is worth 0.25 to 0.4 pounds per day, and it may not be optimal.

(5) Selling

This is really critical in a business where margins are so low. A small loss of premium on the sell side and your profits are gone. I see some eyebrows at my reference to small margins. Perhaps we should pause and dissect some myths. 1972/73 was an unusual year as prices rose to reflect new market access. Normally however, we expect to pay £150 for a beast and at the very outside, net £8-9 or 5-6%, and nets of £3-5 are not unexpected. This means a 50P/cwt. price break on selling kills all profits. Any business netting 1½-2% on sales is pretty low margin business.

Unfortunately our selling is hampered by numerous factors. Our breeds are half wrong for the continental markets. Our animals are mostly too old, and our markets are not local - a tremendous disadvantage. Added to this, our factories have in the past and present gone out of their way to earn a reputation for undependability. The current factory operator's idea of proper business is to assemble with other operators, fix prices to farmers and then to take whatever is easily available from the markets. Hence we see up to 4P discounts on Irish beef in England, a real testament to past and present marketing.

(6) Silage Making

Grass is the paradox - the real quandry. It is said to be, perhaps correctly, Ireland's ace in the hole, her key strength. Yet it comes in many varieties, each very different. It loses feed value after its peak remarkably fast. It requires great skill to ensile correctly, then ferments when disturbed. It is most bulky and restricts the cattle's intake by its sheer bulk. Yet, I think grass can be as good as maize silage grown in Italy, and far better than Irish maize silage.

However, we must figure how to economically sow, fertilise and harvest species yielding 5½ to 6 tons of highly digestible, high protein DM if we are to feed 5 years from now. And we must do this on every inch of ground. Sprawling hedges, open ditches, swamps, poorly drained fields are luxuries we can ill afford. The Phase IV feeder must be by necessity a very

good caretaker of the land.

(7) Labour

A word here is appropriate as labour requirements are very much advanced from Phase II and III. Record keeping, use and maintenance of industrial machinery and precision are all part of the needed skills. Irish Agricultural Development's labour force is miles ahead of the average £18.50 per week farm man and we must train men all the time. Our average feed staff member has £10,000 equipment in his charge.

(8) Breeding

We haven't yet much control over breeding, but sure wish we had. Our records show animals indetical in breed, weight, apparent age, diet, pen - animals completely free of parasites but with one gaining .80 lbs. per day and the other 3.2 lbs. per day. The variability of cattle performance last year was nothing less than shocking. The sooner we forget visual selection of bulls and get down to performance and progeny testing our bulls, the better. Perhaps most discouraging is that everyone speaks of which breed as though a breed type holds all the answers. We must begin thinking of cattle like race horses, and breed only from the few bulls with best characteristics. Each breed type has good and bad gainers. We just identify the best and multiply them.

These are a few of the keys, as we see them. Now a word on our industry.

Whether our feeders go to Phase IV, or stay for a few more years in winter fattening only, whole new systems of feeding are essential. Unfortunately, many of the current setups are obsolete right now. Obsolete because they are incapable of producing gain at a cost below its value. Winter feeding got started due to the attractive price rises from autumn to spring, but these price rises will soon lessen very much, perhaps disappear. How many current feeders can afford to buy and sell at the same price per cwt.? Very few if any.

To feed in a no price rise market, or worse to take a loss on price per cwt., every efficiency is required. Self feed silage is out, open cubicles are out, 11 cwt. slaughter weights are out. Only when the feeder has maximum quantity of very best silage from his land, mixed well with energy foods, minerals, vitamins and protein, starts feeding at low weights, gets all vet problems minimised, and has enough scale to properly utilise labour, will he hope to break even. Then, if he can save the nutrients in the slurry and apply at the right time, he may profit a little.

Finally, let us look at what the value of this new industry is, and what must be done to help it emerge rapidly. One quarter of all of Ireland's exports are cattle and beef,

perhaps more now with the dramatically higher prices. Yet half of the cattle go out live for further fattening. If we merely add £30 value on average to the 600,000 exported live cattle, £1.8 million extra comes in each year. However, this is a bare start. By cutting down slaughter ages, more stock come off the same land. By fertilising, more stock. By killing at home, by-product industries grow up. The net total impact, if fully exploited should allow our government to reduce duties on most imported goods, put us in a reasonably good balance of payments status, and provide full employment for many thousand workers - pie in the sky? I think not.

So what must be done? My own priorities include:

- (1) For once and for all, abandon all notions of the Irish farmer as a backward thick man and address programs to him which make sense. Expect him to respond rationally and he will.
- (2) Get breeding improved right now. Progeny testing all bulls, imported semen, more feedback from factories to breeders.
- (3) Close the gap between grass knowledge and application. Get advisers and others out of the multiple purpose, mixed sward ideas and out teaching the value of new grasses. End result should be $\frac{3}{4}$ of country plowed and reseeded.

- (4) Fertiliser people get creative and remove Ireland from the bottom rung of EEC fertiliser useage. I dont know how, but get useage levels up so we can produce more animals.
- (5) Department of Agriculture rethink on many key areas including TB scheme, bull licensing, grants, drainage incentives, single suckling incentives.
- (6) Form a National Commission quickly, survey the problems hampering this new industry from developing. The commission should cut across departmental lines and look into all of agriculture problems above, plus,
 - Review prohibitive tarrifs and taxes on small tonnage lorries,
 - review red/white diesel fuel system so as to allow feeder to choose best vehicle for his use,
 - review entire good policy towards large units.

Well, I have thrown, I hope, a few new ideas out, claiming that a whole new industry is emerging and one very important. I've suggested a few ways to help that industry emerge, and I am now, I assume about to get roasted. Your questions, please.

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