

SCHEDULE I

FUTURE ORGANISATION OF CATTLE BREEDING IN IRELAND

Discussion Document from "Nagle Committee" Meeting on 25.1.95

Discussion Document for Nagle Committee Meeting on

FUTURE ORGANISATION OF CATTLE BREEDING IN IRELAND

1. BACKGROUND.

25.1.'95

1.1 **General** - The importance of the cattle industry (milk and beef) to the Irish economy cannot be overstated. It is a major contributor to the national economy in terms of gross output, exports and employment. The recent reformed CAP and GATT Agreements have significantly changed the general environment for the production and marketing of milk and beef products. Levels of Intervention support buying have been substantially reduced. Real price reductions for beef are projected and compensation to producers by way of premium has been introduced. Supply control through quotas on premium rights and milk output has been strengthened. Also extensive and environmentally friendly production methods are encouraged. In this new changed production marketing environment efficient production of high quality milk and beef in an environmentally friendly manner and in accordance with the highest animal welfare standards will be critically important. High genetic merit breeding stock which are capable of producing quality milk and/or beef efficiently under Irish systems of feeding and management are an essential first requirement.

1.2 **New Developments** - Traditionally official breeding policy was determined by the Department of Agriculture and was aimed at achieving national objectives related to the general production and marketing environment obtaining at the time. Dairy and beef cattle breeding schemes and programmes were organised and closely regulated by the Department. These schemes and programmes were generally organised around local breeds as access to genetic material from other countries was restricted on veterinary grounds. In 1987 the Government decided to phase out the cost to the Exchequer of the entire livestock breeding programme.

In the last decade or so major advances on the zootechnical and veterinary fronts have changed the whole cattle breeding scene. Improved information processing technologies and statistical methods have made it possible to capture and use large bodies of data from industry wide recording and testing schemes for genetic evaluation purposes. In addition the health status of cattle populations throughout

the world has improved significantly and tests and laboratory procedures have evolved to enable breeding animals, semen and embryos to be certified free of major diseases and traded freely under Community legislation. All of these developments have led cattle breeding to become very much a commercial international business based on objective measures of performance and genetic merit and driven by national cattle breeding industries.

1.3 Importations vis-a-vis Domestic - There are two possible sources of high genetic merit breeding material. One is the importation route and the other is through an expanded and integrated national recording and testing programme. Undoubtedly the importation route offers immediate access to high genetic merit material and it should and must continue to be available to the industry. However, any overreliance on imports would have the following negative consequences:-

- The undermining of the ability to sustain the Irish national recording and testing programme and to monitor the genetic merit of imports.
- May produce animals which are not entirely suited to Ireland's lower output grass based production system (~4090 kg milk). The genetic merit of much of the imported semen has been established abroad under very high (~8000 kg milk) production systems;
- Increase the possibility that foot and mouth or other diseases might cut across foreign sources and undermine the security of supply;
- Would have to take some lower genetic merit semen in a situation where substantial supplies are required. The highest genetic merit semen is always high priced and limited in quantity;
- Loss in employment and cost benefits possible from the operation of a viable and competitive Irish national recording and testing programme.

For these reasons it is highly desirable that the breeding stock requirements of the great majority of Irish commercial dairy and beef producers be domestically produced. The current national programme is inadequate to meet these requirements. While all modern techniques are being employed in the existing programme the scale of recording and testing is too small. Accordingly, the

national recording and testing programme must be expanded in scale and be capable of delivering a guaranteed on-going supply of high quality genetic material suited to the particular needs of the Irish dairy and beef industry at a reasonable cost. The programme must be capable of producing breeding stock which can compete with that from other national breeding industries if it is going to be viable in the new more open EC Single and World Market scene.

1.4 Cost/Benefits - High genetic merit leads to greater efficiency which in turn leads to greater profit. Results from research confirm that dairy animals of high genetic merit for yield of fat plus protein are more productive, more efficient and have higher margins over food, health and reproduction costs than contemporaries of lower genetic merit. Undoubtedly the same is true for beef animals. Numerous international studies demonstrate significant positive returns on investment in cattle breeding programmes. Returns of from 5:1 to 50:1 are available depending on the recording or testing scheme. However, investment in animal breeding is long term and it takes several years before the pound invested today shows a return. In addition, whereas significant investment is generally concentrated into a small sector of the industry, the returns are diffused throughout the industry and are not easily calculated. Consequently some mechanism to provide for wider industry funding and involvement in the national cattle breeding programme is called for.

1.5 Legislative Framework - There are more than 10 different pieces of Community legislation covering zootechnical and veterinary aspects related to trade and approval for breeding of pedigree animals, their semen, ova and embryos. All of these have been transposed into national law in Ireland through S.I. 297 of 1994. This Regulation provides for the approval of "approved" organisations for all aspects of cattle breeding, for example, herdbook registration, recording and testing, genetic evaluation and publication, and semen and embryo collection, processing, storage and distribution. Approved organisations must operate in accordance with specific procedures and methods outlined in the legislation and by international standards bodies like ICAR and INTERBULL. The Artificial

Insemination service continues to be regulated by the 1947 AI Act and the 1948 AI Regulations and the approval of bulls for use in natural service are covered by the 1985 Control of Bulls for Breeding Act and the various Regulations enacted under it. These legislative instruments together provide a legal framework for the Regulation of all aspects of cattle breeding and for the national cattle breeding programme to be organised in an integrated and co-ordinated manner.

1.6 ICAR and INTERBULL - ICAR stands for the International Committee for Animal Recording. It is a non governmental voluntary association of national animal recording and evaluation organisations. IDRC is currently the Irish national member of ICAR. INTERBULL is a permanent sub committee of ICAR which deals very much with genetic evaluation aspects and the Department of Agriculture, Food and Forestry is the Irish member. The aims of both of these organisations are to promote the extension, standardisation and improvement of farm animal recording, testing and genetic evaluation procedures. ICAR and INTERBULL standards are now the reference standards laid down in Community legislation. Accordingly they are the standards, procedures, methods, etc. which must be complied with by all "approved organisations" for animal registration recording, testing and genetic evaluation.

1.7 - New National Animal ID & R System - The new EU animal identification and registration system which the Department of Agriculture, Food and Forestry is proposing to put in place opens up new opportunities for the cattle breeding area. The proposal involves the identification and tagging of all calves born from mid 1995 by the farmer within 30 days of birth and the notification of relevant details for recording in a central computerised data base. The proposal is to use two plastic tags, one on each ear, with the following numbering system - IE XXXX 9999 R - where "IE" is the standard country code for Ireland; "XXXX" are unique herd designation letters for each herd; "9999" are sequential animal numbers within herd; and "R" is a check digit letter. The information notified by the farmer for each calf born in his herd will include herd number, animal ID number, date of birth, sex of calf, dam ID number and breed of sire code. This

will generate a computer data base containing much of the essential primary information necessary for all cattle breeding activities and dramatically increase, the scope for expanding the national cattle breeding improvement programme.

- 1.8 **Structural Funding** - A New Measures for "Improvement of Cattle Breeding Infrastructures" has recently been agreed in the context of the 1994 - 1999 EU Structural Funding Programme - see Schedule II. The Measure is very much aimed at priming the establishment of an industry led Irish Cattle Breeding Authority and the bringing about of other essential developments in the Irish cattle breeding scene. The ultimate objectives are to ensure the continued existence of a viable Irish cattle breeding industry; the maintenance and enhancement of the competitiveness of the dairy and beef production/processing industry; and the improvement of the quality of dairy and beef output.

Since cattle breeding is to an increasing extent data base driven the Measure is targeted primarily at areas which will aid in the generation, maintenance and utilisation of an expanded, comprehensive, integrated, high quality database for all cattle breeding activities. In particular aid will be provided for the following areas:-

- The carrying out of necessary feasibility studies, development work and staff training to improve technical competency;
- To assist in the purchase of computing hardware and in the development of software systems throughout the cattle breeding industry; and
- To help in the upgrading of recording, and testing facilities and equipment.

Under the Measure it is envisaged that initially a feasibility study will be carried out and an integrated development and investment plan for the total cattle breeding industry to cover the entire period of the programme (1995-1999) will be drawn up. The implementation of the individual elements and the payment of aid under the plan will then follow. The estimated total level of investment envisaged is about £7.0 million of which approximately £4.7 million is to come from the industry and the remaining ^{million} £2.3 from State and Community funds.

2. PROPOSED ORGANISATION OF CATTLE BREEDING

2.1 It is clear from the 1992 Nagle Committee Report that there is strong support among all sections of the livestock industry for the establishment of a National Cattle Breeding Authority and the implementation of an expanded industry led national genetic improvement programme. Progress on the basis of proposals included in that Report was not possible because of lack of agreement on funding. There was little enthusiasm on the part of the wider industry towards the provision of significant industry funding to a National Cattle Breeding Authority for the support of a large central office/staff structure or for disbursement to support the activities of local affiliated organisations. In these circumstances a "bottom-up" approach to the organisation and funding of cattle breeding activities required to progress the situation.

The essential herdbook, artificial insemination, recording and testing organisational elements already exist. However, many operate independently of each other on a small scale with limited staff and other resources and often there is duplication of activities. Cattle breeding organisations could reduce costs and do their own jobs better if they joined forces, shared responsibilities and integrated and co-ordinated their activities. Inevitably some activities could be carried out more efficiently and effectively by a central organisation and, in any event, there is a need for a central national organisation to co-ordinate, support, supervise and authenticate all recording and testing carried out by affiliated organisations. A proposed new infrastructure for the organisation of dairy and beef cattle breeding in Ireland is schematically outlined in Annex 1(a) and 1(b) respectively. The establishment of a new central national organisation, the Irish Cattle Breeding Authority (ICBA), is proposed. The current activities of IDRC would be taken over by ICBA. The functions, responsibilities and inter-relationships of the different organisational elements in the whole national cattle breeding infrastructure are summarised in the following:-

Breed Societies - would generally continue to control all policy aspects related to herdbook registration and certification and determine the future direction of their own breeds. They would arrange for the provision of animal identification, date of birth and ancestry information to the central data base and performance data and genetic evaluations would be provided from the central data base. Some breed societies may wish to use data from the central data base for herdbook purposes while others may wish to have their herdbook administered on their behalf by ICBA.

Milk Recording Societies - would be responsible for the provision of milk recording services locally under the aegis of ICBA. This would involve field recording, laboratory analysis, data input and processing and the provision of lactation/certificates and monthly, annual and other reports to herdowners. Milk recording societies would provide lactation and other relevant data to the central data base and would receive ancestry, genetic evaluation, etc. data from the central data base

Artificial Insemination Organisations - would be responsible for the carrying out of random test inseminations from young AI test bulls and for arranging either directly or in association with other approved recording/testing organisations for the supply of all necessary data for their progeny testing programme to the central data base. The required data would include animal ID, date of birth, ancestry, ease of calving and mortality, linear assessment, milk and/or beef recordings and test results. Insemination date would be provided to the central data base for the purpose of validating birth date and ancestry information for identified animals in the central data base.

Irish Cattle Breeding Authority (ICBA) - would be responsible for the following:-

- Decisions with regard to national cattle breeding objectives and strategy for their achievement;
- The creation and maintenance of a national cattle breeding data base for the support of all cattle breeding functions and related activities;

- Co-ordination and supervision of all registration, recording and testing to ensure compliance with ICAR standards and National and Community legislative requirements; and
- Carrying out of certain recording/testing activities which can be more effectively and efficiently done by a central organisation than by local organisations. Such activities could include on-farm recording and central performance testing at Tully of pedigree beef cattle and linear assessment of dairy and beef cattle;
- Carrying out necessary development work, and the provision of technical support and other back up services to affiliated organisation;
- Representation of Irish cattle breeding interests on the International Committee for Animal Recording (ICAR) and other international bodies;
- Provision of possible services to the wider industry, for example:-
 - Recording birth notification information under the proposed new national animal ID and R system on a computer readable medium for the Department of Agriculture, Food and Forestry.
 - Supply of data from it's data base to the meat and dairy industry for quality assurance purposes.
 - Supply of registration/genetic merit certification to farmers to aid the marketing of well bred commercial dairy and beef calves.
 - Other services to the wider industry, for example, statistics, promotion literature, other support services, etc.

Department of Agriculture, Food and Forestry - would be responsible for the following -

- Implementation of National and Community Zootechnical Regulations in close collaboration with ICBA;
- Carrying out national genetic evaluations for the main dairy and beef production traits based on officially authenticated data supplied through ICBA;

- Supply of relevant data for cattle breeding, purposes from the National Animal ID and Registration System to ICBA, for example, ID of calf, ID of herd, date of birth, sex of calf, ID of dam and breed of sire.

2.2 Staff and other Resources - significant staff, computing and other resources will be required throughout the whole cattle breeding infrastructure to ensure compliance with ICAR, National and Community standards.

Cattle breeding is to an ever increasing extent data base driven. The different possible sources of data are illustrated in ~~Annex~~ 2. Major developments are taking place in computer hardware technology, software systems and data transmission procedures which open up new possibilities for the optimum organisation of cattle breeding activities at all levels from the farm to the central data base.

In so far as "local" organisations are involved in "official" registration, recording, testing, etc., adequate local staff resources with the necessary expertise must be deployed and agreed and standard systems and procedures must be adopted to enable ICBA to authenticate all data recorded.

- The proposed central national organisation (ICBA) will require headquarter office accommodation and adequate competent staff, computing facilities and other support systems. The number and type of staff required will depend very much on the extent to which work is carried out centrally rather than by individual "local" organisations. Also some development work could be done under contract rather than by employed staff.

2.3 Management Board and Industry Representation - Given the organisational structure proposed in Annex 2 it is vitally important that all sections of the industry have the opportunity of inputting into the decision making process. Towards this end a Management Board aided by Expert Advisory/Executive Committees and local Consultative Associations is suggested.

The Management Board should be made up of representatives of constituent shareholding organisations and affiliated/support organisations who would be elected or nominated in accordance with co-operative rules. The Board would decide on general cattle breeding policy matters, plans and strategy for implementing policy and budgetary and other matters related to the operation of ICBA.

Two Advisory/Executive Committees should be established to assist the permanent executive of ICBA in preparing policy proposals for consideration by the Board and in implementing Board policy. One Committee would deal with dairy cattle breeding and the other with beef cattle breeding. The Committees would include representatives from relevant shareholding/affiliated breeding organisations and technical experts.

Regional Consultative Associations should be established to provide a forum for the active involvement of local participants in the development and implementation of recording and testing at a local level. The operation and activities of those associations would be organised and co-ordinated jointly by the local milk recording/AI centres/breeders clubs assisted by ICBA staff.

3. WHERE NOW?

3.1 Feasibility Study and Development Plan - Under the structural funding measure for "Improvement of Cattle Breeding Infrastructure" provision is made for the carrying out of a feasibility study and the preparation of a development plan for the breeding industry by June 1995. A contract is likely to be awarded by the Department of Agriculture, Food and Forestry early in the new year. Based on the stated objectives and details outlined in the structural funding measure the terms of reference for the study are likely to be broadly along the following lines:

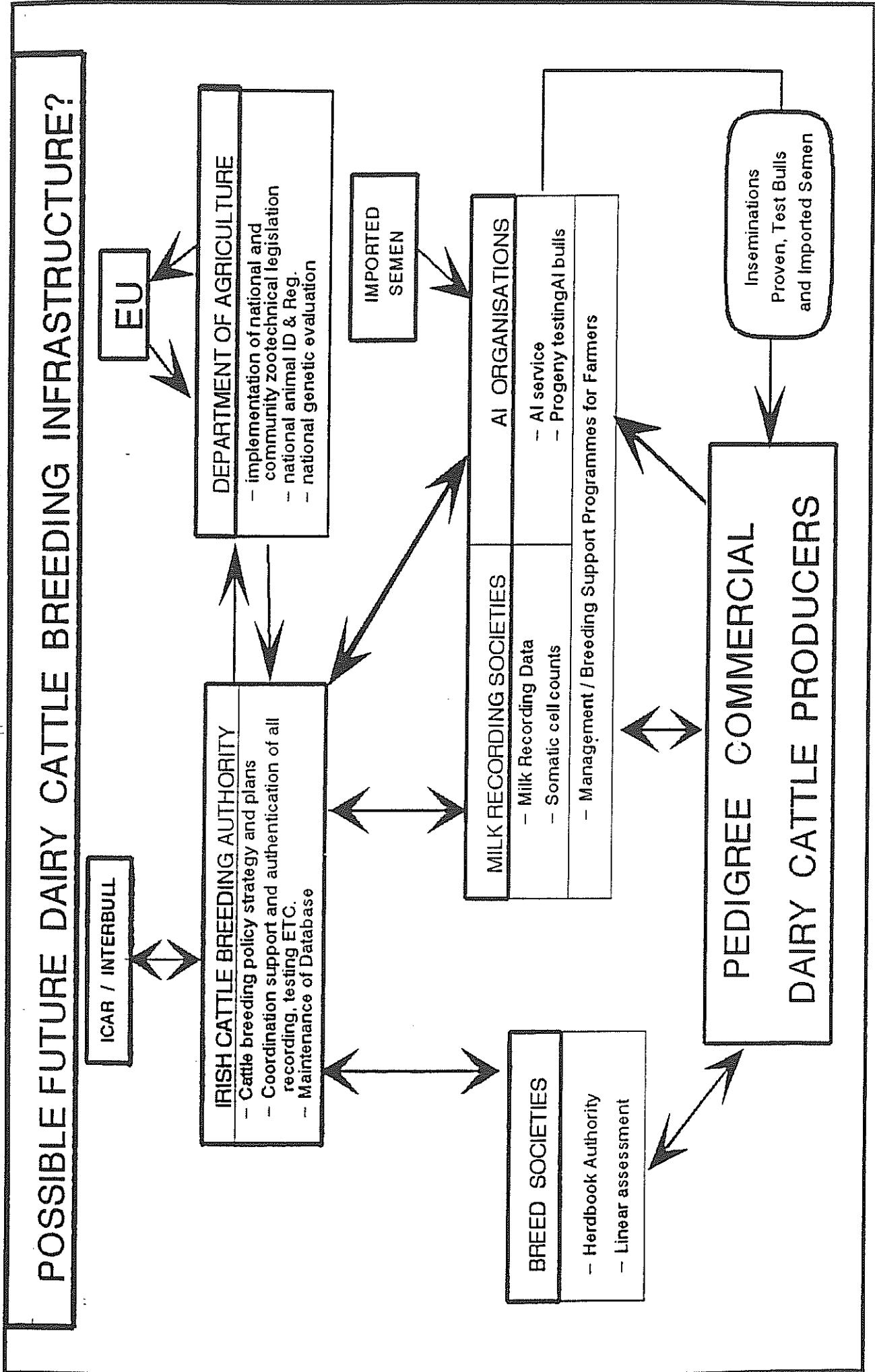
- (i) - Clearly identify all of the various activities that are relevant and important in the context of the operation of an effective national genetic improvement programme and the achievement of the specific objectives and targets outlined in the structural measure.
- (ii) Set out a development plan for the putting in place of an industry led national cattle breeding infrastructure which will provide for the integration, coordination and support of all essential cattle breeding activities. Indicate where and by whom the various essential activities would be best carried out.
- (iii) Quantify the resources (staff, office, computing and other) required at all levels to effectively implement the proposed development plan. In particular the requirements in relation to the establishments and operation of the national cattle breeding data base/network must be detailed. Indicate time scales.
- (iv) Prepare outline annual budgets to cover on-going running costs plus capital and other development costs to the end of 1999 and identify probable sources of funding including industry, structural and other.

3.2 Industry Input - Since the ultimate objective is the establishment of a national cattle breeding infrastructure which is largely industry led and funded it is imperative that the breeding industry in particular and the wider dairy and beef industries have a major input into the preparation of the development plan. As a first step the proposals outlined in Section 2 of this Report might be put to the

Department of Agriculture together with any proposals in relation to the terms of reference for the feasibility study and the preparation of the development plan. Secondly, two committees similar to the Advisory/Executive Committees recommended in Section 2.3 and representing dairy and beef cattle breeding interests might be established to input into the feasibility study and for consultations in the context of drawing up the development plan. Thirdly, seek to obtain the contract for the recording of birth notification information under the proposed new national animal ID and R system on a computer readable medium from the Department of Agriculture, Food and Forestry. Fourthly, identify the likely sources for funding and other supports for cattle breeding generally.

3.3 Funding - The structure and organisation for cattle breeding activities will inevitably be significantly influenced by how they are funded. He who pays the piper will call the tune. Wider commercial industry funding and support to aid the required expansion in recording and testing could perhaps be most readily forthcoming and easily provided directly to local associated milk recording and/or AI progeny testing organisations. Some mechanism should be found to provide some more general wider industry funding to support areas which will be of benefit to the wider industry, for example, some of the overheads of the proposed central cattle breeding authority (ICBA) and for central performance testing of beef cattle at Tully. One possible mechanism is a small extra payment by the farmer for each calf identified and registered under the proposed new national animal identification and registration system with a matching contribution from the dairy and beef processing industry. Much of the on-going costs of ICBA should be covered by

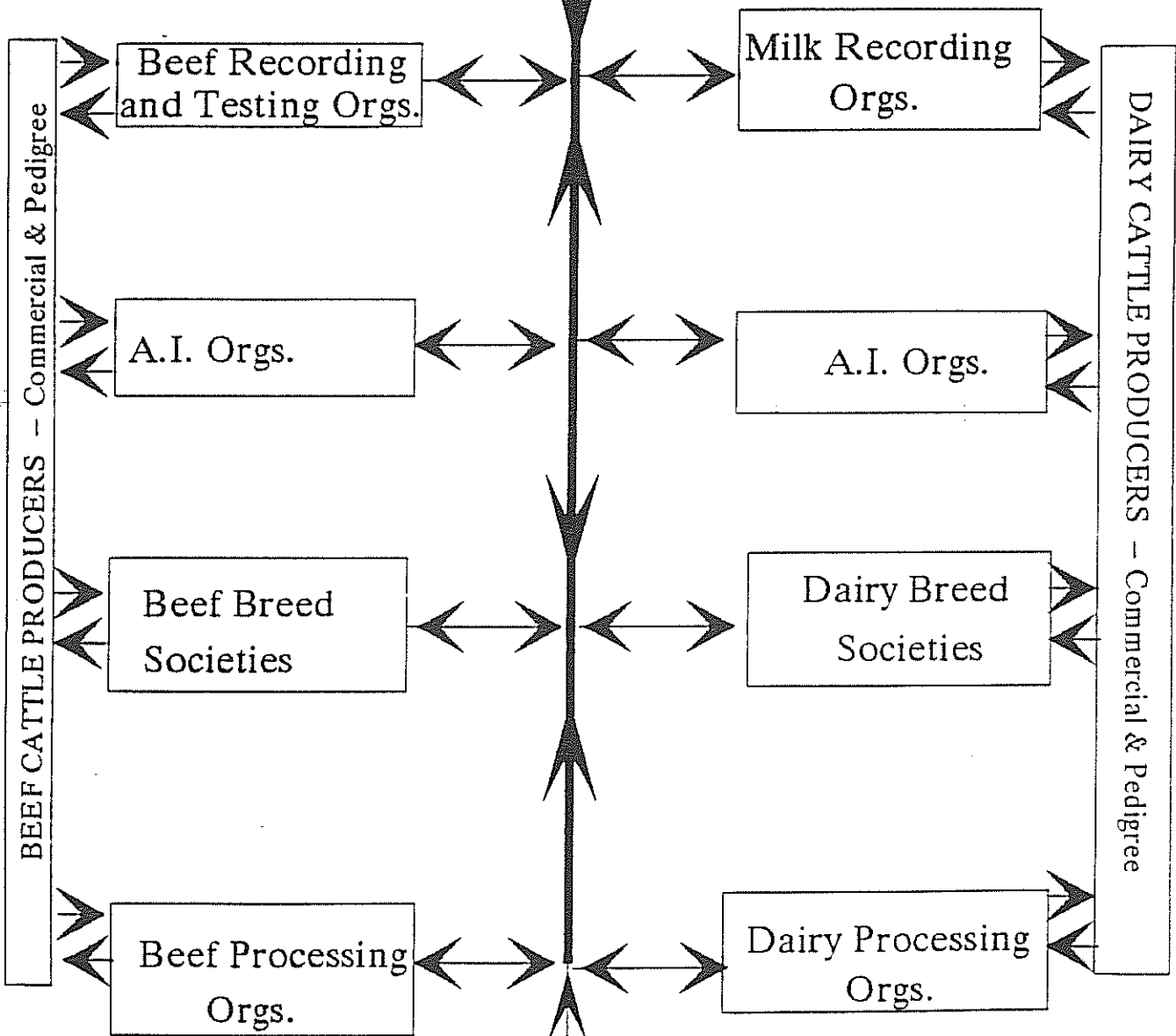
- Fees paid by affiliated member organisations;
- Charges for services provided to member organisations and the wider industry;
- Provision of staff from the Department of Agriculture, Food and Forestry;
- Other.



CATTLE BREEDING DATABASE / NETWORK

Department of Agriculture
Food and Forestry

IRISH CATTLE BREEDING AUTHORITY
DATABASE
BEEF DAIRY



International Genetic Evaluations and Test
Information from other Countries

