

TEAGASC SERVICES TO THE PIGMEAT INDUSTRY
- ADVANCING TOGETHER

RESEARCH – ADVISORY - TRAINING SERVICES

Pigs and Pigmeat

Pork is the world's most popular meat with over 80 million tonnes produced annually. It is eaten fresh, cured and in a wide variety of processed forms. Consumption of pigmeat continues to grow especially in the developing world. Intensive pig production is a very efficient means of converting feed grains and food industry by-products into top quality, safe, nutritious and tasty food. EU countries are among the world's greatest consumers of pig meat and the EU production continues to expand steadily. Ireland's share of the total EU-25 pigmeat production is less than 1.0%.

Ireland's Pig Industry

Pigmeat output in Ireland has increased by over 90% in the period from 1988 to 2002 and has been stable since then. About 3.3 million pigs are now produced annually (2004 output) with a farm gate value of approximately €290 million in 2004. Almost 60% of production is exported. Export earnings in 2004 were €228 million.

Currently the pig industry employs about 7,000 people (on-farm, slaughtering/processing, feed manufacture, transport, services, supplies, buildings and equipment) most in rural areas and small towns.

Surviving in the market

Ireland has few natural advantages in the production of pigmeat. High feed costs, as a result of being a net importer of cereals, and high transport costs to market are the main weaknesses.

Proximity to a large market (U.K.) which is a significant pigmeat importer, a high level of technical efficiency on farms and a modern meat processing sector are the main strengths.

Disadvantages of cost and location have been overcome by superior technical efficiency. Commercial pig production is carried out in under 500 pig units which produce about 98% of our production. Typically units are large and specialised with skilled staff who utilise the latest technology.

Survival in a highly competitive global pigmeat market will require use of the most modern technology to produce premium quality products at a competitive price.

To ensure this, strong Research and Development Services are necessary.

Teagasc's Role

Teagasc's goal for the Irish Pig Industry is profitable, competitive and environmentally sustainable production systems producing pigmeat of the highest quality, consistent with the requirements of the global market.

Teagasc's mission is to provide a technical base to underpin the development of the Irish Pig Industry into the next century and to support its technological excellence in order to:

- Improve production efficiency at farm level
- Improve overall competitiveness
- Maintain the maximum number of producers in profitable pig production
- Assist and encourage expansion where appropriate
- Encourage production units to minimise any adverse effect on the environment
- Improve and assure the quality of pigmeat produced
- Ensure consumer confidence in the pig production industry
- Develop production systems to ensure pig welfare standards that are acceptable to both producers and consumers.

Integrated services in Research, Advice and Training are the basis for Teagasc's continued support for the pigmeat industry.

Teagasc Pig Production Research

Pig production research is carried out at Moorepark Livestock Research Centre, Fermoy, Co. Cork which has been serving the Irish pig industry for over 40 years. At the beginning pig production was a sideline on many farms with low output and poor technical efficiency. To-day, pigs tend to be the sole enterprise on a smaller number of specialist farms. Irish pig production standards are among the highest in the world. In 1960 around 5.0kg feed was required to produce 1 kg pigmeat, now the best units need only 3.5kg.

In the 1960's problems on pig units were associated with poor housing, poor quality feeds, and unscientific management practices. Improved environmental control, better insulation of houses and improved hygiene played major roles in improving production efficiency and reducing the incidence of respiratory and enteric disease.

Simple, nutritionally adequate diets developed at Moorepark set the standard for Irish pig diets during the following 30 years.

Research at Moorepark played a major role in these developments.

Research facilities

Facilities at Moorepark comprise a modern 300-sow unit, supplemented by a modern feed mill and analytical laboratories. Housing includes sow accommodation and commercial scale group housing for growing pigs as well as specialised individual feeding facilities for weaned pigs and finishing pigs.

Meat Technology research is carried out at the Ashtown Food Research Centre, Dublin. Facilities at the AFRC include a pilot scale slaughter house and meat processing plant. Research areas include residue testing, boar taint, carcass grading and evaluation, and means of improving the eating quality of pork.

Other Teagasc research centres whose activities are relevant to pig producers are the Crop Production Research Centre at Oakpark, Carlow, the Environment Research Centre at Johnstown Castle, Co Wexford and the Rural Economics Centre in Athenry, Co. Galway.

Priority Areas currently being researched at Moorepark include:-

The research programme includes a balanced portfolio of projects directed towards solving of current problems and issues which are likely to be important in the future.

- ***Nutrition*** - Feed represents about 70% of the cost of producing pigmeat. High standards in feed formulation, feed evaluation and the management of feeding are essential to efficient production
- ***Genetics*** - Pig breeding is now dominated by well organised commercial companies who combine the main purebreeds to produce prolific sow lines and lean sire lines. Evaluation of the breeding stock available in Ireland provides invaluable information for selection of stock.
- ***Reproduction*** - Regular breeding is normal in sows but a high level of embryonic mortality is a barrier to even higher sow productivity. Research into the interaction of nutrition and fertility is yielding promising results.
- ***Health/Welfare*** - Animal welfare and consumer requirements for assurance of food safety are new challenges for pig producers. Issues of behaviour, housing systems (especially group housing of sows) and quality assurance require novel approaches from all involved - producers, processors, feed manufacturers. Control of potential food-borne pathogens e.g. Salmonella is a priority.
- ***Environment*** - Intensive pig production is only sustainable if it is in harmony with the environment. Manure is a valuable fertiliser for grassland and tillage crops but must be carefully managed to minimise the risk of damage to water and of odour nuisance to rural dwellers. Legal requirements e.g. Nitrates Action Plan are affecting the location and size of units. Minimising nutrient excretion through feed formulation and efficiency of production are critical to manure management.
- ***Economics*** - Every industry must be competitive to survive. The European pigmeat market is now a single one. Expansion of the EU and liberalisation of world meat trade will present new challenges and opportunities for Ireland.

- **Meat Quality** - Quality attributes of pigmeat include colour, appearance, tenderness, eating quality, wholesomeness, absence of boar taint, freedom from bacteriological contamination and freedom from residues of any kind.
- **Carcass composition** - Lean content is the basis of pigmeat payment. New, more accurate and non-invasive techniques for carcass assessment will continue to be developed.
- **The pig as a model for the human** – The pig has a metabolic system very similar to that of the human and as a result the pig are used as model to study human nutrition and health in areas such as feeding of probiotics, growth physiology, development of obesity and prenatal growth.

Contract Research

Few Irish companies are large enough to justify their own research facilities. Contract research puts the wide range of skills of Teagasc staff at the service of its customers. The Pig Production Research facility carries out contract research and consultancy services for a varied clientele of Irish and overseas companies and organisations, and government agencies. Research may be carried out at Moorepark or assistance may be given with the design, analysis and interpretation of farm trials. Desk studies are used to assess the current state of knowledge where new research is not required.

Backup services

The research program in pig production is backed up by the most modern library, laboratory and computer services. Other Teagasc scientists and the research staff of Irish Universities and colleges are involved in many collaborative studies. Regular contact with overseas research organisations and with individual research scientists, ensures rapid access to new developments in pig production and meat technology from all over the world. Staff at Moorepark participate in collaborative studies in EU and other overseas research institutes providing access for Irish pig producers to the most up to date technology from around the world.

Industry support

The Pig Industry Advisory Committee is a consultative group with representative from pig producers, pigmeat processors, feed industry and government under an independent Chairman. Priority areas for research are identified and recommendations made to Teagasc for allocation of resources. The research levy operated by pig producers and pigmeat plants has the potential to be a major influence on research policy.

Teagasc research and advice is always independent and always objective.

Dissemination of Research Results:

Research results are only of benefit to the pig industry when disseminated to the several user groups. These include producers, feed industry, pigmeat processors, government agencies and agri-business.

Several media are used to communicate new information from Ireland and from overseas:

- Research papers
- Popular Articles in farm papers/magazines and trade publications
- Annual Pig Farmers' Conference
- Seminars and Workshops for farmers, farm staff, the feed industry and other agri-industry
- Private seminars for clients and their customers or staff
- A bimonthly newsletter
- Pig Advisory Service
- Training courses for pig producers, pig unit staff, hauliers, meat factories
- Commissioned reports
- End of project reports
- Desk studies including literature searches and reviews of current technology.

Advisory

The Teagasc Pig Advisory Service is used by the producers of over 75% of the pigs in the country. Advice is provided by a team of specialist consultants who deliver, on contract, a comprehensive business and technology service. Pig Development Officers are strategically located around the country but still operate as a closely-knit team with individuals specialising in key sectors of technology. All have long experience in pig production and most have first hand experience in operating commercial pig units. Backed by Teagasc's resources in research and analytical services they provide a top-class service to producers in areas such as management, housing, nutrition, breeding, animal welfare, environmental protection, disease control etc.

Regular in-service training courses are used to discuss new developments and to ensure that Pig Development Officers are briefed in the most up-to-date technology. Staff maintain close contact with new production technology from other countries.

What your Pig Development Officer can offer

The Pig Advisory Service offers an intensive **independent** business and technology service.

The range of specialised services provided includes:

Farm Visits

Most producers contract for one visit every 6 months. The physical and financial records of the unit are analysed using PIGSYS (the Teagasc computerised pig recording system). Results are interpreted and unit performance benchmarked with comparable units. Sections of the unit may be visited with the staff and advice is given on how to correct any problems. A written report is furnished. Corrective action plans are drawn up and progress is monitored.

Herd performance analysis

Accurate recording of herd performance is critical for management decisions. These records are analysed (usually quarterly) using the special Teagasc PIGSYS programme and allow the unit performance to be benchmarked against industry standards. Involvement of Teagasc staff in international production cost comparisons helps to keep the Irish pig industry competitive on the international stage.

Benchmarking of production costs

Accurate performance records are of value only when used for decision making. Benchmarking of production costs shows each producer how his costs compare with industry standards and which aspects of the business are open to improvement. Individual herd records are absolutely confidential between the client and the pig development officer.

Newsletter

The bi-monthly Teagasc pig newsletter is sent to all clients. Prepared by advisory, research and training staff the newsletter focuses on topical issues identified during advisory visits. Together the issues of the newsletter form a valuable information base for producers and their staff.

Training Courses

The main focus of Teagasc training in pig production is on improving the skill levels of operatives and managers on units through focussed workshops. These may be in local Teagasc centres for staff from several units or custom-designed courses for staff from an individual unit or firm. A wide

range of courses is available on topics such as unit management, husbandry skills, stock handling, health and safety.

Feed Formulation

This service will assist home compounders in evaluating competing formulations suited to their requirements with nutritional advice on the range of ingredients available.

Pig Building Design

This service provides advice, sketches and plans for those planning the construction of new buildings or refurbishment of existing structures, for planning and grant applications.

Environmental Issues

A consultancy service is provided to assist with the preparation of Environmental Impact Statements (EIS), Nutrient Management Planning (NMP) and Integrated Pollution Prevention and Control (IPPC) License applications.

Financial Planning

A range of computer programmes are used to generate cash flow projections for new developments or new management strategies. Budget and cash flow analysis are essential tools to evaluate the likely success of new developments and for selecting the best option. Financial institutions require this information in order to process borrowing applications.

Soil and Water Analyses

Your adviser can arrange analysis of soil and water samples where required for EIS and IPC compliance monitoring. Analyses are carried out at Johnstown Castle Laboratories in Wexford.

Seminars, Conferences and Study Trips

The annual Teagasc Pig Conference is the primary technical conference for the pig industry. Held in three strategic locations, the one-day conference features Irish and overseas experts who deal with a varied selection of topics. Occasional local information seminars and study trips to the world's top pig shows and pig producing regions help keep producers abreast of the latest technology in a fast moving industry.

Producer groups

Networks of individual producers co-operate in purchasing and selling group to achieve greater bargaining power, resulting in cheaper feed and higher pig prices. Teagasc staff assist in setting up such groups

Feed and pig price reporting

Information on current feed prices is collected regularly for use in calculating production costs. Participating producers have rapid access to market information allowing timely management decisions.

Services from pig development officers include:

- 1. Improving technical efficiency**
- 2. Investment evaluation and cash flow projection**
- 3. Feed specification and assessment**
- 4. Staff training for pig units, hauliers, factory pig handlers**
- 5. Auditor training**
- 6. Pig price maximisation including control of carcass lean, kill-out and selecting optimum marketing strategies**
- 7. Advice on food safety issues such as Salmonella control**
- 8. Assistance in compliance with welfare legislation and customer specifications**
- 9. Pigmear quality assurance compliance**
- 10. Protection of the Environment including manure minimisation and management**
- 11. Financial Planning including negotiations with lending institutions**
- 12. Market Information**

- 13. International production cost comparisons**
- 14. Building layout design and appraisal**
- 15. Assistance with planning and licensing**
- 16. Help in liaison with government agencies and other bodies**
- 17. Discrete and confidential counselling with individual problems**
- 18. Unit valuation**
- 19. Dispute resolution such as compensation claims**
- 20. Once-off consultancy on any aspect of the pig, feed and meat industries.**

What better pig performance is worth to you

Herd size	100 sows	500 sows
+ 1 pig/sow/year	€3,000	€15,000
- 0.1 in weaner FCE	€1,900	€9,500
- 0.1 in finisher FCE	€4,400	€22,000
-1% in suckler mortality	€660	€3,300
+ 1p/kg in pigmeat price	€1,500	€7,500

Remember all dealings are strictly confidential.

Can you afford to be without this service?

Contact Points

- Advisory Visits
- Newsletters
- Phone Contact
- Office consultations
- Seminars/Conferences
- Discussion Groups
- Workshops
- Staff Training
- Study trips
- Fax
- E-mail

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