

Project number: 5668
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Development of farming systems for the future



Key external stakeholders:

Dairy farmers, dairy processors, government, extension officers, financial agencies, service providers and accountancy firms

Practical implications for stakeholders:

This study involved the development of a two Greenfield Demonstration Dairy farms, modelling futuristic production systems and completing surveys to ascertain the future intentions of dairy farmers as well as to determine the opportunities, challenges and limitations for expansion on farms.

Two new Dairy farms have been developed (one in Kilkenny and one in Bandon). The farm in Kilkenny was converted from tillage with all facilities constructed, while in the farm in Bandon had existing beef housing which was converted. Full conversion costs and running costs are now available for both farms.

- A conversion model has been developed for existing non dairy farms into dairying
- Full conversion and running costs are and will be available on an on-going basis
- Opportunities, challenges and limitations to expansion on commercial dairy farms have been evaluated based on surveys completed on farms

Main results:

- This project has completed two farm conversions to dairy, reporting the full conversion and running costs
- Fifty four percent of farms planned to expand and 14% planned to exit when the surveys were completed.

Opportunity / Benefit:

This project has placed an increased focus around the requirements for expansion, from the planning phase right through to the conversion and running of the farm. The increased awareness around the potential pitfalls will increase dairy farm sustainability.

Collaborating Institutions:

Glanbia, Farmers Journal Trust, FBD, AIB and the Phelan family

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External collaborators: Glanbia
Farmers Journal Trust
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AIB
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1. Project background:

When EU milk quotas are abolished it is generally accepted that the next most limiting factor to increased milk production on many dairy farms is grazing land availability. It is likely that land purchase price in Ireland will continue to be high for the foreseeable future. Therefore it is important that land use policies facilitate the availability of land for dairying through long term leasing arrangements. The most efficient model for milk production in Ireland is the production of milk from grazed grass as this is where our competitive advantage lies. It is also envisaged that herd size will increase substantially over the coming years thereby requiring large blocks of land. Many dairy farms are constrained by farm size and farm fragmentation. This study sets out to demonstrate that a dairy farm can be leased, that all resources can be remunerated and that the farm can give a positive return for the money invested.

2. Questions addressed by the project:

- To demonstrate international best practice in milk production from pasture based systems on a large scale farm
- To demonstrate that an efficiently run dairy farm in Ireland can adequately remunerate all of the resources employed; land, labour and capital.
- To model a number of systems that might be optimum in the future with a view to developing blueprints for milk production in the new policy environment
- To identify opportunities, challenges and limitations to expansion for dairy farmers

3. The experimental studies:

There were three components to this study

1. Demonstration farm

Full financial appraisals have been completed for a whole range of Greenfield dairy farms with two dairy farms set up, one in Kilkenny and one in Bandon. Both farms have been set up with the objective of providing a return to all resources employed. Milk quota has been provided under license from DAFM with the specific objective of the farm having a demonstration role. The Kilkenny farm which has three shareholders (Glanbia, Farmers Journal, Phelan family (landowners)), was set up with approximately 30% equity and the remaining money borrowed through a fifteen year loan. The Bandon farm has 4 shareholders representing the four West Cork Co Ops (Bandon, Barryroe, Lisavaird and Drinagh), with again approximately 30% equity and the remaining money borrowed through a fifteen year loan.

2. Surveys

A random sample of suppliers was selected from Glanbia, Connacht Gold, Lakeland Dairies, Kerry, Barryroe, Bandon, Lisavaird and Drinagh and surveyed to determine the opportunities and limitations as well as future intentions of dairy farmers. A sample of 780, 250, 400, 700 were surveyed from Glanbia, Connacht Gold, Lakeland and Kerry while all suppliers were surveyed from Barryroe, Bandon, Lisavaird and Drinagh. The survey was completed through the telephone with the sample being posted out the survey and approximately one week later it being followed up with a telephone call.

3. Modelling

A number of scenarios were also modelling around substituting capital for labour on farm. The Moorepark Dairy Systems Model was used and all investments were evaluated over a 15 year period with interest and depreciation considered an expense. The investments considered centred around the milking process as 44% of the total labour requirement centres on the milking process.

4. Main results:

Demonstration farms

The Greenfield farm in Kilkenny was set up in late 2009 and early 2010 with milk produced in 2010 while the Bandon farm was set up one year later. Both farms had relatively poor performance in their first year in relation to individual animal performance, however herbage production was ahead of target. Both farms generated positive operating cash surpluses in their first year of operation. In year 2 of production the Kilkenny farm has performed well, with approximately 970kg MS /ha with just under 11 tonne of herbage grown, with a projected cash surplus of €120,000.

Surveys

The average stocking rate, milk yield per cow and per hectare was 1.78 (LU/ha), 4,808L and 8,346L respectively on the sample of farms surveyed. Fifty four percent of producers were planning to expand with 14% planning to exit in the next five years (reference year 2008). Farmers that were intending on expanding had larger farm areas, a larger milk tank capacity per litre of existing milk quota, newer milking facilities, more available cow housing and more housing that could be converted at a relatively low cost. Forty five percent of producers had identified a successor, with higher likelihood of a successor being available on larger farms. Only 15% of farmers had off farm employment. Over 55% of the sample had some form of paid labour on the farm.

5. Opportunity/Benefit:

- Both the Greenfield farms in Kilkenny and Bandon have been set up with all of the conversion costs, ongoing financial performance and ongoing physical performance available
- These farms have been set up to run for 15 years and will be generating information for farmers over that timeframe
- Information will be available to the public via the website <http://www.greenfielddairy.ie/>, the farming Press and through Open Days which will be held on the farm on a continuous basis

6. Dissemination:

There has been 3 Open Days held on the Greenfield demonstration farms since their inception. Approximately 4,500 farmers have visited the farms. There is regular articles in the Farmers Journal and the farm notes are updated after the farm walk on a weekly basis. Updates are available from <http://www.greenfielddairy.ie/node/86>

Main publications:

O'Donnell, S., Horan, B., Butler, A.M. and Shalloo, L. (2011). A survey of the factors affecting the future intentions of Irish dairy farmers. *Journal of Agricultural Science* 149 : 647-654

O'Donnell, S., Shalloo, L., Butler, A.M. and Horan, B. (2008). A survey analysis of opportunities and limitations of Irish dairy farmers. *Journal of Farm Management* 13 (6) : 419-434

Shalloo, L., O'Donnell, S. and O'Brien, B. (2009). Economic analysis of a rotary and herringbone parlour at different size of a dairy enterprise. In: *Agricultural Research Forum, Tullamore, 12-Mar-2009*, p.70

Popular publications:

Shalloo, L., French, P., Horan, B. and Van Bysterveldt, A. (2010). Greenfield dairy farm - projections - Moorepark Dairy Levy Research Update : Greenfield Site Open Day, Series No. 12 on 19th & 20th January. Teagasc IE p. 7-18

Shalloo, L., O'Loughlin, J. and Long, M. (2011). Update on the Greenfield dairy farm - Irish Dairying Planning for 2015, Moorepark'11 Open Day (29/6/11). Teagasc IE p. 96 - 100

Shalloo, L., O'Loughlin, J., Ahern, K. and McNamara, J. (2011). Shinagh Greenfield dairy farm projections. Teagasc Greenfield Dairy Programme Shinagh Dairy Farm Open Day on 25/8/11. Teagasc IE p. 4-14

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