

Teagasc Road Map for Dairying

Market and policy issues

- ⇒ EU milk quotas will cease to exist on March 31, 2015.
- ⇒ Global demand for milk is increasing. Consequently, the end of the EU milk quota regime presents an opportunity for Irish dairy farmers. In the medium term the outlook for international dairy product prices is good, but with the risk of increased price volatility.
- ⇒ Therefore, dairy farm businesses must adopt farming systems more likely to cope with market price volatility and external cost exposures. It is likely that there will be increased opportunities to enter into forward contracts or utilise price risk management tools to protect against milk price volatility.

Shape and size of sector in 2020

- ⇒ Milk production will have increased by 50% on the 2008/2009 level.
- ⇒ There will be approximately 16,500 dairy farms, including 1,500 new entrants to milk production.
- ⇒ Dairy cow numbers will increase by 330,000 above the 2007 to 2009 period (1.065 million to 1.395 million in 2020), largely fuelled by an increase in the number of female dairy calves born during the period.
- ⇒ Average milk delivered per farm will increase to 450,000 litres.

Average herd size will increase to 85 cows

Technical performance indicators for manufacturing milk-producing herds

| | Sectorial average | | Current research performance |
|--|----------------------|---------------------|------------------------------|
| | Current ⁸ | 2020 | |
| Milk delivered (kg/cow) | 4,902 | 5,420 | 5,600 |
| Milk solids (kg fat plus protein/cow) | 358 | 407 | 468 |
| Protein % | 3.36 | 3.43 | 3.65 |
| Fat % | 3.94 | 4.08 | 4.70 |
| Calving interval (days) | 397 | 373 | 365 |
| Mean calving date | 14 th Mar | 5 th Mar | 14 th Feb |
| EBI of dairy females born (€) | 119 | 150 | |
| % dairy heifers from dairy AI ⁹ | 77 | 90 | 95 |
| Replacement rate % | 25 | 22 | 18 |
| Six-week calving rate (%) | 55 | 70 | 90 |
| Cows/labour unit | 50 | 75 | 100 |
| Stocking rate (LU/ha) ⁵ | 1.87 | 2.20 | 2.80 ¹⁰ |
| Herbage utilised (tonnes DM/ha) ¹¹ | 7.3 | 10.0 | 13.2 |
| SCC | 252 | 200 | <200 |
| GHG (kg CO ₂ e/kg MS) | 15.02 | 12.93 | 11.04 |
| Nitrogen efficiency (%) | 25.9 | 27.4 | 33.7 |
| Concentrate per cow (kg) | 875 | 750 | 400 |
| Nitrogen (kg/ha) | 148 | 202 | 250 |
| Net margin at 28c/l milk price (€/kg MS) ^{4,12} | -0.04 | 1.03 | 1.76 |
| Net margin at 28c/l milk price (€/hectare) ⁴ | -25 | 909 | 2,320 |

Environmental and land use implications

- ⇒ The area under dairying will increase as numbers of dairy cows and replacement heifers increase nationally.
- ⇒ The majority of the 50% increase in milk production above 2007 to 2009 levels will be produced in the southern half of the country.
- ⇒ The Nitrates Directive will result in a requirement for increased management capabilities and nutrient efficiency, but will not unduly restrict efficient, innovative dairy farmers.

⁸ Sources; Teagasc National Farm Survey (2011), CSO (2012) and ICBF (2010).

⁹ Of those with known sires;

¹⁰ A target of 2.80 LU/ha is just within the current Nitrates Derogation stocking rate limit;

¹¹ Will be influenced by soil type and location;

¹² Full labour costs included.

Achievement of Food Harvest 2020 dairy targets is subject to a continuation of Nitrates Derogation arrangements.

- ⇒ While cow numbers will increase by 31% and milk production per cow by 15%, the greenhouse gas emissions per unit of milk production will be reduced through increased on-farm efficiency.

Research and advisory actions

- ⇒ Develop, and increase usage of, key technologies to exploit our competitive advantage from grazed grass, thereby increasing both on-farm productivity and sustainability. This will include scientific research to underpin competitiveness and sustainability, and a range of knowledge transfer activities. Teagasc recognises the role of discussion groups in knowledge transfer/practice change and will work to expand its current discussion group network. Recent initiatives by Teagasc include:

- the establishment of the Next Generation Herd to future proof dairy cow genetic selection;
- recent research showing a profit advantage to discussion group membership of €241 per hectare per year;
- the Dairy Business Degree Programme, in collaboration with UCD, which meets the needs of future dairy farmers and agri-business personnel;
- the Diploma in Professional Farm Management, in collaboration with UCD, which will provide a supply of trained farm managers;
- recent research highlighting the potential of sexed semen used on the Irish dairy herd; and,
- the launch of the 'Heavy Soils' programme in wetland areas to identify and promote the adoption of technologies appropriate to dairy farming on heavy clay soils.

- ⇒ Linkages with industry partners, e.g., milk processors, AHI and the ICBF will continue to be an essential component of the Teagasc extension programme.

- ⇒ Further actions are required. These include:

- an increased focus on strategic and financial planning and cost control, especially for farmers expanding their dairy herds;
- the identification of appropriate risk management strategies to help dairy farmers cope with risks such as milk price volatility and adverse weather events; and,
- the promotion of collaborative farming arrangements to take advantage of the growth opportunities to 2020 in the dairy sector.

- ⇒ These actions will lead to an increased number of farmers meeting the road map targets. The percentages of dairy farmers currently achieving selected targets are shown in the table.

- ⇒ The road map targets will be met through a combination of: (1) an increase in grass utilised per hectare by dairy cows; (2) an increased rate of genetic progress in the national herd fuelled by an increased supply of high EBI dairy replacements; (3) an earlier and more

compact seasonal spring calving pattern; and, (4) increased attention to strategic planning and cost control on dairy farms.

Percentage of farms achieving selected Teagasc Dairy Road Map targets¹³.

| | 2010 | 2011 |
|---|------|------|
| Delivered per cow: $\geq 5,420$ litres | 30 | 39 |
| Milk solids per cow: ≥ 407 kg | 22 | 30 |
| Somatic cell count: $\leq 200,000$ cells/ml | 26 | 37 |
| Concentrate feed per cow: ≤ 750 kg per cow | 34 | 45 |
| Stocking rate: ≥ 2.20 LU/ha | 21 | 20 |

Comments

Post 2015, expansion in milk production in Ireland will occur, as EU milk quotas no longer constrain milk output. The Teagasc dairy research and advisory programmes will continue to identify and promote key technologies in grassland, breeding, herd health/milk quality and strategic planning/cost control as the Irish dairy industry experiences a period of rapid change.

¹³ Source: Teagasc National Farm Survey (2010, 2011).