

**Animal Research Programme –
Sustainable Production Systems and System Analysis
RMIS No: 6242**

Title

Predicting long and short term milk supply change in the Irish dairy industry

Abstract

Targets set by Food harvest 2020 will result in increased pressure on existing and new milk processing capacities as expansion takes place. Milk processing capacities currently are at best 10% greater than existing supply at peak. While there will be investment in additional processing capacities in the coming years, this will need to be planned in a way that maximises the returns to the overall industry. Predicting both short term fluctuations and long term trends in overall milk supply will be a fundamental requirement if the Irish dairy industry is going to ensure that the potential from product portfolio and processing capacity issues are dealt with in the most beneficial manner. A model utilising lactation curves will be developed to predict the short term and long term supply of milk. This model will incorporate information from a number of key sources available, which will include stock numbers (including cows, yearling heifers, calves) calving date, turn out date, days in milk, parity structure of the herd, meteorological data and grass growth information into the milk supply predictions. Historical milk delivery data will be combined with the series of databases to develop the prediction equations. A number of year's data will be used as a training population while the remaining data will be used for validation.

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