# Livestock Systems Department

**Title**
Advanced predication for production and processing innovation

**Abstract**
The SMART APPI concept has evolved from discussions between Teagasc TSSG, Glanbia plc and Dairygold Ltd. The publication of the food strategy document, "Food Harvest 2020" published by the Department of Agriculture, Food & the Marine, also gave the concept some background. Specifically, Food Harvest 2020 strives for a 50% increase in milk output. The dairy processors, Glanbia plc and Dairygold Ltd. Require to plan how they are going to deal with this expansion and were searching for predictive models for milk production that could accurately forecast and help manage fluctuations in the supply chain that the new production regime would bring in 2015. Teagasc had developed a model that was used by Dairygold and had also been implemented within the ICBF database, while at the same time, Teagasc in conjunction with CIT had developed a dynamic model to predict short term fluctuation in milk supply. Through the development of these models, it was realised the potential from a research program in this area. TSSG, with its expertise in data mining from multiple data sources, could provide the research and development capabilities required to build a software platform that would utilise predictive analytical engines, based on the Teagasc/CIT models, and advanced data mining algorithms to deliver an accurate, reliable and easy to use digital modelling system.

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**Programme/Subprogramme/RMIS Number:**
AGRIP – Moorepark Livestock Systems-Decision Support Tools & Demo Farms-6756

**Start Date:** 1/9/14 **End Date:** 28/2/16