

ECONOMIC VALUE OF PASTURE PRODUCTION IN SE AUSTRALIAN DAIRY SYSTEMS

Sub theme: Knowledge & Information

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Abstract:

Most dairy production systems in SE Australia are based primarily on grazed pasture. Pastures are not traded directly, so they are difficult to value. Farm systems models of representative farms have been used in Ireland and New Zealand to estimate economic values of important pasture traits such as seasonal pasture production, metabolisable energy content and persistence. The economic values have been defined as the estimated change in farm profit per unit of change in a defined pasture trait. These economic values are combined with data about cultivar performance to create an index, viz., Ireland's Pasture Profit Index (PPI) and New Zealand's Forage Value Index (FVI). The aim of the PPI and FVI is to assist dairy farmers identify profitable cultivars of pasture.

A similar tool for the SE Australian dairy industry is being developed. Economic values for seasonal dry matter yield in key dairy regions have been estimated. In SE Australia, the method of valuing pasture in a single 'representative' farm is implausible because there is a wide range of dairying environments and systems. Instead, case study farms in which grazed pasture in the cows' diet was supplemented with grain-based concentrates and conserved feeds, either grown on-farm or purchased were defined for 4 key dairy regions to estimate economic values. The economic values were calculated using a whole-farm partial budget method. For each case study herd, the base monthly energy requirements, feeds consumed and pasture consumption per hectare were defined. An increase in pasture yield was introduced to the system and the economic values of the added pasture dry matter were estimated. The seasonal economic values of extra pasture dry matter in the 4 case studies ranged from \$0.11 to \$0.39 per extra kilogram of dry matter grown. The highest values occurred where additional pasture grown was harvested by cows and supplementary feed was reduced. The lowest values of additional pasture occurred where it was conserved, as occurs in spring in south-west Victoria. The economic values of additional pasture in dairy systems plus cultivar evaluation data will be used to form a forage value index for the dairy industry in SE Australia. The forage value index will assist dairy farmers and their advisors select the most suitable pasture cultivars for their region and farming system.

Keywords: *dairy; pastures; economic values; cultivar selection*