A Pasture Database for Victorian Dairy Producers

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Milk prices have been steadily declining over the past 3 decades (ADIC, 1996), hence, the greatest opportunity for dairy producers to improve profits on farms will come from reductions in the costs of production. Feeds can amount to between 30-50% of cash farm operating costs (Aitken, 1996). Substantial savings can be made by better matching supplements to the pasture feedbase, thus reducing feed wastage and/or improving milk production responses to feeding practices. Although feed testing of supplements is common or alternatively feed companies may provide producers with nutritional information for their products, knowing what pastures provide in terms of nutrients is more difficult to ascertain, with laboratory testing often proving both uneconomical and untimely.

A database commissioned by the Department of Natural Resources and Environment (DNRE) has been developed to assist Victorian dairy producers to determine the nutritive characteristics (energy, protein and fibre) of pastures, based on simple and observable attributes of pastures on farm. The database captures information from over 8,000 pasture samples collected state-wide, using standardised methodologies. The user can access the database via the Web on: www.Target10.com.au.

The user is asked to select from a range of drop-down menus for information on the region where the farm is located and month of year (Figure 1). The search can be further refined by specifying the pre-grazing pasture mass (t DM/ha) and/or by specifying whether a particular pasture specie(s) is dominant. Species percentages are expressed in increments of 25%. For example, a ryegrass-dominant pasture would have >50% ryegrass component. A ryegrass-clover dominant pasture would have a ryegrass component >25% plus a white clover component >25%. Searches can also be made for paspalum, dead and weed components. A button is then pressed to activate the search. The database then proceeds to collate all pasture entries matching the description specified by the user and displays a summary of these on an output screen (Figure 2).

The output screen consists of average values of metabolisable energy (ME, MJ/kg DM), crude protein (CP, %), and fibre (NDF, %), as well as standard deviations, ranges and the number of matching entries found for each description. The latter determines the degree of confidence one should place in the compiled results. Nutritive characteristics are expresses for pastures cut to ground level and in terms of what the cow actually consumes after selection differentials have been applied (Doyle et al. 1996).

The derived nutritive characteristics can then be used in any nutritional package which accounts for substitution (where supplements are fed) to determine whether the diet is balanced for the desired levels of production. The database is continually updated with data generated from current research projects within the DNRE dairy program.


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