

CROPS TO ALTER MILK COMPOSITION

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Dairy farmers may be able to use high yielding crops to manipulate milk composition, according to research by the FutureDairy team at Camden, NSW.

The field trial, conducted by Honours student, Douglas Mackintosh, involved lactating dairy cows grazing Persian clover or forage rape (brassica).

There was no difference between the two crops in total milk yield. However cows grazing forage rape produced milk with a higher protein content than those grazing Persian clover. In contrast, cows grazing Persian clover produced milk with a higher milk fat content than those grazing forage rape.

FutureDairy project leader, Associate Professor Yani Garcia, said the effects on milk composition were likely to be due to forage rape having a lower fibre content and higher energy than Persian clover.

Energy intake is the main driver of milk protein content so the higher the energy concentration in the feed, the higher the content of protein in the milk.

“We know from previous research that both forage rape and Persian clover are high yielding crops, providing quality feed during the autumn, when quality pasture is typically in short supply,” said Assoc. Prof. Garcia.

FutureDairy’s results suggest that dairy farmers with pasture-based systems can choose the forage crop that best suits their needs.

“With forage rape, we should expect higher yields in early autumn and possibly an increase in milk protein content, according to these results. Persian clover will be a better fit where the feed deficit occurs in late winter and early spring,” he said.

This has been the experience of some farmers involved in FutureDairy’s Hunter Valley on-farm trials.

“Two of the farmers grew forage rape to fill the feed gap in early winter. Compared with the previous year, their annual results show increases in total milk solids per cow, milk solids per kg of body weight and an increase in overall annual milk protein production,” said Assoc. Prof. Garcia.



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FutureDairy research has found that cows grazing brassica, or forage rape, produce milk with higher protein content than cows grazing Persian clover.