

# Mixed feeding trialled for more milk

February 12 2014, by Anika Rodgers

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The PMR system encourages more grazing which can generate extra quantities of milk at the same quality. Credit: Judy Baxter

For the past 18 months dairy farms in Western Australia have been taking part in trials to determine if a partial mixed ration (PMR) system in pasture-based dairying is cost effective.

Seven [dairy farms](#) in the South West region of WA volunteered to trial

the flexible feeding system, including farms in Harvey, Margaret River, Capel and Busselton.

Study author and Department of Environment and Primary Industry's (Victoria), Bill Wales says in PMR, mixed rations are fed to cattle between grazing periods each day.

"Partial mixed rations are an efficient way of giving nutrients to [cows](#)," Dr Wales says.

"A number of ingredients are mixed together and presented on a feed pad—typically concrete in troughs."

Dairy cows generally graze in several bouts per day but with the PMR system cows are grazing more often.

Dr Wales says there are a couple of theories as to why cows graze harder on the PMR system.

The first is when wheat is taken out of the diet and replaced with canola meal, it removes the feedback signals the cow receives to stop eating, prompting the cow to graze more.

"The other theory is that [canola meal] removes some of the insults to the rumen. Putting canola meal in the diet helps to remove some of the acidity," he says.

The researchers haven't found any negative health problems with cows fed using the PMR system so far.

"There is potential that standing on concrete, walking around, could wear the hooves down and [the cows] will end up with more feet problems. [There's] no evidence to support that at all in the research over several

lactations," he says.

Dr Wales says the PMR system helps improve the rumen environment of the cows, and encourages more grazing which can generate extra quantities of milk at the same quality.

Department of Agriculture and Food WA's senior dairy research officer Martin Staines says it's too early to tell how beneficial the PMR system is in WA.

"In some cases the cost doesn't outweigh the benefit. The objective of this work is to try to identify when can you justify doing this and when are you better to stick to a more simple system and a lower cost system, and manage that effectively," he says.

About 20 per cent of Australian dairy milk production comes from cows fed mixed rations.

Provided by Science Network WA

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