

Skimmed milk -- Straight from the cow

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Herds of cows producing skimmed milk could soon be roaming our pastures, reports Cath O'Driscoll in Chemistry & Industry, the magazine of the SCI. Scientists in New Zealand have discovered that some cows have genes that give them a natural ability to produce skimmed milk and plan to use this information to breed herds of milkers producing only skimmed milk.

The researchers also plan to breed commercial herds producing milk with the unique characteristics required to make a butter that is spreadable straight from the fridge. They have already identified a cow, Marge, with the genes required to do this and say a commercial herd is likely by 2011. The milk is very low in saturated fats and so should be high in polyunsaturates and monounsaturated fats.

Experts say that the discovery of these rogue milkers could completely revolutionise the dairy industry. Ed Komorowski, technical director at Dairy UK says that the New Zealand approach could be used to breed cows that still produce full-fat milk but with only the good fats, which could swing things back in favour of full-fat milk. In the UK, for example, only 25% of milk sold is full fat. 'In future if whole milk can be made to contain unsaturated fats – which are good for you – then it might mean that people change back to whole milk products. The big thing about dairy products is taste, so this would be a way of giving the benefits of taste without the disadvantage of saturated fats,' according to Komorowski.

This may also overcome the problem of waste. 'If you can genetically produce milk without fat then that may turn out to be a very good solution to what might later be a big disposal issue,' says Komorowski. Producing skimmed and semi-skimmed milk means there is a lot of fat left over.

Komorowski noted, however, that although the lower-fat milk may be healthier, it will be interesting to see how much milk the cows actually produce.

The rogue cows were discovered when biotech company ViaLactia screened the range of milk compositions across the entire herd of 4m New Zealand cattle. New Zealand dairy firm Fonterra has already made milk products from Marge's milk and they maintain the positive taste.

Source: Society of Chemical Industry

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