



Cows grazed on pastures have five times more of a fatty acid called conjugated linoleic acid (CLA) in their milk. The incidence of cancer in laboratory rats declines after they've consumed CLA.

There is a new reason why it may be beneficial to allow cows to graze on pasture. That reason involves a compound called conjugated linoleic acid (CLA).

CLA is a fatty acid found in beef and dairy fats. Scientific interest in CLA was stimulated about 12 years ago when a University of Wisconsin researcher discovered its cancer-fighting properties in a study of rats fed fried hamburger. CLA cannot be produced by the human body, but it can be obtained through foods such as whole milk, butter, beef, and lamb.

"The interesting thing is that dairy cattle that graze produce higher amounts of CLA in their milk than those which receive conserved feed, such as grain, hay, and silage," says ARS dairy scientist Larry Satter. This is true even when the nongrazers eat pasture grass conserved as hay.

Satter, who is based at the Dairy Forage Research Center in Madison, Wisconsin, conducted a study comparing the amount of CLA in milk from cows grazing on pasture to the amount from cows fed hay or silage. His findings: Pasture-grazed cows had five times more CLA in their milk than those fed silage.

Do dairy producers need to graze cows to get them to produce more CLA? "Not necessarily," says Satter. Instead, he devised a way to nudge the production of CLA by dairy cows

fed typical confinement diets. He added extracted whole soybean and linseed oils to the corn-alfalfa diet. The added oils boosted CLA content in the cows' milk to equal the levels obtained from grazing.

ARS and the Wisconsin Alumni Research Foundation (WARF) subsequently patented the method to increase CLA in cows' milk. The patent, issued in the spring of 1999, was based on a study conducted by Satter and his University of Wisconsin colleagues.

"Animal fats have been criticized for years, but now the potential benefits of CLA in milk and meat from ruminant animals

is being seriously studied. Milk fat is one of the richest natural sources of CLA. If human trials show the same benefits as studies with laboratory animals, the benefit of consuming milk products could improve the economics of dairy producers everywhere," says Satter.—By **Linda McGraw**, ARS.

This research is part of Animal Production Systems, an ARS National Program (#102) described on the World Wide Web at <http://www.nps.ars.usda.gov/programs/appvs.htm>.

Larry Satter is at the USDA-ARS U.S. Dairy Forage Research Center, 1950 Linden Lane, University of Wisconsin, Madison, WI 53706; phone (608) 264-5353, fax (608) 264-5147, e-mail lsatter@dfrc.wisc.edu. ♦

**A m a z i n g
G R A Z E**