

Harvesting the health promise of conjugated linoleic acid

Health sells, but who's buying?

Consumer survey gauges prospects for CLA-enriched dairy products.

Faster than you can say Omega 3, specialty dairy products that showcase nutritional content and health benefits are rapidly becoming the major drivers of growth in the dairy sector.

Conjugated linoleic acid (CLA) is one of the latest and arguably the most promising dairy component to show potential in this area. But with a complex and ever-shifting environment of consumer attitudes regarding health value, the success of potential CLA-enriched dairy products will depend heavily on understanding the customer.

To help kick-start that process, the CLA Network conducted a major telephone survey of consumers in Alberta and British Columbia. The survey was designed not only to gauge potential attitudes and acceptance of CLA-enriched products, but to unveil consumer perceptions that can assist in the development of successful marketing strategies.

"The goal of the study was to examine consumers' attitudes toward potential CLA-enriched products, and identify the key factors that may help determine consumers' acceptance of these products," says Yanning Peng,



market analyst with Alberta Agriculture and Food and member of the CLA Network. "Understanding these consumer motivations will be important for future success in marketing CLA-enriched products."

Unveiling consumer attitudes

The survey was conducted in 2004 and results / analysis were recently published in the January 2007 Canadian Journal of Agricultural Economics. The survey gathered responses from approximately 400 people in Alberta and 400 in British Columbia. Participants were randomly selected and the survey was designed to achieve a 95 percent confidence interval with an accuracy of plus or minus five percent.

The survey collected information on socio-demographic characteristics and included questions on consumer attitudes and knowledge about dairy products, nutrition labeling, health claims, health concerns, the relationship between food and health, as well as consumption of milk and existing functional foods.

"Essentially what we were looking at was providing a preview of the environment for acceptance of CLA-enriched products," says Peng. "Because CLA-enriched products are not yet on the market, we couldn't measure actual consumer behaviour. But we could look at attitudes and factors that could be reasonable predictors of future behaviour."

Growing awareness, potential

Despite limited promotion of CLA, the survey found that 11.6 percent of respondents already had some awareness of CLA and its benefits.

The survey explained several key facts about CLA to all participants. Among these, that CLA is naturally found in cow's milk; based on animal studies, CLA has also been shown to be a potent anti-cancer agent; CLA is also showing promise in the area of diabetes management, heart health and boosting the immune system; and when cows are fed a diet fortified with sunflower seeds or flax seeds, it is possible to significantly increase the CLA content of the milk.



Given these facts, respondents were then provided a base price for milk and asked to estimate a price premium that represented in their opinion "a good value" for CLA-enriched milk. On average, respondents estimated that CLA-enriched milk was worth \$0.39 more per liter than the price of regular milk – an average of 35.5 percent more than the base price.

"Positive attitudes toward the healthiness of conventional dairy products significantly increased interest in purchasing five of the seven CLA-enhanced dairy products in this study," says Peng. "These results indicate that educating consumers about both the health benefits of conventional and high CLA dairy products, and improving the overall image of all dairy foods would be helpful in the successful marketing of CLA-enriched products."

Respondents were also asked to state their likelihood to purchase each of seven CLA-enriched milk products, including whole milk, 2 percent milk, flavoured milk, yogurt, butter and cheese. The results indicated that CLA-enriched yogurt and cheese have the highest likelihood to be accepted by consumers, followed by 2 percent milk, 1 percent milk and butter. CLA-enriched flavoured milk and whole milk had the least likelihood to be accepted.

Predicting purchasing behaviour

To develop final analyses, the results of these basic questions were tied to further results on demographic information and a range of variables understood to affect consumer perception.

Among many interesting findings, for the variable related to health concerns, results indicated that consumers who are more concerned about cancer or diabetes are more willing to try CLA-enriched products, compared to those more concerned about heart health. "This may be due to negative interaction between perceived health benefits from CLA-enhancement and potential health detriments from perceived high fat content," says Peng.

The study also showed respondents who had previously tried innovative products marketed for nutritional components or health benefits were more likely to show interest in the CLA products. Consumers who more strongly believe health claims on food labels and the potential health benefits of CLA were also more interested in purchasing CLA products.

In a key overall analysis component, information on consumer perceptions of dairy products and their actual purchasing behavior was used to predict the likelihood of purchasing CLA-enriched dairy products.

"These results suggest that consumers who had positive perceptions about dairy products in general were more willing to try most of the CLA products," says Peng. "It is possible that previous perceptions that low fat milks, yogurt, and cheese are healthier milk products than whole milk or flavored milk, may increase interest in trying new, even healthier versions of these products."

In a component focused on preferences among different types of milk, consumers who previously bought a specific type of conventional milk were more likely to express interest in a CLA-enriched milk product of that same type.

"These findings appear to confirm that consumers were not willing to switch from their conventional type of milk to a lower or higher fat content in a CLA milk product," says Peng. "The results from almost all the variables included in the 'dairy attitudes' section of the model suggest that consumers tend to stick with milk types they have regularly been consuming. For some products, such as 1 percent milk and 2 percent milk, the tendency was quite strong."

Profiling the customer

Results for demographic variables were also helpful in profiling consumers who are likely to be most interested in CLA-enriched dairy products.

The middle-age groups of 35–44 years old and 45–54 years old had positive and significant coefficients in two or more of the product models, including flavored milk, yogurt, butter, and cheese. "This suggests that consumers in these age categories were more interested in purchasing processed CLA-enriched dairy products," says Peng. "The marginal effects of age on five of the CLA products confirm that baby boomers should be targeted as consumers most likely to purchase CLA dairy products, particularly butter and cheese. Flavored milk is an exception, where it is young consumers who tend to have the highest propensity to purchase the product."



Consumers between 35 and 54 years of age were found to have good market potential for CLA dairy products, especially CLA cheese, butter, and yogurt. Younger consumers were interested in CLA-enhanced flavored milk, as were consumers living in households with teenagers.

"The interest of younger consumers and their parents for purchasing CLA-enhanced flavored milk is yet another indication of the potential positive impact of a health claim when the base-product is perceived as being less healthy."

Overall, the study found the consumer target segment for most CLA-enriched milk products can be principally characterized as being health-conscious, middle-aged consumers who already believe in the healthiness of conventional milk products. "New CLA-enhanced dairy products must be designed, developed, and marketed to meet the needs of this group in order to be successful," says Peng. "But use of other information about consumer perceptions can be used to make inroads among other demographics.

"The study shows that CLA-enriched products have solid market potential, which can be enhanced

substantially with further research progress, education initiatives and marketing strategies."

Tapping 'functional foods' market

With progress in these areas, CLA-enriched products could help the dairy industry further tap into the burgeoning market for functional foods, says Peng. A functional food is defined as any food that has demonstrated physiological benefits or reduces the risk of chronic disease beyond what are considered normal nutritional functions.

A leading example for the dairy sector is the success of milk enriched with Omega 3 fatty acids. "CLA-enriched dairy products have similar potential."

This promise could deliver major benefits to both consumers and the dairy industry, she notes. "The development of functional dairy products improves consumer welfare by providing new options to promote health through dietary choices. It also helps the dairy industry to gain competitive advantages in the marketplace."

Founded in Canada, the CLA Network is a collaborative team from academia, industry and government, including representatives from many areas of expertise such as research, food industry, health and communications. The network is devoted to capturing the benefits of natural dairy and beef CLA to benefit consumers and livestock industries.

Learn more

For more information on the CLA Network, visit www.CLAnetwork.com or email: CLAnetwork@gov.ab.ca.



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