

DDGs Eyed for Functional Food

Scientists Finding DDGs Have Nutritional Value for Humans



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OMAHA (DTN) -- In addition to its vital place in livestock rations, distillers grain may find another market in the functional food industry.

The U.S. already has a \$60 billion functional food and beverage sector, according to The Boyd Company, a New Jersey-based consulting firm that provides independent counsel to companies regarding where they should locate. With an aging U.S. population and a greater emphasis on health prevention, those sales are expected to triple over the next five years. Global sales of functional foods in 2009 were already at \$140 billion and growing rapidly.

The Boyd Company defines functional foods as "foods that offer a beneficial effect on health when consumed as part of a varied diet on a regular basis at effective levels."

Samples of functional food and beverage products include high-energy sports drinks, cholesterol-lowering yogurts and butter spreads, cancer-preventing tea drinks, dark chocolates and breakfast cereals.

It is products such as breakfast cereals, breads, snack foods and energy bars that could provide a new market for distillers grains, according to John Boyd Jr., vice president of The Boyd Company.

"There are great opportunities in the functional foods sector for distillers grain," Boyd said. "There is much research going on in this field, and scientists are finding great nutritional value in distillers grain from the ethanol industry."

The Boyd Company recently released a report of a corporate location study comparing the cost of operating a functional food and nutritional beverage facility in 35 U.S. and Canadian cities. The study analyzed all major geographically-variable operating costs that are most pivotal to a corporation's decision on where to locate such a production operation.

Midwestern cities such as Sioux Falls, Des Moines, Omaha and St. Louis scored well in the report because of their proximity to the majority of ethanol production facilities. Ethanol production in the Midwest alone generates more than 10 million tons of distillers grain annually.

Distillers grain is high in both protein and fiber, both of which make the ethanol co-product valuable for functional foods. Distillers grain also contain phytochemicals, lecithin and carotenoid antioxidants such as lycopene, which are some of the ingredients being researched and expected to be mass produced from distillers grain for the functional foods industry.

Some of the major bioscience and food companies conducting research in this area include Syngenta, Monsanto, General Mills, ConAgra, Kraft, Hersey, Kellogg and others, Boyd said.

These companies are ramping up their efforts in research and development to distinguish their products by marketing their nutritional value, Boyd said.

Boyd mentioned that many Midwestern universities are also conducting research in this area, especially Padmanaban Krishnan, Ph.D., professor of Nutrition, Food Science and Hospitality at South Dakota State University.

Boyd called Krishnan "one of the most respected researchers in this field," and said that SDSU is at the leading edge of this type of research. Krishnan, who has been interviewed several times by DTN, has spent the majority of his career researching the use of distillers grain in food products.

While there are no companies using distillers grain in food products on a commercial scale yet, Boyd believes that may happen in the near future.

"It's right around the corner," he said. "The research is there. The funding is there. The raw material is there. It's just a matter of time before it becomes commercially available"

He added, however, that there will need to be a market and necessary governmental approvals for that to happen.

Still, Boyd believes that there could be a promising market for distillers grain for use in functional foods.

"Distillers seems to have a strong potential for use in the functional food industry. If ethanol co-products can be marketed to U.S. consumers through retail grocery stores, that can greatly improve the bottom line for ethanol producers," he said. "Such technology can also create very attractive employment opportunities as well, especially for graduates from Midwestern universities."

(CZ/AG)

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