

Low-oil DDGS Becoming Increasingly Available

Ethanol plants in the United States, which also produce the feed ingredient distiller's dried grains with solubles (DDGS), continue to upgrade equipment to extract non-food grade corn oil during the ethanol production process.

While regular DDGS may contain 10-15 percent oil, the low-oil variety contains much less and has different characteristics and feeding values than regular DDGS.

Of the roughly 200 corn dry mills that produce ethanol, about 90 have oil extraction capabilities, and 105 plants will by this summer.

"On a production basis, about 40 percent of U.S. DDGS produced today is low-oil, and 58 percent will be low-oil by this summer," said Randy Ives of Gavilon, LLC, and U.S. Grains Council Value-Added Advisory Team Leader.

Ives explained that low-oil DDGS has higher crude protein and higher levels of amino acids. The concentrated amino acid profile is positive for monogastric animals like poultry and swine, while dairy animals may be able to utilize more product thanks to the lower level of fat in low-oil DDGS.

While its appearance is the same as regular DDGS, the dried, low-oil product has improved flowability.

The Council noted research is underway to help quantify the characteristics of low-oil DDGS. Results will become available later in 2012.

While buyers and sellers often add the protein and fat numbers together as part of a sales contract, that may need to change going forward.

"This makes asking questions and communicating important," Ives said. "What we really need to do is go back to requesting specific protein and fat levels and then build in a discount schedule to make up for slight differences in the final shipment."

Low-oil DDGS is a great product that has different values for different buyers, depending on the end use, Ives commented. "It's important for buyers to ask questions and hold suppliers accountable," he added.

Why extract oil?

Just five years ago, few ethanol plants had the ability to extract non-food grade corn oil because the equipment was expensive, and the oil had little value. Now, however, the value of non-food grade corn oil has increased, and plants can extract the oil more efficiently due to improved emulsifiers and centrifuge technology, lowering the payback on oil extraction equipment to as little as six months.

For example, an ethanol plant using 16 million bushels of corn to produce 40 million gallons of ethanol can also produce 135,000 tons of low-oil DDGS and 8 to 12 million pounds of oil.

"With such a positive return, the adoption rate has been incredible," Ives said.



On the left is a non-food grade corn oil immediately after extraction. On the right is the oil after it settles, with only the upper portion being sold as oil. This non-food grade corn oil goes to biodiesel production or feed.