

# Balancing Act

## Golden Grain finds corn oil yield sweet spot

A chemical corn oil extraction aid has helped a Mason City, Iowa, ethanol plant increase its corn oil yield dramatically. "It's probably about doubled the amount of corn oil that we get out of the plant on a weekly basis," says Chad Kuhler, chief operations officer of Golden Grain Energy LLC. "It's providing a very good return based upon these current

corn oil prices." He adds that, based on the corn oil prices in June, Golden Grain was gaining \$2 for every \$1 it spent on the technology.

The back-end corn oil extraction aid comes from Ashland Hercules Water Technologies, a commercial unit of Ashland Inc. The chemical is added to the process after distillation, to the syrup being separated into corn oil and distillers grains and works by improving the release of oil during mechanical extraction, says McCord Pankonen, global biorefining marketing manager, water technologies. The resulting oil contains less solids and means a reduction of system deposits, adding up to less downtime for cleaning and maintenance.

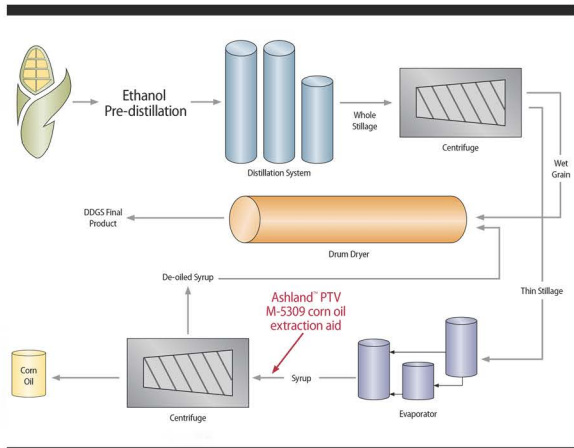
Golden Grain first began testing Ashland's product in October. Though it produced some good results, the 80 MMgy ethanol plant did its due diligence and tested other products as well, Kuhler says. In March, the company settled on Ashland's patent-pending extraction aid. In May, Ashland worked with Golden Grain to smooth out some challenges by providing the ethanol plant with a controller to more accurately dose the chemical. "Since that time it has been basically turned on full time," he says.



PHOTO: ASHLAND INC.

**Before and After** Corn oil on the left was extracted before the extraction aid was used, and is compared to the extraction using the technology on the right.

Ethanol production facilities interested in increasing corn oil extraction numbers need to evaluate all potential suppliers. Each technology is different and will fit in differently with the needs of various plants. Still, Kuhler can say Golden Grain is pleased with what Ashland's corn oil extraction aid has done for that company. "At least for our system, it needed something in order to get the system to perform more as designed," he says. Removing more corn oil does push down the protein/fat numbers in the plant's distillers grains. It's important that an ethanol plant going for higher corn oil extraction numbers understand its customers' needs or it will lose business. So far, he says, the company's increased corn oil yield has had no negative impact on its distillers grains sales. —*Holly Jensen*



**Where it Fits** A schematic diagram shows where the Ashland corn oil extraction aid is used in the ethanol production process.

SOURCE: ASHLAND INC.

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