- Value of High Moisture Corn
- Starch Sources

HARVESTORE® TODAY



HIGH MOISTURE CORN: A Fast, Useful Starch Source

With the summer coming to an end, it's time to start thinking about your corn harvest. With more net energy value than dry corn, many producers and nutritionists turn to high moisture corn as a useful feed ingredient. However, proper moisture content and processing method are essential to obtaining the added energy value.



Ground high moisture corn.

Successfully using high moisture corn requires attention to storage conditions, moisture content, feeding management and processing.

"If high moisture corn has less than 25 percent moisture, poor fermentation and storage losses can occur, plus it can have lower energy values and need more processing for optimal digestion," says Dr. Greg Anderson, consulting nutritionist. "If corn is too wet, it may have a lower feed value and cause rumen digestive disorders."

For maximum value, Anderson recommends putting corn into a Harvestore® structure at 26 percent to 28 percent moisture. Because capturing this peak harvest time can be difficult, he says farmers are better off starting their harvest when the corn is a little too wet, rather than waiting. "Even large operations rarely have enough equipment or time to harvest an entire crop when it is at its peak. Often times, farmers start when corn is at its optimum moisture level, but by the time they are done, it's too dry."

Gary Zimmer, a dairy nutritionist, producer and owner of Midwestern Bio-Ag (a biologically based agricultural consulting company in Blue Mound, Wis.), agrees, "I'm a fanatic about harvesting corn at at least 25 percent moisture. I start early and target for it."

How the corn is processed is also important, especially to digestion. "To make sure you don't have dips in production, inspect your equipment early," says Anderson. "Many times, a roller mill will be out of adjustment or worn out. The finer the corn is rolled, the more surface area will be made available to the rumen bacteria."

Zimmer grinds his high moisture corn really fine with a hammer mill. "I want finer particle size because I'm using less corn in the ration, but getting the best use out of it. This way, I feel we get the most utilization out of the starch. In addition, we try to match the solubility of high moisture corn with our haylage solubility. We produce super-quality highly digestable forages and match that with the fine ground highly digestable starch."

With 200 cows and a high-moisture Harvestore unit on the farm, Zimmer has always liked high moisture corn. "Our cows do really well on it. Plus there is no cost of drying and we can get it off the field early, helping us with our fall work."

To help manage the supply and capitalize on the benefits of high moisture corn year round, Anderson says to keep close track of feed rates and inventory. Start blending drier corn with high moisture corn earlier in the feeding year so that you don't have a sudden ration change. Don't switch completely from high moisture corn to dry corn.

Along with paying attention to moisture content, processing and feed management, Anderson says maintaining a nutritional balance when feeding high moisture corn also is critical.



The NEW HARVESTORE® BACK ON THE HORIZON!

FAST, MEDIUM AND SLOW STARCH SOURCES

	FAST STARCH	MEDIUM STARCH	SLOW STARCH
FEED INGREDIENT	• Finely processed (rolled or ground) high moisture corn > / = 25% moisture • Steam-flaked corn rolled or finely ground • Processed wheat • Extremely fine-ground oats • Finely ground barley	• Coarsely processed high moisture corn • Dry shelled corn rolled or finely ground	• High moisture shelled corn at less than 22% moisture • Dry corn coarsely rolled or ground

"Rations today are formulated to reach the highest production level. In order to achieve this, we need to commit to balancing carbohydrates (starches) when feeding high moisture grains – balancing for rate of digestion," notes Anderson.

According to the nutritionist, some starches digest more quickly than others. Maintaining a ration balanced between a "fast" starch and a "slow" starch is essential to digestion and maximum performance. Anderson warns producers against overloading a cow's system with too many fast starches, increasing the risk of acidosis.

"A ration does need to have some fast starches for the rumen to work at peak efficiency," says Anderson. "And finely processed high moisture corn can be an excellent source of a fast starch. However, we never want all of the starches to come from fast starches or all from slow starches. The key is to find a balance that makes a cow's rumen work efficiently."

By using high moisture grains and Harvestore structures and unloaders, many producers can harvest early, reduce field losses, eliminate expensive energy costs used for drying grains, and increase animal performance.

For more information on high moisture corn Harvestore structures contact your local Authorized Harvestore Dealer.



We'd Like Your Comments...

Have you had success designing rations around forage stored in a Harvestore? We'd like to hear your story and possibly feature it in an upcoming issue of Harvestore Today. If we use your story, we'll present you with an iPod shuffle. Email us your experience or other comments to **jgarnett@cstindustries.com.**

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