- Group Feeding.
- Fast In, Fast Out.

HARVESTORE® TODAY



Group Feeding High Quality Silage to Top Producing Cows Makes Cents

As dairies continue to expand, the challenge of meeting individual cow's nutritional needs expands, too.

THAT'S WHY DAIRY FACILITIES ARE BEING designed to allow cows to be grouped, based upon milk production and body condition. Dairy nutritionists recognize that a cow's nutritional requirements change over stage of lactation, and group pens allow dairies to keep a closer eye on performance and health.

The dairies with the best, most economical use of feed are tailoring their feed programs for as many as four production strings, and making sure that high producing dairy cows receive the highest quality forages available – forages from a Harvestore – even while lower producers may receive forages from a plastic bag or concrete bunker.

"Forage quality is extremely important when feeding high producing dairy cows," says Greg Anderson, Nutritional Consultant to Engineered Storage Products Company. "They need the additional dry matter intake and energy. An optimal forage system will segment forages by quality."

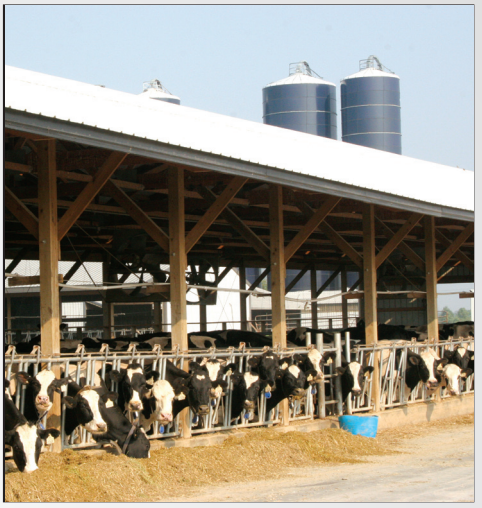
High quality forage is consumed in larger amounts and is more digestible than mature, lower quality forage, or forage that has lost substantial nutrient value over time. Alfalfa stored in a Harvestore will lose only 3 to 8 percent dry matter, while alfalfa stored in a covered concrete bunker the same amount of time will lose 12 to 25 percent, Anderson says, and bags 12 percent or more.

"That's why dairies that have gone to plastic bag or concrete bunker storage as they have expanded are still using or restoring their Harvestores – to provide a higher nutrient value to high producing cows," Anderson says. Plus, Harvestores' "first-in, first-out" flow allows for consistent haylage quality, without abrupt changes in nutrient value. Some dairies use their Harvestores for high moisture corn for their high producing cow group instead of alfalfa, Anderson says.

High quality forages also provide a high return on investment – an ongoing USDA Forage Research Center study shows 5.7 more lbs of fat-corrected milk in cows fed alfalfa from a Harvestore as compared to alfalfa from the same field stored in a bag or bunker.

"Forages are a more economical source of nutrients than grains, protein supplements or mineral-vitamin premixes," says Anderson.

Total mixed ration (TMR) programs should be adjusted for high producing, dry and transition



cows. Group feeding systems also help regulate body condition and minimize metabolic disorders at next calving. A transition group program for fresh cows may improve peak production and reduce fresh cow health problems, Anderson adds, while separating first lactation heifers at the feed bunk reduces competition with mature cows and enhances performance.

"There may be less labor in feeding one ration to all cows, but in my opinion it's not the way to get the most production or prevent health problems," Anderson concludes. "There is a tremendous value to grouping cows so higher producers get all the nutrients they need to reach maximum genetic potential. And that means feeding forages or high moisture corn from a Harvestore."

The NEW HARVESTORE®
BACK ON THE HORIZON!

The NEW HARVESTORE®
BACK ON THE HORIZON!

Harvestore®. Faster In, Faster Out, Faster Feeding.

New technology has now evened the playing field – Harvestores can be loaded and unloaded just as fast as plastic storage bags and concrete bunkers, thanks to new innovations in unloaders from Engineered Storage Product Systems.

The Alliance® unloads up to 250 pounds per minute of 55 percent moisture ensiled alfalfa. And this year, we'll be introducing the Harvestore XL® (currently in field testing), which will unload up to 400 pounds per minute.

While these new pieces of equipment bring in a new era in forage handling to get alfalfa out of the silo, farmers are also taking advantage of other manufacturers' more powerful blowers, resulting in "fast-in, fast-out" filling and unloading using a Harvestore.

To find out how Harvestore compares to filling and unloading other systems in "real life," we visited dairy farms equipped with the Alliance unloader with a stop watch and timed each for comparison. Measurements were made for dry matter delivered due to variability in moisture content.

TIMED ON-FARM OBSERVATIONS

2004 Filling Rates*		2004 Unloading Rates**	
Harvestores	25 to 40 tons DM/Hr	Harvestores with Alliance Unloaders	125 to 175 pounds DM/Min at 55% moisture
Bunker Storage	5 to 50 tons DM/Hr, plus packing and covering	Bunker Storage	87 to 236 pounds DM/Min
Plastic Bags	18 to 21 tons DM/Hr	Plastic Bags	116 to 151 pounds DM/Min

* Actual filling times. Time to harvest changes by size of forage harvester, number of forage wagons or trucks, and distance to the field.

** In general, unloading from bags and bunkers required more set-up time than Harvestore structures – Harvestores unloaded into a fixed location batch mixer. For bunkers and bags, time was required to get the mixer in place, and extra time was required to remove plastic and tires from bunkers.

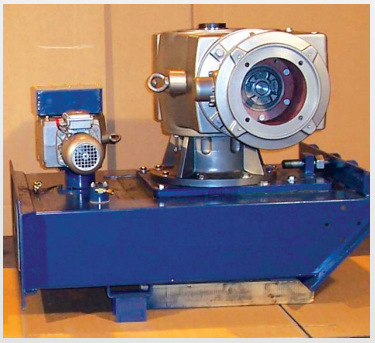
What we found was that unloading a Harvestore compares favorably and can even beat the time needed to manage a plastic bag or concrete bunker storage system.

Also, Harvestore unloaders use electricity versus diesel fuel for extra cost savings. Plus, there are no plastic covers or tires to handle, or other "invisible" costs such as additional labor, tractor wear and tear, replacement plastic bags, etc.

Talk to your Harvestore dealer today to get more information about the Alliance and Harvestore XL unloaders. Your dealer will help you calculate your operating costs for a Harvestore versus concrete bunkers, stave silos and storage bags with data from your own farm.



The Alliance Unloader.


A Monster-Sized Unloader for Monster-Size Power. The New Harvestore XL prototype.

The new Harvestore XL unloader due to be available this year brings more size, strength and speed to unloading operations. Ask your Harvestore dealer when the new Harvestore XL will become available and how it can speed unloading with reliable, durable performance on your farm.

Win an iPod!

If you've had success designing rations around forage stored in a Harvestore, we want to hear from you! We'd like to hear your story and possibly feature it in an upcoming issue of Harvestore Today. Email us your experience or other comments to jgarnett@cstindustries.com for a chance to win an iPod.

ENGINEERED STORAGE PRODUCTS COMPANY

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