

Retractable Bunker Cover Makes For Better Feed



Retractable bunker cover system uses a set of A-frame gantries that run outside bunker walls, quickly unrolling or rolling up a weatherproof cover over silage. It's held in place by filling overlying hoses with water.



Hotze and Jan Bosch have installed retractable bunker cover systems on more than 50 farms in the Netherlands, and plan to eventually introduce it to North America.

A retractable bunker cover system from the Netherlands quickly unrolls or rolls up an air and weatherproof cover over fresh-packed silage. Instead of spreading out tires or sandbags, the cover is filled with water, and drained as needed. The system was developed by Hotze Bosch to improve his dairy herd's production.

"We wanted to find a better way to feed our cows," says Hotze's son Jan Bosch, Agridek Duo.

Bosch explains that the grass they harvest in spring, summer and fall differs by season in energy, protein and structure. When feeding it out of a bunker, the ration changes as you reach a new section from a different season. This lack of consistency has a negative affect on the cows.

"We wanted to layer the forage in the bunker as it was harvested like lasagna laid in a pan," says Bosch. "That way, as the silage is removed from the bunker, it would be a consistent mix throughout the winter."

To create the layers, the Boschs needed a way to quickly cover and uncover the bunker. Hotze came up with a set of A-frame gantries that run along the outside of the bunker walls. A roll-up box hangs from the A-frames inside the walls.

The strong, reusable pvc fabric connects to hooks on the roller with seatbelt-like belts every 6 to 10 ft. Hydraulic motors drive the roller and act as brakes when the system is at rest.

The cover is held in place by filling overlying hoses with water. Larger hoses lay along the walls for airtight closures. In the winter the Boschs uses salt water in a closed system to prevent freezing.

"We have a bunker silo that is about 20 ft. wide by 80 ft. long. We can cover it in half an hour," says Bosch. "The hoses use around 500 gal. of water."

Their prototype worked well enough that the Boschs continued developing and testing the system. Since 2003 they have added layers to the bunker 10 to 14 times each year. Corn and other materials, such as byproducts, can be layered over forage.

In 2014 Hotze and Jan refined the system and set up a company to make it. In recent years, they have installed systems on more than 50 other farms in the Netherlands, proving the "lasagna" forage concept as well as the mechanical system.

"Our largest system design was for a bunker that is roughly 80 by 120 ft and 13 ft high," says Bosch. "The roller can travel at about 16 ft per min."

Smaller systems are also available.

Because each system is customized for the bunker and the number of cows, there is no set price. However Bosch estimates the price for a system will range between \$24,000 and \$240,000.

Most installations have been with a full system at each bunker. However, the gantries can be equipped with either fixed wheels or swivels to travel between bunkers. Separate rollup boxes would be provided at each bunker.

The base system is powered by tractor hydraulics. However, stand-alone power is an option. Other options include a heavier duty gantry system to pull multiple covers, as well as LED lighting.

The next step for the company is to work with marketing partners to introduce it to the rest of Europe and eventually to North America. Currently the website can only be viewed in Dutch. A video about the system (also in Dutch) can be seen at FARMSHOW.com.

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