

The Mother of Invention

Angus breeders Lawrason and Ned Sayre receive first-ever IRM Tips for Profit Award.

BY ERIC GRANT

Ned (left) and Lawrason Sayre looked at several methods to overcome the challenges of feeding cows efficiently through muddy Maryland winters.

PHOTOS COURTESY OF NATIONAL CATTLEMEN'S BEEF ASSOCIATION

Maryland is not an ideal location to winter cows. It has prolonged periods of wet and muddy conditions, making it difficult for farmers to store, handle and feed hay to cows.

Over the years, Lawrason and Ned Sayre looked at several methods to overcome these challenges. First, they fed with hay rings in pastures, but they found the cows wasted too much hay. They also damaged fields when they hauled out round bales. Then they used silage pits but discovered they were inefficient, too.

The Sayres also wanted to ensure they were managing manure properly — and any feeding system they developed had to be environmentally sound. This is key because their farm is just 8 miles from the headwaters of Chesapeake Bay, one of the country's best-known waterways and wetlands, home to countless waterfowl, wildlife and fish.

So in the early 1990s, the Sayres drew plans for a structure



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that would allow them to feed hay efficiently, to manage manure effectively and to protect the environment at the same time.

The farm, which raises about 140 registered Angus cows, now has two of these structures in place.

Their invention has been so successful that the National Cattlemen's Beef Association (NCBA) Integrated Resource Management (IRM) program presented the Sayres with the first-ever IRM Tips for Profit Award. The award, sponsored by Pennington Seed, recognizes

ingenious cattle producers across the country for their homegrown inventions.

The Sayres' structures consist of two 50-foot-long pads on which the cows stand while feeding. A bunk, which feeds cattle on both sides, is located down the middle. Behind each

of the pads is a 30-by-30-foot manure pit that's sloped away from the bunk and allows water to drain away from the pit. A picket drain and 200-foot settling terrace allow water to drain from the pit.

To further simplify the structures, the Sayres placed hay storage sheds next to the bunks to minimize field damage and to improve hay quality. They constructed a calving barn at the sites, making it easier to catch "calfy" cows. They built the structures on existing pasture fencelines so two separate groups of cattle could use the facility at the same time.

The Sayres also worked closely with local Natural Resources Conservation Service (NRCS) representatives to design and to

construct an attached manure storage pit, along with a drainage terrace. NRCS also provided some of the cost sharing for the construction of the project.

Results so far have been astounding. The Sayres estimate they've reduced their feeding costs by about 30% due to improved feed quality and less waste. They've also reduced the incidence of calf scours.

"Virtually all hay we put in the bunk is consumed and not wasted," Lawrason says. "And we're much more efficient from a manpower perspective. With this facility, it takes one person to scrape the alleys, refill the haybunk and feed about 90 cows for four to seven days. Before it would take four to five bales of hay each day, requiring [that]

one man work one to two hours every day. The savings is about 125 man-hours during the 100-day feeding period."

Despite receiving the first-place award, the Sayres plan to make continued improvements to their invention.

"One of the changes we'd like to make is to widen the alleys to have more space for cows to get into the bunk," Ned says. "We are also considering putting a shed roof with gutters over the pads to divert rain and snow from the pit, as well as protect the feed from inclement weather. Keeping water from the pit would minimize water outflow through the settling surface."



Sometimes it's the little things that count

Kim Lindsey, an Angus breeder from Jayton, Texas, always took careful steps to ensure she was handling vaccines properly. When she went into the field, for instance, she packed them in coolers, protecting them from extreme temperatures.

But she worried about exposure to sunlight and temperature extremes once the vaccines were removed from a protective place and put in an outdoor, working environment.

"Prolonged exposure to sunlight, heat or cold can potentially lead to loss of vaccine effectiveness and place the treated animal or herd at risk," she says.

So Lindsey invented the syringe coozie. It fits a standard 50cc, 1-inch (in.)-diameter, pistol-grip syringe commonly used by cattle producers across the country. She made the coozie from 1-in. pipe insulation cut to the correct length, which is slipped over the barrel of the syringe. The idea worked.

"Not only does the coozie protect vaccine from exposure to sunlight," Lindsey says, "it also protects vaccine from becoming too hot or from freezing. It protects the syringe barrel from accidental breakage and provides a uniform surface for proper vaccine label identification."

For this invention, Lindsey received third-place honors in the Integrated Resource Management (IRM) Tips for Profit contest. It's a little thing, Lindsey says, but it can make a big difference.

Other cattle producers also have benefited from the invention. Following Lindsey's advice, Bradley 3 Ranch Ltd. (B3R) began using the syringe coozie as one way to improve herd health and survival rates.

"Our SPA (Standardized Performance Analysis) data show that in 1991 we were experiencing 13.98% death loss from cows exposed to calves weaned," says Minnie Lou Bradley of B3R. "In 1998 SPA revealed that we had cut our death loss to 2.32%."

While Bradley admits the improvements weren't due exclusively to use of the syringe coozie, protecting vaccines in the field probably played a key role. "This is a profitable idea that requires less than a \$2 investment," she says.

— by Eric Grant



Jayton, Texas, Angus breeder Kim Lindsey invented the syringe coozie to protect vaccines in an outdoor, working environment.



The syringe coozie fits a standard 50cc, 1-inch-diameter, pistol-grip syringe.