

Big Watering Tank Never Freezes

For nearly 20 years, Wade Berlier hasn't had to worry about his water troughs freezing up. The 20,000-gal. tank that fed his water troughs created its own microclimate and kept the water open in a 30-ft. trough at its base.

"It was an old oil tank, and the cost to haul it was more than the \$400 I paid for the tank," recalls Berlier, who installed it on his Garden City, Kan. ranch in the early 1990's. "At that time we were running a cow herd of 500 to 700 head through the winter and needed good water. Since water needs are less in the winter, the 30-ft. trough was enough."

Berlier installed the tank as part of an intensive grazing system with the tank at the center of a set of nine 320-acre paddocks. Other grazing areas have other types of water systems, including submersible pumps and traditional round water tanks. The big tank is his preferred system.

"I wanted something that would have plenty of capacity in the summer and wouldn't freeze in the winter," says Berlier.

"We excavated the hillside, installed the tank and then backfilled."

He then laid concrete for a pad and installed a trough that ran the length of the tank. The reservoir tank was fed by a submersible pump that ran off a float inside the big tank. A second smaller tank buried next to the reservoir held a float mechanism that fed the trough.

"It was 10 ft. underground, so it never froze up," says Berlier. "I could access it through a manhole, so I didn't have to worry about snakes and such."

As his operation grew, he added more and more cattle, eventually reaching 2,000 head of yearlings in the nine paddocks each summer. As the numbers increased, Berlier recognized he needed more trough space. He added two, 30-ft. steel troughs, feeding them off the big tank and using 6-in. pipes to ensure they didn't run dry.

"We set them level with the first trough, so they could use the same float system," says Berlier. "That gave us 150 ft. of head space and was enough for the larger herd."



The 20,000-gal. water tank is set into a hillside, which keeps the water from freezing. Note 30-ft. trough at base of tank.

Berlier recently sold the ranch, but says he has never seen anything like his watering system before or since. "That 20,000 gal. created a huge heat sink," he says. "With it insulated on three sides and open to the South, weather

was never much of a problem."

Contact: FARM SHOW Followup, Wade Berlier, 1475 W#R3, Lakin, Kan. 67860 (ph 620 355-7887).



Tractor-mounted boom lets Ruben Auch load round bales into feed wagon without getting off tractor.



The boom eliminates the need for an extra loader tractor just to handle bales," says Auch.

Tractor-Mounted Boom Loads Bales Into Feed Wagon

Feed wagons that grind whole bales make feeding cattle easy. Ruben Auch made it even easier with a tractor-mounted boom that lets him load bales into the feed wagon without getting off the tractor.

"I didn't like having to have an extra tractor around with a loader just to handle bales," says Auch. "I had the idea for a long time. It just took time to find all the parts."

Finding the right tractor was key. Auch's 4696 Case IH has more power than needed for either the feed wagon or the boom, but it also has a rear axle with room to mount a boom. In fact it was the only tractor with the cab forward from the rear axle with axle steer.

"This tractor has crab steering so you can pull right up next to a bunk or fence line," he notes.

The next thing to find was a boom that would fit on the axle. Federal Co. made one for \$8,000. Unfortunately, soon after he bought it, the company went out of business. Thus when he had problems, like a busted safety cable, he had no one to turn to. Luckily for him a local fabricator was able to step in and help as needed.

"Central Iron at Wishek made the adapter plate for the axle, and we bolted the boom mount to it," says Auch. "They did a heck of a nice job on it and on the grapple forks."

The grapple mechanism hangs from the

end of the boom. Auch says designing the opening and closing action of the grapple with its two sets of forks was a challenge, even for the professional fabricators.

Auch wanted a single cylinder to open and close both sets of forks. The cylinder is mounted so it pulls the two sets together and apart. He brought a 5 by 6-ft. round bale to the shop, and they designed around it. To make sure they had enough strength, they used 4 by 2-in. rectangular steel with 1 1/2 by 2-in. cross bracing for the forks.

"We had to rebuild them a couple of times to get them to clamp just right," says Auch.

Auch's hay handling system is heavy on hydraulics. He needed three valves for his

feed wagon and one for the boom. The boom has electric-over-hydraulic controls.

The boom stretches to 24 ft. when fully extended and has a maximum lift of 1,600 lbs. at full reach. To lift his 1,800-lb. bales, Auch simply pulls them in close before he lifts. While getting the system put together wasn't as easy as he had hoped, Auch has no regrets about doing it.

"It works great, saves a tractor and makes feeding a one man job," he says.

Contact: FARM SHOW Followup, Ruben Auch, 6910 40th Ave. S.E., Wishek, N. Dak. 58495 (ph 701 452-2966).

Mud Scraper For Combine Duals

"Our heavy duty-combine mud scrapers prevent mud buildup between the dual wheels on Deere and IH combines. They really help in a wet year like we had last fall across much of the Midwest," says Kevin Mulder, K&M Mfg., Renville, Minn.

The mud scrapers are designed for John Deere, International Harvester and some New Holland AFX models. They come complete with all mounting hardware and are adjustable to all wheel widths. The hardware mounts under the combine frame and extends out between the duals. A flat, heavy bar is used to knock mud down between the dual wheels.

"As the mud builds up the bar keeps knocking it down," says Mulder. "It's much less

expensive than buying a \$20,000 set of tracks or a rear wheel assist system, which is what some farmers have done."

Fits Deere STS roto series models including the 9550, 9650, 9750, 9560, 9660, 9760, 9860, 9570, 9670, 9770, and 9870. Also fits older Deere walker-style combines, IH 21 and 23 series, and some New Holland AFX models.

Sells for \$804 plus S&H.

Contact: FARM SHOW Followup, K&M Mfg., 308 NW 2nd St., P.O. Box 409, Renville, Minn. 56284 (ph 800 328-1752; Kevin@tractorseats.com; www.tractorseats.com).



K&M's mud scrapers knock mud down between combine's dual wheels. "Mud scrapers really shine in wet weather like we had last fall," says Kevin Mulder.