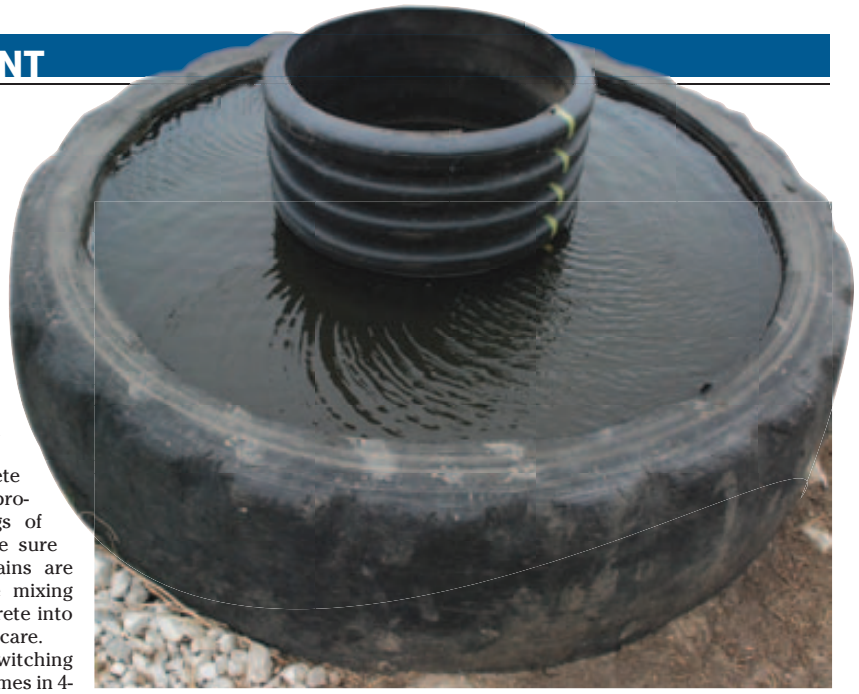
# Graziers prefer recycled tires for water tanks



**TREADING WATER:** One used tractor tire holds water for two grazing paddocks. A hot wire across the top of the tank (upper left) separates grazing cells and keeps cattle out of the tank. The tile at the center protects the valve and float from livestock, and helps keep water free of ice in cold weather. Holes are cut in the bottom of the upright tile to allow water circulation. A solid rock base under the water tank prevents a mud hole from forming at the drinking site.

## Foraging Ahead

### Key Points

- Getting water into paddocks is not easy, but borrowing experience helps.
- Used tires are a bargain; spend money on a high-flow refill valve.
- Black tires absorb the sun's heat in winter weather and prevent freezing.

By **DUANE DAILEY**

IN one short visit about watering tanks made from used tires, Chris Zumbrunnen used the word "cheap" a half-dozen times. Cost-conscious producers who graze cattle will like the sound of that.

The University of Missouri Extension livestock specialist says graziers in his region around Milan find the homemade tanks used in grazing paddocks are "fairly trouble-free." Zumbrunnen does have experience in making them less troublesome.

First, some background. The water tanks are big used tires, with the bead cut off, that are half buried in the ground over a water line. The bottom is sealed with concrete or thick plastic sheeting.

When he says "big" tire, Zumbrunnen has become a moderate. A combine tire, size 28L26, works well. It is deep with a 3-foot opening across the top. A tank made from a huge construction tire resulted in the drowning of a calf. It was too deep for the calf to get out.

### How-to instructions

The first step is cutting the bead off one sidewall. Zumbrunnen uses a reciprocating saw. Don't try cutting through the bead, he warns, but drill a hole to get started. Cut out the bead and some sidewall, but leave about 6 inches of sidewall in from the lugs. He recommends cutting off the most abused bead, if there is one.

Many producers use concrete to seal the bottoms of the improvised tanks. About three bags of Quikrete will do the job. Make sure water pipes and overflow drains are where you want them before mixing concrete. Then, don't get concrete into the pipes; it takes planning and care.

Lately, Missouri graziers are switching to half-inch-thick plastic that comes in 4-by-8-foot sheets. One sheet makes three bottoms by cutting a plastic circle about 4 to 6 inches wider than the rim hole on the bottom of the tank. Working with the tank upside down, bolt the plastic to the bottom sidewall. Zumbrunnen uses ⅜-inch bolts spaced about 4 inches apart around the tire.

### Helpful advice

A couple of tips: After drilling the first hole, put in a bolt and lightly tighten. That makes alignment of the other holes in the slippery plastic easier. And, start with a sharp drill bit.

Silicone or tar seals the plastic circle to the rubber tire. Don't over-tighten bolts, or puckering can create leaks. Finally, drill holes in the plastic for the valve and overflow pipe.

Always make sure the pipes work before setting tire tanks over the lines.

It's best to half-bury the tire tanks for stability and earth warmth. The tanks can freeze. However, some producers add small submersible garden water pumps if there is a power source nearby. The agitation keeps water open in freezing weather. A screen wire enclosure for the pump helps keep debris out of the intake. That prevents burning out the motor.

Zumbrunnen notes that ice in tanks melts quickly when sun hits the black heat-absorbing tire.

Now, about leaks. There may be some, but he notes that small leaks are self-sealing as they fill with feed and hay left in water by drinking cattle.

Water-tank size depends on herd size. But, that combine tire seems to work well for most when equipped with a high-flow water valve. Zumbrunnen uses a Neville brand that costs about $30. It's not cheap, but the refill capacity is handy and trouble-free.

One other suggestion: Don't allow cattle to use tire tanks as a footbath, bathtub or swimming pool. Placing paddock waterers under a hot wire discourages climbing in the tank. Cattle learn that electricity and water don't mix, Zumbrunnen says. One farmer put hay rings over the tire tanks.

All these tips come from hard-earned experience by the livestock specialist and his cooperators.

"This is a cheap way to get water into paddocks," Zumbrunnen says.

■ **For a guide sheet on tire tanks, send an e-mail to *ZumbrunnenC@missouri.edu,* or call Sullivan County Extension at 660-265-4541.**

## Where to find the right materials

PLASTIC sheets are available from the recycle firm Coon Manufacturing Inc., Spickard. Call 660-485-6299. Used tractor or other tires are easy to find. The last time Chris Zumbrunnen went to an implement salvage yard, the dealer bought his lunch for taking the tires off his hands.

## EQIP may help build water tanks

In Missouri, money for building water sources in grazing paddocks may be available through the Environmental Quality Incentives Program. Check with the local USDA Natural Resources Conservation Service office to determine availability and qualifications in your county.