Albert Thiessen uses a sump pump to transfer collected rain water through an underground line into two 500-gal. plastic tanks, located inside his machine shed.

He Collects Rain For Pressure Washer, Crop Spraying

A Butterfield, Minnesota man set up a system in his machine shed to collect rain water for his pressure washer and field sprayer.

Albert Thiessen wanted an automatic system that would let him collect water in a tank inside his 42 by 75-ft. shed without having to punch holes in the walls.

He first collects rain water from half his shed roof, using eaves troughs to fill a 55-gal. barrel outside. A sump pump then transfers this water into two 500-gal. plastic tanks inside the shed, thanks to an underground line that carries the water beneath the building's footing.

"When those 500-gal. tanks are full, there's a shut off on the pump so any excess water will overflow the outside barrel, onto the ground," he says.

Thiessen made the automatic shut off himself by mounting an on/off switch on a metal box and connecting it to a float in the tank.

"I use this soft water for spraying crops because I think it's easier on the sprayer and mixes better with chemicals," he says. "I also ran a line to my pressure washer so I can use the soft water for washing down equipment."

Thiessen says the system takes the pressure off his main well.

Rain water is collected from half his shed roof. Eave troughs fill this 55-gal. barrel outside.

"I've used this system for 10 years and there's much more water available than I need. The two tanks are easily filled in the spring," he says. "If I used both sides of the roof, I could easily collect 4,000 to 5,000 gallons of water."

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Rainwater Harvest Catching On

Harvesting rain water is a very old concept that people are now starting to show more interest in, says Alyson Sappington, district manager of the Thomas Jefferson Soil and Water Conservation District in Charlottesville, Virginia.

"You're starting with much cleaner water than you get out of a stream or reservoir," she says. "Last year, we had a drought in Virginia and were inundated with calls from people whose wells were going dry. Many of them started collecting rain water as an option."

Rain water provides "instant" soft water and there is no water bill to pay.

"You can collect 750 gallons of water from a 1-in. rain on an average 1,200 sq. ft. residential roof," she says. "In this area, we normally get 42 inches of rain on average, so that translates into 31,500 gallons of water that could be collected.

"In Texas, there are some farmers who have built a low-cost structure consisting of a steel roof on poles. It collects rainwater and also provides shade for cattle," she says. "A cistern holds the water for pumping into stock watering tanks."

According to Sappington, rain harvested from rooftops should be filtered and disinfected before drinking. Carbon and ultraviolet filters can clean it up, and there are also "roof washers" available that can be incorporated into the system, collecting and segregating the first half inch of rain.

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Portable Calf Feeder Made From Old Feed Bin

"There are a lot of old feed bins around that can be had for the taking. This is a great use for them," says Bud Wright, Cullman, Alabama, who turned an old feed bin into a portable calf feeder.

Wright started with a 10-ton feed bin that he got free from a neighbor. He removed the top two rings and then welded two of the bin's four legs to the axle and wheels off an old trailer. He used 2 by 4's and plywood to make a 4-ft. sq. "swinging" platform that mounts between the legs. Feed gravity flows out of a manually-operated slide gate at the bottom of the bin onto the platform, which is suspended at each corner by a chain. By raising or lowering the chains, Wright can change the rate at which feed comes out of the bin. A roof made from sheets of corrugated tin keeps the feed dry.

"We've used it for three years and couldn't be happier with it," says Wright. "The bin holds about 5 tons of feed. We have the feed delivered to our farm and augered into the bin. We use a rubber cord to open the bin's top lid from the ground.

"We spent only about $50 to build it. I think the same idea would work with much bigger bins. One advantage of this design is that the platform never overfills, which virtually eliminates waste. As the calves run out of feed they jostle against the platform, which brings down more feed as needed. Another advantage is that the feed is out in the open so animals don't inhale as much dust as they do in more enclosed conventional feeders."

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Bud Wright removed the top two rings from a 10-ton feed bin and then turned it into a nifty portable feeder. He welded two of the bin's four legs to the axle and wheels off an old trailer.

A 4-ft. sq. "swinging" wooden platform mounts between the legs. Feed gravity flows out of a manually-operated slide gate at bottom of bin.

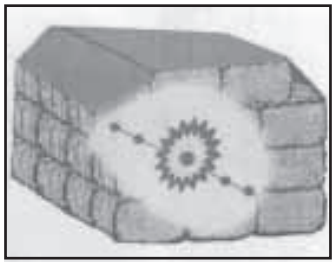
Temperature Cables Monitor Hay Stacks

Using cables equipped with thermocouple sensors to monitor grain temperature inside bins isn't a new idea. But using such systems to monitor temperatures in hay stacks is a new idea that's catching on, says TSGC Inc., Spirit Lake, Iowa.

For years, the company has been marketing temperature cables that hang from a bin roof. The information can be manually recorded or stored and downloaded to a computer or directly to a printer.

To use the system in hay stacks, the cables are laid horizontally through a stack, alternating layers. For stacks that are taller than they are long, the cable can be placed vertically rather than horizontally.

"It lets you know if any hot spots develop so you can take action before spoilage, or a fire, occurs," says president Rich Cook. "What you're looking for is a trend in temperature change that might show any problems at a particular location. The system can be used on any type of bale including small square bales, round bales and big square bales. The number of cables used in a hay stack is determined by its size. The cable is available in 10-ft. increments in lengths from 100 to 300 ft."



Temperature cables are laid horizontally through a stack in alternating layers. For stacks that are taller than they are long, the cable can be placed vertically.

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