

Predator-Proof Livestock Pens

Anyone with livestock at risk to marauding wildlife will want to take a look at the predator-proof pens on Pat Copa's farm near Salem, Oregon.

"We sell breeding stock to kids for 4-H and FFA projects. Many do not have a barn or other building to keep the animals safe," explains Copa. "Consequently, they make easy prey for predators."

In an effort to avoid the bad publicity that results when predators take livestock, especially from 4-H and FFA kids, the Mountain Lion Foundation (MLF), working with the 4-H and FFA, has designed two models of predator-proof pens. To demonstrate the simplicity of the pens, the MLF paid for materials to construct one on Copa's farm.

The Copas keep 30 adult Pygora goats (a breed developed from pygmy and angora goats) year round. They sell the fiber for knitting, felting and spinning. They also sell about 20 kids each year across the Northwest. They use the pen for overnight protection.

"We don't have a lot of predator problems, thanks to two small barns that were on the place when we bought it and perimeter fencing we installed," says Copa. "However, hav-

ing the pen here lets us show our customers and other tour groups an economical shelter for livestock."

The 10 by 20-ft. structure is made from chain link fencing and T-posts for quick and easy construction. There's a canopy over the top. The cost for the shelter was about \$500.

The idea is simple. Set up the roof kit for the canopy, drill holes in the pipe frames for eye bolts to secure tension wire with turnbuckles. Cover the roof with chain link and fasten it to the frame and the tension wires with rebar tie wire. Install the plastic sunshade or tarp and raise the roof up on the provided legs. A T-post pounded in at each corner leg and fastened to the leg with hose clamps anchors the fence to the site. A prefabricated chain link panel with gate placed at the end of the shelter provides entry and exit. Chain link fence wrapped around the other three sides keeps out predators. The sides are also strengthened with eyebolts at the base of the poles and tension wire with turnbuckles. If coyotes are a problem, the MLF suggests stretching chain link across the floor of the structure and attaching it to the side panels and the tension wire



Predator-proof pen, shown here without the skirting around the bottom, is an economical way to protect a few head of "exposed" livestock.

A larger, heavy-duty shelter uses pressure-treated wood posts anchored in concrete with a wood roof. The 120 sq. ft. shelter has chain link sides and a suggested materials price tag of approximately \$1,000.

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A Friggstad air seeder tank is shown here equipped with a pair of 2 by 4-ft., 100-watt solar panels, converting the tank into an inexpensive water pumping station. A 400-watt wind generator is also available and can be used in combination with the solar panels.



Solar Water Pumping Kit Mounts On Old Air Seeder Tanks

Old air seeder tanks can be converted into inexpensive water pumping stations powered by solar or wind, says Wayne Hagen, Hagen Mfg. Ltd., Lake Alma, Sask.

He supplies a kit that turns a tank into a large, rugged pumping system. The customer supplies the tank. He removes the tank's metering system and pumps, then uses silicone to seal the tank.

The top of the tank is then fitted with solar panels or a wind generator. The resulting electricity is stored in deep cycle batteries that are used to operate a floating pump that fills the tank. It feeds out of the tank and into a trough on back.

Most components bolt to the tank frame and come pre-wired, although some drilling may be required.

"It looks a little different, but it's much less expensive than commercial portable livestock watering systems that include a tank and trailer. They can easily cost \$3,000 to \$5,000 more than my system," says Hagen. "My kit sells for \$2,500 and up, depending on the number of cows to be watered, maximum feet of water lift for your system, and rate of water recovery in gallons per minute.

"There are a lot of old unused air seeder tanks on the market that can be purchased for as little as \$500. Most air seeder tanks will hold more than 1,000 gal. of water when sealed. Generally, that's enough storage to take care of about 100 cows. Any good-sized pickup will be able to pull the tank. Another advantage is that most air seeder tanks are built much stronger than most commercial water tanks and ride on heavier running gears, so cattle aren't as likely to cause damage."

In Canada, the government is encouraging ranchers to fence off their ponds and pump the water to a nearby trough. "Using my air seeder tank kit, you can provide water to cattle away from the pond, so they don't trample wildlife habitat. The pond will stay cleaner so cattle drink cleaner water and stay healthier," says Hagen.

Salt and mineral block holders, calf waterers, and oilers can all be added.

Kits are available to fit Friggstad, Prasco and Deere 665 air seeder tanks.

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Dave Friedrichs came up with an easy way to mount row units designed for a Deere 7000 planter onto a Great Plains drill, converting it to a split row bean planter.

He Converts Grain Drills Into Split Row Bean Planters

"I came up with an easy way to mount row units designed for a Deere 7000 planter onto a Great Plains drill, converting it to a split row bean planter. It saved me the cost of a new soybean planter and results in a much better plant stand than I'd get with a grain drill," says Dave Friedrichs of Marysville, Kansas.

Friedrichs and his brother made the conversion on a Great Plains 24-ft. grain drill. He bought planter row units from a local salvage yard that buys used planters and sells the row units, but notes you could also buy an old Deere 7000 planter and strip off the row units. He attached the units to the frame of the Great Plains drill by welding a length of 3 1/2-in. sq. tubing on top of a 3 1/2-in. length of tubing already on the planter frame.

"I've used this rig for five years and am really happy with it," says Friedrichs. "The stand I get is comparable to what you'd expect from a Deere planter. However, my 24-ft. grain drill holds 50 or 60 bushels of soybean seed at a time which is much more than a 12-row planter of comparable width can hold. As a result, I don't have to refill seed as often."

Eliminating the expense of a new planter saved a lot of money, he points out. "You can buy old Great Plains 24-ft. grain drills for about \$3,000, whereas a new Deere 24-row split row no-till planter sells for up to

\$100,000. My total cost was only about \$10,000 total. One of my neighbors has used my drill for the past two years, and he liked it so much that last year he asked me to convert his grain drill, which I did. Now five other farmers in our area have made their own conversions."

Besides the cost savings, there are other advantages. "The Deere no-till planter is a rigid planter which doesn't work so well on terraces, whereas these grain drills are built in two sections so they flex," says Friedrichs. "Also, the 15-in. rows result in a quicker canopy for better weed control."

Why not just use a grain drill to plant narrow row beans? The answer is poor depth control, says Friedrichs. "You can plug every other hole on a drill and try using it to plant beans, but they have a hard time getting a stand because of depth control problems. Planter row units do a much better job of controlling seed depth."

For the past two years, Friedrichs has used his split row drill to no-till beans into milo stubble and had "tremendous success" with it. "We made special brackets that apply extra down pressure on each row. The bracket makes use of a spring that welds under the row units and pulls down at an angle."

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