

## "Non-Stick" Soil Probe

This "non-stick" soil probe is easy to use and works well even in wet, sticky soil, says Luke Duplessie, Tilbury, Ontario, who came up with the design after he got frustrated trying to use commercial soil probes.

The T-shaped soil probe consists of a 36 in. long steel pipe with handles across the top and a tapered, heat-treated tip on bottom. The pipe is 1 in. dia., but the tip narrows down to only 5/8 in. dia. so as the sample enters the probe it has room to expand without sticking to the inside of the pipe. Duplessie empties the sample out the top of the pipe into a 5-gal. pail.

"I've even used it to take samples of wet soil under ice," says Duplessie. "The sample comes out in one piece that's 20 to 24 in. long, depending on how deep I insert the probe into the ground. The handle straddles a 5-gal. pail so it's easy to knock the sample out of the pipe. I tried using six or seven different commercial soil probes, but they all tended to plug up



when soil was moist. They also got bent because they weren't built very strong. My soil probe works so well I plan to make a hydraulic-operated model for my 4-wheel ATV."

Duplessie says he's looking for a manufacturer.

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## Low-Cost Portable Feeder Built From Old Fuel Oil Tanks

An Ontario farmer says he's come up with an inexpensive way to make his own portable livestock feeder using old fuel oil tanks.

Jim MacDonald, who farms near Yarker, cut three 200-gal. fuel oil tanks in half and welded the three halves together end to end to make a 15-ft. long, 4-ft. wide portable feeder for his 70-cow beef herd. He welded 2-in. wide angle iron around the top edge of the tanks, then welded on 1-in. sq. steel tubing to make V-shaped uprights. The tanks ride on a frame built from 2-in. sq. steel and the axle is built from rectangular steel tubing and fitted with two used car wheels.

"It cost less than \$500 to build," says MacDonald. "A 24-ft. commerical feeder would have cost me about \$2,500. This unit feeds up to 18 head at a time and holds three 4-ft. round bales, but most of the time I fill it with corn silage or grain which I feed to my heifers. I had been using V-shaped troughs to feed silage, but the heifers were able to step into the trough, often dropping feed onto the ground and wasting it. The V-shaped uprights on this feeder work good because they keep cows from pushing each other out of the way."

After cutting the tanks in half, MacDonald lit a fire in the tanks to burn out any leftover oil residue. The tongue is braced to the feeder by an angled length of 2-in. sq. steel tubing equipped with a coupling for a jack. Drop-down stands are welded onto the front corners of the feeder.

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## Home-Built 54-Ft. Fertilizer Top Dresser

Montana farmer Keith Hertel uses a Concord air seeder cart and 54-ft. tractormounted booms to top dress nitrogen onto small grains and hay fields and also to seed alfalfa and grass seed while applying fertilizer at the same time.

"This system works excellent for us. We no longer have to rent a cart from the fertilizer company and the system itself is a lot more efficient. You can apply fertilizer in more wind than with conventional spreaders and it's more accurate," says Hertel.

The fold-forward booms mount on the tractor 3-pt. and the Concord air cart tows behind. One large tube brings fertilizer up to a central distributor directly behind the tractor which then directs material to four separate distributors spacedout along the boom. From there, fertilizer is split into hose drops spaced evenly all along the heavy-built boom, which has a 14-ft. long piece of 4 by 4-in. square tubing at

center to provide the main support.

Hertel does three jobs with the Concord cart since he also added air distributors to a tillage toolbar so he can tow the Concord cart behind that to deep band fertlizer before switching the cart over behind his air seeder to seed grain.

For transport, the booms fold forward by hydraulic cylinder. The ends of the boom rest on a bar mounted across the front of the tractor. Raising the 3-pt. hitch when the boom is folded puts downward pressure on the tips of the booms so they stay on the crossbar.

Shear pins on the cylinders that fold the wings prevent damage if the booms ever hit an obstacle. Boom wings are supported by an air shock and spring so they won't bounce if the tractor hits a hole or an obstacle.

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## Pickup-Mounted ATV Great For Winding Fence Wire

"It works great for rolling up temporary electric fence," says Leland Wohler, Barnes, Kan., who uses a 4-wheel ATV in the back of his pickup to roll up fence wire used to put livestock out on pasture.

Wohler jacks the ATV's rear axle up onto a wooden block, then bolts a 12-in. dia. wheel rim (the tail wheel off an old White 1100 plow) outside of one of the rear wheels. He starts wire onto the rim by tying it onto the valve stem hole, then puts the ATV in gear and lets out the clutch.

"It's a simple idea but it works well," says Wohler. "I guide wire onto the wheel rim while my wife controls the ATV. She usually puts it in second gear. After the wheel has been running for a while she can speed up the throttle so we can roll up the wire faster. We had been winding up wire by hand which took a lot of work and time. I didn't want to spend the money for a commercial pto-driven wire winder.

"I can put more than 1/2 mile of wire on the wheel rim. However, I plan to weld a 1-in. wide extension onto it for even more capacity."

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