

## SAVES A TRIP OVER THE FIELD

# Apply Anhydrous As You Disc, Cultivate

If you aren't already doing it, it's time to take a serious look at equipping your conventional disc, field cultivator or chisel plow to "knife in" anhydrous ammonia in a once-over application.

Biggest advantage is that you save a trip over the field. What's more, most farmers already doing it will tell you that the two-in-one operation works great.

"I've had excellent results," reports Gordon Frew, Norwich, Ont., one of the first Canadian farmers to try the idea. Using a kit manufactured by Harlan Mfg., Harlan, Iowa, and sold in Canada by United Co-Op, of Ontario, in Mississauga, he equipped his heavy duty, 23 ft. field cultivator to apply anhydrous ammonia four years ago.

"You need a heavy field cultivator to do the job right — a cultivator that can hold a steady 5 or 6 in. working depth," Gordon points out. "If the cultivator shanks are too light, they'll spring back and raise, permitting ammonia to escape into the air."

When he started out, it just seemed simpler to Frew to buy a heavy cultivator and pull a tank behind it, instead of creeping along with a conventional anhydrous applicator. He had a local machine shop make up some special injector pipes to be attached behind each of the shanks in the center row of his cultivator. A skid plate welded underneath the pipes helps prevent dirt from plugging the openings. Anhydrous flows from the tank, through a pressure regulator, and to hoses connected to each injector.

It cost Frew about \$400 four years ago to equip his 23 ft. cultivator for anhydrous application. He raises 800 acres of corn and aims to have all the ground fall plowed. In the spring, he works the ground once with the cultivator as he applies anhydrous. This is followed by a disc harrow to incorporate herbicide prior to planting.

Harlan Mfg., a pioneer in developing kits for applying anhydrous with tillage implements, started with a kit for field cultivators. "We have since added complete kits for discs and chisel plows, with our disc kits now being our biggest seller," Bill Ahlers, Jr., marketing director, told FARM SHOW.

Each Harlan kit includes everything you need to make the bare implement an applicator. Harlan's hydraulic shutoff — the An-Hydra Positrol — and a nurse tank hitch are optional parts of the kit. Harlan also offers the DeTracker, a device for scratching out wheel tracks laid down by the nurse tank.

Here, according to Ahlers, are key features of Harlan kits for the following tillage equipment:

Field cultivators: There are two

basic ways to set up a field cultivator to apply anhydrous. You can have the ammonia applied at the existing cultivator shanks with either a pipe and bracket or a replacement spike. The second method is with a 21 in. tine using a special clamp. This latter alternative is generally used when sweeps are mounted on the cultivator shanks rather than spikes. Spacing is usually 18 in. — by either setting up one row of shanks, or placing a tine in between every shank on the rear bar of the cultivator.

**Chisel plows:** They are set up for anhydrous on the shanks with either a pipe and bracket, or a replacement spike. For straight chisel points, either an offset pipe or an in-line pipe can be used. A beaver tail sealer can be added to the in-line pipe to aid in sealing. Spacing on most chisels is 24 in., or every other shank, although many are set up at 12 in. on every shank.

**Disc kit:** It allows both spring and fall application with the same implement. Harlan mounts 3/4 in. tines behind the back gangs of the disc by adding a separate toolbar. A special swivel clamp is used to hold the tine, allowing it to pivot freely. The tine pulls straight no matter what angle you have the disc. An added feature of the Harlan clamp is its ability to hold the tine securely upside down. This makes it possible to disc without running the tines in the ground. It is a 5 min. operation to turn the tines up or down, leaving the hoses attached. Spacing of the tines on toolbars can be whatever you prefer — 20 to 24 in. spacing has proven to be most popular. Toolbars added behind the back gangs are all cut to allow folding wing sections to remain operable.

"In no way will the anhydrous attachment hamper the normal operation of the disc. We will sell the entire kit, or only as many parts as you need to equip your tillage implement for applying anhydrous," explains Ahlers. Cost of a complete kit for equipping an average size disc (20 ft. or so) runs right at \$1,500. It costs about \$1,000 to equip a medium sized (24 ft.) field cultivator, and about \$800 to equip a 12 ft. chisel plow.

You don't need a gas-to liquid converter in equipping tillage equipment with the Harlan anhydrous applicator kit. Darrel Bucholz, extension soil specialist with the University of Missouri, Columbia, says that as long as the gas is released more than 4 in. under the surface, there should be no more loss from gas application than there is when a cold flow liquid converter is used. In Kansas tests, says Bucholz, there was no significant difference in wheat production when the two methods were used side by side.

Are there any added safety hazards



Photo courtesy Country Guide.

This application rig, hooked to a field cultivator, applies anhydrous without converting it from gas to liquid.

from application of gaseous anhydrous, compared to the use of the liquid converter?

"I don't think there's any more danger. The nurse tank is behind the cultivator, and there's a breakaway coupling in between. So, if the wagon would come loose, you'd be protected by the breakaway coupling, distance and the tractor cab," answers Canadian farmer Gordon Frew.

Bucholz agrees that there should be little difference in the safety of the two methods. However, he cautions that anyone applying gaseous anhydrous should be very careful when cleaning injection tubes, which may have been plugged with dirt.

For more details, contact: FARM SHOW Followup, Harlan Mfg., Box 712, Harlan, Iowa 51537 (ph 712 755-5107).

## SET IT AND FORGET IT

# New "Water Minder" Turns Off Faucets

Remembering to turn off faucets is no problem if you've got the line equipped with the new "Water Minder" which measures up to 1,500 gallons of water, then automatically shuts itself off. You simply set the dial, turn on the water faucet and forget it.

Accuracy of the new device, designed primarily for use with garden hoses, is unaffected by variations in water pressure. It operates on system pressures of 25 to 55 psi. It's strictly water actuated — no time clock or timer mechanism involved.

Depending on system pressure, and the volume of water to be metered, it can be set to operate for up to approximately four hours before shutting off automatically. The dial has 15 settings, marked in 100 gal. intervals.

The Minder is made of high grade, corrosion-resistant material. It's normally attached to a common water faucet and is threaded for use with conventional garden hoses. A quick coupling may be used to save time in making frequent transfers to different locations. The unit can be permanently installed in a water line where regular water measurements are required. Sets for \$11.50, plus \$1.50 postage.



For more details, contact: FARM SHOW Followup, Water Minder, c/o Holst, Inc., 1118 W. Lake St., Box 370, Tawas City, Mich. 48763.