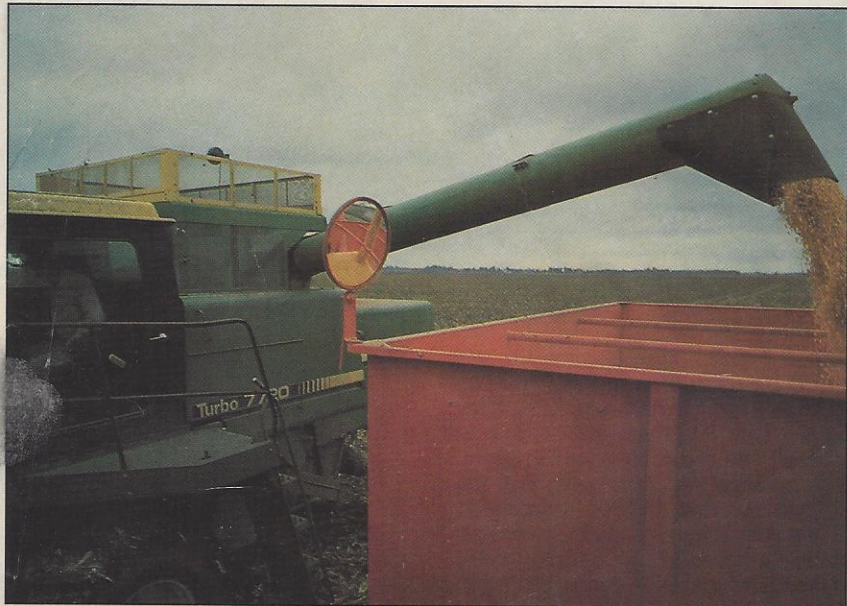


Taking headaches out of harvesting

On Dennis Noland's farm, interruptions are minimized with helpful gadgets

By DARRELL SMITH



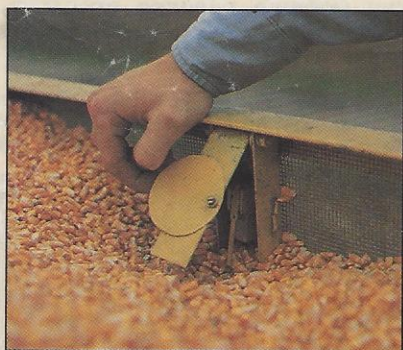
A MIRROR MOUNTED ON THE corner of a grain cart lets tractor operators on Dennis Noland's Macon County, Ill.,

farm know when to pull ahead or slow down to fill the cart evenly while unloading on the go.

PHOTOS BY THE AUTHOR



ROPES RUNNING TO THE PTO and hydraulic levers add to convenience and safety. They let Noland shut off both augers while standing at the rear of the grain truck. He anchors the ropes to a stand made from an old disk blade.



A MICROSWITCH FROM a straw walker alarm alerts Noland when his combine hopper is full. "You can't see the top of the hopper from the cab," he explains. Noland enclosed the switch in channel iron to keep grain from getting behind the paddle and preventing a connection. With drier grain, he swings a circular piece of metal downward to provide more pushing surface. "Otherwise, drier grain may overflow before it pushes in the paddle," he notes. The switch triggers a motorcycle horn inside the cab. The operator shuts off the alarm with a toggle switch.



MATCHING UP AUGER speeds prevents delays due to overloading and sheared pins, says Noland. He uses a hand tachometer to synchronize the speed of the swing-away auger (which

runs off tractor hydraulics) and the main auger (which runs off the PTO). Noland drilled a small hole in the bottom of the swing-away auger to insert the tachometer.

Machinery ideas from farmers

Dennis Noland uses shop skills to solve common farm problems

By **DARRELL SMITH**

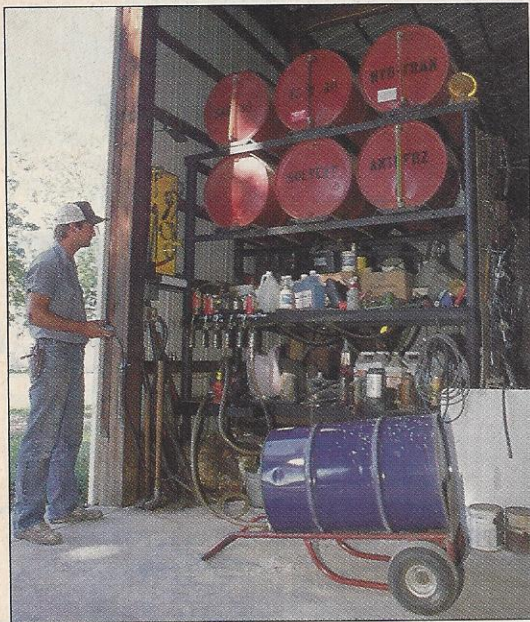
■ A smooth hand with wrench or welder, Dennis Noland, Blue Mound, Ill., never stops trying to make farming a little easier, faster or safer. Here are a few of the ways he has succeeded.

NOLAND'S FRONT-END loader doubles as a forklift. "It's handy for loading pallets of seed and bulk chemical tanks," he says. "And the forks are long enough to load a pickup."

Noland made the forks from 2" x 4" tubing. He welded strips of strap iron to form a hook that slides over the front of the loader. The longer portion of the hook under the loader bolts into place.

Noland is careful not to overload the forklift, which could lift the rear of the tractor off the ground.

PHOTOS BY THE AUTHOR



A SIMPLE PUMP arrangement makes oil and solvent storage quick and convenient. Noland mounted drums horizontally on a wooden framework, with the heavier, less flowable oils on top and the thinner fluids on the bottom. He uses an old herbicide pump to refill the drums. It takes about five minutes to pump out 30 gal. Connections to the drums are quick-couplers like those used for tractor hydraulics.

The storage drums are vented in the rear. Noland brazed bungs into the front of the drums and installed sight tubes that tell him when contents are running low. The drums empty by gravity flow.



MOUNTING LIGHTS ON THE FRONT fenders of a front-wheel-assist tractor makes the light shine where Noland is turning. He built brackets from 1/2" steel—heavy enough to prevent vibration—and attached them to the solid metal portion of the fender. He set the lights on the outer edge of the fender so that most of the light always shines past the front end when turning. Wiring is underneath the fender, enclosed in a rubber gasoline line hose for protection.

The fender lights are controlled by a separate switch. ◀

Machinery ideas from farmers

Creativity replaces cost in this farm shop

By DARRELL SMITH

■ High among the requirements for farm shop efficiency are comfort, convenience, lifting capacity and adequate lighting. Dennis Noland, Blue Mound, Ill., bolstered all four of those categories, financing the improvements not with cash but with creativity.

The Noland's shop is at one end of the machine shed. It has a concrete floor, which is walled off with a custom-made curtain of a fabric used for truck tarps. The shop is divided into an 18' x 32' workshop and a 32' x 32' equipment bay, where Noland, brother Duane and father Neil maintain machinery.

To keep the work area comfortable in winter, Noland heats the area with a wood-burning stove made from an old oil furnace. He supplements the wood with used oil.

Noland converted the furnace by tipping it on its side, welding on angle iron legs and cutting a door in the end. Holes that served as igniters in the original furnace are now an air vent and an oil line inlet.

To burn oil, Noland sets an old iron skillet on the grate. He feeds oil from a 275-gal. tank into the burner with a pump that draws oil through a pipe opening just above the bottom of the tank. This prevents sediment from plugging the line. A check valve keeps

oil from draining back out of the pipe when the pump is shut off.

Oil passes through a strainer and sprays into the burner through an old field sprayer nozzle. Noland installed a valve in the oil line to regulate the flow. A by-pass line from the pump returns excess oil to the tank.

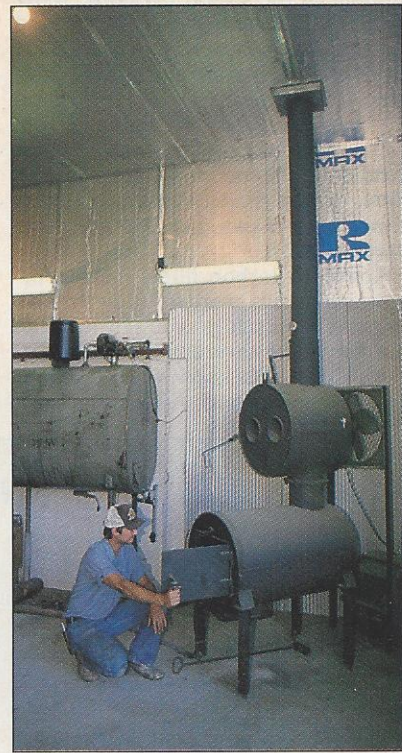
To keep the oil from thickening in the winter, Noland attaches a magnetic heater to the bottom of the tank. He burns oil in the stove only when someone is present in the shop.

Noland placed the furnace's fan behind the stove and a window fan behind the heat exchanger to move warm air into the work area. A tin shield, mounted with electric fence insulators as spacers, protects the wall behind the stove.

Noland installed a sliding door in the bottom of the stove for cleanout.

Improving convenience was simple: Noland installed casters on a worktable, so it now goes to the job. Putting the wheels on only two of the legs makes it stay put when Noland sets it down.

For lifting capacity, Noland made a portable hoist with parts from an old wagon hoist. He made legs from oil well pipe and a framework between the legs and across the top from I-beams. Caster wheels make it portable. "Lifting capacity with this hoist is enough for any job

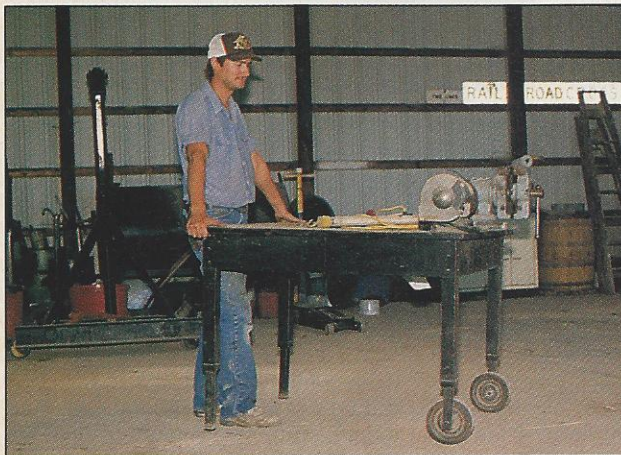


PHOTOS BY THE AUTHOR

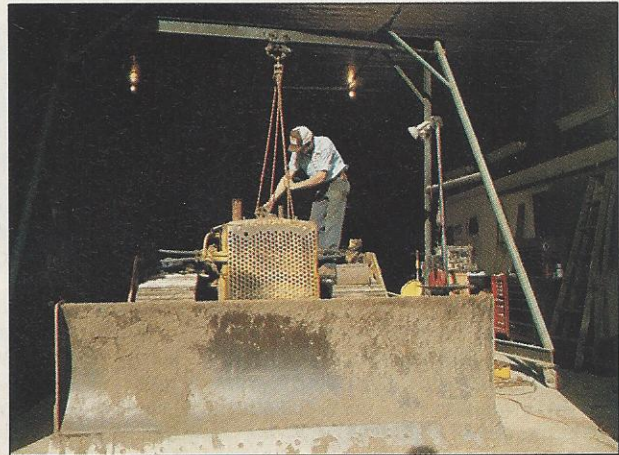
THIS STOVE, REBUILT FROM an old oil furnace heats Dennis Noland's shop. The stove burns wood and waste oil.

we need to do," says Noland.

To shine light on any job, Noland built a variable-height lamp stand using scrap pipe for the stem and old disk blades for a base and tray. The lamp extends up to 10½' and locks in place at any height with a bolt. The cord moves up and down on a base-mounted pulley. The stand also features outlets for plugging in tools. ◀



CASTER WHEELS ON TWO LEGS of a worktable make it easy to transport, yet it stays where you put it, Noland says.



A PORTABLE HOIST WAS MADE from parts salvaged from a wagon hoist. The framework is made of I-beams and pipe.