Ceramic Hard Surfacing

British manufacturers who have begun to use super hard ceramics to cover wear points on tillage tools say they get up to nine times more wear over conventional steel parts, and up to four to five times the wear of hard-surfaced parts.

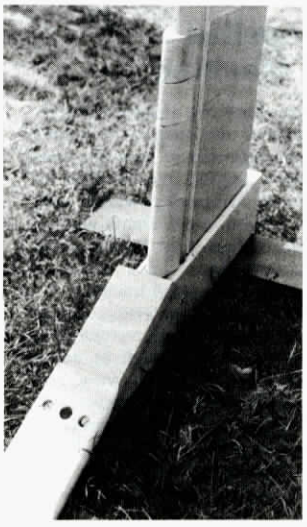
According to research into ceramics by the National Institute of Agricultural Engineering (NIAE) in Silsoe, England, conventional hard-surfacing often has little economic benefit. Although equipment may last longer with hard-surfacing, the cost of materials and the labor needed to apply it may nearly equal the benefits of less down time and parts replacement.

As work has progressed at NIAE, a commercial company has stepped in and produced ceramic tips for cultivator spring tines, which are now on the market. Smith Industries says the ceramic tips have been field tested extensively, outlasting standard steel point 5 to 9 times. Because ceramics are brittle, and can break on sudden impact, the points are difficult to use in rocky ground. The tines are available as replacements for existing equipment.

The company has also introduced a ceramic-protected subsoiler shank. Specially selected facings are bonded to the leading edge of the shank and along the foot of the implement.

The company attaches ceramics to existing shanks which are then sold as replacements. The tiles must be bonded to the shank with a special hot adhesive that would be difficult to apply on the farm but a Smith Industries spokesman says they hope to develop an adhesive that could be used on the farm to retrofit existing equipment with ceramics.

For more information, contact: FARM SHOW Followup, Smith Industries Ceramics & Ignition Co., St. Peter's Road, Rugby, Warwickshire England CV21 3QR (ph 0788 2166).



Tractor-Powered Tiler Saves 50 to 80%

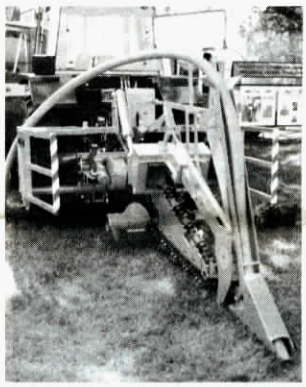
A new tractor-mounted drainage tiling machine that'll lay up to 900 ft. of tile per hour saves 50 to 80% over the costs of conventional work done by contractors, according to a British farmer who bought one.

The machine, developed by A.F. Trenchers Ltd., Colchester, England, was introduced last year. It's designed for tractors from 45 to 80 hp. with a Cat. II 3-pt. hitch and a 540 rpm pto. No modification is needed to the tractor and the 3-pt. mounted tiler can be removed easily at any time to free the tractor up for other work.

John Austin, who manages a large farm near Daventry, says that before buying the tiler from A.F. Trenchers, he received quotes on a tiling job that ranged from $250 to $800 an acre from contractors. Using the tractor-mounted unit, he was able to completely tile a 25 acre section in 11 days at a cost of just over $200 per acre.

The tiler consists of a boom-mounted digging chain that comes in sizes that'll dig trenches ranging in size from 5 to 12 in. wide. The trencher will operate at depths down to 5 ft.

A key feature of the tiler, and one of the problems that often stumps manufacturers who attempt to design tractor-mounted drain tilers, is the trencher's wheel drive. Because most tractors are not able to creep along at the slow speeds of 300 ft. per hour or less, tractors have had to be fitted with special gear boxes to gear them down. The A.F. Trencher tiler uses a hydraulic motor, supplied with oil from the idling tractor's internal system, to power a worm gear and shaft connected to two small cage wheels that are held tightly against the tractor's rear wheels by a ram. The cage wheels move the tractor, which is in neutral, forward as they rotate.



The tiler needs a minimum 45 hp. tractor with wheels that can be spaced on 60-in. centers.

For more information, contact: FARM SHOW Followup, A.F. Trenchers, Ltd., Gosbecks Road, Colchester, Essex, England, CO2 9JS (ph 0206 44411).

Air-Powered Post Driver

If you ever see J.F. Whidborne's air-powered fence post driver, you'll never forget it.

The 2-handed post driver contains an air-powered cylinder that lifts the driver up off the post from its down or resting position. Once up in the air above the post, the cylinder retracts, dropping the driver back down onto the top of the post, driving it into the ground.

"It's just like using a conventional post driver except that there's no effort needed to lift it. Most people get the hang of it in a matter of seconds," Whidborne told FARM SHOW.

The Whidborne Whacker, as it's called, needs just 4 to 5 psi of air pressure to operate, an amount that can be supplied by a small portable compressor that can easily be carried into fields with a small battery back. A small air line runs to a ball valve at the top end of the shaft which fastens to the piston. When the right hand handle on the post driver is lifted, it releases the ball valve, forcing air into the piston chamber, which instantly knocks the piston down on the top of the post. This kicks the post driver up into the air without any effort on the part of the operator. The motion required on the part of the operator in activating the driver is no different from what would be required if the post driver were not air-powered. The operator can add downward pressure on the downward stroke to aid in driving the post, just as he would normally.

Whidborne says that besides taking the effort out of post driving, the Whacker has advantages over tractor-mounted post drivers. "You don't have to maneuver a tractor into position and you can easily work in areas inaccessible to a tractor, such as in ditches, on banks, against trees and so on," he notes.

The post driver is 6 in. in dia. and can be used to drive in any post less than 6 in. in dia. A 3-in. model is also available. The larger model sells for $370 and the smaller for $345.

"Rubber Duk" Tractor Tires

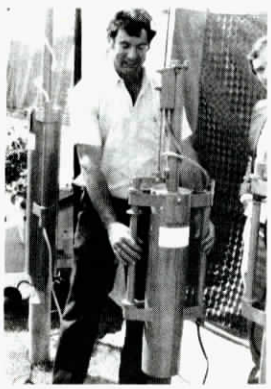
Four years ago British farmer Brian Burling obtained a copy of FARM SHOW (Vol. 4 No. 2) which contained a story on the Rubber Duk, a low ground pressure spraying machine that uses inner tubes for tires. Soon after, he flew to Oregon to meet with the manufacturer. He now imports Rubber Duk tires to the U.K.

The Rubber Duk was developed by Rear's Manufacturing in Eugene, Ore., for low ground pressure work in heavy or wet soils. Because it "walks" through fields so lightly, the 3-ton machine has also been used for work in growing crops.

Burling was interested in the machine for use in heavy compacted soils on his farm near Cambridge, England. He found he couldn't justify importing the entire machine, however, so he began adapting the unique tires to conventional tractors equipped with spray rigs. After three years, he's sold on the idea.

The tires and special rims fit to rear tractor hubs with an adaptor kit. To fit them to the front, Burling has designed a front axle add-on stub to accommodate the large wheels. The wheels sell for about $800 per wheel and can also be fitted to 4-WD pickups with special adaptors.

Contact: FARM SHOW Followup, Rear's Manufacturing, 2140 Prairie Road, Eugene, Ore. 97402 (ph 503 688-1002).



Contact: FARM SHOW Followup, M.J. Farthing, Ltd., 2 Summers Road, Farncombe, Godalming, Surrey, GU7 3BB England (ph 04868 22971).

(Continued on next page.)