

Two coil springs with bolt-type adjustment provide down force to increase penetration. Shanks mount on parallel linkage with 10 in. of vertical movement.

**NEW "STATE-OF-THE-ART"  
CONSERVATION CULTIVATOR**

## Kinze Introduces Its First Tillage Machine

Kinze Mfg., Inc., is getting into the tillage equipment business with the introduction of its new cultivator, equipped with state-of-the-art features, that's designed to handle high amounts of residue in any minimum till or ridge till cropping system.

Kinze's Bill Heick says the new model 1500 "conservation cultivator" has features that provide lots of flexibility in how it's used. "More and more farmers are switching to minimum till cropping systems to meet new compliance laws for government programs. They need a high residue cultivator that has easy-to-set features. We looked at the best ideas on other cultivators and incorporated them into one machine. It has many standard features, such as automatic spring-reset shanks, that are optional on other brands."

Cultivator row units are mounted on a 7 by 7-in., 3/8-in. wall toolbar with 30 in. of crop clearance. Heavy duty parallel linkage with hardened, replaceable wear bushings allow 10 in. total vertical row unit movement. Two coil down-force springs with bolt-type adjustment allow maximum weight transfer for superior penetration. Two 4 by 12-in. rubber tire depth gauge wheels mount on either side in front of the coulters to gauge depth and hold residue down while the coulters slice it. "The angle at which the gauge wheels are mounted ensures minimal plugging," says Heick. "The wheels are close coupled to the coulters, not ahead of it as on most other cultivators, and can be raised and lowered by simply loosening a bolt."

The 18-in. dia. smooth coulters are equipped with scrapers, cast hubs, and dual re-lube bearings. The coulters' 5/8 in. dia. spindle can be adjusted downward in 1-in. increments to compensate for blade wear. The automatic spring-reset shanks have 3/8-in. shear bolt protection and dual, screw-adjustable automatic spring-reset coil springs that are used to set trip pressure. Maximum trip pressure at the shank's tip point is 1,200 lbs. The hardened, bolt-on point is replaceable. Standard 1/2-in. dia. steel "T" fertilizer tubes are welded to the rear side of the shank, allowing you to side-dress liquid fertilizer about 10 in. from the row (on 30-in. rows) at the depth the cultivator is set.

Standard safety equipment includes SMV sign, reflectors, and safety/warning lights.

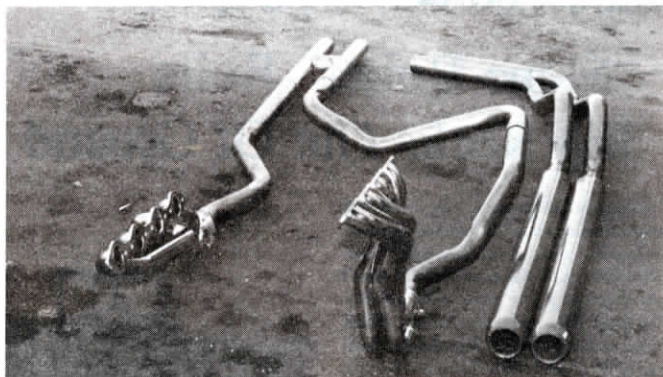
Optional equipment includes double edge, reversible shares available in 17, 19, 21, 25, and 27-in. sizes, as well as cut-away weeding discs, ridge wing attachments, rotary hoe crop shields, a liquid fertilizer application package featuring a piston pump with flow divider, and a rear telescoping hitch.

Available in rigid-frame models, 4-row narrow through 8-row narrow. A 6-row narrow cultivator equipped with rotary hoe crop shields sells for \$8,435 (\$11,500 when equipped with the liquid fertilizer application package).

For more information, contact: FARM SHOW Followup, Kinze Mfg., Inc., Box 806, Williamsburg, Iowa 52361-0806 (ph 319 668-1300).



The 18-in. coulters are equipped with scrapers, cast hubs and dual re-lube bearings.



Four individual header pipes on each side of engine feed into large 3-in. dia. exhaust pipes which lead to 2 1/2-in. mufflers and tailpipes (at right in photo).

**"INCREASES HORSEPOWER BY UP TO  
30% AND FUEL ECONOMY BY UP TO 33%"**

## New Header System For Diesel Pickups

"It boosts horsepower by up to 30% and increases fuel economy by up to 33% and costs far less than a turbocharger," says Claude Corrigan, sales manager, Brian's Auto, Tacoma, Wash., about the company's new dual header exhaust system for Ford and Chevrolet diesel pickups.

The first-of-its-kind system is designed to virtually eliminate exhaust back pressure on the engine. Four header pipes on each side of the engine feed into large 3-in. dia. exhaust pipes that start about 18 in. behind the engine. A crossover pipe equalizes pressure between the two pipes just before they connect up with 2 1/2-in. dia. mufflers and tail pipes. The system also includes a large air intake hose on the engine and air cleaner adapter on Chevrolet pickups, as well as performance tuning of the fuel delivery system during installation.

"We've tested the system on about 50 Ford and Chevrolet pickups for two years with great results," says Corrigan. "We're concentrating on the Chevrolet 6.2-liter diesel engine and Ford 6.9 and 7.3-liter engines. The new Cummins engine on Dodge pickups already has plenty of horsepower."

"Diesel engines lack horsepower and, since they burn slower than gas engines, they take more time to escalate to desired speeds. The problem is that factory exhaust manifolds create unnecessary back-pressure, reducing power and also causing undesirably high engine temperatures. Factory header pipes are sized to fit the engine's exhaust opening which may be only 1 7/8 in. in dia., resulting in restricted air flow. The header pipes make a sharp 90 degree bend away from the engine which further restricts air flow. Our big 3-in. dia. exhaust pipes collect exhaust from all four pipes to virtually eliminate back pressure, and the header pipes make a gentle bend into the collectors - exhaust air flows freely."

Another problem with factory exhaust systems is that the air intake hose into the air cleaner is too small, says Corrigan. "An inadequate air flow greatly hinders performance of an engine to burn the fuel/air mixture effectively. Some manufacturers use plastic hoses and mufflers that make the air intake appear larger than it really is. Our system uses a large 4-in. air intake hose and a large air cleaner adapter. The combination increases air flow by 300% on Chevrolet's

6.2-liter diesel engine. The extra air flow allows the engine to burn more fuel which boosts power. We also tune up the fuel delivery system to deliver more fuel to the injectors. Fuel economy is improved because less acceleration is required to get the power you need. The result is at least 2 to 4 more mpg."

Corrigan says that after installation a Chevrolet 6.2-liter diesel engine drives "as well as a stock 350 cu. in. gas engine. A Ford 7.3-liter diesel engine drives almost like a 460 cu. in. gas engine."

He adds that the exhaust header system helps throughout the engine's power range, but offers the most benefit in the last 200 rpm's. "The point at which a diesel engine normally bogs down, such as when going uphill or pulling a trailer, is when our exhaust system really helps. We increase performance on hills by 80 percent. It eliminates normal diesel engine lag and delivers instant throttle response, much like a gas engine. Dynamometer tests performed on a 1989 Ford F-250 XLT "Lariat" equipped with a 7.3-liter diesel engine show that at 2,200 rpm's, the engine develops 82 hp. After our system is installed, it develops 98 hp. At 3,000 rpm's the difference is 18 hp; at 3,200 rpm's, 15 hp; and at 3,400 rpm's, 33 hp. We guarantee a 25% increase in horsepower on a dynamometer when our system is properly installed."

According to Corrigan, the new exhaust system works better than turbochargers and also costs far less. "Turbochargers add pressure on the cylinders and increase exhaust temperatures which can cause wear on engine compartment components, especially when the engine is pulling hard. Extreme heat can cause metal fatigue on the valves and result in a blown head gasket. Turbochargers also sell for several thousand dollars. Our kit sells for only \$725 and doesn't add pressure to the cylinders or increase exhaust temperatures. The only possible thing that can go wrong is a blown exhaust gasket. Installation doesn't require expensive block O-ringing or steel shimming like with most turbochargers, and there's no need to cut or add extra oil lines or drain backs."

For more information, contact: FARM SHOW Followup, Brian's Auto RV Marine & Diesel, P.O. Box 9333, Tacoma, Wash. 98409 (ph 206 581-4302).