



TAG sensor arm automatically steers tractor. All driver has to do is turn the tractor at the ends.

"DRIVERLESS" SYSTEM ADAPTS TO MOST TRACTORS TO ELIMINATE SKIPS, MISSES

Automatic Steering For Your Tractor

One of the big new attractions at upcoming farm machinery shows and major state fairs this summer and fall will be new automatic guidance systems for tractors, sprayers, combines and other equipment.

Prototypes of at least two systems have already been shown publicly. In California, a "driverless" tractor steering system called TAG (which stands for Tractor Auto Guide) has been unveiled by the Modesto-based Electric Sorting Division of Geosource, Inc. It's slated for marketing early this fall. In Illinois, a radio-controlled marking system called Ag-Nave is being developed by Precision Tank Co., headquartered at Virginia. It's been displayed at several fertilizer and chemical application equipment shows and is expected to be available commercially in several months.

The radio controlled Ag-Nave system doesn't do the actual steering but tells the driver, via a dial mounted on the dashboard, how to steer for precision accuracy both day and night. Instead of watching a marker line scratched on the ground, he watches the needle on an "error meter" and manually turns the steering wheel accordingly to keep the needle on dead center, and the tractor on course. The guidance system is adaptable to tractors, combines, sprayers, floaters and other self-propelled equipment — possibly even agricultural airplanes. Estimated retail cost is \$2,000 to \$3,000.

The new TAG system for tractors goes a step further in that the driver doesn't have to do any steering going down the row. When the "driverless"

tractor comes to the end of the row, the driver simply hits a button on the dash to revert to manual steering while he makes the turn. Soon as the tractor is headed back down the field, he hits the "automatic steer" button. The tractor steers itself, leaving the driver free to devote full time to monitoring other operations.

"I've worked on this principle 7 years," says Dave Petz, Modesto farmer who holds several patents on the TAG system. Manufacturing and marketing rights have been assigned to the Electric Div. of the Geosource Co. which expects to have it on the market in several months.

Here's a closer look at how the TAG system works:

It's tied into the tractor's hydraulic power steering system. When he comes to the field with a cultivator, planter or other piece of equipment, the driver steers the tractor manually to make the first furrow mark with the power marker. This furrow — about 3 in. deep and 5 in. wide — serves as the guide for the TAG sensor arm mounted directly in front of the tractor. From this point on, the sensor rides in the existing furrow and the power marker automatically strikes a new furrow for automatic "driverless" steering of the tractor as it works its way across the field. The driver doesn't have to touch the wheel except for turning the tractor each time it comes to the end of the field. If the field is permanently ridged for vegetable or other crops, the TAG sensor arm can be adjusted to follow the existing furrow, or to straddle a bed.

Geosource officials say the TAG

system readily adapts to most makes of tractors with either wide front or tricycle front ends. Cost of the system hasn't been firmed down. Best guess is that it'll carry a price tag in the \$1,500 to \$2,500 range, depending on width of the power markers and other options.

For more details, contact: FARM SHOW Followup, TAG System, Electric Sorting Machine Div., Geosource, Inc., 3416 Oakdale Road, Modesto, Calif. 95355 (ph. 209 522-3203).

ANNOUNCES FRIEND OR FOE

Low-Cost Alarm for Driveways

For less than \$50, you can install an alarm system that lets you know when somebody drives into your driveway. The buzzer announcing friend or foe is located in the house and sounds whenever a vehicle drives in or out.

"It's more reliable than a watchdog," says Vincent Kramper, manufacturer and distributor of the Kramper alarm. "Besides serving as a burglar alarm, it's a convenience which can be enjoyed every day. For example, if you're expecting company, the alarm alerts you when they drive in so you can meet them at the door. It also lets housewives know when tractors leave or return from the field."

Everything you need to install the complete system yourself is included in the basic kit, which sells for

\$39.50. The kit includes 20 ft. of filling station type hose for laying across the drive way, an all-weather tight box to be mounted on a stake or post beside the driveway, 100 ft. of wire which can be buried or strung to the house, and an alarm which plugs into a 110 V. outlet at the house (or any other place you elect to locate the alarm). The alarm uses electricity only when ringing and makes a sound similar to a telephone.

The system, which can be adapted to more than one driveway, is available with an optional attachment which automatically turns on a yard or house light for two minutes every time the alarm sounds.

For more details, contact: FARM SHOW Followup, Kramper Enterprises, Dakota City, Neb. 68731 (ph. 402 987-3560).