

## Get Set To Try New Tramlining Technique

Automatic steering devices for tractors, sprayers, fertilizer spreaders, planters and drills are busting out all over.

Claus, the German farm equipment manufacturer that makes combines for Ford, is one of the first manufacturers to introduce automatic steering for combines. The device was demonstrated on a Ford 642 combine in Iowa last year. The driver heads the combine (or forage harvester) into the row, then depresses a foot switch which switches operation of the machine to automatic sensing. With no driving to worry about as the machine moves down the row, the operator is free to do other things, such as watching monitors to make sure all threshing mechanisms are operating properly.

Latest new development in semi-automatic steering comes from England, where the technique is called tramlining. It's catching on fast with small grain growers who picked up the idea from farmers in Germany. Basically, tramlining is a technique of leaving gaps or marks in small grain fields. Once the crop is up, these tracks guide the tractor driver as he goes over the crop 4 to 6 times during the growing season to spray and fertilize.

A major requirement of tramlining is to figure out the right arithmetic so the sprayer (or fertilizer spreader) width is an exact multiple of the drill width. In a few cases, farmers leave "tracks" in small grain by spray killing narrow strips with a herbicide, such as Paraquat. The most popular method of making tramlining tracks in small grain, however, is to shut off one or two coulters to leave unplanted gaps for the tractor wheels to follow as the crop is sprayed or fertilized. In the last year, at least a dozen British manufacturers have introduced mechanical and automatic tramlining attachments which fit most makes of grain drills. Many English farmers have also devised home-built tramlining rigs. One farmer, for example, simply tapped his drill's hydraulic supply to power two hydraulic switches which cut off the seed supply to selected coulters. Seed to these coulters is cut on every third pass. A hand held counter reminds the driver on which rounds he needs to operate the shutoff device.

"Until recently, drill manufacturers have been rather slow in providing modifications of their drills. Consequently, we have developed a pneumatic system which allows the conversion of several makes of drills available in the United Kingdom," A. G. Griffith, marketing manager for Shafer, of South Yorkshire, England, told FARM SHOW.

"Our conversion kit is called the Tramliner. The mechanism is powered by compressed air in rechargeable cylinders mounted on the grain drill." The Chafer Tramliner sells for

right at \$900 in England. We do not make sales directly to farmers or dealers. However, we would be interested in hearing from any distributors interested in licensing our Tramliner systems for sale in the U.S.," Griffith told FARM SHOW.

For more details, contact: FARM SHOW Followup, Chafer Ltd., Chafer House, 19 Thorne Road, Duncaster, South Yorkshire, England.

"Tramlining saves a lot of work and money," says Allen Jackson, English farmer who devised a tramlining rig for his Massey Ferguson 30 drill. It's so much easier to spray and spread fertilizer with tramlining tracks in the field. You don't realize the benefit until you've used it."

Jackson notes that it isn't uncommon in his area to make 5 or 6 trips over small grain to apply weed sprays and fertilizers. The tramlining device he designed can be fitted to any drill which uses hydraulics to raise and lower the drill coulters. Its key features are that:

1. It operates automatically and requires no separate controls, and
2. It operates after any desired number of passes without the driver having to listen or count to keep track of when to activate the shutoff device on the designated coulters, and when to leave it deactivated.

Says another English farmer: "When you're spraying 1000 acres of

small grain up to five times during the season, tramlining is a big help. Nobody can afford under or overlapping, particularly with a product like Avenge where a missed stroke means a line of wild oats through the crop. With tramlining, we can increase the number of acres sprayed per day without the loss of accuracy, and with less strain on the operator. The big advantage with tramlining is that a wide boom sprayer is just as fast and simple to operate as a narrow width unit."

Stan Downes, manager of Model Farm at Ditchely Park, Enstone, Oxon, Eng., switched to tramlining when he bought a new International 511 drill which was adapted to take the Chafer compressed air tramlining system. "Simplicity of operation is the main advantage of tramlining," reports Stan in an article in Big Farm Management magazine. "Our spraying and fertilizing operations have been increased so much that the

operator can now do as much as 250 acres a day. Before tramlining, our top rate was 160 acres a day. There's no difference in yields but there is a lower labor cost. We were able to cut our crew from 7 to 5, thanks to tramlining."

There is little evidence to suggest any significant yield loss from tramlines, according to most sources in England who have had experience with tramlining. Plants adjacent to the tramline get more sun and generally yield enough more to offset the missing plants, they point out. The amount of field area left unseeded will depend on how the tramlines are formed, width of the tramlines and distance between individual marks throughout the field. In cases where the arithmetic doesn't work out, it may be necessary to modify the working width of the sprayer, such as by blocking off an outside nozzle or two to make its total width correspond to tramlining tracks laid out by the drill.

**Compressed air powers Chafer's Tramliner attachment on this Massey Ferguson drill. Tramliner cuts off seed supply to selected coulters to create track pattern shown on right.**

