

# Full-season no-till soybeans show promise

NEWARK, Del. Full-season no-till soybean production is a relatively new program.

"There's a clear advantage to no-till over conventional practices, provided your management is good," University of Delaware Extension crops specialist Frank Webb told farmers gathered in Salisbury for the recent Delmarva Corn and Soybean Technology Conference. "But," he stressed, "this program is even more demanding than growing no-till corn because of the need for excellent weed control."

Comparing yield results over the past four years in trials at the University's Georgetown Substation, Webb said conventional soybeans averaged 33 bushels an acre while full-season no-till beans yielded 31 bushels. But when soybeans were grown no-till in three-year residue cornstalk ground, they averaged 40 bushels compared to only 27 under conventional tillage. He also referred to University of Maryland studies where yield increases of 19 and 12 bushels, respectively, were obtained in 1980 and 1981 when full-season Essex beans were grown no-till in 20-inch rows.

Webb who says he hopes to develop a production for full-season drilled soybeans comparable to one he put together a few years ago for no-till corn, says

a successful program for soybeans requires five things: good vegetative burn-down; proper selection of residual weed control chemicals; a good cover crop; planting accuracy; and row spacing of no more than 20 inches.

"As far as row spacing is concerned," he said, "the closer the rows, the better the yield". Fifteen inches is about as close as you can get with present standard no-till unit planters. Closer rows are possible with a no-till grain drill; however, his present data doesn't show a consistent or significant yield advantage with rows closer than 15 inches.

Plant population is critical with no-till soybeans. This poses a real problem for producers when they try to close up row spacing. Standard no-till unit planters are more accurate than current grain drill models in achieving desired seed placement because of the design of their seed delivery system.

"Unfortunately," said Webb, "the seed delivery mechanism of today's no-till grain drills is not nearly accurate enough when it comes to a seven-inch row, where you want only two seeds per foot. If you don't watch your seeding rate very closely, you could get reduced yields from too many plants," he warned.

Populations are the same for no-

tillage as they are for conventional tillage. Rates are based on row spacing and, to some degree, variety.

Many growers already have standard unit no-till planters on their farms. He suggested they first try growing full-season no-till beans with them before investing in a grain drill, unless they're also planning to use it for small grains as well. The specialist is currently also working on a no-till program for small grain production. Though that's still in the development stage, so far it looks pretty good, he said.

A good cover is one of the most important factors in producing successful full-season no-till soybeans. It doesn't seem to matter what kind you use as long as it produces a good thick mulch. This is important for both moisture conservation and weed control. You can plant in residue from the previous crop or in a living cover. The important thing is for the ground surface to be fairly level with no equipment ruts so that you get even seed depth.

Many crop residues are available for no-tillage soybeans, Webb said. Those that provide the most mulch are best. Corn stalks and soybean stubble may be used, but these covers generally provide poor mulch conditions which result in heavier weed pressure, so you need excellent chemical control. Whichever kind of cover you've got, good vegetative burn-down at planting and effective residual weed control are critical to a successful full-season no-till soybean program.

In cases where herbicide performance has been less effective than desired, to protect yields you may need to make postemergence herbicide applications.

"Be aware of a problem in time to correct it," he stressed. Once the canopy is established, the soybean plants themselves will do a good job of weed control.

Marestail or horseweed is one potential problem with this soybean cropping system. It's a biennial weed that's hard to kill even with Paraquat or Roundup. Webb recommended growers consult his fact sheet on "Full Season No-Tillage Soybean Production" (available at Extension offices in Newark, Dover and Georgetown, Del. for details on how to control this and other potential weed problems.

He described three programs which, depending on field conditions, can provide effective broadleaf weed and grass control. The first calls for applying Paraquat (Paraquat CL or Gramoxone) plus a surfactant and 2,4-D, ten to 14 days before planting. Follow this up after planting with a combination of Paraquat (if needed) plus a surfactant, Lorox, and either Dual, Lasso, or Surtlan.

The second program calls for the same pre-plant treatments followed after planting by Roundup (additional surfactant may be beneficial), Lorox, and either Dual, Lasso, or Surtlan. Instead of

the Roundup and Lasso you can now use Bronco, which is a package formulation containing 1.4 pounds of Roundup plus 2.6 pounds of Lasso per gallon.

With a good mulch cover and few broadleaf weeds and grasses present, a third option is open. In this case, after planting apply either Paraquat CL or gramoxone plus a surfactant, or Bronco. Treat residual broadleaf weeds with Lorox or, where soils contain two percent or more organic matter, you could use either Sencor or Lexone. Residual grass control can be provided by either Dual, Lasso, or Surtlan. Check labels for specific rates to apply.

The specialist said he foresees the no-till grain drill becoming of greater value in the future for full-season no-till soybean production. For the present, while all the bugs are being worked out of the production package, he suggested growers try just a few acres of no-till full-season beans at first, while they find out what works best for them.

## York holds hedging workshop

YORK — You can use the futures market to lock in a profitable price when it is offered. To do this requires some knowledge, some skills and some discipline to follow the markets and make timely market decisions.

You have a chance to gain the knowledge and skills by attending an evening workshop on the mechanics of hedging, on Monday, March 15 from 7:30 to 9:30 p.m. at the York County 4-H Center, Barr.

The program will include: "Hedging as a Management Tool", Roland Freund, Area Farm Management agent; "How to Hedge Your Livestock Production", Greg Strausbaugh, Merrill Lynch; and "Hedging Your Grain Production," Ellis Grossnickle.

The session is sponsored by the York County Cooperative Extension Service in cooperation with Merrill Lynch, Pierce, Fenner, and Smith Inc.

To make reservations call 717/757-9657.



## Don't get swamped

(Continued from Page A29)

benefited you. In fact, the farmer probably benefited more than any other working man."

Highlights of the presentation included: change in the law now states that property between a husband and wife are jointly shared meaning if one party dies the other pays no inheritance tax under the new law; and a person can now give a gift of up to \$10,000 a year without having to pay gift tax.

This \$10,000 gift clause is just one of the ways farmers can sell their farm to sons or daughters when they (the farmers) are still living and not have them pay exorbitant amounts of tax. Ten thousand dollars of the total amount of appraised value can be deducted as gift from each parent, and \$10,000 each to the spouse of the son or daughter, thus dropping the sale price \$40,000. For further explanation and procedure, Blyer and Crowley recommended consulting your attorney.

The third in the series of farm

economic changes will be held Thursday, March 11 at the Farm and Home Center. To begin at 7:30 p.m., the program will feature Hughes and Freund speaking on farm transfer arrangements. Included will be discussion of parent agreements, partnerships, contracts, corporations, installment sales and tax advantages.

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