

Lake Forest FFA reports on no-till studies

FELTON, Del. — Since 1977, vocational agriculture teachers and students in the FFA chapter at Lake Forest High School in Felton have been cooperating with county agricultural agents and extension specialists from the University of Delaware on a series of studies comparing no-till and conventional corn production.

Purpose of these studies has been to evaluate the effectiveness of various management practices so farmers can grow corn more efficiently. The work has received generous support from the agribusiness community.

"We now have enough data to draw some conclusions," says extension crops specialist Frank

Webb, who has been in on the project from the start.

Several findings concern fertilizer use. Results so far suggest that:

- * Planter-applied fertilizer gives a yield response on no-till corn.

- * Higher rates of planter fertilizer may be less likely to injure plants than some people have feared — at least based on one year's observation.

- * No-till corn makes better use of later applied N than does conventional corn.

- * Dribbled applications of liquid nitrogen can be as effective as knifed ones in terms of plant response.

In a four-year comparison of the

effects of planter vs. broadcast applications of 300 pounds of a 13-10-22 fertilizer on both no-till and conventionally grown corn, planter fertilizer consistently increased yield on no-till treatments," Webb says.

Average yields during 1978 to 1981 ranged from 87 bushels an acre for no-till with planter-applied fertilizer; 83 bushels for no-till with broadcast fertilizer; 75 bushels for conventional with planter fertilizer; and 77 bushels for conventional, broadcast. These are averages across all treatments including no-till covers of hairy vetch and Austrian winter peas, as well as no cover at all.

Judging by these results, Webb

says farmers who grow no-till corn should seriously consider applying a starter fertilizer at planting.

In another study this summer, the Lake Forest group compared plant response to different rates of planter fertilizer under both no-till and conventional tillage. A 13-10-22 fertilizer was banded 2 inches from the row at three different levels: 172, 292 and 405 pounds.

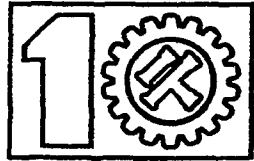
"There was no significant yield difference among any of these treatments," Webb says. "We ran this study to see how much planter fertilizer we could use in terms of total N and K without causing plants injury."

"We don't recommend using over 50 pounds total of these two

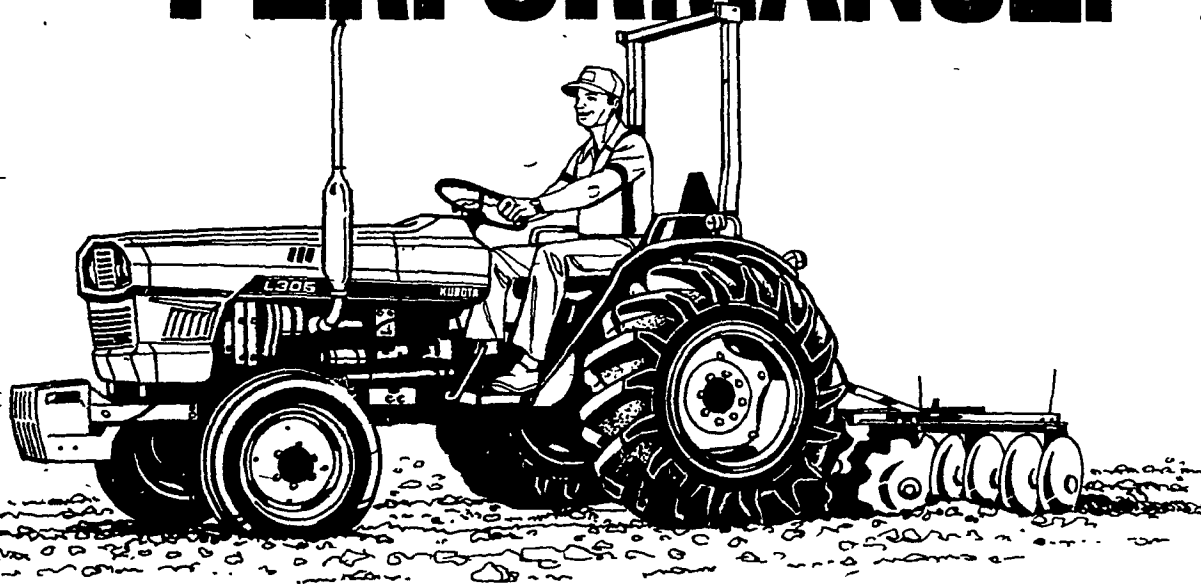
nutrients because of the potential for salt burn," he says. "But a lot of farmers have been using higher rates and apparently getting away with it. We wanted to know what the effects of higher levels would be and — at least this past year — there didn't seem to be a problem."

In this study, corn plants about 18 inches tall were sidedressed with enough 30% liquid nitrogen to bring the total amount of applied N in each plot up to 100 pounds. Average conventional yield was 65 bushels as compared to 70 bushels no-till. These were not exceptionally good yields; however, dry weather prevailed at that

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Plan spring conservation work

LEESPORT — With plans being made for planting spring crops, now is the time to consider any changes in your farming program, states Duane E. Pysher, district conservationist with the Berks County office of the USDA Soil Conservation Service.

"It's easy to become a successful conservation farmer. You don't have to upset your entire operation," says Pysher. "Start with one step at a time, such as one field or even part of a field, and add to this each year."

Early spring is an ideal time to layout stripcropping for spring crops or putting in subsurface drains to get rid of the wet spots, Pysher notes. Diversions or terraces are easily installed at this time of the year. Manure management also is an important consideration in preparing conservation plans.

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