

No-Till Farming Methods Catching On Among Amish

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GAP (Lancaster Co.) — More Amish farmers are taking an interest in no-till farming. That's evident from the big crowd that visited the David F. Stoltzfus farm for a no-till field day this past Tuesday.

A total of 120 guests attended the third annual field day. They had a chance to hear stories and see first-hand examples of how using horse-drawn no-till planters can save many hours of labor, conserve moisture, prevent erosion, and help build up soil structure over the years.

Stoltzfus first began trying no-till methods eight years ago. Since then, he's switched entirely to no-till planting for his 70 acres of corn and alfalfa crops on the farm.

His father Gideon and several brothers manufacture and adapt a variety of planters at their nearby business shop.

Stoltzfus said the main reason he began no-tilling was to better deal with the red clay soil found

in some of his fields. The dense, poorly-drained clay makes it tough to plow and work the soil.

But no-tilling can be an advantage for all soil types, according to crop specialists at the meeting. During this wet spring, for example, no-till farmers were often able to get their crops planted sooner than those who plowed.

"A lot of people found out no-tilling was good this year. They didn't have time to plow," said Bob Anderson, Penn State crop agent in Lancaster County.

Anderson pointed out that planting corn by conventional tillage (plowing, discing, harrowing, and planting) takes at least six times as long as no-tilling, which involves only one pass across the field with a no-till planter.

"I find the interest (in no-till) is growing," said David Stoltzfus. Some of the reasons for this, he said, are because some Amish dairies are growing larger and labor is not as readily available as it used to be.

Grant Troop, an agronomist from Quarryville, spoke on some of the basics of no-till planting, including planter parts and adjustments.

The best way of transitioning to no-till corn is by planting into an alfalfa field, according to Troop. After four years of not being tilled, soil in an alfalfa field "has structure back in it," he said.

"Year after year of plowing compromises soil structure," Troop pointed out.

Visitors had a chance to examine one of Stoltzfus's corn fields he no-tilled planted this spring in fairly wet conditions. Troop and Stoltzfus said they were concerned about how the corn would grow because of the risk of "sidewall compaction" that can happen when corn is planted in wet soil, Troop said.

This kind of compaction is caused by hardening of "sidewalls" created by the no-till coulters in the soil. If the corn roots cannot break through these walls, they will only grow in a single plane along the planting groove, greatly reducing yields.

Troop and Stoltzfus said they were pleased with how well the corn was growing. This is the second year the field was planted to no-till corn. Prior to that it had been in alfalfa.

Troop attributed the good-



Interested farmers gather around a corn planter on the farm of Gideon and David F. Stoltzfus farm, as Grant Troop goes over some of the essentials of good no-till methods. In the background is a field of no-till corn.

growing corn to the fact that the field had not been tilled for several years.

Sjoerd Duiker, Penn State soil scientist, pulled up several corn stalks to show the root development. The roots showed some evidence of sidewall compaction, but not to the extent of causing large yield losses.

Duiker also had soil samples on hand for farmers to see the difference between soils that have been no-tilled over the years and soils that have been tilled. Better

structure and fewer signs of compaction could be seen in the no-till soils.

As far as no-tiller planter adjustment, Troop stressed the importance of making sure the planter is level to get the best planting job.

"If you don't have the corn planter level, it's not going to do the job you want it to do," he said.

Troop also went over recommendations on various planter parts. Generally, 13-wave coulters work best for planting corn,

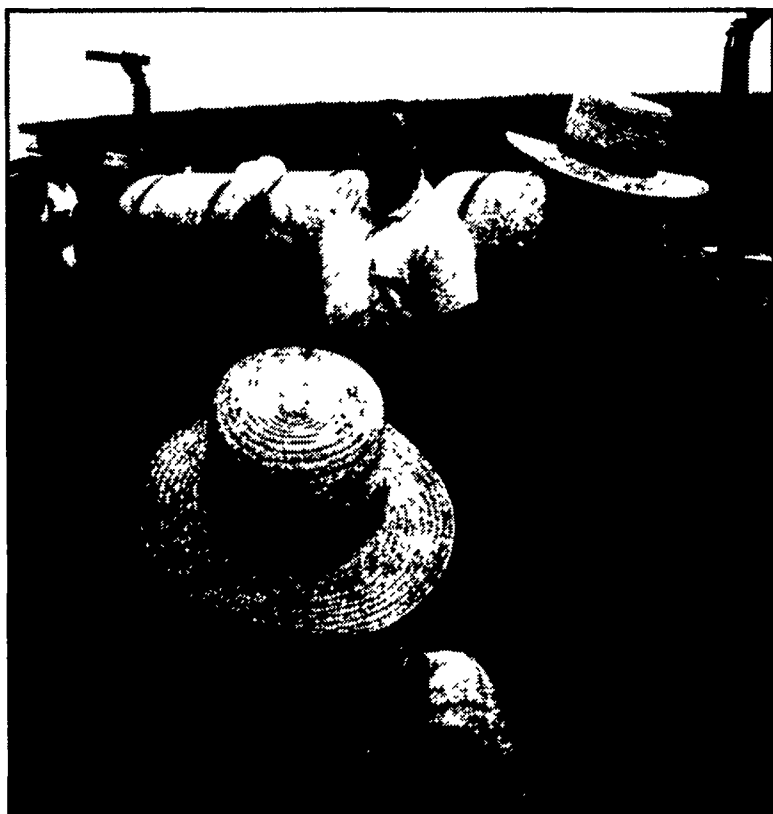
he said. They should not be mounted on the planter frame, but mounted so that depth wheels can give direct depth control.

Other Penn State personnel on hand for the day included Greg Roth, professor of crop management; David Sylvia, head of the Department of Crop and Soil Sciences; and Mark Goodson, York County crop agent and organizer of the field day.

Farmers attending the field day were eligible to receive chemical application credits.



Sjoerd Duiker shows corn roots taken from a field that has been no-tilled for several years on the Stoltzfus farm. Although this corn was planted in fairly wet conditions and the soil shows some evidence of sidewall compaction, the crop is growing pretty well.



Grant Troop demonstrates the importance of keeping the no-till planter level in order to get a good planting job.

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