

# Zone Tillage Creates Better Seedbed Than No-Till

LITITZ (Lancaster Co.) — A national zone-till expert said that 30 years ago, he realized he couldn't survive using only no-till, because crop yields were falling and the soil fertility conditions deteriorated.

So he invented a way to create a "zone" of conventional tillage measuring 8-10 inches wide in the seed planting path, while leaving the rest of the field undisturbed, according to the specifications of a no-till soil management strategy.

Ray Rawson, Farwell, Mich., spoke about the benefits of using zone-till using the Unverferth/Rawson one-pass coulters/disc tillage combination at the annual Binkley and Hurst Bros., Inc. Open House. Approximately 300 Binkley and Hurst customers attended the open house on Wednesday.

Rawson said zone till "is the intensive tillage of a narrow area in which we place that seed." Rawson said that regular no-till cultivation does not incorporate the

residue to create good soil fertility. Also, a no-till planter will create compacted "sidewalls" in the seed planting line, which restricts growth of the hair roots, dropping crop yield potential.

But the three-disc coulters method creates a one-pass optimum seedbed area for fine seed-to-soil contact, and allows oxygen and nutrients to be utilized more effectively by the plant.

"If you use Ray's system, you get all of the advantages of conventional tillage, but you do it in one pass," said Bill Ferris, an Unverferth Manufacturing representative, at the open house.

In past experience, according to Ferris, corn planted using no-till creates a sidewall, where the roots grow in the coulters disc track, rather than the way they're supposed to, which is outward in a circle around the plant.

The coulters/disc combination can create a seedbed through 220-bushel/acre corn residue.

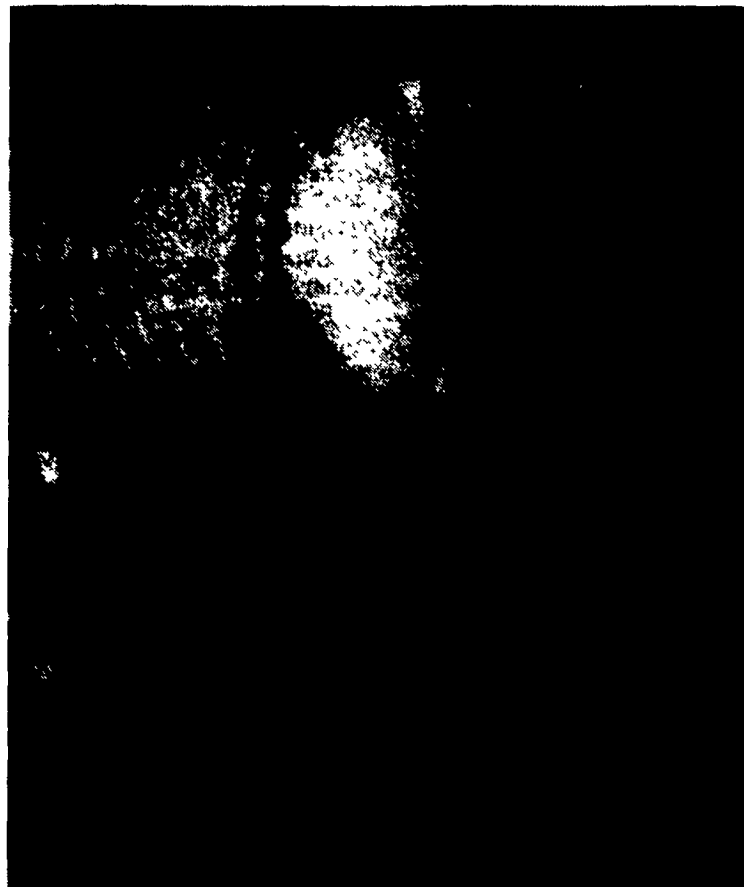
Using zone tillage, said Raw-

son, has increased yields by a third over no-till. Yields have increased by 25 percent using zone tillage over conventional till, according to studies done by Rawson on his 5,500 acre cropping operation.

Zone tillage "takes the best of both worlds — the best of the no-till and the best of the conventional and combines it in one operation," said Rawson.

What farmers should ask themselves if they are going to change from conventional to no-tillage, said Rawson, is: does the change address all of the things that we need to have happened in the soil to make that seed grow successfully?

Also at the open house, Rich Merrill, Case representative, spoke about the Case IH Products of Excellence, including the new line of 7200 Series Magnum tractors. Liquid manure management equipment and insights, in addition to pesticide update and safety training, were also discussed at the open house.



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## Farm Safety Fact Sheet Available

UNIVERSITY PARK (Centre Co.) — Would you scale a cliff without climbing ropes or play professional football without a helmet? Many farmers take similar risks by not wearing personal protective equipment (PPE) in hazardous situations, said a farm safety expert in Penn State's College of Agricultural Sciences.

"According to one survey, only 44 percent of farmers always wear gloves when working with pesticides," said Dr. Dennis Murphy, professor of agricultural engineering. "The same survey found that only 22 percent of farmers always wear eye protection, 8 percent always wear respiratory protection, and 4 percent always wear coveralls.

"Maybe these farmers try to

save money by not buying the proper equipment," Murphy said. "But they can wind up paying with their health or their lives. Some farmers say wearing PPE is uncomfortable, or that it's a nuisance to lug it from job to job. But the protection it offers outweighs any inconvenience."

Murphy has prepared two new fact sheets that explain the equipment farmers need for protection from pesticide exposure, respiratory hazards and other farming risks. The fact sheets are part of a series on PPE, which will include educational plans and a training program. Two more fact sheets are scheduled for release this spring.

"Personal Protection from Pesticides," fact sheet Safety-35, describes how to choose the

appropriate equipment for jobs involving pesticides, including various types of gloves, respirators, chemical-protective clothing, eye protection and boots. It also covers PPE maintenance and what to do in the event of an accident.

"Farm Respiratory Protection," fact sheet Safety-36, discusses respiratory hazards commonly found on farms and the types of respirators that are appropriate. It also covers respirator maintenance and testing.

"The first step in choosing a respirator is determining what kind of hazard you'll be facing," Murphy said. "There are three basic categories. Particulate hazards include dust, mists, fumes and mold spores. Gases such as hydrogen sulfide or nitrogen diox-

ide present another hazard. The third category involves atmospheres without enough oxygen, such as those in manure storages or oxygen-limiting silos."

The fact sheet covers two categories of respirators — air-purifying and supplied air. "Air-purifying respirators are appropriate for many hazards," Murphy said. "But because they only filter the air outside, they don't protect the wearer from an oxygen-

deficient atmosphere. Only supplied-air respirators, which provide clean, fresh air from an outside source, can be used when the air has too little oxygen."

Fact sheets Safety-35 and Safety-36 are available free from the Department of Agricultural and Biological Engineering, The Pennsylvania State University, 246 Agricultural Engineering Building, University Park, PA 16802, (814) 865-7685.

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