Raise Worms For Better Crops

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tomorrow's demands are for no-till farming as it has developed to today — contrating on establishing earthworm populations and beneficial soil microbials through the management of crop residue.

Jim Kinsella, manager for the BASF Corporation Development Center in Lexington, Ill., presented a slide show and speach of his more than 15 years experience on his own farm with no-till farming. His talk presented a practical illustration of how a no-till system works and he provided testimony that the method is superior, in the long run, to current traditional practices.

Though his Midwest farm is comprised of large rectangular fields and deep soil, he said that a no-till system can be adapted to Eastern farms, though modifications must be made in the system depending on the characteristics of each field.

The gist of the presentation was

that traditional tillage-based cultivation is a long-term deadend, while the practice of no-till methods offers long term benefits of increased yields, extremely decreased erosion, operating costs and time spent in the field.

In addition to Kinsella, speakers at the conference included Dr. Garv Steinhardt, an agronomist at Purdue University who reviewed research on compaction and yields following practices to eliminate compaction and maintain a lowcompaction program; Lynn Hoffman, a Pennsylvania State University agronomist who discussed notill machines, seeding rates and effects; and Dr. Lester Vough, with the University of Maryland's Department of Agronomy, who talked about various forages, combination-plantings and the resulting feed values.

Also offering programs were Dr. Ron Ritter, also with Maryland university's agronomy department, who spoke on weed control with conservation tillage: Dr. E. Scott Hagood, a weed specialist with Virginia Polytechnic Institute who talked on controling specific weeds; and David Schertz, a national agronomist with the U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS), who updated participants on the current trends in Washington.

The day finished with a question-the-experts panel discussion. Kinsella received most of the requests for information.

Kinsella has authored a manual for no-till farming in the Midwest, which was published by the BASF Corporation. Kinsella works for the BASF Corporation's Agronomic Development Center, which is located on his farm.

However, the master's degree holder said the company does not subsidize his farming income, even though he uses his farm as a testing grounds for practical applications of no-till theory.



Jim Kinsella, manager of BASF Agronomic Development Center, and author of a no-till user's manual, tells of his experiences and love of earthworms.

The catch to Kinsella's system is that he allows at least three years before a field being cropped with traditional plowing responds to notill practices. He said it takes about three to five years for the soil and the soil worms and microbes to build up the tilth, tunnels and humus that can build the soil, instead of allowing to wash away.

Not on Kinsella, but other speakers as well, spoke of the severe need to reduce soil erosion. A field that has been developed under a no-till system can be virtually erosion proof, according to Kinsella and others.

Showing slides of his fields, crops, soil and earthworm populations, Kinsella seemed to describe a garden plot approach to raising crops and forages, rather than the crop field approach used.

According to Kinsella, the problem with establishing a no-till system is overcoming the threshhold of damage done to a piece of earth when it was initially used for





