

# York Farmers Attend Corn 'Trade School'

JOYCE BUPP

York Co. Correspondent

YORK (York Co.) — They call it the county corn clinic.

But this popular, annual gathering of York area farmers is more than a "clinic." It's a combined short-course, mini-trade show, and in timeless farmer tradition, an informal idea-swap session.

While it focuses on the production of York County's most widely-grown grain crop, the annual corn clinic includes a wider scope of agronomy-related education. Much of the content is specifically geared toward farmers completing their state-mandated pesticide certification credits, with about 200 in

attendance at the Feb. 8 meeting at the county's 4-H center.

Mark Goodson, York's extension agronomist, set the tone for the day with review of the newly-revised soil tests, as well as a technical look at the basics of soils.

New soil tests — at \$6 each — have been expanded to deliver three years of nutrient recommendations. Goodson reminded growers that an effective soil test must include no less than 15-20 core topsoil samples taken from scattered spots of each field being sampled. Most testing labs are now using very similar processing methods, the procedures of which are graphically illustrated at the bottom of the test

result sheets.

Recommendations focus on the "optimum" level, where the most efficient returns for nutrients are gauged, Goodson cautioned growers that, while good crop response is shown when nutrients are applied at the "below optimum" level of recommendations, the aim should be to keep soil nutrient levels maintained over the years at the optimum, or center green portion of the test chart.

"It doesn't pay to have nutrients off the scale, and livestock operations should especially be aware of their soil nutrient levels," he said.

While starter fertilizer is routine in corn cultivation, Good-

son advised growers that little more may be necessary, in light of escalating costs, if soil nutrient levels are already high. Excessive application of nitrogen is not only wasteful in cost, since unused nitrogen will quickly leach out, but can create environmental problems like high nitrate levels in groundwater. Splitting applications of nitrogen, one boost for the seed's early growth, and a second as it approaches mid-summer growth spurt, is generally more efficient.

Goodson reviewed soil chemistry basics, using graphic presentations to show how soil is composed of 45 percent mineral matter, 25 percent each air and water, and five percent organic matter. Levels of the three ingredients in the mineral matter — sand, silt and clay particles — determine much of the quality of the soil.

Soil components, as well as the nutrients necessary for plant health, have positive or negative charges. And, like a magnet, the positive and negative attract, while positives and negatives repel like charges. An understanding of soil makeup, which components and nutrients are positive and negative, and how they interact, is helpful to producers for fine-tuning nutrient levels.

Clay particles, for instance, are composed of many microscopic layers which offer surface for these magnetic-like charges to convert nutrients for plant use. Just one-fourth of a cup of clay particles offer more chemical conversion surface than a football field. And the particles allow for water absorption, retention of nutrients and holding the soil together.

"It's an amazing miracle," marveled agronomist Goodson, of the intricate chemistry of soils and their ability to nurture plant growth.

One macronutrient of healthy soil, sulfur, is less available than in prior years, according to Goodson. And, that relates directly to cleaner-air measures undertaken in recent years.

"As we've cleaned up our air, there is less sulfur falling to the ground," he explained, of the sulfuric acids once given off by certain manufacturing and energy generation processes. Therefore, growers need to watch soil sulfur levels and take measures to add it, when soil tests indicate a low level of the macronutrient.

Bugged By Weevils

While healthy soils include

many "bugs" of active bacteria, it was a "bug" of a different sort addressed by regional forage crop agent Paul Craig in his alert about alfalfa weevils.

"We were surprised by the weevils in the 2000 growing season," said Craig, noting that it had been almost 30 years since the last major outbreak in the region of the costly alfalfa pest.

Weevils, which winter over and hatch when temperatures warm, devour the tender, delicate growing tips of alfalfa, skeletonizing the leaves and leaving afflicted fields with a silvery cast. With weevil populations at their highest last summer since the outbreaks of the 1960s and 1970s, and a winter which was "perfect" for their carryover — steady cold and insulating snow cover, regional agronomists predict a likely serious infestation for the upcoming season.

Weevil larvae are 1/16" to 5/16" long, with a dark head and pale green body with a white stripe, very active, and according to Craig, "all they do is eat." They feed for 14-20 days, then molt in a cocoon into a quarter-inch weevil with a distinctive brown streak and snout.

"Go look in your fields; get out of your truck and scout your alfalfa," Craig emphasized. Two tools he advised to carry along are a bucket and a pocketknife, to cut 30 stems from random, scattered spots in each stand, then carefully counting the larvae/adults found feeding there. Two or more per stem, or 40 percent or more of the stems showing damage, indicate the need to "do something." Early or late in the day might be preferable for scouting, since Craig says the insects "hunker down" during the heat of the day and are more difficult to find.

Depending on the stage of the crop, that something to do in response to finding weevils might be to cut the crop and then spray the remaining stubble, or if the alfalfa is still young, spray the infestation immediately before more of the crop is chewed away.

Growers finding just a few weevil larvae or adults in their alfalfa stands should not panic, since a limited number of the insects actually attract their natural, biological control, a small wasp. That wasp lays its eggs in the larvae and adults, which destroys the weevil when the eggs hatch. However, the weevils reproduce much more rapidly than the controlling wasps, rendering this natural control ineffective.

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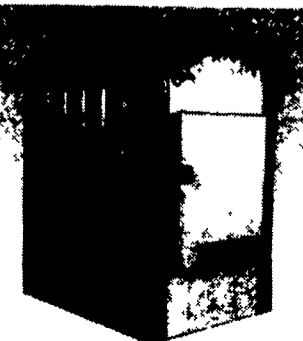
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