



CHECK IT OUT: August is a good time to dig corn roots, though you'll likely face a hot job. Derek Sauder, Precision Planting, says to knock off dirt and brace roots, then evaluate whether roots are moving out at a good rate, whether a healthy number of roots exist and whether root feeding occurred.

don't carry enough weight on your gauge wheels, the row unit can ride up, creating shallow planting." Understand, too, that 90 pounds is not 90 psi; 90 pounds equals 25 psi, and 90 psi equals 300 pounds.

Planting depth can translate into root issues, Montgomery says, adding he's encountered more problems with planting depth than he's expected to. Checking behind the planter is particularly important in fields with varying soil types, conditions and moisture.

Scout for root robbers.

If you didn't use an insecticide at planting, consider putting out bait stations within the first two weeks after planting.

Montgomery says if you trap wireworms, which feed on the mesocotyl region of the early seedling, you may need to consider treatment. Trapping the occasional white grub, which feeds directly on roots, may help you make insecticide decisions in 2009.

Dig, dig, dig.

When producers think of fun summer activities, digging up root systems may rank second only to baling small hay bales. Yet, it's no less necessary.

Montgomery recommends digging root systems from several areas of the field in June, to get a good feel for rootworm pressure.

You can use the Iowa

Most wanted root wreckers

IN the early season, root feeders will show evidence of their damage through gaps in stands, wilting plants, stunted plants, and purpling of the leaves and stems (phosphorus deficiency), says University of Illinois entomologist Mike Gray. If you see those symptoms, take a hand trowel to the field and dig up a few plants to see how well your seed treatments worked.



White Grub: Prunes root hairs, reducing efficient moisture and nutrient uptake.



Rootworm: Millions of dollars have been spent trying to control this hardy insect.



Grape Colaspis: Another root hair feeder. The larvae are only about 1/8-inch long.

Wireworm: This insect pest bores into the mesocotyl region, between the crown and seed itself.



Tracking variant spread

The western corn rootworm has proven itself to be an adaptable little insect, with the variant overcoming traditional crop rotation control by laying eggs in soybean fields. The first variants showed up in eastern Illinois nearly 20 years ago and have steadily spread across the state. According to University of Illinois entomologist Mike Gray, the potential for the rootworm variant to strike exists anywhere in Illinois north of Interstate 70. Although entomologists quit tracking the spread of rootworm variant a couple of years ago (widespread use of *Bt* rootworm technology has made injury harder to document), this map offers a historical perspective on how rapidly the variant spread.

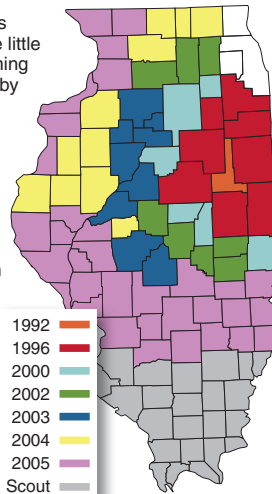


IMAGE SOURCE: BURRUS SEEDS.

root rating system (see Page 4) to evaluate damage. Or, Montgomery also recommends mixing a water and salt solution in a 5-gallon bucket and soaking roots. If three or more larvae per plant float to the top, you'll get a pretty clear idea of whether you made a mistake this year — and you'll know better what to do next year.

Start digging again in August, when spindlier plants are evident. Check those smaller stalks for evidence of hatchet roots, planting depth problems or "furry" roots, which indicate a point at which roots experienced stress or were chewed on by insects.

They said it

"The struggle is that a lot of producers don't get real excited about going out and looking for root injury in July. They usually do that from the seat of their combine. That's just the reality of the world."



Mike Gray,
University of Illinois



"Soil condition plays a big part in getting good root systems. On our farming operation, we practice vertical tillage. Even though we know soil varies, we want to make soil relatively consistent all the way down. Vertical tillage goes underneath trash and mixes soil up."

Dustin Blunier,
Precision Planting

"What should you be doing? Anything that gets the root system up and moving as quickly as possible. Don't do anything to stall out root development and let a pest get a leg up on the plant."



Matt Montgomery,
Mason County Extension



"Everybody thinks you'd be better off if your corn root system was bigger. The problem is that the plant has a limited supply of energy to spend, and bigger roots would mean less grain for many hybrids. We're not selling roots. We're selling grain. Roots only need to be big enough to get the job done."

Emerson Nafziger,
University of Illinois

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