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Preventing Soil Compaction

Even as I type this, I look at the title and wonder: why are you writing about soil compaction...when the crop is already planted and growing...in July? Let me try to explain!

Soil compaction begins when we work, plant, or travel on soils that are too wet. The effects, however, don't necessarily show up until the crop is actively growing. With that in mind, now is the time to assess potential soil compaction issues are you are scouting the crop, particularly in a year when ample moisture led to some less than ideal planting conditions.

Most crops will reveal compaction as either a nutrient deficiency or drought stress. As you see areas of the field where crops just don't look right, check out the developing root system. If roots are restricted in some way, you can then determine the cause – and more importantly, if it can be avoided in the future!

It's also a good time to start thinking about compaction prevention this fall, since harvest equipment tends to be some of the heaviest implements we run over field. A 1000 bushel grain cart can weigh upwards of 36 tons on a single axle. If that axle weight is transferred to wet soils during field operations, compaction can occur. What can you do to help prevent compaction? The most obvious way is to avoid being out there when it's wet! That may well be a difficult task if continue in the same weather pattern we are now. When traffic can't be avoided on wet soils, consider axle configurations (where possible) that reduce tire/track pressure as well as a minimization of axle weights in general. Another option that you might want to consider is controlled traffic patterns. Controlled traffic is defined as confining traffic to about 10% of the surface area of the field. If you are interested in design of a controlled traffic pattern, now is the time to start looking at what those patterns may be.

Walnut Caterpillars

If you've ever looked up at your walnut tree and noticed an absence of leaves, you may well have seen the damage from walnut caterpillars. While they mostly attack black walnut and hickory, they can also do damage to oak, willow, honey locust, and apple trees.

The caterpillars overwinter as pupae underground. In late spring, moths emerge and deposit egg clusters on lower leaves of the host trees. At this time of the year, newly emerged larvae skeletonize leaves. As they grow, they continue to consume larger amounts of leaf tissue, eventually devouring entire leaves in some cases. They tend to stay in a single tree with many groups possible within a single canopy.

Removing leaves with egg masses is an effective way to control walnut caterpillars, but can be impractical with larger trees or heavy infestations. Bands of Tree Tanglefoot pest barrier may be used to snare larvae as they migrate to main branches or the trunk to molt. Insecticides such as spinosad (Conserve; Captain Jack's Dead Bug Brew; Borer, Bagworm, Leafminer and Tent Caterpillar Spray) permethrin (numerous trade names) malathion or cyfluthrin (Tempo, Bayer Vegetable and Garden Insect Spray) may provide the most practical means of control.