

Grain Crops Newsletter

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AGRICULTURE & NATURAL RESOURCES

Late Winter 2011

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Outreach Program Highlights Differences in KY, IL Farm License Plate Regulations

For several years, Kentucky farmers have known about the problems associated with driving their semi's in the state of Illinois without extra permits. But recently, I've received several complaints from farmers about driving their pick-ups with KY farm plates into Illinois. It seems that they are being ticketed because of some different interpretations about weight limits of vehicles with farm plates between the two states.

The Graves County Cooperative Extension Service is partnering with the Kentucky State Police/Commercial Vehicle Enforcement Division and Kentucky Farm Bureau to provide a 'Farmer Outreach' forum that will forge enhanced relationships between law enforcement and the agricultural community.

The meeting is scheduled for Tuesday, March 8, 2011 at 9:00 a.m. (CT) in the Graves County Extension Office (251 W. Housman Mayfield, KY 42066). Topics of discussion will include safety

regulations, licensing requirements and driver qualifications.

For more information about the program please contact Kenny Perry at the Graves County Extension Office at (270)-247-2334 or Officer Del Miller with the KY State Police at (270)-685-3927 or (270)-577-4262.

Sampling for Nematodes

By Paul Vincelli

Nematodes are microscopic roundworms that attack roots of corn and other plants. In corn, nematodes affect yield by damaging the root system and interacting with opportunistic root-rotting fungi. They become more important when there are other root-related stresses in the same field, such as moisture shortage, root damage from insects, or compaction.

Although there is increasing interest in nematodes as potential yield-limiting factors, the threat these pose varies greatly from one field to the next. The best way to determine whether nematodes may be affecting yield is to sample for nematodes.

When to Sample

The window at 4-6 weeks after planting is probably the easiest time to sample, since the nematodes will be in the root zone and the soil is often moist enough to be able to insert a soil probe. Plus, sampling early in the growing season will give an idea as to whether nematodes are likely to affect crop productivity. Summer sampling is less than ideal. During summer,

certain nematodes, like the sting nematode and needle nematode, move downward in the soil, where the moisture is. Also, pulling samples from dry soil is difficult. After harvest, sampling gives a look at certain nematode populations, especially endoparasites (lance nematode and root-lesion nematode, which burrow within the corn root), as well as the nematodes that go deep into the soil during summer.

How to sample

The most important thing to realize is that *sampling for corn nematodes is different than sampling for soybean cyst nematode*. For corn, sampling guidelines are as follows:

- Instead of sampling at random, in a zig-zag pattern, sample parts of the field where yield losses or symptoms (stunting, yellowing in elongated areas of the field) are not explained by other factors, such as soil compaction, soil type, etc. Corn nematode populations can be extremely variable (see Figure 1), so focus sampling on potentially problem areas of the field. However, for severely affected areas of the field, sample from the edge of the damaged areas rather than in the worst areas. (This is because corn nematodes require live roots to feed on, and if plants are severely damaged or dead, the nematode numbers will be low.)
- Make sure to sample within the row—that’s right, *within the row*. This is different from sampling for soil fertility. Take 20-25 samples.
- Sampling for nematodes in corn requires a depth of at least 12 inches. This is much deeper than for soybean cyst nematode. If sampling in summer or fall, one may need to go as deep as 24-36 inches in order to detect sting nematode or needle nematode (although these two nematodes are usually found only in sandy soils).
- Put all 20-25 soil cores in a Ziploc bag. Don’t break the soil cores, since some nematodes like stubby root nematode are extremely sensitive to soil disturbance. Label the bag with a permanent marker (not a magic

marker, which comes off in water). Store samples in a cool, dry place until shipment.

**2010 Corn Nematode Research
Arenzville, IL**

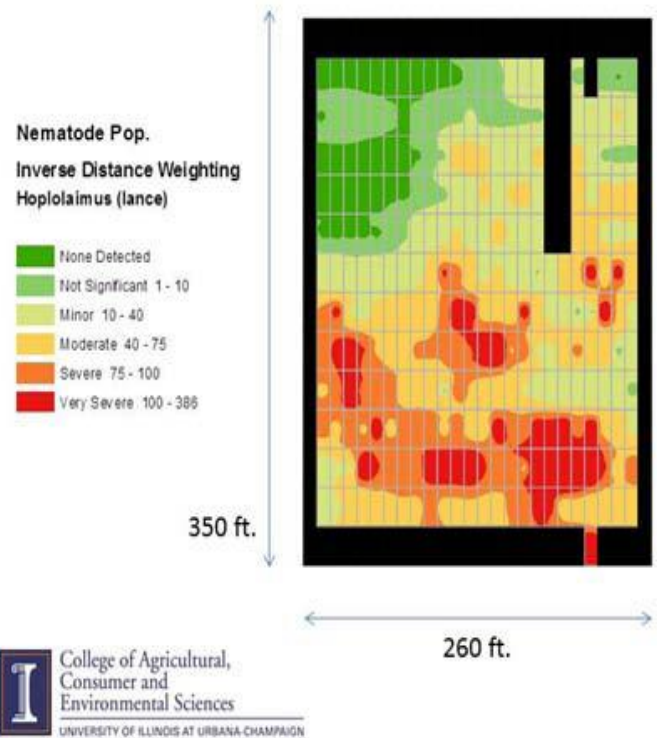


Figure 1. Variability in nematode population in a corn field. (Courtesy Terry Niblack, University of Illinois)

Where to send samples

Laboratories that can analyze nematodes in soil samples collected at this time of year include:

- University of Illinois, <http://plantclinic.cropsci.illinois.edu/submit.html#nematode>
- Purdue University, <http://extension.entm.purdue.edu/nematology/cv/submissionform.pdf>
- Mississippi State University, <http://msucares.com/pubs/misc/m1230.pdf>
- University of Florida, <http://edis.ifas.ufl.edu/sr011>
- Iowa State University, <http://www.extension.iastate.edu/Publications/PD32.pdf>

RYEGRASS CONTROL STRATEGIES THIS SPRING

By Jim Martin, Extension Weed Scientist

Fall is the preferred time to control Italian ryegrass in Kentucky; however, the conditions last fall were not favorable for the development of wheat or ryegrass. Although planting was ahead of schedule, both wheat and ryegrass plants did not begin to emerge until late October or early November due to the extremely dry conditions. The fact that December's statewide temperature was nearly 9 degrees cooler than normal also limited the development of wheat and ryegrass plants.

The good news is the cold temperatures during December and January enhanced the likelihood of winter kill of small seedling ryegrass. However, growers should not take it for granted that the freezing temperatures eliminated all the ryegrass. Some plants will survive and additional seedlings could emerge as we transition from winter to spring. Fields with a history of ryegrass could still be a problem.

The following are some factors growers need to consider if they determine there is a need to make a spring application for controlling ryegrass:

Weather Conditions: Ideally, ryegrass and wheat plants need to be actively growing in order to achieve optimum control and avoid crop injury. Be aware it may take several days, if not weeks, to control ryegrass, especially if temperatures are cool. Large fluctuations between daytime high and nighttime low temperatures can result in crop injury with some herbicides. Frost the night before or within two days following application can also enhance the likelihood of wheat injury.

Competition: Wheat is somewhat behind in its development, therefore it is important to control competitive weeds, especially ryegrass, in order to give wheat a better chance to finish tillering and develop a competitive canopy.

Growth Stage: Crop growth stage can impact when certain herbicides can be applied. Spring treatments with Hoelon need to be applied prior to jointing of wheat; whereas, Osprey and PowerFlex can be applied up to jointing. Axial XL may be applied up to pre-boot stage. Ideally spring applications should be applied before ryegrass exceeds the maximum growth stage of 2 tillers. The delay in emergence and development of ryegrass will increase the likelihood that most plants will be within the 2 - tiller growth stage this spring. Even if plants exceed the 2- tiller stage, a spring application may control or suppress plants enough to limit ryegrass competition to wheat.

Timing of Nitrogen Fertilizer: Osprey and PowerFlex are Acetolactate Synthase (ALS) inhibitor herbicides that can injure wheat if applied near the time of topdressing nitrogen. Stunting and leaf chlorosis are typical injury symptoms that can occur when these herbicides are applied near the time of top-dressing nitrogen. The PowerFlex label cautions against making applications within seven days of topdressing ammonium nitrogen fertilizer, while the Osprey label suggests waiting 14 days between application and topdressing. Visual injury can occasionally occur even when following these directions, yet UK data show that it is unlikely this will result in a reduction of wheat yield.

Rotation Restrictions: The rotational crop restrictions can impact which option to consider when applying herbicides in the spring for ryegrass control. The Hoelon label does not prohibit planting to double crop soybeans; whereas, Osprey and Power-Flex require a minimum of 3 months between application and planting double-crop soybeans. The rotation intervals for Finesse Grass & Broadleaf and Olympus Flex are much longer which prohibits their use for spring applications.

Tankmixing: The use of Harmony Extra, 2,4-D or dicamba as tankmix partners with Hoelon may limit ryegrass control. However, Harmony Extra is an approved tank mix partner with Axial XL or Osprey. Consult product label directions for approved tank mix partners and use of additives.

**Rinse and Return, Chemical Amnesty
Programs Continue**

By Kenny E. Perry

The KY Department of Agriculture (KDA) continues to offer two programs that help producers get rid of unwanted pesticides and empty pesticide containers. Through the Chemical Amnesty Program, KDA will collect and dispose of any old, unwanted pesticides that may be present on a farm free of charge. Producers can call 1-800-205-6543 and a KDA field representative will set up a time to come to your farm and pick them up. Any type of agricultural pesticide is included, but NOT paint, motor oil, antifreeze, or industrial chemicals.

The Pesticide Container Recycling Program is about 20 years old. KDA collects used plastic containers which are then chipped and are used to make items like fence posts. There are **3 things that need to be done** to these containers before a producer can return them. First, a container must be **triple rinsed**. Second, the **lid should be removed and discarded** and finally, the **label booklet must also be removed and discarded**.

Containers can be dropped off at Mayfield Grain, either of the CPS stores in Sedalia or Fancy Farm and the Graves County Co-op. For more information, contact the Graves County Extension Office or the KDA at 1-800-205-6543.

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To file a complaint of discrimination, contact Rosemary Veach, UK College of Agriculture, Lexington KY 40546, or Terry Allen, Associate Vice President of Institutional Equity, Lexington, KY 40546, or the Secretary of Agriculture, USDA Director, Office of Civil Rights, Room 326-W Whitten Bldg., 14th and Independence Ave. SW Washington D. C. 20250.

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