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Corn & Soybean News

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Cooperating Departments: Agricultural Economics, Biosystems and Agricultural Engineering, Entomology, Plant and Soil Sciences, Plant Pathology
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In this issue

1. Cool Spring Weather and Planting Delays with Corn Insects

Ric Bessin, Extension Entomologist

- **Cutworms and wireworms could be problems this year.**
- **Most seed that was treated with an insecticide should be protected from these insects.**

Cutworms

Excessive winter annual weed growth can impact insect management in corn. Notably one insect group that may be encountered is the cutworms. Cutworms do not prefer to lay eggs on corn, they more commonly lay their eggs on winter annual weeds. Black cutworm cannot overwinter in Kentucky, but spends the winter months near the gulf shore. Early in the spring the moths immigrate to Kentucky with weather fronts out of the south. As the moths tend to lay their eggs on winter annuals, much of the food during early development of the larvae is from the weeds. When cutworm damage does occur, it is usually when winter annuals have been burned down with herbicides forcing the intermediate-stage larvae to feed on the emerging corn.

Fortunately, nearly all of the corn seed has been treated with an insecticide. The insecticides used for these seed treatments are effective in helping to reduce the level of cutting by black cutworm, however, depending on the level of cutworm pressure, supplemental sprays may be need if populations are intense. Growers are advised to scout their corn to monitor for cutworms and use a threshold of 3% cut plants as a decision level for spraying.

Wireworms

There are several species of wireworms that will attack corn, and because they have extended life cycles of more than one year, past problems can be an indication of risk in

particular fields. Wireworms attack the seed and developing seedlings. Once the corn plant reaches 12 to 18 inches it is no longer vulnerable to wireworm attack. Hybrids with strong seedling vigor will also progress through these vulnerable stages more rapidly, leaving less time for wireworm attack. For that reason, growers are advised to delay planting into high risk wireworm fields until soil temperatures as warm enough to promote rapid germination and seedling growth. Warm temperatures reduce the amount of time the plants remain vulnerable to attack. On the other hand, planting early into cool soils will delay germination, seedling emergence, and plant growth. If wireworms are present, then greater losses to wireworms can be expected. Nearly all of our seed is treated with a systemic insecticide that provides protection from light to moderate levels of wireworms. In some high risk fields, these seed treatments may not provide the level of protection when corn is planted into cold soils, particularly if seedling vigor is low. Delaying planting until soils warm can help to reduce wireworm losses immensely.

2. Delayed Planting May Pose Disease Risks

Paul Vincelli, Extension Plant Pathologist

- **Cool conditions can lead to more *Pythium*.**
- **Gray Leaf Spot is usually more of a problem in late-planted corn.**

Weather conditions that have been cooler and wetter than normal over the past thirty days, particularly in western Kentucky. These conditions have delayed corn planting, and they may have ramifications for development of key diseases this season.

Seedling diseases

Minimum soil temperatures in many areas of Kentucky have been below 50°F for most of the first half of April. Corn seeds and seedlings are in stasis (sort of a "suspended animation") at or below 50°F, and they have a difficult time resisting infections by soilborne *Pythium* organisms that cause damping off. *Pythium* organisms are most active in wet soils.

Producers who seeded corn prior to recent cold weather are encouraged to monitor stand establishment, especially if the soil in those fields has been wet for extended periods. That way, they can determine in a timely way whether reseeding is needed.

Gray leaf spot

Past research at UK has clearly shown that, on average, the later the crop development, the more severe the pressure from gray leaf spot. In late-planted fields, the disease occurs earlier in crop development and develops more quickly, all else being equal. The greater disease pressure in later corn may be due in part to the fact that later planting pushes more of the crop development into August, when nighttime periods of warm, muggy conditions are longer than in mid-summer. In any case, greater disease development earlier in crop development increases the potential for yield losses.

Late planting also likely increases severity of northern leaf blight.

Stalk rots and other ear rots

If much of the corn crop is delayed substantially, it will be filling grain and drying down during less favorable conditions than normal. This could lead to development of more stalk rots and ear rots than normal. During grain fill, producers would be well-

advised to scout for stalk lodging potential, and harvest fields that are showing more than 10% weak stalks. Also, as crops reach black layer (physiological maturity), inspect the crop for ear rots, and be prepared to harvest and dry crops at 25% moisture content (or even higher, if ear rot conditions warrant).

3. How Late can we Plant Soybeans?

D.B. Egli, Soybean Physiologist

- **June 7 is the cut-off plating date for maximum soybean yields.**
- **Planting from mid-April to June 7 results in similar yields.**

When does late planting of soybean reduce yield? To answer this question I analyzed 10 soybean planting date experiments from the Midsouth region including Arkansas, Kentucky, Missouri, and Tennessee. Based on these studies, June 7 was the critical date (Fig. 1). Planting date had no affect on yield before June 7, but 1% of the maximum yield was lost for each day of delay after June 7. For example, for soybean planted on June 27 (20 days after June 7) the yield was only 80% of the maximum.

Summer rainfall patterns help determine which planting date will produce the highest yield. Since we cannot predict summer rainfall before planting, we must use the average response in Fig. 1 to decide when to plant and the average response says that your soybeans must be in the ground before June 7 to get maximum yield.

There was no advantage for late April or early May plantings, so there seems to be no good reason to plant early in cold wet soils, which increases the risk of stand failure and the need to replant. The generally lower seed quality and limited seed supplies this year may make stand failure more common and replanting more difficult than usual. In a year when we have had cool, wet conditions early and we have poor soybean seed quality, there is no need to rush soybean planting.

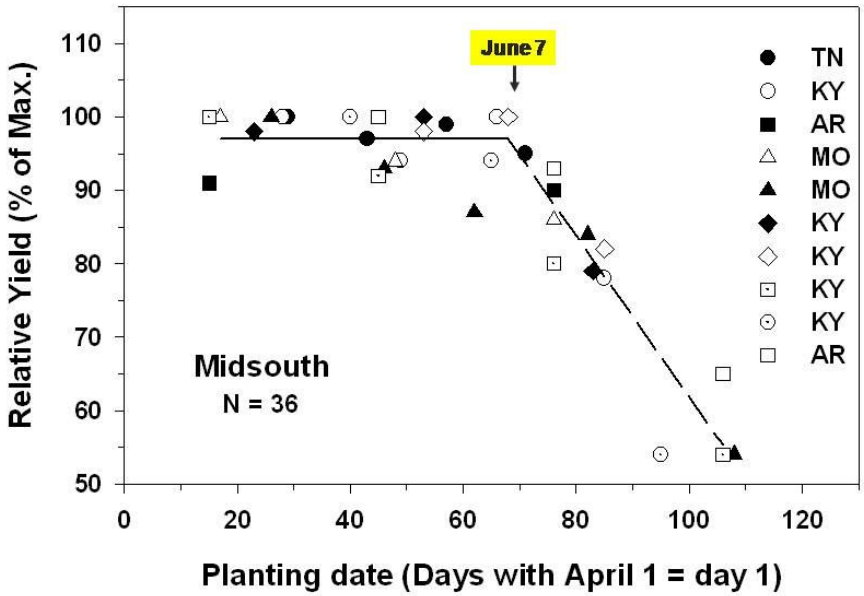

Figure 1. Relationship between planting date and average yield for 10 experiments in the Midsouth region. Yield in each experiment was expressed as a percent of the maximum yield (i.e., maximum yield = 100%). May 1 = day 31. May 15 = day 45. June 1 = day 62. June 15 = day 76. July 1 = day 92.

4. It Could be Worse

Chad Lee, Extension Agronomist

- **Argentina farmers are protesting high taxes.**
- **The protest is affecting world commodity prices and some corn seed supplies.**

Farmers are nervous about getting the corn and soybean crops planted in Kentucky. To loosely quote a recent article in the Lexington Herald-Leader, half the fields are too wet for farm equipment and the other half are under water. The April 14, 2008 Crop and Weather Report from the USDA National Ag Statistics Service places corn planting at 1% compared to a five-year average of 26% planted. Farmers have greased and re-greased all bearings. They have checked and re-checked planter settings. They have counted and re-counted their seed. All that is left is to gather at the local restaurants, drink some coffee and ask each other when things will dry out.

During your next coffee session, just remind each other that things could always be worse. In Argentina, farmers are outraged over new taxes on farm commodities. Soybean export taxes were raised to 44%. This was an increase over the previous rate of 35%. Including income taxes and local taxes, some reports put the total tax burden for an Argentine soybean farmer near 75%! Others claim that the tax burden will take 75% of current profits. Either way, taxes are high and so are tempers.

Farmers protested by stopping sales and shipments of most commodities, including soybean, corn, milk and meat. Grocery stores in Argentina were bare as a result. The strike has been halted for about 15 days while the government and farmers negotiate, but the supply chains are still in question.

The problems in Argentina have affected world soybean prices and have caused some problems in our (U.S.) corn seed supply. Some of the corn seed that we will grow in 2008 was produced in Argentina. Shipments of some of that corn seed has been delayed due to the problems in Argentina. According the seed companies, the shipment delays are more likely to affect our neighbors to the north who grow shorter-season hybrids. If hybrid seed you wanted to grow was delayed, you probably have been contacted by your seed salesman and have worked out an alternative.

So, while you are trying to wait for soils to dry out, just remember, it could be worse!!

For more on the Argentina taxes and farmer strike, see the following links:
http://www.time.com/time/world/article/0,8599,1725497,00.html
http://ipsnews.net/news.asp?idnews=41694

5. Upcoming Events

Wheat Sciences Field Day, UKREC, Princeton, KY
Tuesday, May 20, 2008, 8:30 am - noon

Plant and Soil Sciences Field Day, Spindletop Farm, Lexington, KY
Thursday, June 12, 2008

All Commodity Field Day, Robinson Station, Quicksand, KY
Thursday, September 25, 2008

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