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TO: Area Farmers

FROM: Derby Walker, Extension Agent, Agriculture
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SUBJECT: Ag Notes

Now is the time to Scout Soybeans

Soybean Aphid Watch

- We continue to see an increase in soybean aphid populations especially in New Castle County, but aphids can be found in fields in all 3 counties.
- We have also found a few fields with economic levels in New Castle and Northern Kent Counties.
- Weather conditions continue to be favorable for aphid development and beneficial activity is still low in many fields.
- We still believe that these populations have migrated on wind fronts from the Midwest. As you remember, we reported our first find in New Castle County in mid-July (one moth earlier than 2002). Data from the Midwest indicates that the greatest benefit from an insecticide application occurs from the late vegetative stage to R2 (full flower) stage. However, there is also data showing a yield advantage from treating through R4 (full pod) in years with adequate moisture. In our area, the R4 stage can last up to 3 weeks.
- So, the critical time for treatment is from the late vegetative stage or the initiation of bloom to early pod-set. Current guidelines from the Midwest say treat if you find 200-250 aphids per plant on 80% of the plants in a field or 25 or more aphids per leaflet.
- Early in the season, aphids tend to be located on new growth. As vegetative growth stops, aphids will move down the plant to leaves lower in the canopy and to stems and pods.
- On later planted fields, treatments should not be applied too early to avoid recovery of populations and the need to reapply treatments during the risk window from R1 through R4 growth stages.
- The following products are registered and have provided effective control in trials in Minnesota and other states in the Midwest: Asana, Baythroid, Furadan, Lorsban, Mustang MAX , Penncap-M, Pounce and Warrior. The mid-higher range rates should be used to achieve the best results. Dimethoate has a 2ee registration; however, in these same trials it has not provided the level of
control provided by the pyrethroids and other labeled products at 4 DAT (85 versus 99 % control). Trials in the Midwest also show the pyrethroids tend to provide longer residual control. However, they also state that with limited immigration into a field any labeled product might provide effective control. Good results have been obtained with moderate water (15-20 gallons) and pressure (35-45 psi); however, in 2002 aerial application (5 gpa) provided control equivalent to ground applications.

- Reports on yield returns from insecticide applications have been as high as 10 - 16 Bu/A; however, if economic levels are present and beneficials do not crash populations, the yield advantage in insecticide treated fields has averaged 6-8 bushels per acre.
- The conditions necessary to crash populations would be a period of hot, humid weather. With the forecasted cooler weather at the beginning of next week, aphid populations could continue for a longer than normal period. Predators are generally more effective at higher temperatures and fungal diseases are most effective when we see prolonged periods of hot, humid weather. Although many fields may never reach economic levels, all fields should be checked to avoid losses from this insect pest.

**Pod feeders.**
Corn earworms, fall armyworms and beet armyworms do pose a potential threat. How big is the threat? Only time will tell. The weather has a great impact on the survival of young larvae. Also, strong winds out of the south can carry more moths into our area. Rainy weather will be the main factor in how serious a problem pod feeders may be to us. Temperature will also have an impact, but you need to start scouting now until we have a clear picture as to how many larvae hatch and survive to reach the pod feeding size.

**Corn earworm** moth activity has significantly increased in full season and double crop fields which are blooming. We also have another potential problem with **beet armyworm** and maybe **fall armyworm**. Normally we just have to be concerned with corn earworms. Young earworm larvae will feed both on blossoms and pin pods. Beet armyworms are mostly foliage feeders unless there are high numbers of them. It will be critical to know how to tell the difference between the three species to select the best insecticide for your situation. Last year we had some growers that had some fields that needed to be sprayed for earworms, and others that needed to be sprayed for beet armyworms. It is possible to save money on materials selected, by determining which insect you have.

**Beet Armyworm (BAW):** The beet armyworm is a light-green to black larva with four pairs of abdominal prolegs and a darker head compared to corn earworm. There are many fine, white wavy lines along the back and a broader stripe along each side. There is usually a distinctive dark spot on each side just above the second pair of true legs.
**Corn Earworm: (CEW):** The corn earworm larvae can vary from light green or pink to brown or nearly black. You can also see alternating longitudinal dark and light stripes marking its body. Coloration is so variable that it is not dependable for identification. Short microspines, which are visible through a hand lens, can be seen on the skin. In general, the head capsule is yellow to amber in color.

**Fall armyworms (FAW):** Fall armyworms don’t have microspines, but they have an inverted Y on forehead and four black dots which form a square on the last segment.

Therefore, all fields should be scouted for pod feeders as soon as blossoms are present. A potential yield of even 8-10 BU/A justifies a treatment. In addition, if you have purchased Crop Insurance you can not abandon a field on your own, since you risk loosing your payment. You should have both your insurance agent and adjuster come to your field to make a decision. If you plan to salvage the field, you will need to control worms if they reach economic levels.

Since earworms can also act as defoliators, a treatment may be needed prebloom if 30% of the plants are defoliated or if 15% of the plants are defoliated during bloom. This defoliation threshold should also be used for beet armyworm. The treatment threshold for pod feeders is 3 per 25 sweeps in narrow fields and 5 per 25 sweeps in wide row fields (20-inches are greater). At the present time, there is no threshold for beet armyworm pod feeding; however, once pod feeding is detected, you may want to consider the same threshold used for corn earworm. A drop (shake) cloth can also be used to estimate populations. The drop cloth should be placed between 2 rows and then the plants are shaken over the cloth in 6 foot of row. A treatment is needed if you find 1-2 larvae per foot of row.

The following materials will provide corn earworm control in soybeans: Ambush, Asana, Mustang, Pounce, Warrior (all pyrethroids) or Larvin. **The pyrethroids will not control beet armyworms.** If population pressure is heavy, the higher rate of the older pyrethroids will be needed. You should use 2.56 of Warrior and 3.2 oz may be needed if mixed size larvae are present at treatment time. If beet armyworm is the predominant species, Steward should be used at 5.6-8.0 oz/A.

**Leaf Feeders.**
We also have leaf feeders like green cloverworms and grasshoppers. Blooming beans through pod fill need to keep 80 to 85% of their foliage to support the beans. When you find 15% of your foliage eaten and the critters are still there you need to eliminate them.

**Field Corn.**
Corn is getting ready, now is the time to start checking root and stem quality to prevent significant yield loss in fields because of down corn. Root rots and stalk rots can cause corn to go over with wind or rain storms and make harvesting difficult. Fields with poor quality need to be harvested early before they go down. It may increase your drying costs, but it is better to harvest the extra corn and avoid issues of trying to harvest corn that has gone down.
Corn weed control for harvest aid can be done in hard dough stage to black layer depending on the material you select. Sodium chlorate, Glyphosate products, 2,4-D amine and now Paraquat (Gramoxone Max) are labeled for use. If you need to use one of the products to kill the weeds, read the label to select which material fits your situation. Don’t forget about neighboring crops and neighbors. Spray drift can still cause problems for you and your neighbors.

For all pest updates go to our web home page:  http://www.udel.edu and check IPM for the latest black light reports. See the latest edition of the Crop Update for current insect recommendations.

Farm Safety.
Farm safety is a big issue at this time year. Work days are long and fatigue leads to mistakes. We all feel pushed to get the job done. Sometimes we take chances that can result in serious injury or death. Take the time to do it the right way, the safe way.

Good News for Derby!
Ms. Tracy Wootten, who was Ed Kee’s Extension Vegetable Associate for the last 12 years has been promoted to Extension Agent, Horticulture, replacing Jay Windsor who retired in June 2003. Tracy is assuming Jay’s responsibilities and will be providing the leadership in ornamentals, some vegetable crops and will be my backup for other vegetable crops and agronomic crops.