Farm mapping is a familiar thing for growers in New Jersey. Field maps, pesticide storage maps and customer maps are regular tasks, but mapping for food safety? Mapping your farm with food safety in mind allows you to manage the physical characteristics of the farm to minimize microbial contamination hazards.

Hand drawn maps are acceptable for an audit, but if you want a computer generated map, or an aerial image, there are several free resources that you can use. The easiest to use is the My Maps section of Google Maps, located at: [www.maps.google.com](http://www.maps.google.com). Just plug in your farm’s physical address, zoom in so the map shows the entire farm and print. You can then hand draw in the details required for the food safety maps or trace the prominent features of the farm onto a clean sheet of paper and add in the required components. Another good resource is the USDA Web Soil Survey at [http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm](http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm). Your local FSA also has aerial photo maps that could be used. Simple computer drawn maps, like the ones shown in the Henderson Farm Plan, can be created using standard computer software such as Microsoft Word, PowerPoint, or Publisher.

What map(s) will you need for your food safety plan?

✔ Field map

The field map will most likely be much like what you currently use for planning crop rotations and schedules. Field maps need to include, where applicable:

- Fields uniquely numbered with crops indicated
- Farm roadways
- Indoor growing facilities such as high tunnels, greenhouses, etc.
- Farm buildings including barns, and other structures
- Packing house location
- Water systems, you have the option of including this in your field map or in a separate map. Whichever is easier for you to do. (Water systems will be discussed in a separate area below)
- Animal waste storage areas, including compost
- Animal housing and grazing areas

See Farm Map on page 2
Insect Pests of 2012
Joseph Ingerson-Mahar, Vegetable IPM Program Coordinator

Given the kind of winter and early spring that we have experienced one has to wonder what insect pests will be like for the 2012 growing season. Unfortunately, there is no good answer to this question. Despite the warmer than normal winter temperatures and some significantly warm days in March and April, it doesn’t necessarily mean that insect pests survived in large numbers.

Insects that are dependent upon heat accumulation for their activity will be affected by these early high temperatures. For example, based upon degree-day accumulation of heat units (base 50), the first moths of European corn borer should be appearing now in southern New Jersey, about two to three weeks ahead of normal. Soil insects, such as white grubs, wireworms, and rootworms will be less affected by the early season heat and will be more likely to appear at the usual times during the year. The current wet, windy and cool weather from Saturday night till now will help slow the heat accumulations and depress insect activity.

All of the typical early season insects are out including aphids, flea beetles and the seed corn maggot group (onion maggot, cabbage maggot and others). We have already seen some of the minor general feeders such as tarnished plant bug and spotted cucumber beetle appearing in traps and spotted cucumber beetle in parsley (Kline, Cumberland Co. ag agent). It is likely that potato leafhopper is present now largely feeding on ornamentals and trees soon to shift to alfalfa and other crops.

Because of the unusual weather, early insect populations and farmers planting some crops earlier than usual, there may be some unexpected pest infestations. Farmers should more than ever routinely check or scout their crops for potential problems.
Vegetable Disease Update

Andy Wyenandt, Ph.D., Specialist in Vegetable Pathology and Wesley Kline, Ph.D., Cumberland County Agricultural Agent

✔ Cabbage – Damping-off – To help control losses due to damping-off pathogens apply Ridomil Gold (mefenoxam, FRAC code 4) at 1 to 2 pt/A 4SL or Quadris (azoxystrobin, 11) at 0.40 to 0.80 fl oz 2.08SC/1000 row ft (for Rhizoctonia only), or Ridomil Gold at 1 to 2 pt/A 4SL plus Quadris at 0.40 to 0.80 fl oz 2.08SC/1000 row ft. in a band up to 7 in. after seeding. For more information please see 2012 New Jersey Commercial Vegetable Production Recommendations Guide.

✔ Lettuce – Bottom Rot/Drop – Spring lettuce season is beginning and growers should take precautions to help control Bottom rot (Rhizoctonia) and Lettuce drop (Sclerotinia) which may cause potential problems. For Bottom rot, apply Endura 70W (boscalid, FRAC code 7) at 8.0 to 11.0 oz 70W/A, or iprodione (FRAC code 2) at 1.5 to 2.0 lb 50WP/A or OLF should be applied one week after transplanting or thinning and 10 and 20 days later. For Lettuce drop, apply Endura (FRAC code 7) at 8.0 to 11.0 oz 70WG/A or iprodione (FRAC code 2) at 1.5 to 2.0 lb/A, or Quadris (azoxystrobin, 11) at 0.40 - 0.80 fl. oz/1000 row ft. 2.08SC beginning one week after transplanting or thinning and again at 10 and 20 days later. For more information on control of Bottom rot and Lettuce drop and other important diseases of lettuce please see the 2012 New Jersey Commercial Vegetable Production Recommendations Guide.

✔ Parsley – Septoria Blight /Bacterial (blight) leaf spot – Leaf spots caused by Septoria blight are easily distinguished by small, angular to round leaf spots with grayish-brown centers with a definitive dark, brown margin. Numerous black fruiting bodies develop in the center of lesions. Septoria blight is spread by wind-driven rain, heavy dews and overhead irrigation. Workers and equipment may also spread the disease during wet conditions. Best management practices include i) proper crop rotations of at least 2 years and by using clean or treated seed ii) scouting fields early for symptom development iii) keeping workers and equipment out of fields with wet foliage iv) plowing under residue of harvested crop and avoid planting in fields adjacent or near previously infected fields. Rotate applications of Quadris (azoxystrobin, 11) at 6.0 to 15.5 fl oz 2.08SC/A or Cabrio (pyraclostrobin, 11) at 12.0 - 16.0 20WG/A with Tilt (propaconazole, 3) at 3.0 to 4.0 fl oz. 3.6F/A every 7 days. A fixed copper at labeled rates can also be included if bacterial leaf spot is an issue. Bacterial leaf spot (Pseudomonas syringae) of parsley can also show up at the same time as Septoria blight. Leaf spots caused by Bacterial blight appear as small brown to black spots on the leaves. The pathogen can be soil or seed borne

See Disease Update on page 4
and develops during cool, moist weather. The disease spreads during cool, rainy weather or with overhead irrigation; and is exacerbated by high plant density. The same control measures listed for Septoria will assist in preventing the spread of Bacterial leaf spot as long as the fixed copper is included with azoxystrobin and the fungicides are applied preventatively. If Oxidate is used, follow the label carefully.

✔ **Strawberry – Anthracnose fruit rot** -Strawberry anthracnose can be extremely destructive during warm, wet weather causing significant fruit rot. Symptoms of Anthracnose include blackish-brown circular spots on maturing green fruit and soft, sunken (flat) circular lesions on ripe fruit. On ripe fruit, lesions can expand rapidly and are often covered with a pinkish-orange spore mass. Spores are spread from infected to healthy fruit with splashing water. Control of Anthracnose always begins with a 7 to 10 day preventative spray program no later than 10% bloom and/or prior to disease development. For control apply the following combinations:

1) captan (M3) at 4.0 lb 50WP/A plus Pristine (pyraclostrobin + boscalid, 11 + 7) at 18.5 to 23.0 oz 38WG/A
2) captan (M3) at 4.0 lb 50WP/A plus Abound (azoxystrobin, 11) at 6.0 to 15.5 fl oz 2.08SC/A or Cabrio (pyraclostrobin, 11) at 12.0 to 14.0 oz 20EG/A
3) Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

For subsequent applications, alternate:
- captan (M3) at 4.0 lb 50WP/A plus Abound (azoxystrobin, 11) at 6.0 to 15.5 fl oz 2.08SC/A, or Cabrio (pyraclostrobin, 11) at 12.0 to 14.0 oz 20EG/A
- Captevate (captan + fenhexamid, M3 + 17) at 3.5 to 5.25 lb 68WDG/A

To help manage fungicide resistance development, do not make more than 2 consecutive applications of either: Pristine (pyraclostrobin + boscalid, 11 + 7), Cabrio (pyraclostrobin, 11) or Abound (azoxystrobin, 11) before switching to another fungicide chemistry.

✔ **Strawberry – Botrytis (Gray Mold) and Blossom blight** – can cause serious losses in strawberry plantings in high tunnels and the field if not controlled properly. Development is favored by moderate temperatures (59 to 77 °F) with prolonged periods of high relative humidity and surface wetness. Control of Gray mold begins with preventative fungicide applications. Apply at 5 to 10 percent bloom and every 10 days until harvest. During periods of excessive moisture, spray intervals of 5 to 7 days may be necessary. Rotate fungicide chemistries to aid fungicide resistance management.
Weekly Weather Summary
Keith Arnesen, Ph.D., Agricultural Meteorologist

Temperatures averaged much, much above normal, averaging 60 degrees north, 61 degrees central, and 61 degrees south. Extremes were 91 degrees at New brunswick and canoe brook on the 17th and 39 degrees at downtown on the 21st. Weekly rainfall averaged 2.42 inches north, 2.72 inches central, and 2.30 inches south. The heaviest 24 hour total reported was 3.34 inches at long branch on the 22nd to 23rd. Estimated soil moisture, in percent of field capacity, this past week averaged 88 percent north, 76 percent central and 72 percent south. Four inch soil temperatures averaged 59 degrees north, 61 degrees central and 60 degrees south.

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<th>GDD BASE50 AVG</th>
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WES KLINE -- GDD BASE 40 PINEY HOLLOW
*LAST WEEK (97 Ending 4/16/12)
THIS WEEK (154 Ending 4/23/12)
* FEBRUARY GROWING DEGREE DAY TOTALS 59
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