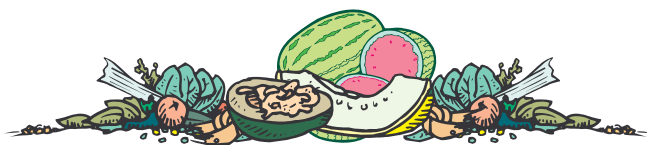


VEGETABLE CROPS HOTLINE

A newsletter for commercial vegetable growers prepared by the
Purdue University Cooperative Extension Service

Dan Egel, Editor
(812) 886-0198
egel@purdue.edu

No. 393
June 28, 2001



<http://www.entm.purdue.edu/entomology/ext/targets/newslett.htm>

IN THIS ISSUE

- SPIDER MITES ON WATERMELONS
- INDIANA VEGETABLE GROWER WHOLESALE DIRECTORY FOR 2001 AVAILABLE SOON
- SWEET CORN UPDATE
- 2001 NON-INSURED ASSISTANCE PROGRAM (NAP)
- SQUASH VINE BORER ON SQUASH AND PUMPKINS

SPIDER MITES ON WATERMELONS - (Frankie Lam) - Spider mite infestations were found in some watermelon fields during mid June in southern Indiana. Infestations of mites usually occur at the edge and slowly move into the field. Colonies of mites tend to establish on the crown leaves of melon plants. Close inspection of affected crown leaves shows an interveinal yellowing on the upper surface. Heavy infestation of mites may reduce the marketable value of fruits and even kill the plants.

Spider mites are small (1/80-1/60 inch) relatives of spiders. The adult mites are eight-legged, ranging in color from pale yellow to brown. The immatures look similar to the adults, but are six-legged and smaller in size. Both adults and immatures feed by shredding small areas of leaf and sucking the plant sap. The mites usually feed from the underside of the leaves and give the foliage a speckled appearance. They produce protective webbing around the area where they feed and lay their eggs. Their eggs are very small, spherical, straw-colored, and shiny. Under optimum conditions (>80°F and <50% RH) the mites can complete their life cycle within five to seven days. However, heavy rains, which increase relative humidity in the field, is favorable for the development of fungal diseases in the mites and may also wash the pests off of the leaves.

Scouting of mites should be focused on the borders of fields. At least 10 plants in 10 locations along the field edge should be checked. Crown leaves that are yellow or speckled should be examined

carefully for mites by using a 10x-hand lens. If mites are found on plants along the field edges, the rest of the field should also be checked. Mark the infested plants with flags and recheck the plants in three to four days. If heavy mite infestation is found during a hot, dry period, miticide application is justified. However, if infestation is not spreading, spot spraying may be effective. For spot spraying, spray the infested area of the field and 100 feet beyond the infested area.

Furthermore, the first miticide application should be followed by a second application within five days. The first application will kill all mite stages except the eggs, whereas the second application will kill the mites hatched from those eggs escaped from the first application.

Miticides should be used only where and when the application is justified. This is because many of these chemicals also kill beneficial organisms, including predatory thrips, minute pirate bugs, and predatory mites, that feed on the pests. Dimethoate, Kelthane 35WP, Agri-mek 0.15EC, and Danitol 2.4EC are commonly recommended for the control of mites on melons. Read the labels carefully before applying any pesticides.



INDIANA VEGETABLE GROWER WHOLESALE DIRECTORY FOR 2001 AVAILABLE SOON -

(Liz Maynard) - The 2001 Directory of Wholesale Vegetable Producers published by the Indiana Vegetable Growers Association (IVGA) will soon be available on the world wide web. The Indiana Dept. of Commerce will host the directory on their website. The directory lists IVGA members who sell vegetables in wholesale quantities and the vegetables they produce. Some producers of strawberries and other small fruit are also listed. Anyone needing a copy before it is on the web, or anyone who can not obtain

it from the web may request a copy directly from the Association by calling 219-785-5673. A few printed copies of the 2000 directory are also still available by request.

The regular membership directory listing all IVGA members was sent to IVGA members in mid-June.



SWEET CORN UPDATE - (Chris Gunter) - Standard sweet corn is a mutant type of corn that differs from field or dent corn by a mutation at the sugary (su) locus. The sweet corn (su) mutation causes the endosperm (storage area) of the seed to accumulate about two times more sugar than field corn. Today several hundred sweet corn varieties are available. Recently, a number of new mutants have been used to improve sweet corn eating quality, particularly the sugary enhanced (se) and shrunken-2 (sh2) genes.

The se varieties, also called Everlasting Heritage (EH), are well-suited for local market production because they contain more sugars than the normal (su) sweet corn and therefore will remain sweet about two to four days after harvest if refrigerated. The se varieties can be grown in the same manner as su corn. Sugary enhanced (se) hybrids and normal sweet corn (su) varieties do not require isolation from each other.

The shrunken-2 (sh2) sweet corn, also called supersweet, has two main advantages over the other types: 1) it is at least two to three times sweeter, and 2) the conversion of sugar to starch is negligible, thus this corn type will remain sweet up to 10 days after harvest if cooled properly, then refrigerated. Because of these advantages, sh2 varieties are typically grown for sales to distant markets. The demand for sh2 corn is increasing at local markets, also. The sh2 sweet corn varieties must be isolated at least 300 ft from all corn types; otherwise the corn will be starchy if cross-pollinated.

Harvesting sweet corn at the proper stage of maturity is essential to insure a high quality crop. Sweet corn should be harvested at the milk stage. At this stage the silks are brown and dry at the ear tip. When punctured with a thumbnail, the soft kernels produce a milky juice. Over-



mature sweet corn is tough and doughy. An immature ear will not be completely filled to the tip and the kernels produce a clear, watery liquid when punctured.

The harvest date can be estimated by noting the date of silk emergence. The number of days from silk emergence to harvest is approximately 18 to 23 days. Prime maturity, however, may be reached in 15 days or less if day and night temperatures are exceptionally warm. Most hybrid sweet corn varieties produce two ears per plant. The upper ear usually matures one or two days before the lower ear.

Sweet corn remains in the milk stage for a short time. The weather determines the length of this stage. Sweet corn remains in prime condition for only one or two days during hot (85°F and above) weather. As the sweet corn approaches maturity, check it frequently during typical summer weather to insure high quality sweet corn.

Harvest sweet corn by grasping the ear at its base and then twisting downward. Use or refrigerate sweet corn immediately as its quality rapidly declines after harvest. Standard sweet corn varieties may lose 50% of their sugar within 12 hours of harvest if not refrigerated. Sweet corn can be stored in the refrigerator at 32°F for 4 to 8 days. New high sugar varieties are slower to convert sugar to starch and may be harvested over a longer period of time. The high sugar types also have a longer storage life.

(Excerpted from articles by Jonathan R. Schultheis, Department of Horticultural Science, North Carolina State University and Richard Jauron, Department of Horticulture, Iowa State University)



2001 NON-INSURED ASSISTANCE PROGRAM (NAP) - *(Brad Summers)* - Farm Service Agency (FSA) is now accepting 2001 NAP applications and fees. This program offers 50% production and 55% price guarantees on specialty crops. Crop insurance must be unavailable for the crop to be eligible. Administrative fees of \$100 per crop, up to \$300 per producer, per county can be paid now through 30 days after the final regulations are published in the Federal Register.

The Agricultural Risk Protection Act 2000 removed area triggers, grouped similar types/varieties of a crop as single crops and requires that producers annually provide acreage and production data to FSA. Production data and acreage reports are due by the final spring reporting date of July 15, 2001. Eligible producers must receive 50% or more of their gross income from farming and not exceed \$2 million per year. Farmers should be aware that grass, hay and pasture crops are uninsurable, thus eligible for NAP coverage.

NAP participants are advised to contact FSA when anticipating losses in excess of 50% of expected yields. A loss adjuster may be assigned to appraise the acreage should the crop planted be abandoned or replanted to another crop and not harvested. Questions concerning NAP or any other related USDA program can be directed to The USDA Service Center near you.



SQUASH VINE BORER ON SQUASH AND PUMPKINS - *(Frankie Lam)* - Squash vine borer moths have been found in some areas of Evansville. Squash vine borer is an occasional pest. However, damage is usually worse in areas where squash and pumpkins are grown year after year. The presence of the borer is usually not noticed by growers until after the damage is done.

The squash vine borer adult is a "clear wing" moth with a wing span of about 1 1/2 inches. Their front wings are metallic green, whereas the hind wings are almost without scales. The body of the moth is generally orange-red with black bands on the abdomen. The moth is a daytime flier, and is commonly mistaken as a wasp. The moth lays eggs singly at the base of the plants, on the petioles of leaves, or on the stems. The eggs are small (1/20 inch), brown, and hatch in seven to ten days.

The squash vine borer larvae bore into the plant immediately after hatching from the eggs. As the larvae bore into the stem, they leave behind a telltale sign of sawdust-like frass at the entrance hole. The larvae, which are white grub-like caterpillars, feed inside the stem for two to four weeks. The larvae destroy the vessels in the stems, causing the vines to wilt and eventually die. Once inside the vine, little can be done to control the pest. Full-grown larvae leave the vine and spin silken cocoons in soil. In the northern areas of the Midwest, the larvae overwinter in the cocoons, whereas in the southern areas, they pupate and give rise to the second-generation.

From mid-June through early August, if adult moths are found in fields, vines should be checked for any signs of eggs and larval feedings. While scouting for the borer, check five plants in ten locations for borer frass. Once sawdust frass is found, stems should be split to check for the presence of borers. Early signs of larval feeding indicate eggs have been laid and will probably hatch within a few days. Two insecticide applications, spaced five to seven days apart, will control the majority of the newly hatched larvae before they enter the vines. Currently, no economic thresholds have been developed for the borer. Ambush, Asana, Pounce, and Thiodan are labeled for the control of squash vine borer. Be certain to read the label carefully before using any pesticides.

It is the policy of the Purdue University Cooperative Extension Service, David C. Petritz, Director, that all persons shall have equal opportunity and access to the programs and facilities without regard to race, color, sex, religion, national origin, age, marital status, parental status, sexual orientation, or disability. Purdue University is an Affirmative Action employer. 1-888-EXT-INFO <http://www.agcom.purdue.edu/AgCom/Pubs/index.htm> Disclaimer: Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may have similar uses. Any person using products listed in this publication assumes full responsibility for their use in accordance with current directions of the manufacturer.

Vegetable Crops Hotline
c/o Daniel S. Egel
Southwest Purdue Agricultural Program
4369 N Purdue Rd
Vincennes, IN 47591