

PLANT & PEST ADVISORY

CRANBERRY EDITION \$1.50

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Field Update

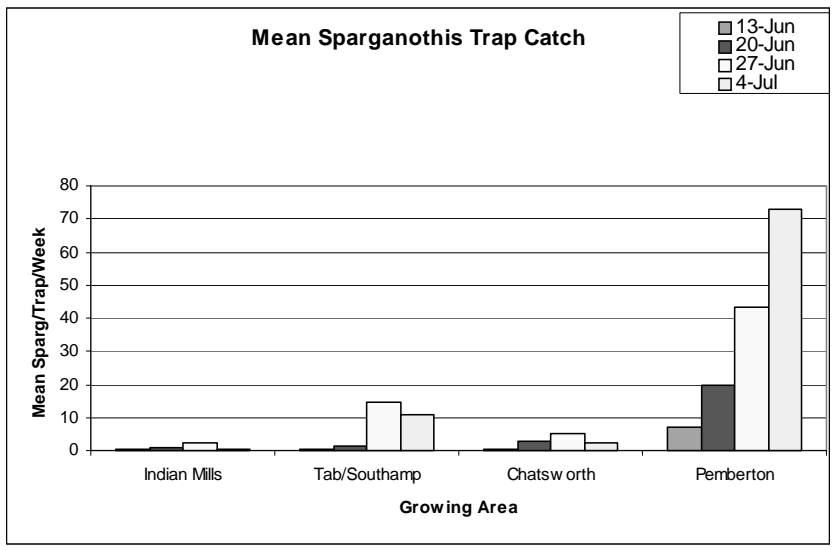
Dan Schiffhauer, Agricultural Specialist, Ocean Spray Cranberries

Bloom is rapidly disappearing on many New Jersey cranberry beds; especially early cultivars such as Ben Lear and Stevens. Pollination activity picked up dramatically during the past 10 days or so, and there is quite a bit of fruit already set on beds. Bumblebees have shown up in very high numbers on some farms during the last week, and it would appear that they have bounced back after their slow start due to the spring weather.

Sparganothis counts in the pheromone traps increased markedly during the last two weeks but are still low by historical standards (see figure below). To date, I have had only one trap with more than 100 *Sparganothis* moths in it. I reviewed trap catch data from 1995 and found that nearly 50% of the traps caught more than 100 moths at peak flight and that counts in excess of 200 were common. A few traps caught more than 300 moths, and at that point the traps were basically full and could not hold any more moths. *Sparganothis* numbers have been steadily falling over the last few years and I believe the major reasons are: overall decreased insecticide spraying combined with the careful use of highly specific compounds such as Confirm and Intrepid. *Sparganothis* was not recorded as a major pest of cranberry until the advent of the organochlorine insecticides (i.e. DDT) after WW II. *Sparganothis* is a wonderful example of what is known as a secondary outbreak species. This works as follows: you spray for one or more insect pests and in the process you eliminate a set of natural enemies that have been holding another insect pest in check. This pest now emerges from the background and causes damage. This is a very common phenomenon and has been well documented in crops such as cotton. **Spotted fireworm** is also much more scarce now than it was even 3 years ago and probably the same mechanism is responsible.

The decline in *Sparganothis* and spotted fireworm is great, of course, but now we need to pay attention to insects that were being held in check with regular organophosphate sprays (Parathion, Guthion, Lorsban). Two that come immediately to mind are **Blackheaded fireworm** and **Blunt-nosed leafhopper**. These two pests have both shown up in the past on beds that were not sprayed over an extended period of time. Blackheaded fireworm is fairly easy to scout for and is well

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controlled by the new compounds Confirm, Intrepid, and SpinTor, so growers should be able to stay on top of this pest. Of course, there will be a learning curve as growers become used to this insect's patterns of infestation. Blunt-nosed leafhopper does not have an established scouting protocol and at this point the best that can be done is to conduct some light sweep sampling for the adults after bloom. Nymphs are present pre-bloom, but they are very small and adult sampling after bloom is easier. Adult leafhoppers are fairly small and it will take time for growers to familiarize themselves with them. It has been my experience that blunt-nosed leafhopper numbers tend to be either very low or very high. Therefore, I don't think that sampling for this pest will be very time-consuming for growers. I have included a photo of two adult blunt-nosed leafhoppers on a cranberry leaf, to give an idea of their size.



Reducing Pesticide Exposure

Teryl Roper, University of Wisconsin-Madison, Extension Horticulturist

Reprinted from Cranberry Crop Management Newsletter, June 5, 2005, University of Wisconsin.

With the growing season well underway growers are on the constant lookout for pests that will need to be managed if populations exceed action thresholds. Most growers use some sort of pesticide product to manage pest outbreaks. When used in accordance with the label directions pesticides can be an effective and safe method of managing pests. However, the use of any pesticide product creates risk to the people who mix, load, and apply the product. Minimizing our exposure to pesticides will protect our health and that of our families.

Pesticides can enter the body through four main routes: Dermal (through the skin), Oral (through the mouth), Inhalation (through the lungs), and Ocular (through the eyes). Not all of these routes are equal. Oral, inhalation, and ocular are particularly dangerous because they all lead directly into internal parts of the body. The skin (dermal) receives the greatest amount of exposure and it is the most common route for pesticides to enter the body. The amount of pesticide that your skin absorbs depends not only on the chemical itself and the extent of the exposure, but also on the product's formulation, the area of your body that is exposed, and the condition of the exposed skin.

Different parts of the body absorb pesticides more efficiently than others. Figure 1 shows the relative absorbance compared to skin on the forearm. The head and the genital area are particularly absorbent. It is easy to pass pesticides from the hand to the head by such a simple action as wiping a sweaty forehead. Cuts and abrasions to the skin also allow pesticides to enter the body more readily.

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Oral exposure is very dangerous, but relatively uncommon. It is almost always a result of extreme carelessness. The most common cause of human oral exposure is putting pesticides in unlabeled bottles or food containers.

Inhalation exposure is very hazardous because the lungs can rapidly absorb pesticides, especially vapors and dusts. When inhaled in sufficient quantities, pesticides can damage nose, throat, and lung tissues.

Ocular exposure is also rare. The eyes are very absorbent. Not only may your eyes be damaged by pesticide exposure, but enough pesticide may be absorbed through the eyes to cause serious illness or death.

Pesticide Protection

Wearing personal protective equipment greatly reduces your dermal, inhalation, and ocular exposure to pesticides. The personal protective equipment that is to be worn while mixing, loading, or applying any pesticide is listed on the product label in the Agricultural Use Requirements box.

Hands and forearms receive the most pesticide exposure. 85% of dermal exposure occurs on the hands and forearms. This can be reduced to 3% with the use of unlined chemical resistant gloves. *Wear chemical resistant gloves when using any type of pesticide in any form of application.* This includes wiping with Roundup. Leave the gloves on when adjusting equipment or opening pesticide containers. Do not wipe your face when wearing gloves. Leave the gloves on until the entire job is completed. After completing the task, wash your hands with the gloves on, then remove the gloves and thoroughly wash and dry your hands.

Faceshields will protect the eyes and head from pesticide exposure. Face protection is required when mixing and loading some pesticides. Wearing a chemical resistant hat with a wide brim will also reduce exposure.

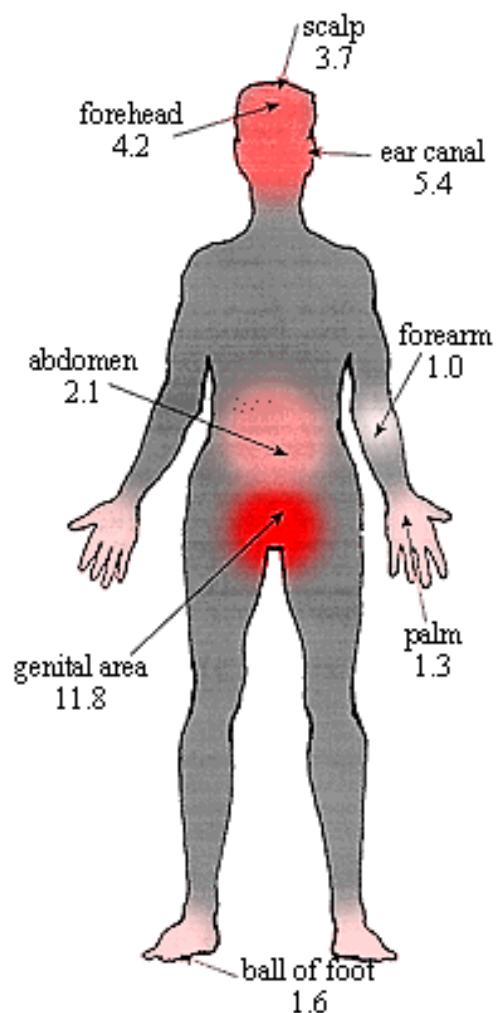
Laundry

Clothing worn while working with pesticides should be laundered after each use. Wash this clothing separately from the family laundry. Put the clothing through one rinse cycle and then a complete washing/rinsing cycle using plenty of detergent.

Vehicles

Keep farm vehicles interiors clean so that pesticide contaminated dust will not be picked up when other people ride in the vehicle. Vacuum out the interior periodically and wipe down smooth surfaces with soap and water. One research study found that the level of pesticide contamination in dust found in farm homes correlated closely with that found in vehicles used by members of that family. Wipe off the seat and interior of tractors used to pull sprayers after each application.

Using pesticides in a safe manner will protect your health and the health of your family. Pesticide exposure can be minimized by following the label and using personal protective equipment and required. □



Relative absorption rates, as compared to the forearm (1.0)

Figure 1

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Pesticide User Responsibility: Use pesticides safely and follow instructions on labels. The pesticide user is responsible for proper use, storage and disposal, residues on crops, and damage caused by drift. For specific labels, special local-needs label 24(c) registration, or section 18 exemption, contact RCRE in your County.

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