Volume VIII, Number 5, July 5, 1994

Nitrogen from Thunderstorms.

Thunderstorms have been rattling through Wisconsin bringing much needed rain and relief from above average temperatures. Thunderstorms bring additional benefits as well. The rain clears the air of particulates and the energy of the storm fixes some nitrogen.

Lightning in an electrical storm can create enough energy to cause some oxygen and nitrogen to combine to form various nitrogen oxides. Subsequently, these combine with water to form nitric acid. This is carried to the soil with rain. The disadvantage to nitrogen fixed through lightning storms for cranberry growers is that virtually all of the nitrogen released is nitrate, and cranberries predominantly use ammonium forms of nitrogen.

In addition to nitrogen fixed through thunderstorms, nitrogen is released through volatilization from fertilizer applications and from barnyards and feedlots. Much of this nitrogen is released to the atmosphere in an ammonium form and can be carried back to the soil in rainfall.

However, before you call your fertilizer dealer and cancel any further shipments of nitrogen fertilizer, the total amount of nitrogen coming from the atmosphere is insignificant. One study in the 1970's estimated available nitrogen at 10 to 15 pounds per acre per year. You also need to remember that this nitrogen is included as background in all fertility research projects and so is included in nitrogen recommendations resulting from these projects. Your long term experience with nitrogen application on your marsh also includes this nitrogen, even if you didn't know you were getting it.

While some nitrogen is fixed through thunderstorms and released through volatilization and can then be carried to our cropland, the amounts released are already included as background and are too insignificant to include in fertilizer needs. Consider this "something extra you don't pay extra for".

Teryl Roper, Dept. of Horticulture, UW-Madison

Fruit Pathologist

Dean Roger Wyse of the College of Agriculture and Life Sciences at the University of Wisconsin-Madison has announced the release of the fruit pathologist position in the Department of Plant Pathology. This position will support all commercial fruit industries in the state, including the cranberry industry. Extension will be the major component of the position (70%) with the balance being research.

A search committee is being formed and with any luck a fruit pathologist will be hired to begin work in early 1995. The release of this position is made possible at this time by support of the Wisconsin Cranberry Board, Inc. and the Wisconsin Apple Growers Association.

Maybe death and taxes are inevitable, but death doesn't get worse every time Congress meets.

J.I. Welsh

Aster Leafhopper

During the last two weeks several growers have inquired about leafhoppers that they have found during their IPM scouting. The leafhopper that most growers have found is called the aster leafhopper. It does not typically feed on

cranberry, but is some cases where a suitable food source is not available they will feed on secondary hosts (cranberry).

The aster leafhopper is approximately 1/8 inch in length, green bodied with wings. If viewed under a microscope they will have dark stripes on markings on their faces. I have seen some minor feeding on some new growth in cranberry beds. Basically, the insects remove excessive amounts of plant sap and reduce or destroy the plant's chlorophyll in the leaves. Continued feeding will cause the leaves to turn yellowish and eventually brown. The damage I saw was associated with about 200-300 leafhoppers per 20 sweeps. These were extremely large numbers and are probably higher than what most growers or scouts are finding.

Leafhoppers occur on almost all types of plants, including forest, ornamental, fruit trees and forage crops. They feed primarily on the leaves of their host species. Most leafhoppers have one generation per season. Some species overwinter as adults or as eggs. The Aster leafhoppers that we are seeing probably were carried into cranberry beds by the southerly wind currents. The Aster leafhoppers will most likely only be here for a few weeks or until growers treat for fireworm or fruitworm. Most of our insecticides should provide adequate leafhopper control.

Leroy Kummer, Ocean Spray Cranberries, Inc.

Safe Pesticide Handling

A report our of Washington State says that 3/4 of workers in apple orchards who became ill after exposure to an insecticide did not follow label requirements to wear personal protective equipment. 26 workers were exposed to an organophosphate insecticide on different farms and reported a range of symptoms. Interestingly, in every case personal protective equipment including respirators, gloves and goggles had been available, but had been removed or not put on during pesticide handling.

It is well documented that workers can protect themselves from pesticides by simply wearing appropriate clothing. Some reports indicate that exposure can be reduced 90% simply by wearing chemical resistant gloves. When combined with an apron or coveralls exposure can be significantly reduced. The new worker protection standard labels that will begin appearing this year will spell out what equipment is needed in more detail.

The use of protective equipment is to protect you, your company's greatest asset.

Teryl Roper, UW-Madison

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Now that the world has the facilities for transmitting intelligence rapidly it is said they are having difficulty finding enough to transmit.

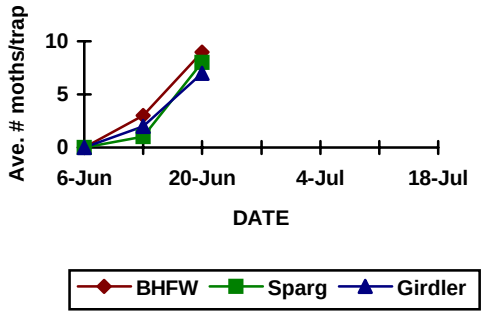
Author Unknown

1994 Pheromone trap counts

Cranmoor area includes:	Adams, Portage and Wood counties
Warrens area includes:	Jackson, Juneau and Monroe counties
Northeast area includes:	Forest, Lincoln, Oneida, Price, and Vilas counties
Northwest area includes:	Barron, Burnett, Douglas, Rusk, Sawyer, and Washburn counties

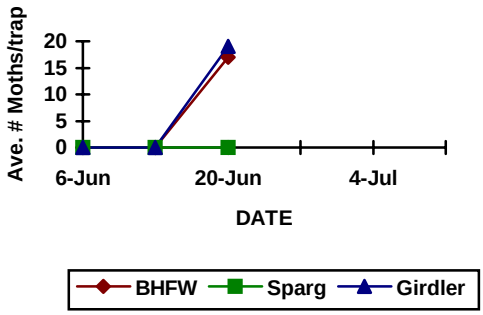
Please note that different regions may have different scales on the left axis. Doing this allows greater accuracy in determining actual values within a region. However, comparisons between regions are more difficult. Please use caution in making comparisons of these averages to trap counts on your marsh.

Northwest Area



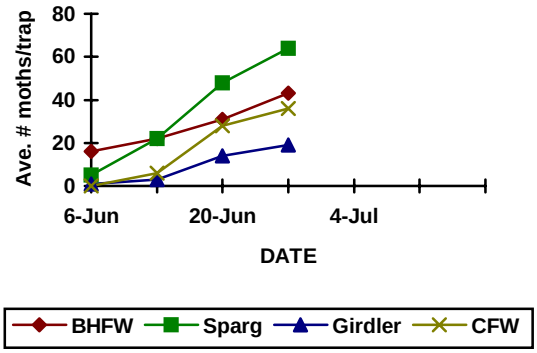
Means from 8 growers

Northeast Area



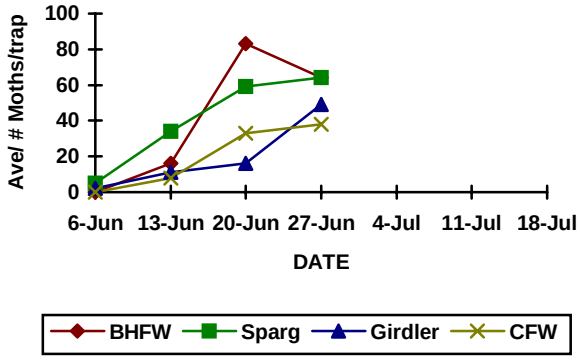
Means from 2 growers

Warrens Area



Means from 39 growers

Cranmoor Area



Means from 29 growers

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