THUNDERSTORMS

Lots of thunderstorms have been rattling through Wisconsin during the last few weeks. They have brought much needed rain. These thunderstorms have been somewhat spotty, however. Some areas have had as much as 6 inches of rain in the past 2 weeks. This is not reflected in the statistics. This shows the importance of having data from your marsh or at least your locality since regional data will likely not reflect your actual conditions very well.

	Rainfall		
District	Last week	Since 4/1	Normal
NW	2.9	6.7	9.7
NC	1.1	9.1	9.6
NE	0.2	6.0	9.6
WC	1.0	7.1	10.5
C	0.4	7.5	10.0
EC	0.4	9.6	9.1
State	1.0	8.2	9.8

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

No one can whistle a symphony. It takes and orchestra to play it.

H.E. Luccock

OBSERVATIONS FROM THE FIELD

The beauty of the pink blossom and our crimson hook is breath taking. Despite the rough looking spring, we have had one of the most beautiful blooms that I have ever seen. What a lovely fragrance too! The cool weather has been instrumental in slowing set down, but it has also eased our vines from heat stress. The Ben Lear cultivar is setting nicely with lots of peas and sizable fruit. Stevens, LeMunyons and Pilgrims are neck and neck, be we are still finding bloom in the Searles, McFarlins, Crowley, Howes and Natives. Beckwith and Bergman are just gorgeous. What potential Wisconsin has this year! Let's bring it home come October.

The BHFW have had an unceasing appetite this second generation. Pyrenone and BT's are slowing them, but it seems that they rebound far too quickly. I commend the growers who are willing to try our experiments those fellas who are losing sleep because the applications are all evening projects. You see, Pyrenone is contact so we don't want to harm any pollinators by spraying them so we need to wait until they are not foraging. The sun breaks down the BT's so we avoid day time applications of that as well.

Some of our observations have brought to our attention Red Shoot, cottonball, red leaf spot, brown fungal activity on leaves, herbicide injury, canker, frost injury, and umbrella bloom. For the most part we are not seeing any SERIOUS cases. Some of the frost we have found this year is once again related to trashy areas of a bed. We have growers who are experimenting with a vacuum type apparatus to clean out corners of beds where we have corralled fruit repeatedly. Many of the growers who have used mill felt or screen under their elevators have had positive results. My theory is that when we get such a build up of trash we are creating an insulator for the ground underneath and thus a new cold spot springs up. See for yourself, in the spring place a ground thermometer into the soil in those trashy areas, and then move into the heart of the bed and place it at the same depth and see what the difference is. The older our beds get, the more chance there is for trouble.

It is getting to the time of year when we begin to see cranberry flea beetle. Now, we are always asked, "What are the threshold levels for these pests and just what are they doing out there?" CFB adults usually feed on weeds. The weed species include Joe Pye weed, hardhack, smartweed, Marsh St. Johns wort, and we've seen it on Jewelweed, but I'm confident there are other weeds CFB preys upon. They have worked the cranberry when there wasn't anything else to feed on or when the populations are intense. Now I am more concerned about the larvae. If we are seeing the adults now, then the larvae would have been working mid to late June and early in July. When we see vines dying back or turning a strange bronzed color we dig n the sol to try to discover why. The larvae do damage that is similar to girdler, but we do not see girdler larvae until late July or early August. So by the process of elimination we should see CFB larvae if it is insect related. It is easy to control CFB adults, so that is what we concentrate on. Most insecticides control them. Thresholds that we have used are 15 to 20 adults swept. Sometimes, if we are lucky, one of our fruitworm sprays will control CFB.

Jayne Sojka, Lady Bug IPM

DEGREE DAY REPORTS

This degree day report is calculated from measurements made at the National Weather Service/WisDOT network of automated weather stations (ASOS/AWOS). For the past couple of years we used another source of data which at the time was the only statewide summary available, but ASOS/AWOS is a better choice. However, if this graph were made with the older source, there would be about 100 more degree days in each region. This results from the daily high

temperatures being a bit lower from ASOS/AWOS than the old source. The ASOS/AWOS stations have high quality thermometers of consistent design, so I believe that they are accurate. The ASOS/AWOS measurements compare well with the automated station at the Potter and Son marsh in Cranmoor, which WCB supports and we use for research.

Small differences in temperature readings among thermometers leads to big differences in degree day totals, unfortunately. This is why I no longer show the summaries of the past 30 years which I calculated a few years ago. Such "climatologies" of cumulative parameters such as degree days are very sensitive to the data source, so you cannot compare how the current year is going to a summary/climatology unless the data were measured in exactly the same way. With the ASOS/AWOS network just about complete, we are starting to build the record that we need to accurately compare degree day totals in different years.

Bill Bland, UW-Madison, Extension Soil Scientist

ROUNDUP REMINDERS

With flowering over and fruit setting growers will once again be thinking about wiping weeds with Roundup. Be sure to read the product label before you begin an application. A few points warrant reminders:

- Coverage is the most important variable. You must have good coverage of the weed's leaf surface in order to get enough material throughout the plant to kill it completely. Dyes added to the wiping solution help you tell where you have wiped.
- Increasing concentration does not make Roundup more effective. Concentrations that are too high may be detrimental as they can kill the contacted tissue before enough is translocated to kill the roots. A 10 to 20% Roundup solution works for most people.
- Cut stump applications are allowed for woody brush. Cut the plant off then treat the stump with a Roundup solution.
- Adding ammonium sulfate per the label specifications can help entry of the active ingredient and will improve performance.
- Roundup requires a 6 hour rainfree period following application to get into the plant. Don't apply if rain is imminent.
- Remember the 30 day PHI.
- Wear appropriate PPE. This includes a long sleeved shirt and long pants and shoes plus socks. Waterproof gloves are not required, but are prudent.
- Keep the wiper surface clean. If dirt, weeds or other debris covers the wiper too little solution will accumulate on weed leaves.

Teryl Roper, UW-Madison Extension Horticulturist

SAFE PESTICIDE HANDLING

A report out 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 spell out what equipment is needed. The use of protective equipment is to protect you, your company's greatest asset.

Teryl Roper, UW-Madison Extension Horticulturist

PESTICIDE POISONING

Call a doctor at once if you suspect a poisoning has occurred. This is especially critical for organophosphate or carbamate poisoning. Atropine is an antidote for these two classes of pesticides, but is not effective against all pesticides. Remove any contaminate clothing and wash the skin will plenty of soap and running water to remove all traces of pesticide. If chemical is swallowed, induce vomiting by giving warm soapy water.

Wisconsin has two poison control centers you can call at any hour for information regarding proper treatment of pesticide poisoning. If you call the Poison Center of Wisconsin (800) 815-8855, your call will automatically be directed to the center that serves your area. The two centers are:
Madison—University Hospital 608-262-3702
Milwaukee—Children's Hospital 414-266-2222.

Most pesticide labels list a phone number that you (or your doctor) can call for specific information on poisoning or other pesticide related accidents (spills?) that involve that product.

CLEAN SWEEP

Farmers in Monroe County have a clean sweep on August 19 to help rid farms of outdated and unnecessary pesticides. This free service can be offered only every few years, so it is critical that growers avail themselves of this opportunity when it is available.

The clean sweep can accept almost any unwanted pesticides including common unregistered materials like DDT, Parathion, Chlordane etc. They can also accept leaded paints, solvents, acid washes and engine cleaners. They cannot accept gas cylinders, explosives, radioactive materials (including smoke alarms), Freon 11 and 12, latex paints, batteries or waste oil.

The first 500 pounds of chemicals can be accepted at no charge from Monroe County Farmers. Amounts in excess of 500 pounds will accrue a $1.50 per pound charge.

Pre-registration is required for this clean sweep. Inventory acceptable waste materials and make a list. Leave materials in their original containers and don't mix any materials together. Pre-register by calling 608-269-4929 or 269-8722 or 372-8722. **Registration must be received by August 1** to participate in this clean sweep. Drop off sites will be in Sparta or Wilton. Agricultural clean sweeps can greatly reduce the potential of pesticide exposure on farms to employees, family and emergency response personnel.

SUMMER FIELD DAY

The annual Cranberry Summer Field day will be held at the Northland Cranberry Receiving Station in Wisconsin Rapids on August 6. This field day will celebrate Northland's 10th anniversary. Lunch will be catered by Cranberries Restaurant.
Registration materials have been mailed to Wisconsin cranberry marshes by WSCGA. If you have not received registration materials please contact them at 715-423-2070. Mark this event on your calendar and plan to attend.

Nobody grows old merely by living a number of years; people grow old by deserting their ideals. Years wrinkle the skin, but giving up enthusiasm wrinkles the soul. Worry, doubt, self-distrust, fear, and despair--these are the long years that bow the head and turn the growing spirit back to dust. You are as young as your faith, and as old as your doubts; as young as your self-confidence, as old as your fears; as young as your hope, as old as your despair.

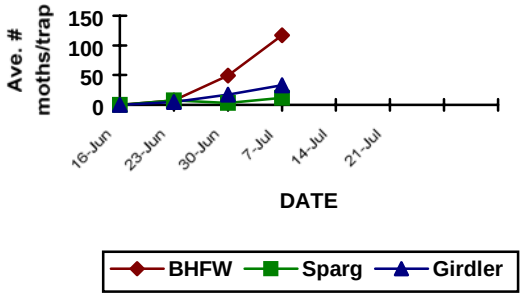
Zoroaster

1997 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

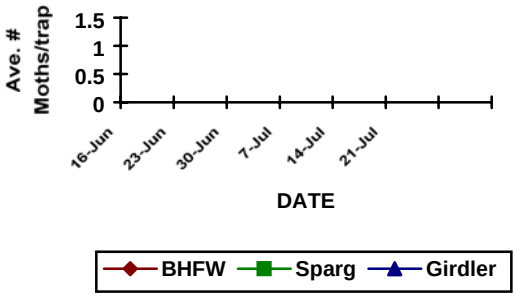
Please note that different regions may have different scales on the left axis. Doing this allows greater accuracy in determining actual values within a region. However, comparisons between regions are more difficult. Please use caution in making comparisons of these averages to trap counts on your marsh.

Northwest Area



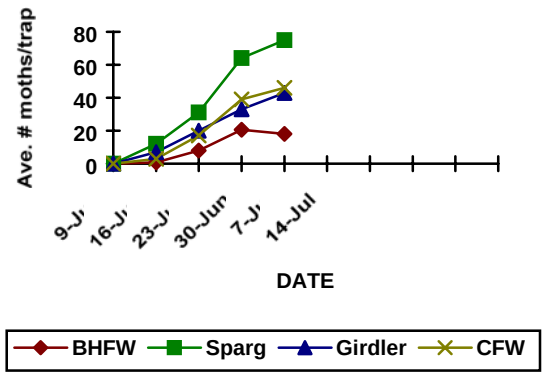
Means from 9 growers

Northeast Area



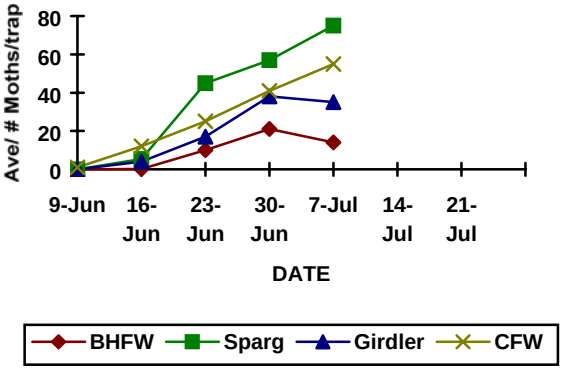
Means from 0 growers

Warrens Area



Means from 27 growers

Cranmoor Area



Means from 34 growers