

## **Vermont Vegetable and Berry News – April 9, 2008**

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[www.uvm.edu/vtvegandberry](http://www.uvm.edu/vtvegandberry)

### **UPCOMING FARM MEETINGS**

Details: [www.uvm.edu/vtvegandberry/meetings/meetlist.html](http://www.uvm.edu/vtvegandberry/meetings/meetlist.html)

April 16th, 4-7 pm. Organic Greenhouse Tomato Production.  
Old Athens Farm, Westminister VT. Info: UVM Extension 802-257-7967 x13

April 21<sup>st</sup>, 6:30-8:30 pm. Setting up Drip Irrigation and Growing Giant Pumpkins.  
Demers Garden Center, Manchester NH. Info: UNH Extension 603-641-6060

May 20<sup>th</sup>. Northern Vermont vegetable twilight meeting, location to be announced.

### **FROST PROTECTION IN STRAWBERRIES**

(adapted from Marvin Pritts, Dept. of Horticultural Sciences, Cornell University)

Strawberries often bloom before the last frost free date, and if a frost occurs during or just prior to bloom, significant losses can result. The strawberry flower opens toward the sky, and this configuration makes the flower particularly susceptible to frost damage from radiational cooling. A black (rather than yellow) flower center indicates that frost damage has occurred.

Strawberry growers occasionally delay the removal of straw mulch in spring to delay bloom and avoid frost. Research has demonstrated, however, that this practice also results in reduced yields. Also, applying straw between the rows just prior to bloom will insulate the soil from the air. This will increase the incidence of frost injury as solar radiation will not be absorbed by the soil and reradiated at night. If additional straw is to be applied between the rows in spring, delay its application for as long as possible before fruit set.

Overhead irrigation is frequently used for frost control because flowers must be kept wet during a freeze in order to provide protection. As long as liquid water is present on the flower, the temperature of the ice will remain at 32F because the transition from liquid to ice releases heat. Strawberry flowers are not injured until their temperature falls below 28F. This 4 degree margin allows the strawberry grower to completely cover a field with ice and yet receive no injury from frost. However, if insufficient water is applied to a field during a freeze event, more injury can occur than if no water was applied.

Several principles are responsible for the ability of ice to protect strawberry flowers from injury. First, although pure water freezes at 32F, the liquid in the strawberry plant is really a solution of sugar and salt. This depresses the freezing point to below 32F. The temperature of the applied water is usually greater than the temperature of the plants, so this serves to warm the flowers before heat is lost to the air. As long as liquid water is continually applied to the plants, the temperature under the ice will not fall below 32F. When one gallon of water freezes into ice, 1172 BTUs of heat are released.

Several factors affect the amount of water that is required to provide for frost protection, and the timing of application. At a minimum, apply water at 0.1 - 0.15 in/hr with a fast rotating head (1 cycle/min). Water must be applied continuously to be effective. A water source of 45 - 60 gal/min-acre is required to provide this amount of water. Choose nozzle sizes to deliver the amount of water required to provide protection under typical spring conditions in your location. Under windy conditions, heat is lost from the water at a faster rate, so more water is required to provide frost protection. For every gallon of water that evaporates, 7760 BTUs are lost. The application rate then depends on both air temperature and wind speed.

For tables with specific recommendations about water application rates at different wind speeds and temperatures, and at what temperature and dew point to begin frost protection, see:

[www.fruit.cornell.edu/Berries/strawpdf/strfrostprotect.pdf](http://www.fruit.cornell.edu/Berries/strawpdf/strfrostprotect.pdf) or call me for a hard copy.

## **INTRODUCTION TO GROWING RICE IN VERMONT**

Sunday May 11th, 1-3 pm, Akaogi Farm, Westminster.

For the past 2 years Takeshi and Linda Akaogi have been experimenting with growing rice in southeastern Vermont. They were recently awarded a 2008 SARE Farmer Grant for their project 'Introducing Rice as a Commercial Crop to the Northeastern U.S.' In this workshop they will explain rice production in general, show their rice paddy, and also explain how to grow rice in a five-gallon container. As part of their grant project they will supply interested growers with seedlings of a selected variety and an observation report sheet to be returned at the end of the season. Growers supply their own five-gallon container and garden soil (you don't need to bring them to the workshop).

Directions to the farm: Take Exit 4 on I-91. From Route 5 in Putney take a left at the Putney General Store; travel a little over 4 miles on that road (it will start as Kimball Hill Rd. and change to Westminster West Rd.); at the Earthbridge sign on the left, turn left; and take the first left (that is our driveway). After about 250' the driveway will fork; park at the fork. The workshop is free of charge, but space is limited. Pre-registration is required. Please call Linda at 387-2540 and leave a message with your name, phone number, and number of persons attending.

## **GLEANING NETWORK NEEDS YOUR EXCESS PRODUCE!**

(Theresa Snow, Vermont Foodbank)

Salvation Farms Gleaning Network is a new program of the Vermont Foodbank working to salvage excess farm produce, making it available to Vermonters in need. Currently serving the farms of the Lamoille Valley we are working to expand this program to the Montpelier area and then statewide. We provide participating farms with a volunteer gleaning crew and a competent field coordinator to manage the volunteers in your fields. There is minimal responsibility on behalf of the farm or farmer – we only ask that you have enough foresight to know what and when access may be available in good condition to warrant a gleaning crew. This notice could be as little as one week prior to your need to plow due to weed seeds or loss of quality in crops.

We do not have a minimum volume to engage your farm in gleaning or assistance with the distribution of excess farm produce. We will do our best to establish a working relationship with

your farm if you make contact. Farms are the first link to make this a successful program – without your interest we would have nothing to work with. For more information contact Theresa Snow at the Vermont Foodbank 802-477-4114 or [tsnow@secondharvest.org](mailto:tsnow@secondharvest.org). (editor's note: Federal and State 'Good Samaritan Laws' are designed to limit your liability as a donor or food, to encourage donations to people in need. Theresa has the details.)

## **STILL TIME TO SEND IN YOUR CENSUS OF AGRICULTURE FORM**

Want funding for Extension, NRCS, and other agricultural service providers to remain strong in our region? One way to support that is to participate in the Census of Agriculture. Many allocations of federal dollars are based on the number of farms counted by the Census. The New England Agricultural Statistics Service (NASS) will continue Census data collection into June. The current response rate for Vermont is only around 65 percent. If you have your form, please fill it out and return it; if you did not get a form and wish to take part, or if you have any questions, contact Gary Keough, Director, NASS, 603-224-9639 ext 129 or email: [nass-nh@nass.usda.gov](mailto:nass-nh@nass.usda.gov)

## **REPORTS FROM THE FIELD TO START NEXT ISSUE**

It's that time of year when growers submit reports from the field. These are a paragraph or so, describing current crop conditions, production activities, pest observations, and/or comments on markets, labor, or other items of interest to commercial growers. Reports from across the Northeast are welcome. Reports are identified only by town location. I may edit the reports for clarity and to fit the available space. Growers who get this newsletter by e-mail will receive a request for reports 3 or 4 days prior to the newsletter deadline. If you would like to participate in reporting, let me know and I will add you to the email newsletter list. Thanks. [vernon.grubinger@uvm.edu](mailto:vernon.grubinger@uvm.edu)

## **TRIBUTE TO DICK ASHLEY, UCONN VEGETABLE SPECIALIST**

I am sad to say that Dr. Richard Ashley passed away on March 26; he served as a Professor of Horticulture, Vegetable Crops Extension Specialist, and IPM coordinator at the Univ. of Connecticut from 1968 to 2003. He specialized in weed-crop competition, nutrient management, protected vegetable culture, sustainable agriculture and developing IPM curriculum for primary schools. He authored, published and edited dozens of articles, manuals, proceedings, and curriculum, and taught courses on horticulture production, garden center management, and marketing. He contributed to the New England Vegetable Management Guide and served as its editor. He was on the Steering Committee and a key player for the New England Vegetable and Berry Growers' Conference since its beginning in 1979. He mentored many students and was a friend and valued colleague to those in the vegetable industry. A quiet, soft-spoken, generous and gentle man, he was most animated when sharing knowledge with others. As a young extension agent starting out, I remember and am thankful for Dick's kindness and support, and the model he provided of professionalism combined with sincere caring about the interests and information needs of others.