

May 5, 2000

Strawberry Information

NC Strawberry Weekly Update - May 5, 2000

NC Strawberry Weekly Update - May 5, 2000

General roundup - Fair skies and warmer temperatures have finally returned and we are enjoying some excellent harvest conditions and great berry quality through much of the state. Growers are looking for a great weekend ahead. Today marks the first of three "Farmers' Market Strawberry Days in May". Scott Bissette of the NCDA marketing Division is leading this program today at the State Farmers Market in Raleigh (call Scott at 919.733.7136, or Charlie Edwards, Manager, 733.7417).

Prices for California strawberries continue to plummet (dropped to \$3.75 per 12 pint flat in some wholesale terminals this week), but cheaper berries from California are having almost no detectable impact on the demand for locally grown berries (thank goodness). The improved weather conditions have greatly reduced botrytis problems this week, but we are experiencing more and more difficulty it seems with bacterial angular leaf spot as well as the dreaded big A (anthracnose). Be on the lookout this Saturday as we may experience warm enough temperatures to justify evaporative cooling in the afternoon hours.

Evaporative cooling - as Dr. Gina Fernandez reported in yesterday's advisory, in early May of 1996, just as many fields in North Carolina were coming into peak production, temperatures soared into the 90's and fruit turned white, a condition called sunscald. We started to see a slight bit of this yesterday at Clayton (not the white appearance so much as some water soaked spots on the upper sides of the berries). Unlike 1996 when we had virtually no experience with dealing with this problem, a number of growers have learned that it can be beneficial to lower the temperature of the plant and fruit by using their overhead irrigation systems to sprinkle the crop for short periods of time in hottest part of the day. I have heard various recommendations on when to turn on the irrigation system, but it seems most sensible to base the decision on actual temperature conditions. It has been recommended that you should consider evaporative cooling (with overhead irrigation) when:

- 1) the temperatures exceed 85o F
- 2) there is low humidity, and
- 3) wind speeds are over ten miles per hour.

As temperatures increase over 90o F., seriously consider using evaporative cooling regardless of humidity and wind speed. In addition, very low humidity and higher winds at 80o F. may require evaporative cooling.

In speaking to several growers yesterday, there was a consensus that you should not run for more than one hour. On hotter days, most growers seem to favor sprinkling two or three different times in the afternoon for shorter periods (15 minutes to 30 minutes). It is recommended by Dr. Fernandez that you should not irrigate past 4:00 p.m. The plants must dry out before sunset or they will not dry until the next day. She also indicates that short, frequent running times, are better than

one or two long running times. Of course, growers will need to be thinking of how to manage these afternoon irrigations with all the people that want to pick strawberries this weekend! If it appears that evaporative cooling is really needed, then I would have a strategy of dividing your field(s) into quarters or possibly thirds for harvesting. After each section is picked clean, turn on the sprinklers! Many folks seem to enjoy morning picking anyway, so this should hopefully not pose too great a problem this weekend.

Piedmont Agents Report Increasing Problem with Bacterial Leaf Spot:

Darrell Blackwelder, Agent, Rowan County, and Wick Wickliffe, agent Guilford County, have both spotted Bacterial Angular Leaf Spot in their respective counties this week, and Dr. Louws and I appreciate the excellent digital photos sent by Darrell and Wick (these will be posted to the Small Fruit Center web site later today). Essentially, this is a plant source-associated problem. It can come in on plants from either Canada or California. As Dr. Louws recently wrote in the NCSA, Inc. monthly newsletter (May, 2000),

" The primary concern if the weather is cool and wet (which it was all last week) is that the pathogen will colonize the calyx and cause it to turn an unsightly black. This detracts from the aesthetic appearance of the picked berry. We have never been able to demonstrate yield benefits with an intensive copper application schedule. However, two or three well-timed copper applications could reduce the incidence of calyx discoloration."

"Growers with an identified problem should consider applying copper sprays prior to predicted cool and wet weather. A limit of three applications is advised and copper is not recommended if no angular leaf spot is present, due to possible phytotoxicity of copper to the strawberry plants."

The photos sent by Darrell and Wick show how bacterial leafspot turns the green strawberry calyx into an unsightly brownish/black color! I think that perhaps the best way to deal with this problem in future seasons is to have a more aggressive copper spray program early in the season during bloom and well before fruit ripening - this is the actual practice of one of our larger growers in ENC. Another producer I visited on Wednesday tried some copper spraying with ripe fruit, and we did observe some spotting on the red berries (phytotoxicity) that rendered them unmarketable (the green fruit seemed OK).

Bottomline: don't spray copper once you have started with the harvest. Also, when ordering plant material for next season, be very clear with your plant supplier that this is a disease that can be very serious for us in a cooler wet year, and that you simply must have disease-free plants (it can come in on runner tips for plugs as well as fresh dug and cutoffs).

Anthracoze:

Anthracoze started showing up in more locations late last week and efforts are being made as we speak to see if we can possibly obtain another emergency exemption for Quadris (we will advise you the moment we hear anything - an official application was submitted by Dr. Louws on Wednesday). Many thanks to Frank for taking on the huge task of developing one of these very difficult applications for submission this week!!

At the Clayton Research Station we have had very good control by immediately rouging out all infected plants and surrounding plants (we had several plants come down with an infection on

April 24th, and by immediate rouging we have checked the spread of the disease and have had only an occasional berry with the blackspot symptom (sunken brown spots in earlier development). Dr. Louws also advises a vigilant schedule using Captan fungicide, BUT HE ALSO ADVISES THAT ALL OVERHEAD WATERING MUST CEASE (e.g. Evaporative Cooling).

Fertility:

Now that harvest is well underway, most growers have now cut back to ½ lb of N/day or even less, depending on soil, previous N fertility, and crop load. It appears that we are getting some very strange petiole nitrate readings this year - it is our belief that a reduced crop load is causing this. More on this subject at a later time. But, Dr. Gordon Miner does wish to advise that total trifoliolate N values would be the better indicator for plant nitrogen at this time. He advises that readings in the 3.0 - 3.2% N range are desirable. Yes, it would be well to take one more leaf tissue sample (petiole test is optional).

Drip Irrigation:

Is very critical right now with hotter temperatures and low humidities - monitor soil moisture very closely and don't let the plants become stressed! At peak harvest we are also at peak water demand! We irrigate when the tensiometers (8 in deep) reads 20 to 25. It is generally not advised to drip for more than 2 hrs at a time.

Special Thanks This Week:

Special thanks to Dr. Gina Fernandez, Dr. Frank Louws, Darrell Blackwelder, Agent, Rowan County, Wick Wickliffe, agent Guilford County, and Bill Jester, Area Agent, ENC, for their timely contributions of key information to this advisory as well as the excellent digital photos we will be posting to the Small Fruit Center later on Monday.

Contributed by:

E. Barclay Poling, Director
SRSFC
Campus Box 7533, 1017 Main Campus Dr., Suite 1100
Raleigh, North Carolina 27695-7553
919.515.5365

-
barclay_poling@ncsu.edu

[The Southern Region Small Fruit Consortium](#)

Campus Box 7533
1017 Main Campus Drive / Suite 1100
NCSU Centennial Campus
Raleigh, North Carolina 27695-7553

