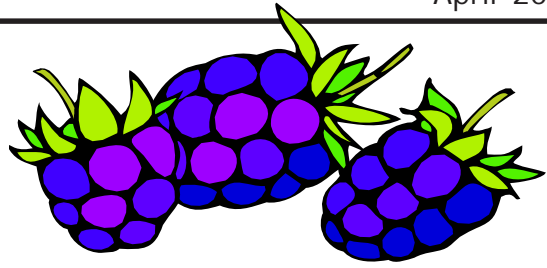




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*Diane Kaufman*

# Caneberry Newsletter

Dear Friends;

This seemed a good time to briefly discuss timely field operations and update the table on winter temperatures vs. Marion yields that I began in 2006. I hope this info is helpful as we all begin to look at fields and assess winter damage.

As we all go out and cut through buds in an attempt to estimate cold damage, I thought it might be worthwhile to update the table I compiled in 2006 attempting to correlate cold temperatures with crop loss in Marions. Since the number of acres has changed with time, average yield/acre is probably the most telling parameter. Looking at the weather data for the winter of 2007/2008, it is difficult to know which timing resulted in the damage that reduced Marion yields to levels similar to those of 1989 (4,400 lb/A) and 1991 (4,170 lb/A). The time of winter damage is pretty clear for the 1989 and 1991 crops, but it is difficult to pinpoint when the damage occurred in the winter of 2007/2008. It's hard to imagine low temperatures in the 20's causing significant damage to Marions that are fully dormant in December (you may wish to refer to Bernadine Strik's discussion of cold damage in the previous Caneberry Newsletter and in the ORBC newsletter). The cool low temperatures in January and February don't really seem cold enough to have resulted in so much damage (except to recently trained EY canes). One might wonder if there might have been a general weakening of plants beginning with the cold night temperatures in November, 2007 that pre-disposed the plants to cold temperatures in January through April, 2008. However, similar temperatures at similar times in November, 2006 did not seem to do any harm to the 2007 crop.

It may be that spring was also a major factor. The average low temperature for March, 2007 (a year with good yields) was 41.14 degrees F, with 12 days breaking highs of 60 degrees (according to NWREC weather data). The average low temperature for March, 2008 was a chilly 36.72 de-

grees F, with only 2 days breaking highs of 60 degrees. The average low temperature for April, 2007 ( good yields) was 41.18 degrees F, with some nights not dropping below 50 degrees. The average low temperature for April, 2008 was a chilly 38.38 degrees, with only one night of temperature rising above 45 degrees F. Continuing with the NWREC weather data, the average low temperature for May, 2007 was only 44.85 degrees F, but highs didn't go above about 82 degrees until the period of 5/29 to 6/3/07, when highs ranged from 85 to 90 degrees F. By contrast, the average low temperature for May, 2008 was 48.97 degrees F, with highs in the 55

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to 75 degree range until 5/15 and 5/16/08, when temperatures soared from 88 to 98 degrees, and remained high for the next few days. Rain during the last 2 weeks of May, 2008 may have resulted in reduced pollination. Thus, it appears as if cold spring temperatures followed by sudden hot weather may have been as or more damaging to the 2008 crop than temperatures during the winter.

A similar situation may have occurred for the 2006 crop (only 5,090 lb/A), when lows remained in the 30's and 40's until the period of February, 15 through 20, 2005, when lows fell to the low to middle 20's. We would expect damage to recently handled canes from such a sudden drop in temperatures. Temperatures remained on the cool side with an average low temperature of 37.57 in March and 39.5 in April. After this relatively cool spring, high temperatures suddenly jumped to 97 degrees F on 5/15 and then highs remained in the mid 80's through 5/18/06. It then turned cool and wet until the very end of May, resulting in poor conditions for pollination.

So, what's in store for us in 2009? Even though lows at NWREC only fell to around 32 degrees F on October 11 and 24, 2008, it probably got a bit colder than this at various sites. Because plants would not have been dormant yet and previous nights had been a good deal warmer, one might expect the potential for some damage at that time. Once again there was some cold weather in November, but not until the end of the month. Temperatures in December remained in a range that would not be expected to cause damage to dormant plants (17 to 25 degrees F), and there was a certain amount of snow-cover. There were a few nights in January and February with lows in the 20's (possibly the mid to upper teens in some locations). The February lows might be expected to cause some damage to recently trained canes in EY fields. March has been chilly, with an average low temperature of 38.14 degrees from 3/1 to 3/31/09 and only one day reaching a high of 60 degrees F. Buds on Marions and boysens appear to be breaking pretty well, despite these chilly conditions. Maybe the best thing we can do right now is pray for a more "typical" spring than the one (or lack of one) we had last year and for good conditions during pollination.

One other way to compare weather data to yield may involve looking at the accumulation of growing degree days (a measure of hours above 50 degrees F). Between 1/1/07 and 3/31/07 (good yield year) we had accumulated a total of 185.81 growing degree days, with 133.73 coming in the month of March. Between 1/1/08 and 3/31/08 (poor yield year) we had accumulated a total of 114.86 growing degree days, with only 44.15 coming in March. Thus far, between 1/1/09 and 3/31/09 we have accumulated a paltry 92.65 growing degree days, with only 48 coming in March. Let's hope for more of what we saw during those early days in April!

## Things to do: April/May

Make first application of fertilizer in early April.

OSU Berry Specialist, Bernadine Strik, recommends applying half of the fertilizer in late-March/early April, and the second half in early to mid May.

EY Blackberries: apply fungicide (Abound or Tanos followed by copper followed by Pristine) to primocanes when they are 0-12, 12-18 and 18 to 36 inches high to protect new growth from infection by purple blotch and Septoria. Recent research has shown that removing the first 2 flushes of primocanes and then applying Pristine to the entire canopy in early bloom provides purple blotch control that is equivalent to the 3 fungicide applications described above.

Burn back first flush of primocanes (raspberries) and first and second flushes of primocanes in blackberries with Aim or Goal, if desired. Aim will do a good job of burning back primocanes in blackberries and raspberries, but Aim will not provide any pre-emergence weed control. Goal is not as effective at burning back the primocanes of blackberries, but it will provide good pre-emergence weed control. For this reason, Goal

## Field Day Dates at NWREC

Strawberry Open House: Wednesday, June 10, 2009, beginning at 2:00 pm

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Caneberry Open House: Wednesday, July 8, 2009, beginning at 1:00 pm. I know that this is the busiest time for caneberry growers, however, it's a golden opportunity to see and taste new raspberry and blackberry varieties and ask Chad Finn (our berry plant breeder) questions about specific varieties. There are now so many new blackberry varieties that selecting one or two can be very confusing. There is no substitute for seeing these plants and fruits with ones own eyes.

## **Marion Yield vs. Weather**

Based on lows recorded at Forest Grove, Oregon City, NWREC and/or Salem and yield data from the Agricultural Statistics Service

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