



Weather INnovations Consulting LP



2013 Growing Season

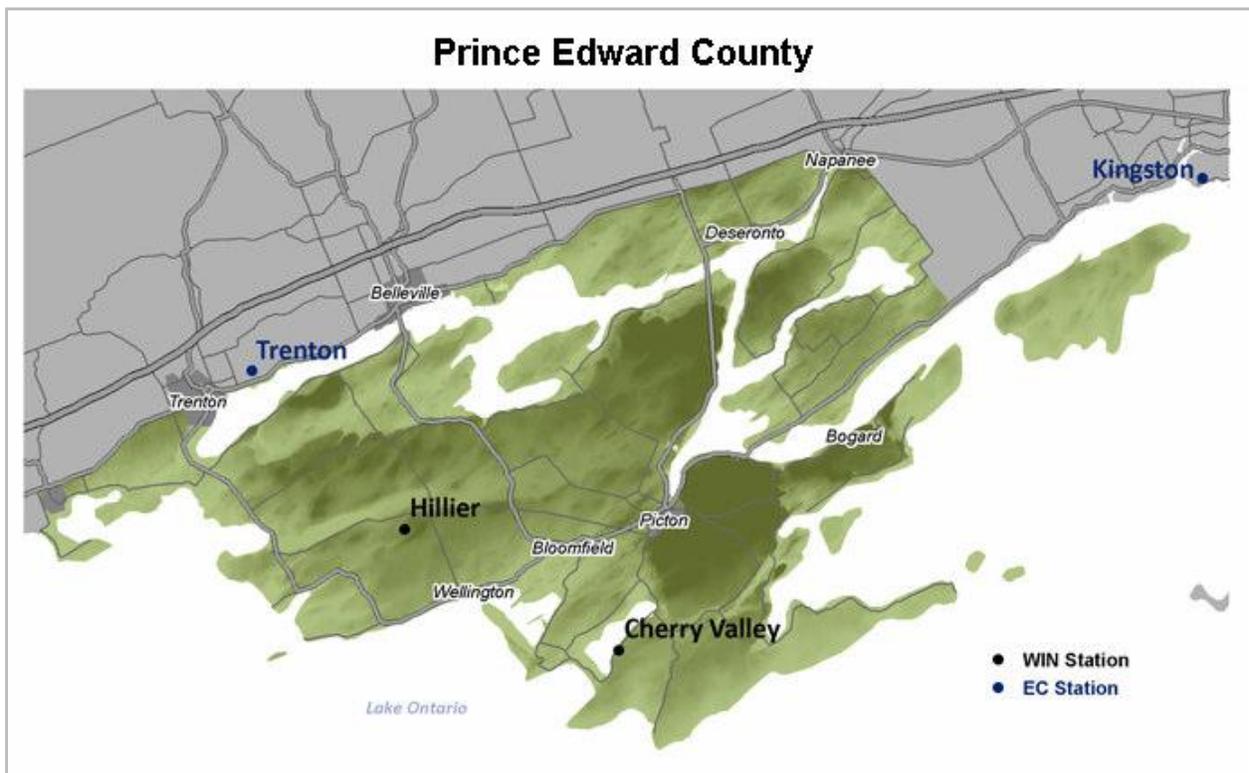
Prince Edward County Report

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November 15, 2013

Overview

The 2013 growing season in the Prince Edward County appellation was a more characteristic vintage, following a few consecutive seasons of above-normal heat units. Daytime temperatures typically averaged above normal, while overnight lows often fell below normal. Vines entered the spring with seasonal March and April temperatures which transitioned into above-normal May temperatures. Above-normal rainfall during the summer led to high soil moisture conditions for established vines and supplemental irrigation was not required. These conditions attributed to slightly above-average disease pressure. The onset of the harvest was welcomed with a warm and dry September but above-normal rainfall returned in October.

All of these attributes are examined in the following report. The 30-year normals, used for comparisons in this report, were taken from Environment Canada's Picton location. The locations of the stations referred to in this report are shown in the following map.

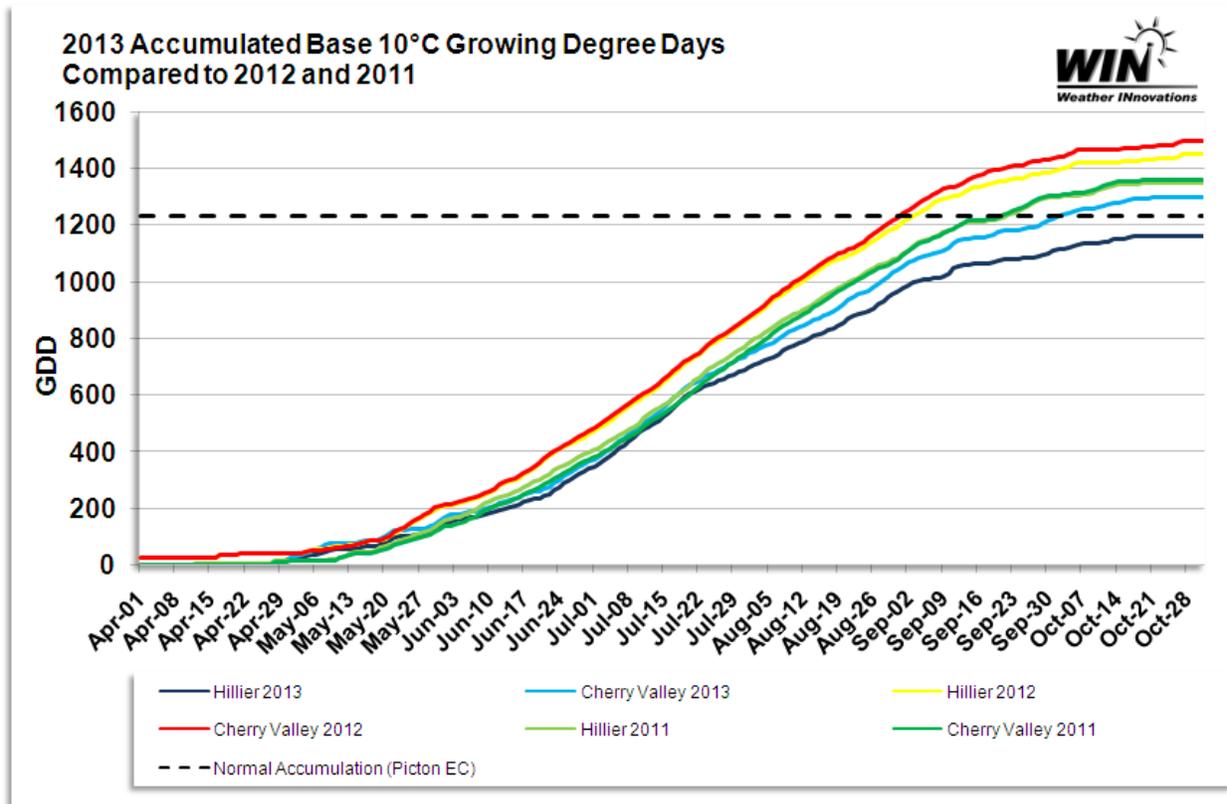


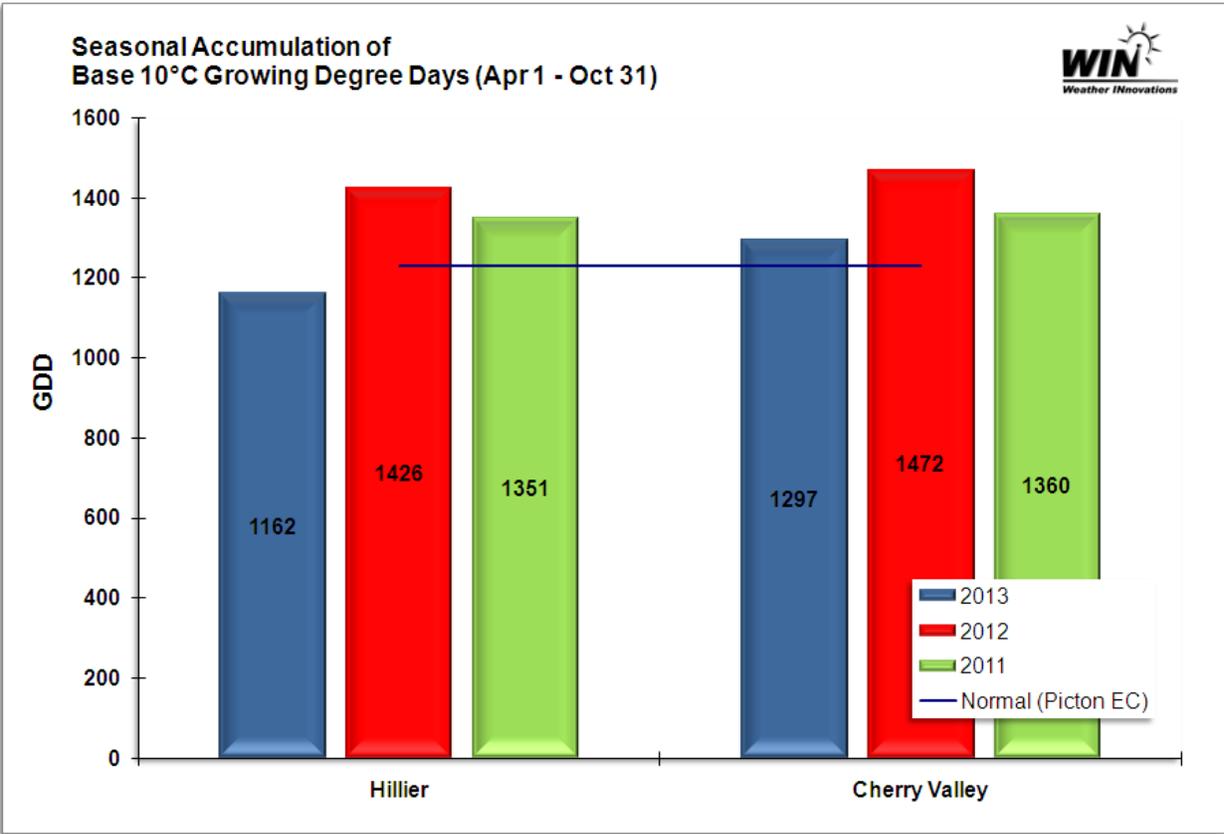
Temperature and Growing Degree Days

Closer-to-normal March and April temperatures, as compared to the previous year, resulted in a much more normal launch to the growing season. Day-time highs and overnight lows averaged slightly below normal. Significantly above-normal temperatures marked the month of May, but June and July temperatures remained near-normal. August and September transitioned into above-normal daytime

temperatures with cool nights; appropriate conditions for ripening grapes. The growing season finished on a warm note with above normal October highs and lows.

The lack of daytime highs exceeding 30°C and the recurring near-normal temperatures throughout a majority of the growing season, led to a steady and near-normal progression of heat unit accumulation. Cherry Valley accumulated the highest seasonal total of 1297 growing degree days. Both stations accumulated a fewer number of days over 30°C, as compared to the previous year, but a similar number to the 2011 growing season. The following graphs illustrate these temperature attributes:





PEC: Average Daily Maximums Compared to Normal (2013)

The table shows the average daily maximums for PEC compared to the normal (2013) values for Hillier and Cherry Valley from April to October. The values are color-coded: black for normal, red for above-normal, and blue for below-normal.

	Apr	May	June	July	Aug	Sept	Oct
Normal (Picton EC)	10.8	17.7	22.3	25.4	24.4	20	13.4
Hillier	11.0	21.2	23.1	28.3	26.4	21.9	16.5
Cherry Valley	10.3	20.0	21.3	26.5	24.8	20.7	15.5

— Normal
 — Above-normal
 — Below-normal

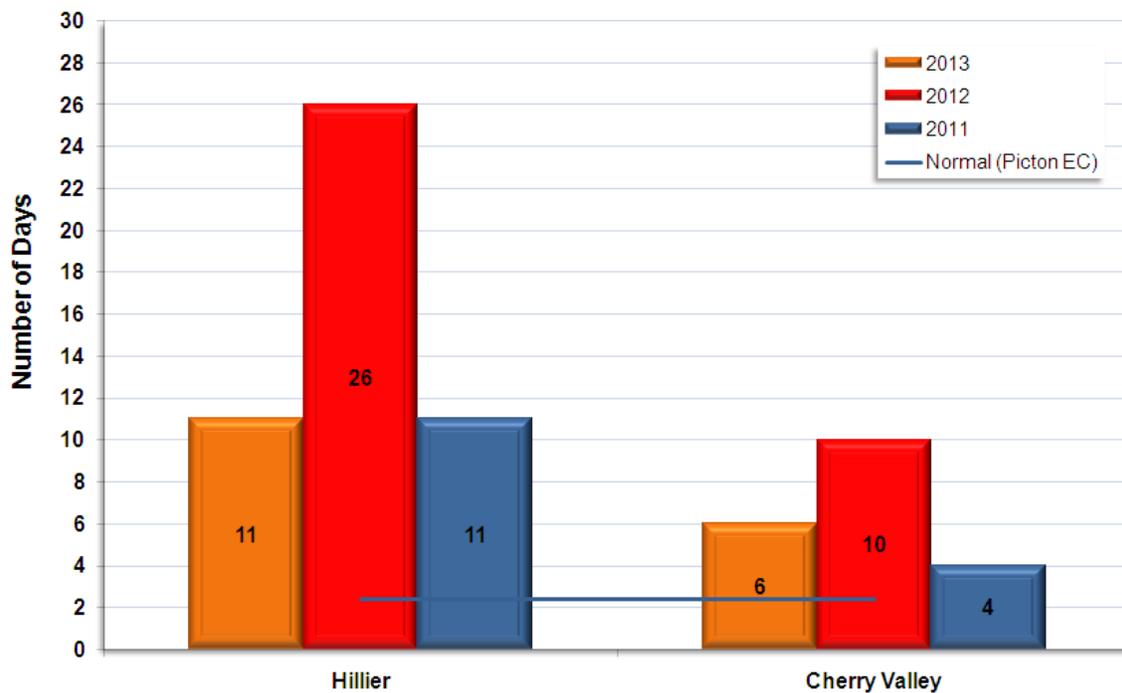
PEC: Average Daily Minimums Compared to Normal (2013)



	Apr	May	June	July	Aug	Sept	Oct
Normal (Picton EC)	2	8.2	12.7	16.1	15.9	11.8	5.5
Hillier	-0.4	5.9	10.6	14.2	11.6	6.5	3.3
Cherry Valley	1.1	8.3	12.7	17.4	15.0	10.6	7.1

- Normal
- Above-normal
- Below-normal

The Number of Days from Apr-Oct Where Tmax was Greater Than 30°C

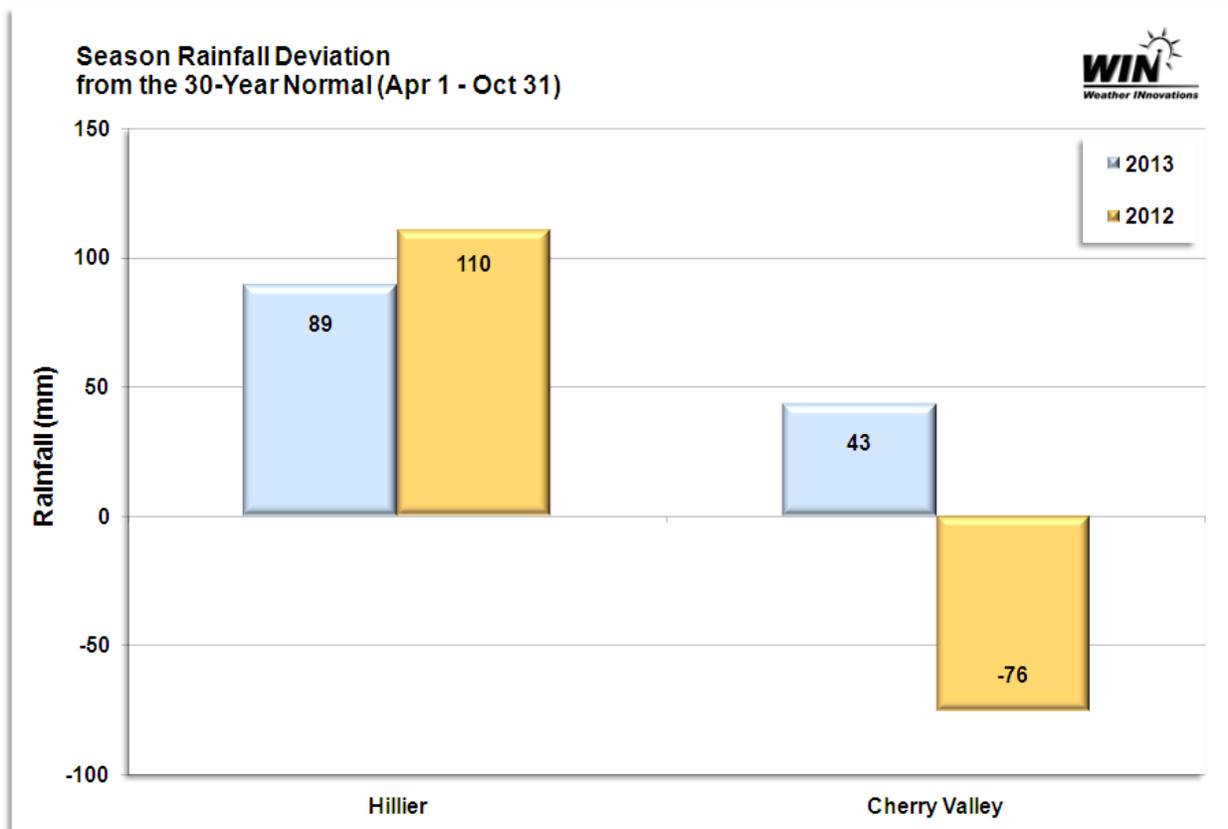


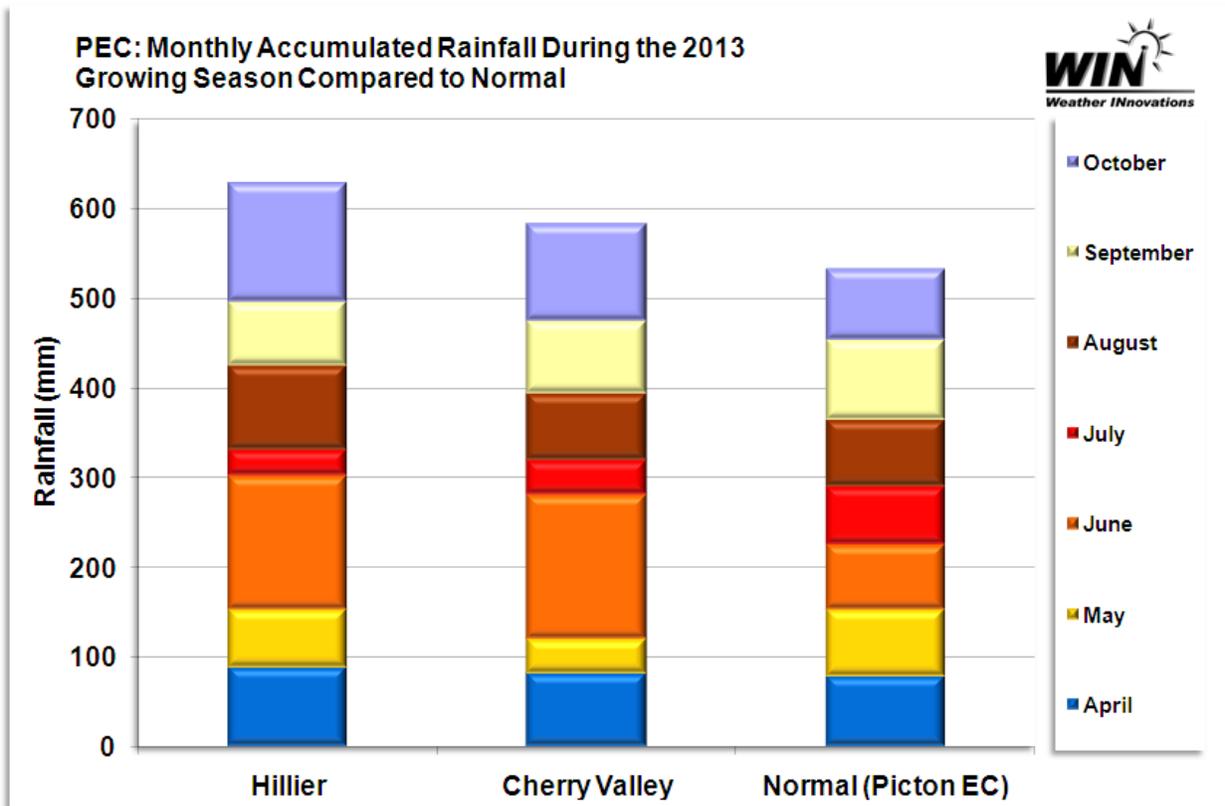
Precipitation

The 2013 growing season can be summarized as having typical precipitation, apart from a very wet June. The growing season commenced with average rainfall. Below-normal rainfall marked the month of May: 87% of normal at Hillier and 52% of normal at Cherry Valley.

Excessive rainfall followed in June, occurring at least every few days throughout the month. As a result, June rainfall equaled 204% of normal at Hillier and 220% of normal at Cherry Valley! The Prince Edward County appellation was fortunate to experience a significantly dry July, unlike the Niagara and Lake Erie North Shore appellations. Rainfall events were rare and insignificant, with the majority of the month's precipitation occurring from July 19th to the 20th. As a result, July rainfall equaled only 43% of normal at Hillier and 59% of normal at Cherry Valley.

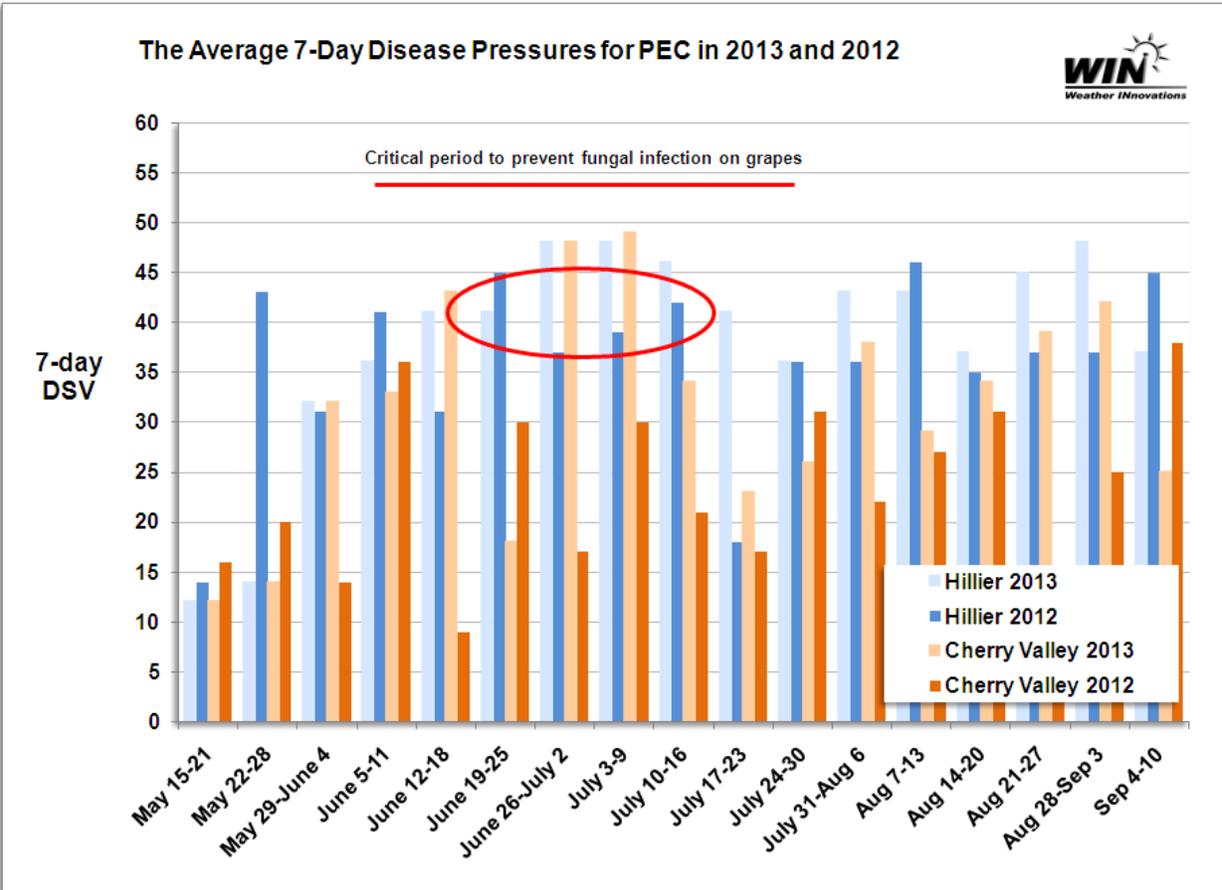
Above-normal rainfall in Hillier and normal rainfall in Cherry Valley marked the month of August. The majority of rainfall occurred during the first and last weeks of the month. Below-normal and infrequent rainfall followed in September; in fact, approximately half the monthly rainfall occurred on September 21 alone. Above-normal rainfall returned in October amounting to 168% of normal at Hillier and 137% of normal at Cherry Valley. Consequently, the October harvest period was challenging as compared to the favourable September harvest conditions. Seasonal rainfall amounts equaled 89 mm above normal at Hillier and 43mm above normal at Cherry Valley.





Disease Pressure

The Prince Edward County appellation experienced average to high seasonal disease pressure, greater as compared to 2012's disease pressure. The graph below shows that the majority of June and July were the most critical periods for keeping a tight spray schedule to reduce the chances of infection on the fruit. These periods had a high accumulation of disease severity values. In particular, June 26 to July 9 show notably higher disease pressure as compared to 2012 and overall.



Conclusion

The 2013 growing season was a reminder of an average heat unit growing season, noteworthy for its suitably high but not extreme summer temperatures and seasonably warm fall. The growing degree day accumulation was close to normal but behind growing seasons in recent memory. Above-normal daytime temperatures prevailed on the whole, with cooler-than-normal overnight temperatures. Typical precipitation occurred throughout the growing season apart from a very wet June. The harvest began with seasonably warm and dry September conditions, followed by a more challenging wet October. This growing season, although accumulating fewer heat units than in recent years, still resulted in a typical vintage with many of the attributes necessary to produce a great harvest.

Contact Us

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