

NZ Blackcurrant Co-operative

Spring Update (September to November 2019)



Spring time in New Zealand is a wonderful part of the year, although the saying “four seasons in one day” perfectly describes what you might expect in terms of the weather!

In a formal way, Spring covers the period of September, October and November, and these months as well as December are the most critical

for the blackcurrant harvest. The plants come to life, and the quantity and quality of the harvest depend almost totally on the weather in this period.

The settled weather of winter gives way to big changes in weather during spring, and you may experience days which are as hot as summer (up to 30°C), but when the southerly winds come, temperatures can drop back to winter temperatures, and sometimes even brings snow or hailstorms to the South Island where the Blackcurrants are grown.

Nights can still be cold, and although cooler temperatures are not a major problem, frosts over this period can be damaging to the fruit, especially in November when the fruit is fully set on the plant.

Spring 2019 weather

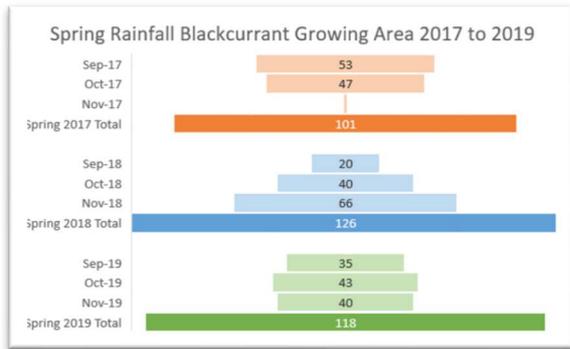


When the overall spring weather for 2019 is considered, it was not too different to 2018 – although 2018 and 2019 were probably a little warmer than normal.



The blackcurrant growing area experienced some cold days (as low as 10°C), but many days above 25°C, and a few days as high as 30°C.

Night-time temperatures were normal, with a few nights just below zero, but most nights in the 5°C to 10°C range.



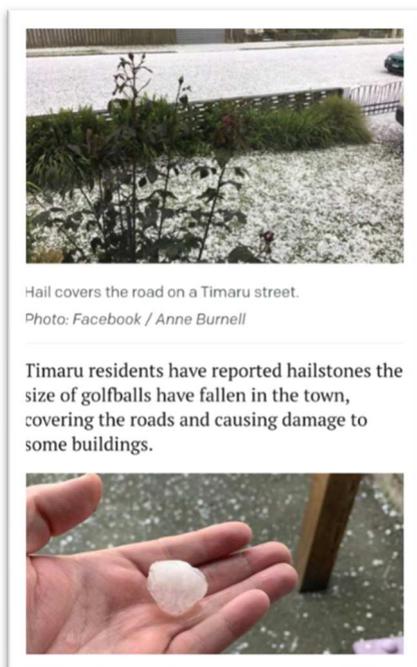
Rainfall was also in the normal range (100mm to 130mm over 3 months) – in fact rainfall in 2019 was quite consistent over the 3 months of spring.

Overall, the growers were very happy and optimistic about the upcoming harvest. The fruit looked abundant, and the quality of fruit appeared as good as it ever had – tasty and high in anthocyanins!

The spring weather was not without some drama however, and mother nature decided to give the growers an early and unwanted Christmas present!

Wednesday 20 November started out as a typical spring day in the blackcurrant growing area. The night had not been cold, and the weather forecasted some welcome rain, however with a chance of thunderstorms. By lunchtime that day, the growers heard a warning from the weather forecasters that none of them ever want to hear in spring – hailstorms were coming!

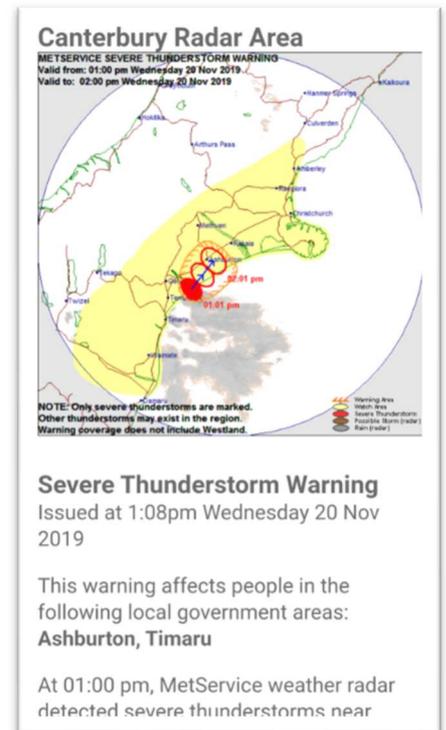
The hail started in the early afternoon, and the stormy weather travelled up through the Canterbury region, causing a significant amount of damage to all crops in the region.



The Blackcurrant crop did not escape, and by the time the storm passed a few growers had lost up to 30% of their crop.

Thankfully the hail was localised, so the damage did not affect all of the blackcurrant growers. Of those who did receive some hail, the crop losses were reported between 10% and 30%.

The total losses will not be fully known until after the harvest. However early reports would suggest that current demand for fruit will be able to be met, but it is unlikely that there will be any leftover fruit this year.



Growers are still optimistic that the quality of the fruit will be excellent this harvest, and the industry in New Zealand is sure that it will be once again delivering the best quality blackcurrant in the world to Japan in 2020!

Spring - Blackcurrant Growth Cycle

Spring is the most critical period for the blackcurrants and a very busy time for the growers. During the early part of Spring, the growers will apply fertilizer if required, based on soils testing carried out early in the previous autumn.



Beehives are placed around the blackcurrant farms to pollinate the flowers.

In response to crop monitoring and to meet residue compliance, sprays may be applied in the early part of Spring to reduce the negative effects of insect and microbiological challenges to the plants and fruit.



One useful biological control tool for insects is the use of pheromone strips for control of currant clearwing. These are a plastic strip that looks like a plastic bag tie, which controls the release of a man-made chemical that mimics the pheromone that female Currant Clearwing moths use to attract males.

They work in two ways:

- by overloading the male insects senses so it no longer reacts to pheromone from real females, and
- when there are lots of dispensers about it creates a “pheromone fog” which covers up the female moths’ pheromone trails so they can’t be followed by the males.



Flowers give way to the fruit, and the first fruit look like tiny green apples (!).



Not only are the blackcurrants growing, but the grass also grows – fast! - sometimes as high as the plants!

It is actually important to keep this under control, as the grass attracts unwanted insects and if wet, it is also a source for mould and fungus.

It is therefore the time that the growers love to get on their mowers!



Spring and early summer can also be dry, so the blackcurrants are watered regularly during the dry days.

Then when the Spring jobs are all done, the harvesters are serviced and cleaned in preparation for harvest, and the growers can sit back and enjoy a few days rest with the family over Christmas while the blackcurrants ripen under the New Zealand summer sun!



Variety of the Month

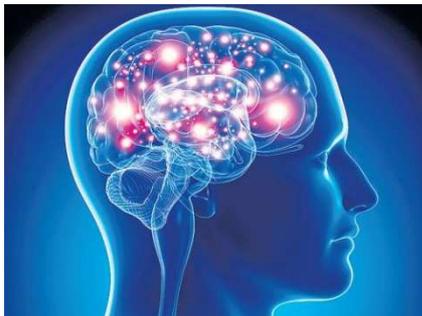
Blackadder

Blackadder, like the previous variety of the month (Kepler) is a variety of blackcurrant that has been developed in New Zealand by a joint venture between the New Zealand government research group, Plant and Food (<https://www.plantandfood.co.nz>) and the New Zealand Blackcurrant Industry.

Although a great many varieties are developed over time, the researchers developing Blackadder were particularly excited, as the fruit had both the taste profile of a good fruit for juice manufacture, but also a high anthocyanin content, which meant product developers had a fruit that could be used for both food and dietary supplement applications alike.

First patented in 2005, Blackadder also quickly excited researchers working on health research studies.

Research conducted by scientists at Plant & Food Research (New Zealand) in collaboration with Northumbria University (UK), showed that compounds found in Blackadder increased mental performance indicators, such as accuracy, attention and mood. The study also showed that Blackadder also reduced the activity of a family of



enzymes called monoamine oxidases. These chemicals are known to affect mood and cognition, and are the focus for treatments of both neurodegenerative symptoms associated with Parkinson's disease and mood disorders, including stress and anxiety.



References

Watson, Anthony W., et al. "Acute supplementation with blackcurrant extracts modulates cognitive functioning and inhibits monoamine oxidase-B in healthy young adults." *Journal of Functional Foods* 17 (2015): 524-539.

Watson, Anthony W., et al. "The pharmacodynamic profile of "Blackadder" blackcurrant juice effects upon the monoamine axis in humans: A randomised controlled trial." *Nutritional neuroscience* (2018): 1-10.

New Products or Recipes

Nutrient Rescue

Nutrient Rescue is a social enterprise with a mission to help New Zealanders become the healthiest, most energetic people on the planet.

The harmful western diet of heavily processed food, combined with our busy, stressful lives means that 63% of kiwis are missing out on their 'five a day' of fruit and vegetables. This micronutrient-poor diet has contributed to the modern epidemics of obesity, diabetes, heart disease, cancer and dementia.

We've answered to call by making it easy for you to get your quota of nutritious fruit and vegetables all year round.

Only the most nutritious New Zealand grown fruit and vegetables have been selected and then harvested at their absolute peak. We've simply removed the water and preserved as many of those precious nutrients as possible. The only way you could get more nutrient dense ingredients would be to pick them and eat them fresh from your garden (and even then you can't do that all year round!).

100% of the ingredients in Nutrient Rescue products are 100% grown in New Zealand.

Our Red Shots are made of organic whole blackcurrant powder supplied by ViBERi and whole boysenberry powder from Tasman Bay Berries.

ViBERi grows its blackcurrants in South Canterbury, where a unique set of climatic conditions produce blackcurrants with world-leading levels of anthocyanins. These are the micronutrients that research has linked to, among others, reducing blood pressure and improving circulation, improved eye health, enhanced immunity and improved brain function.



Red Shots™

100% New Zealand Whole Blackcurrant & Boysenberry Powder. Antioxidants, Immunity Support!™ + Reduces Fatigue!™.