

Raspberry Drought and Heat Stress Symptoms

Extreme hot weather can cause sunscald of raspberry fruit, also known as white drupelet disorder (see figures 1,2). These are physiological disorders caused by solar injury and excessive temperatures. Drought can



Figures 1 & 2: White drupelets on raspberry caused by sunscald.

also play a factor if the raspberries are not being irrigated or receiving sufficient precipitation frequently. The white drupelets in the raspberry fruit are still edible, just not as appealing.

Drupelets are the subdivisions you can see on an aggregate berry like raspberry. Each individual drupe is a fleshy fruit with a single seed.

Heat and drought stress can also cause physiological disorders in the leaves. When subjected to these environ-

mental stresses leaf edges can brown off and/or entire leaves closest to the cane tips can brown off as well (see figures 3,4). The heat and drought

stress can also cause leaves from the tip down and take on a light green-yellow appearance which can sometimes be mistaken for spider mite damage. If you do not see any tiny webs or tiny mites on the underside of the leaves then likely heat/drought stress. The lack of water hinders the plant from taking up nutrients which can result in leaves displaying nutrient deficient symptoms as well.



Figures 3 & 4: Darkened leaf margins and brown leaf edges due to heat / drought stress.

Extreme hot weather over many days during flowering can also lead to crumbly fruit disorder in raspberries. The high temperatures can hinder bee

pollination and/or pollen tube growth in the fertilized flower resulting in small, crumbly fruit (see figure 5).



Figure 5: Crumbly berry due to extreme hot weather during flowering.

These physiological disorders can be alleviated by irrigating on a regular basis especially at establishment of the canes and fruiting time. The greatest increase in berry weight occurs 7 to 10 days before it is ripe and is the time when adequate moisture levels are most critical. The soil should be soaked to a depth of 25cm (10 inches). Lighter soils may absorb more than 50mm (2 inches), while heavy soils require only 25mm (1 inch) at a time.

Additional raspberry production info can be found at: <https://www.gov.mb.ca/agriculture/crops/crop-management/fruit-crops/raspberry-production-information.html>

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