

Extending the Season with Dayneutral Strawberries and Protected Cultivation of Raspberries

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Growers in Ontario are expanding into dayneutral strawberries and protected cultivation of raspberries to extend the growing season, increase yields and improve returns. A series of experiments were conducted in two climate extremes, Cedar Springs Research Station in southwestern Ontario and the New Liskeard Agricultural Research Station in northeastern Ontario.

Cultivars and overwintering treatments were compared for dayneutral strawberries in high tunnels and outside in both environments. The results varied depending on the environment. In the more moderate climate of southwestern Ontario, there were no significant differences between the overwintering treatments inside the high tunnel or outside. In northeastern Ontario where we expected significant winterkill in all treatments except the straw mulch/row cover treatment, the Seascape survived well in all treatments both in the high tunnel and outside. Albion was less winter hardy. Between 60 and 75% of the Albion plants survived the winter with no protection and the highest survival rate was with a 42g floating row cover and no straw mulch. This treatment gave the earliest and highest yields in both cultivars. Plants growing in the high tunnel had greater winter survival in New Liskerd. Once again the high tunnel reduced yields in the warmer climate and increased them in the cooler climate. This is probably due to reduced flower bud initiation in the warmer climate high tunnel due to average daily temperatures greater than 25 °C. Larger fruit in the cooler climate can be attributed to lower temperatures prior to flowering.

Research at two sites in Ontario and one in Quebec compared primocane and florican raspberries grown outside and under protected cultivation systems including high tunnels and Voen covers (www.Voen.eu). High tunnels were shown to increase yields of primocane-fruited raspberries in all climates compared to raspberries growing un-covered. In Ontario, the Voen covers did not improve yields in the first year. However in Quebec, yields of both a primocane and a florican cultivar were significantly increased by the Voen covers in 2011 and 2012. The use of reflective covers increased yields for the primocane cultivar in the three culture systems in Quebec. (Qihe Xu, André Gosselin, Yves Desjardins, University of Laval and Ysela Medina, Louis Gauthier, Les Fraises de l'Île d'Orléans)