

The Quebec day-neutral strawberry breeding program

strategies and goals

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Introduction:

The Quebec strawberry breeding program has been very successful in the past few years in releasing June-bearing cultivars adapted to Quebec growing conditions.

The following cultivars have been

released from the program: Chambly (1989), Oka (1992), Joliette (1996), L'Acadie (1999), Yamaska (1999) and L'Authentique Orleans (2000). In addition to the June production period, there is a good market for strawberries produced during the latter part of the summer and into early fall. Production of day-neutral strawberries has been increasing at a rate of 30% annually for the past 4 years in Quebec. To answer market demands for late summer fruit, Quebec growers presently plant day-neutral cultivars such as Seascape which is adequate in terms of yield, flavor, color and size but is quite susceptible to powdery mildew which reduces marketable yields significantly. Our goal is to develop

day-neutral cultivars that are suitable to the Quebec climate and that produce high yields of large, firm fruit with a good shelf life and a resistance to powdery mildew and leaf diseases.



The day-neutral breeding program was started in 1998 when a new partnership program was established between the Agriculture and Agri-Food Canada station in St-Jean-sur-Richelieu and Les Fraises de l'Île d'Orléans. Over 400 crosses were made and about 3000 seedlings were evaluated in single plots during 1999 and 2000. Fifty seedlings were selected, propagated and

placed in non-replicated trials and an additional 5 seedlings were propagated and placed directly into replicated trials due to their high fruit quality, productivity, aroma and firmness. All of the new selections will be planted in the spring of 2001 at two sites: the L'Acadie sub-station of Agriculture and Agri-Food Canada and the production farm of Les Fraises de l'Île d'Orléans situated near Quebec city on Île d'Orléans. New crosses are planned for this winter using genotypes that have performed well in previous crosses. An experiment will also be conducted with our entomologist and pathologist to test the selected genotypes for resistance to tarnished plant bug, leaf spot, red stele, powdery mildew and verticillium wilt.



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