

SYMPATRY AND HYBRIDIZATION OF CANOLA AND BIRD RAPE (*BRASSICA RAPA* L.) IN QUÉBEC. Marie-Josée Simard, Anne Légère, and Suzanne I. Warwick, Research Scientist, Agriculture and Agri-Food Canada (AAFC), Québec, QC G1V 2J3; Research Scientist, AAFC, Saskatoon, SK S7N 0X2, Research Scientist, AAFC, Ottawa, ON K1A 0C6.

Hybridization between herbicide resistant (HR) transgenic canola (*Brassica napus* L.) and weedy bird rape (*B. rapa* L., also birdsrape mustard) has been documented in Québec. We evaluated the actual hybridization potential based on range overlap and *in situ* rates. We mapped the distribution of canola fields and bird rape herbarium specimens in Québec; collated information on the presence of bird rape in certified canola seed production fields; and surveyed for bird rape in, or close to canola field margins. Progeny from these populations was screened for herbicide resistance (HR) and for the presence of the HR transgene. Significant sympatry was observed in several areas and hybridization occurred in all eight populations (1.1-17.5% hybrid seed) located in field margins and in one (1.1%) out of three populations located less than 10 m from a canola field. Hybridization rates decreased exponentially as bird rape density increased, but rates across plants at any given density were highly variable (0 to 68%). At present, there are no compelling data suggesting that the presence of an HR transgene in a wild/weedy relative is inherently risky. However, our current knowledge might not fully describe the risks posed by other transgenes, particularly those that convey fitness-enhancing traits.