



Agriculture

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NEW PATHOTYPE OF CLUBROOT IDENTIFIED IN MANITOBA

Manitoba Agriculture is reporting a new strain of clubroot of canola (*Plasmodiophora brassicae*), having been positively identified in the Rural Municipality of Pembina.

Clubroot is a disease of canola and other brassica species that inhibits the function of plant roots to take up water and nutrients from the soil. Infected plants suffer premature ripening, significantly reduced yield and/or early plant death under moderate to severe levels of infestation.

Clubroot is a soil-borne disease, and can be transferred from field to field on soil particles. Soil movement can be on footwear, vehicle tires, farm machinery, custom equipment, or via wind or water movement across a landscape.

The new strain of clubroot is identified as pathotype 3A, using the combined designation of the Canadian Clubroot Differential Set (2018) and the Williams set (1966).

Pathotype 3A is able to overcome some first-generation sources of genetic resistance in commercial canola cultivars. Traditionally rated “resistant” or “R” canola varieties will not be effective in preventing clubroot infection against this pathotype strain. Traditionally R-rated varieties are tested against pathotypes 2, 3, 5, 6, and 8 of the Williams set, and not labelled as effective against breaking-resistance pathotypes of 3A and 5X.

Genetic resistance to pathotype 3A can be found in a small number of commercially-available canola varieties specifically labelled for resistance to 3A. Long-term sustainability of canola production requires effective crop rotation and rotation of sources of genetic resistance, together with good farm biosecurity to suppress clubroot infection.

Clubroot distribution in Manitoba can be found at: www.gov.mb.ca/agriculture/crops/plant-diseases/clubroot-distribution-in-manitoba.html. If you are concerned about clubroot on your farm, the Plant Surveillance Initiative Lab (PSI Lab) in Winnipeg can test soil samples and provide information on if clubroot present, see <http://www.mbpestlab.ca/> for more details.

For more information on clubroot of canola and crop biosecurity measures, call Manitoba Agriculture at 1-844-769-6224 (toll-free), or visit:

www.gov.mb.ca/agriculture/crops/plant-diseases/clubroot-of-canola.html (Manitoba Agriculture);
www.manitoba.ca/agriculture/crops/biosecurity.html (Manitoba Agriculture); or
www.canolacouncil.org/canola-encyclopedia/diseases/clubroot/control-clubroot/#geneticresistance (Canola Council of Canada)

