MAKE YOUR SOIL COME ALIVE

Growers and researchers have long observed that crops following canola in a rotation tend to demonstrate reduced yield, compared to results when seeded behind another crop. It can largely be explained by the relationship (or lack of relationship) between canola and certain fungal microorganisms in the soil. One of the major fungal groups negatively affected by canola are *Arbuscular Mycorrhizal Fungi.*

HOW CAN YOU **IMPROVE CROP PERFORMANCE** ON CANOLA STUBBLE?

BY MARC BELAND, Biol., M.Sc.

CANOLA

Arbuscular mycorrhizae form a mutual beneficial association with the roots of nearly all crops, except canola, a major crop grown in Western Canada. Because canola does not form an association with mycorrhizae, and exude certain toxic compounds in the soil[1], fungal populations in the soil naturally decline. Once the mycorrhizae are gone, they take a sustained period to re-establish. A study by Gavito and Miller[2] examined the presence of mycorrhizae in a corn crop following canola. They discovered it took 62 days for the mycorrhizae population to return to the same level it was before the canola crop.

STUBBLE

Mycorrhizae create an intricate network of filaments (called hyphae) inside and outside the roots. These hyphae will explore and expand soil area beyond the roots to access even more nutrients (P, Cu, Zn) and water, and transfer them to the plant. In our short growing season, with low mycorrhizal presence after canola or tillage, that means there is two-whole months where the plant is not getting the full benefits of phosphorus uptake, which is necessary for optimal growth and development.

FOLLOWING CROP

Adding an inoculant containing mycorrhizae at seeding following a canola crop, will add life to the soil and benefit the plant immediately after germination and will continue to benefit the plant for the whole season. Third party trials comparing AGTIV®'s dual inoculant (rhizobium and mycorrhizae) to different inoculants on the market showed a significant positive impact of the mycorrhizae component on yield for soybeans, lentils and peas. Detailed results can be found at www.ptagtiv.com/results.

1 Ryan, M. H. (2001). The effect of Brassica crops on the level of mycorrhizal inoculum in soil. Proceedings of the Australian Society of Agronomy. 6 p.
2 Gavito, M. E. and M. H. Miller, 1998. Changes in mycorrhizal development in maize induced by crop management practices. Plant Soil. 198: 185-192.

AGTIV®

THE CANOLA ROTATION INOCULANT

Premier Tech, a Canadian company, has been working with Western Canadian producers since 2010 to increase their profitability with **AGTIV®, the only brand on the market to offer the powerful combination of rhizobium & mycorrhizae in one application.**

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