



Dos and Don'ts for the 2019 Season

by Dr. Tarlok Singh Sahota , CCA

Genetics, weather / environment and management are the three key factors that govern production potential of a crop. While we can hardly do much about aberrant weather (such as 80 mm or more rain pouring in a single day or no rain at all during peak crop water requirement stages), we can manage the other two factors to achieve maximum economic yields..

Buying cheap seed rarely works! Select crop varieties best suited to your local agro-climatic conditions. While \$250/MT seed of an old/prevalent variety may seem attractive to \$800/MT seed of a new high yielding variety, it may not yield as much as the new variety. Remember you aren't spending \$800/acre. Calculate the extra seed cost per acre from the new variety and compare it with likely extra yield. If the latter's value exceeds extra seed cost, go for the new variety. New and better varieties are added each year of which producers can take advantage. However, don't discard a time-tested variety that has been giving consistently high yield just for the sake of a new variety. Put some acres under the new variety for evaluation against the time tested variety to decide upon extended cultivation of new variety next year(s).

Nutrient Management: Gone are the days when maximum economic yields could be obtained with NPK alone. Sulphur (S) and micronutrients such as zinc, manganese and boron are becoming increasingly important. In crops such as canola, response to N may not be recorded unless S is applied. Follow 4R Nutrient Management and application of nutrients in balanced amounts. Higher rates of one nutrient may require higher amounts of other nutrients. Seed row placed liquid/or solid fertilizers at recommended rates help the crops to take a healthy early start. ESN (polymer coated urea) is very safe N source for seed row placement; slowly released N from ESN will be taken by roots directly without any losses.

Be prepared for new/or increasing threats to crop production! Club Root has been reported in Ontario. One canola plant was found infected with Club Root in a Clearfield canola variety in our research plots at Thunder Bay. Bring in Club Root resistant canola varieties (L255PC, L241C and L135C) for cultivation

in 2019 and follow crop rotations and sanitary measures (clean the implements from the carry over soil from the infested fields; Club Root spreads from spores in the soil). Swede Midge has threatened canola cultivation in NE Ontario and was also noticed in canola fields at Thunder Bay during 2018. The attack comes at bolting (5-6 leaf stage) when the pest ruins the floral buds by sucking sap from the buds. A Chlorpyrifos spray just before bud formation stage was found to kill the Swede Midge at Thunder Bay. A protective spray of Chlorpyrifos (effect will last for 15 days) in season 2019 without even noticing the pest may be advisable. Fungicides sprays to control foliar fungal diseases and Fusarium Head Blight in cereals pays to maximize economic grain and straw yields with clean straw. Western Bean Cut Worm, Gibberella Ear Rot and Stripe Rusts are challenges in Corn Belt of Ontario. Go for resistant varieties and other protective/control measures.

Overcome other production constraints! Low soil pH would limit yields of most crops. Apply lime to acidic soils, preferably in the fall and cultivate soils after lime application to increase the volume of soil reacting with lime. Use Dolomitic lime if your soils are deficient in magnesium. Lack of drainage would be a constraint to timely seeding in spring and getting adequate yields. Tile drain all your fields. Grow more than one variety of a single crop with few days of difference in maturity to spread farm operations and also to increase horizontal and vertical resistance to crop diseases. If only a single variety is grown on a farm/or in an area, the loss will be much more if a disease comes in an epidemic form. Allocating part of the canola acres to non shattering varieties (for direct combining) and part to varieties that will need swathing before combining could help spreading harvest operations and minimizing shattering losses in canola. Dry down weeds by Roundup spray well before combining crops. Maintain proper harvest interval after herbicides sprays.

The Final Word: Consult your peers who did better than you. Consult a specialist or a researcher or a CCA in your area or even outside your area. *May you have bumper crops with bin bursting yields in 2019!*

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