**What is new at LUARS this year (2020)?**

*Dr. Tarlok Singh Sahota CCA*

If we don’t try new techniques/or varieties for crop production we would not be making any progress. Every year, we keep on researching something new at LUARS. This year, we have added a lot of new high yielding and disease resistant crop varieties as briefly detailed below:

**Spring wheat**: We added 9 new wheat varieties to our portfolio; CS Jake (HR), CS Accelerate (CPSR), CS Tracker (CWRS), CDC Credence - Canada Western Amber Durum low in Cadmium (from Canterra Seeds), AAC Russell VB (CWRS) and CDC Reign - CPSR (from FP Genetics), AAC Redstar - PT488 (CWRS) from SeCan, SY TORACH (CWRS) from Syngenta and Raven (HR) from C&M Seeds. The acronyms stand for; HR: Hard Red, CPSR: Canadian Prairie Spring Red and CWRS: Canadian Western Red Spring, VB: Midge Tolerant. CWRS category fetches highest market price! Four out of the nine varieties belong to this category.

**Spring Barley**: Seven new feed and forage barley varieties were added; two 6 row and five 2 row. AAC Ling and AAC Bell (2 row feed barley with good lodging resistance from AAFC Ottawa), AB Advantage (6 row Feed and Forage barley; SeCan), AB CATTELAC (6 row Feed and Forage barley; Alliance Seeds), AB Tofield, AB Wrangler and TR18647 (all 2 row Feed barley from AAFC Lacombe).

**Malting Barley**: Canada Malting Company has been procuring malting barley from Thunder Bay and Rainy River producers. We have added two new 2 row malting barley varieties this year; AB Brewnet (FCDC, Alberta) and CDC Churchill (SeCan).

**Oat**: CDC Skye and AAC Douglas (SeCan).

**Canola**: BY 6204TF (Truflex with Blackleg + Club Root protection from BrettYoung), L345PC (pod shatter and Club Root resistance), L352C (Club Root resistance), LR344PC (from BASF), and B3010M (Liberty Canola straight cut with resistance to Club Root, Black Leg and Fusarium Wilt from Brevant™ seeds). LR344PC is a first of its kind InVigour Choice canola with both the LibertyLink® technology system and TruFlex™ canola with Roundup Ready® Technology. With this variety, growers will have the option to use Liberty® herbicide or Roundup WeatherMAX® herbicide in their canola.

**Soybean**: Seven new soybean varieties with early to medium maturity are being tried this year; NSC Redvers RR2X and NSC Culross RR2X (Northstar Genetics), S003-Z4X and S007-Y4 (Syngenta Canada), and Amirani R2, Renuka R2X (good tolerance to IDC, PRR and white mould) and Akras (BrettYoung). S007-Y4 has a strong tolerance to Phytophthora Root Rot (PRR) and excellent tolerance to white Mould.

**Peas**: We have two new Yellow Pea varieties; CDC Lewochko (SeCan) and AAC Profit – high protein (FP Genetics).

**Alfalfa**: LUARS has some extremely good varieties of alfalfa including AAC Trueman, Response WT and Revolution MD. For details, please visit: <http://tbfarminfo.org/luars-has-some-extremely-good-alfalfa-varieties/>

**Hops**: Dr. Gautam Das has planted three varieties of hops at LUARS this year; Willamette, Cascade, and Brewer's Gold. This is the first time we are trying hops at LUARS.

**New Fertilizers**: We are also testing a couple of new fertilizers on canola this year. One of these is **TOP**-**PHOS**, which is a new phosphorus (P) fertiliser called Complex Super Phosphate (CSP) and is a mixture of Single Super Phosphate and Triple Super Phosphate. It is a water soluble phosphorus fertiliser, and is therefore available quickly for uptake by the plants. However, unlike standard forms of phosphorus, the chemical make-up of TOP-PHOS protects it from being locked up by the soil. This maximises the availability of P to the crops. It also contains stimulants that are designed to increase root mass to improve P efficiency and to increase soil microbial activity to release P from the soil reserves. It has 8 % ammoniacal N, 30 % P2O5 and 4.8 % S. **APEX** is another new fertilizer. It has 30 % N (5 % ammoniacal N and 25 % urea N), 8 % S, 2.9% Ca and1.2 % Mg. The fertilizer company (Timac Agro Canada) claims better absorption, better restitution of soil nitrogen, better processing and limited losses of N from APEX.

**Biostimulants**: New Biostimulants from Timac Agro Canada being tested at LUARS include FA starter, IRYS, FL Gold and Genea. These Biostimulants are unique in that they contain seaweed (in fact specific bioactive substances found inside the seaweed plants), and other plant extracts, in addition to essential plant nutrients, which promote plant growth.

We have also laid down an experiment to determine optimum row spacing/geometry and rate of sulphur application for alfalfa production. Another new thing this year is an experiment on fungicides to control foliar fungal diseases and Fusarium Head Blight in spring cereals. Plus a lot more going on from the previous years!

*Come to LUARS; we will show you what we have been doing this year!*