**Which crop varieties should I choose for seeding this year?**

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Variety (genetics) is one of the three main factors influencing crop production; the other two being weather and management. Suitable varieties recommended through location specific research could be best fit even under changing weather conditions. Proper responses to adequate management can be obtained only with varieties having a high yield potential. A variety with a poor genetics cannot respond as much to adequate management as a high yielding variety. LUARS has been adding new varieties every year to its variety evaluation program; so that our area growers could have the best varieties for the crops they grow. Based on research at LUARS, following varieties could be recommended for cultivation in 2021:

**Spring Wheat**: *AAC Wheatland VB* (CWRS; seed source SeCan) that gave highest grain yield in 2019 and also averaged over 2019 and 2020 could be your best choice. It had 17.8 % grain protein content. It has an excellent straw strength and is tolerant to the Orange wheat blossom midge. *AAC Starbuck VB* (CWRS; seed source SeCan) that has given second best grain yield (averaged over 2019 and 2020) could be your second choice. It has lower FHB and DON. In other characters, it is similar to AAC Wheatland VB.

**Barley**: Relatively older varieties, *Synasolis*, *Boroe* and *Chambly*, are still the top grain yielders. However, their seeds may not be available in the market. Some of our farmers may have these varieties seeds. The next best option could be AB Advantage (6-row smooth-awned feed and forage barley; seed source SeCan) that had a reasonably good grain yield and highest straw yield (6.80 MT/ha).

**Malting Barley**: Farmers could continue cultivating *CDC Bow* which, averaged over 2017-’20, produced the highest grain (6.29 MT/ha) and straw (8.31 MT/ha) yields. However, its grain yield has started declining since 2019. *AB Brewnet* (ideal for brewing, feed, or forage) could be another choice. However, its seed will not be available till spring 2022.

**Oats**: Prefer *CDC Arborg* (seed source FP Genetics) and *AC Rigodon* (seed source SeCan). Both had ~6.0 MT/ha grain yield (averaged over 2019 and 2020). *CDC Arborg* is early maturing, white milling oat that stands very well. It has excellent market opportunities, with good groat percentage, low thins and high beta-glucan. This is the first year when its seed will be available for cultivation on farms.

**Winter wheat**: Continue with *AAC Gateway* (seed source Seed Depot/and SeedNet), which had the highest grain yield among all the western winter wheat varieties tried at LUARS. It has FHB resistance, shorter straw and very good lodging resistance, high protein, excellent milling characteristics and medium maturity. Even though a couple of Ontario varieties (*Keldin* and *Gallus*) gave higher grain yield than AAC Gateway, I am not recommending those because they were winter killed in some years.

**Soybean**: In addition to *Akras* (2375 CHU; seed source DeKalb/and BrettYoung) that you grew last year, try *Bourkey R2X* (2400 CHU) and *Mahony* (2350 CHU; seed source SeCan). Grain yield of *Bourkey R2X* (5.39 MT/ha; seed source SeCan) that has excellent tolerance to white mold and resistance to PRR was a bit higher than that from *Akras* (5.25 MT/ha). At NLARS too, these three varieties had performed very well last year. I would advise you to prefer *Bourkey R2X* because of its tolerance/resistance diseases.

**Edible Beans**: Edible beans that equal or exceed soybean in grain yield could be added to the cropping systems in northwestern Ontario. You can try *AAC Scotty* – Cranberry beans (grain yield 5.91 MT/ha, which is higher than the best soybean variety yield). It has resistance to anthracnose races 73 and 105 and an acceptable cooking and canning quality. Basagran Forte gives perfect weed control in edible beans. Since edible beans mature in ~97 days, they have no risk from an early fall frost.

**Canola**: BASF has recommended two new canola varieties (L357P and L340PC; P stands for shatter reduction and C for clubroot resistance) this year. Seed yield of L357P has been reported to be 112.9 % of L233P and that of L340PC 108.9 % of L233P. Since the seed is available only this year, we are yet to test these varieties at LUARS. The two 300 series (LR344PC and L352C) that we tested last year didn’t give significantly better yield than the highest yielding L252 (average seed yield over 2018-’20: 4.45 MT/ha; the average is low because of poor seed yield last year). L252 is not shatter resistant and has to be swathed before combining. Any way, most of our growers swathed canola last year. I would therefore suggest continuing with L252 and add one or two new 300 series varieties to your canola portfolio. I am not recommending any Roundup Ready (RR) canola variety to have herbicide rotation (after RR crops).

**Alfalfa**: For high dry matter yield (5.6-6.0 MT/ha/year), grow 135 and Instinct (two conventional alfalfa varieties) or WL319HQ (RR alfalfa). WL319HQ out yielded the two conventional varieties; therefore you may wish to try it!

We didn’t try any corn last year or a year before. We will evaluate corn varieties this year and share the results with you.

**Note**:

CWRS: Canadian Western Red Spring, DON: Deoxynivalenol, FHB: Fusarium Head Blight, PRR: Phytophthora Root Rot and VB: Midge tolerant wheat varieties, sold as varietal blends (VB).

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