

Crop and Fertilizer Planning for Season 2012

II Crops/Crop Varieties

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All factors of production/inputs attempt to attain **maximum economic yields** of crops/crop varieties as dictated by their genetic potential. Even best management practices may fail to elevate yields of an otherwise low yielding crop/or a crop variety. It is therefore important to choose the right crop and variety mix in view of the potential production goals; consumption on barns/or cash or both. Main crops and their suitable varieties for our area are as follows:

Alfalfa: Two years combined results from a cutting management experiment on alfalfa with 32 varieties indicated that *Supernova* (7,491 kg/ha), *Radar* (7,485 kg/ha) and *55V48* (7,326 kg/ha) were the best for 3 cuts and *Valiant* (5,889 kg/ha), *Survivor* (5,860 kg/ha) and *Response WT* (5,808 kg/ha) were well suited to 2 cuts/year. This was true for *4S417* (6,266 kg/ha), *OAC Superior* (6,144 kg/ha) and *Starbuck* (6,047 kg/ha) too as indicated from another experiment. Dry matter yield from **berseem clover** ($\geq 6,000$ kg/ha in 2-3 cuts) could equal or exceed that from alfalfa. Berseem is more palatable than alfalfa and its protein content doesn't come down with delay in harvesting. Mixed cropping of berseem with forage cereals could increase the yield by 1,000-2,000 kg/ha and also improve the protein content as compared to cereals alone. However, berseem being an annual legume would need to be seeded every year (best in rotation after spring cereals). Berseem could also be a best fit in the organic systems, because it doesn't need N fertilizers and doesn't need Round Up spray to kill in the fall (it is auto killed in winter). Berseem can be grown in mixtures with alfalfa in alfalfa based cropping systems in which it has been found (by a Thunder Bay grower) to improve alfalfa yield the next year. Berseem could also be used to thicken the aging alfalfa stands/or poor stands due to partial winter kill before finally ripping of these fields. Corn could be the best choice to grown in the fields vacated by alfalfa.

Forage Cereals/Grasses: Please refer to Northwest Link, February 2011, Page 9/or TBARS Annual Report 2010 that has information on best spring cereal/grass forage varieties. Follow best management practices for forage production to get more from less (area) and to divert saved area for cash crop production.

Corn: We haven't evaluated corn varieties for silage production in the recent past, partly because seed companies are shy to pay even the nominal test fee to TBARS. Don't depend upon a single seed company for seed. As I understand from some of our member growers new varieties from companies such as Maizex and Pioneer have done well in our area. Forage production from corn, on dry weight basis, should exceed 12 t/ha to be economically rewarding as compared to barley for silage. This is due to relatively higher input costs for corn cultivation. Avoid seeding corn after corn even in the second year, because, I have noticed infestation of corn stalk borer in such fields. Refer to <http://ipm.illinois.edu/pubs/cip.pdf> for more information on corn pests. *Grow corn in wild oats infested fields and use both Atrazine (applied pre to 10 days after crop emergence) and Round Up (later in the season if the weeds come up again) for weed control in corn. Unlike Round Up, Atrazine will have prolonged effect on wild oats that emerge in multiple flushes and are difficult to control by 1-2 sprays of Round Up.* Soybean could be the best crop to grow after corn and that too without any N fertilizers. In our long term experiment on crop

rotations, soybean grain yield was higher after silage corn than after spring cereals and lowest after Italian ryegrass. If you decide to grow spring cereals after corn, reduce N application rates to cereals by half.

Canola: Is a potentially good cash crop! Since it is new to our area, it is free from insect-pests and diseases which pick up with time and increased intensity of cropping. Make sure that canola is grown only once in 3-4 years in a field. If you are planning to seed a Round Up Ready crop after canola, grow Liberty canola (*InVigor 5440*) and use Liberty herbicide for weed control in canola. Otherwise go for Round Up Ready canola varieties such as *SW 3950 RR*. We have tested both these varieties at TBARS and found them good! Canola could be seeded even earlier than spring cereals. If you are planning to seed canola in spring 2012, procure the seed now! And, make sure that you apply part of N to canola as ammonium sulphate to meet its sulphur requirements. *Canola can smother wild oats very well!*

Spring Cereals: Replace at least part of the area under **spring wheat** variety *Sable* with *Stettler* (5,531 kg/ha); a western variety that gave ~500 kg/ha higher grain yield than *Sable* (5,048 kg/ha). *Stettler* has *Superb* as one of its parents and is promoted by SeCan as 'More Superb than Superb'! *WR859CL* (5625 kg/ha), and *CDN Bison* (5,402 kg/ha), both western, and *HY 162-HRF* (5,449 kg/ha), *Batiscan* (5,417 kg/ha) and *AW 625* (5,412 kg/ha) from the east were also found better than *Sable* this year at TBARS. In the provincial performance trial, three highest yielding **barley** varieties were *Cyane* (5,443 kg/ha), *Amberly* (5,128 kg/ha), and *Encore* (5,097 kg/ha). In the barley variety evaluation from the west, *CDC Coalition* and *Bentley* (> 5,900 kg/ha) had somewhat higher grain yield than *Cyane* (5,600 kg/ha). *Conlon* had a poor grain yield (~4,800 kg/ha), though it equaled *CDC Coalition*, *Bentley* and *Cyane* in forage yield (> 5,600 kg/ha in all aforesaid varieties). *Encore* has been one of the top three barley varieties for the past 3 years and *CDC Coalition* has proved time and again the best dual purpose (silage and grain production) variety. *Conlon* was relatively poor forage yielding variety. Best **oats** varieties in the provincial trial were *Vitality* (6,000 kg/ha), *RC Amaze* (5,931 kg/ha) and *Prescott* (5,863 kg/ha). Two western oats varieties, *Summit* (6,577 kg/ha), and *Oscar* (6,074 kg/ha), were as good as, if not better than *AC Rigodon* (6,287 kg/ha). In cereal based rotations, oats after barley gave more grain yield than wheat after barley (TBARS Annual Report 2011).

Soybean: Continue with *NSC Warren RR*. An enterprising farmer from the Slate River Valley who had grown *NSC Warren RR* in comparison with a high CHU variety of soybean got better grain yield from *NSC Warren RR*.

Spring Grain Legumes: Try adding grain legumes, such as Chickpeas, Lentils, Peas and Edible Beans to your crop mix/cropping systems to increase farm incomes, save on N fertilizers, to improve the soil health and the yields of the subsequent crops in rotation. Best varieties for each crop are listed as follows:

Chickpeas: *Corinne Desi* (3,277 kg/ha) and *Fontier Kabuli* (3,070 kg/ha).

Edible Beans: *Earlired* (3,327 kg/ha), *Pintoba* (2,814 kg/ha) and *Carman* (2,684 kg/ha).

Lentils: *Rosetown* (3,721 kg/ha), *Plato* (3,375 kg/ha) and *Meteor* (3,344 kg/ha).

Peas: *Patrick* (5,556 kg/ha), *Sorrento* (5,025 kg/ha) and *CDC Golden* (4,956 kg/ha). Peas at optimum seed rate can choke wild oats.

Remember grain legumes will be sold at a much higher price than the cereals!
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