



Mistakes That Farmers Can't Afford To Make!

by Dr. Tarlok Singh Sahota, CCA

Agriculture is a risky business. It requires planning and execution of each farm operation in a right/timely manner right from the pre-seeding days. This note discusses about a couple of mistakes that farmers can't afford to make.

Buying cheap seed and selecting a wrong variety:

Remember quality has a price! And, cheap seed isn't necessarily the best. It is advisable to use certified seed of all crops that was produced as per set standards/Government regulations documenting its genetic purity (seed in the bag is true to the label; tracing its pedigree) and physical quality (clean seed relative to chaff, dirt, etc; high germination, and a minimum of other crop and weed seeds). On the contrary, the seed from unreliable sources may not be grown as per set standards. As a result, the germination percentage/or the viable seeds may be lower than normal, seeds may not be of a uniform grade and may include shrivelled/uneven seeds, seeds carrying diseases, and weed seeds (beyond the prescribed limits). When the seed grade/size is not uniform, the crop emergence/stand and heading, especially in cereals, is unlikely to be uniform. This could create problems in fungicides spray to control harmful diseases such as Fusarium Head Blight which has a narrow window for spraying. With uneven heading, some of the late heading stems will escape spray and will get infested with the disease and result in low yield of poor quality grains as well as straw. Often the money saved in buying seeds from uncertified sources is much smaller than the losses in the produce yield or quality. A farmer known to me who used spring wheat seed from an uncertified source lost \$25,000 from 200 acres (0.5MT/acre grains @ \$250/MT) under wheat last year. Dollars saved in seed procurement by him will hardly be a fraction of \$25,000. While using own seeds of conventional varieties (not the hybrids), care should be taken to select a part of the total acreage for seed production in which standard practices for seed production including use of certified seeds, pest control (weeds, insect-pests and diseases), rouging etc. are followed. The seed should be cleaned (to remove chaff, shrivelled grains and weed seeds) and graded to a uniform size before storing at optimum seed moisture that could vary with each crop. Germination percentage of the self grown/kept seed should be tested before seeding and the seed rate should be adjusted as per

the germination percentage. A good quality seed should have a germination percentage of 95 % or more. Before selecting a variety for seed production, check the high yielding varieties for your area from the Provincial/ location specific research facility variety testing programmes in your area. A high yielding variety in one area may not be the highest yielding in another area. Don't hesitate to consult a crop specialist or a Certified Crop Adviser (CCA) to help making you right decisions. All factors of production, including costly fertilizers, are aimed to attain the genetic potential of a crop variety. If you choose a low yielding variety, you are likely to get low yield despite good care in other management practices. Choose the best variety of each crop for your farm! While rotating crops, for example canola and soybean, it is advisable to seed glyphosate resistant soybean after Liberty canola so that volunteer canola in soybean is killed by glyphosate.

Considering 19-19-19 a balanced fertilizer /or relying on a single fertilizer mixture:

Older crop varieties were low yielding and could probably do with a fertilizer blend containing 19 % N, 19 % P₂O₅ and 19 % K₂O (19-19-19) at a relatively lower rate of application. Today's varieties are high yielding and would require higher amounts of nutrients. Also, the crops don't take N, P and K in equal amounts/proportion. For most field crops, NPK uptake is in the proportion of 4:2:1 with the exceptions of legumes and tuber crops, such as potatoes, which may need as much K as N. Applying N, P and K in equal proportion (e.g. 1:1:1) to such crops will be an imbalance. Balance means applying each nutrient in the right amounts; not necessarily in equal amounts! For spring wheat/barley, N is usually recommended @ 70 kg N/ha; 20 kg/ha each of P₂O₅ and K₂O is required for soils of medium fertility. Applying 70 kg N/ha to wheat/barley through 19-19-19 would supply 70 kg P₂O₅/ha and 70 kg K₂O/ha; 3.5 times more than the recommended rates (higher investment without any extra reward). A grower last year applied 19-19-19 @ 250 kg/ha to canola (47.5 kg each of N, P₂O₅ and K₂O/ha). He didn't get even 1 MT canola seed yield per acre, as compared to 1.2-1.5 MT/acre by those who used 100-120 kg N/ha and P and K as per soil tests. Two prime factors that should govern farmers' decisions on nutrient application are soil tests (including secondary and micronutrients) and yield goals.

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This industry driven program helps ensure that Ontario crop producers are well served by those providing their crop production advice. This article was written by one of those CCA's.