

## General fertilizer recommendations

The following are general fertilizer guidelines to be used in the absence of a soil test.

The suggested rates are based on a long-term average soil test values across the province and are not as accurate as a soil test recommendation for a specific field and year.

Crops	Nitrogen (N) (lb./acre)		Phosphate P <sub>2</sub> O <sub>5</sub> (lb./acre)	Potash** K <sub>2</sub> O (lb./acre)	Sulphate*** Sulphur (S) (lb./acre)	Comments
	Fallow or Legume* Breaking	Stubble				
<b>Cereals</b>						<p><b>Spring-seeded cereals</b> - For most efficient use, place phosphate, potash and nitrogen in the seed row when possible. Refer to tables 3 &amp; 6 for safe rates.</p> <p><b>Fall-seeded cereals</b> - Between 20 and 30 lb./ac of nitrogen can be applied with the seed to encourage early growth if soils are very low in nitrogen. The required phosphorus and potassium should be placed in the seed row in the fall for optimum efficiency and promotion of winter survival. Total seed placed fertilizer should not exceed (175 lb./acre). High rates of nitrogen in the fall may decrease winter survival of the stand. Preplant banding may also lead to seed bed damage, reduce seedling establishment, and reduce the amount of snow trapping which may reduce winter survival. Additional nitrogen may be more safely applied as a broadcast application in the spring.</p>
Wheat						
- Hard Red Spring	0 - 30	55 - 90	30 - 40	15 - 30	15	
- Prairie spring	0 - 30	60 - 100	30 - 40	15 - 30	15	
- Durum	0 - 30	55 - 90	30 - 40	15 - 30	15	
- Winter	0 - 30	80 - 120	30 - 40	15 - 30	15	
Barley – feed (1)	0 - 30	55 - 90	30 - 40	15 - 30	15	
– malt (2)	0 - 30	55 - 90	30 - 40	15 - 30	15	
Rye	0 - 20	40 - 65	30 - 40	15 - 30	15	
Oats	0 - 30	55 - 90	30 - 40	15 - 30	15	
Triticale	0 - 20	40 - 65	30 - 40	15 - 30	15	
<b>Oilseeds</b>						<p><b>Canola/rapeseed and mustard</b> - refer to tables 3 &amp; 6 for safe seed placed rates.</p> <p><b>Flax</b> - All fertilizer material should be placed away from the seed to avoid seed injury.</p>
Canola/rapeseed	0 - 30	70 - 90	30 - 40	30 - 60	20	
Mustard	0 - 30	70 - 90	30 - 40	30 - 60	20	
Flax	0	40 - 65	30 - 40	30 - 60	15	

\* Refers to breaking after first cut of forage

\*\* On sandy-textured or organic soils apply this rate of K<sub>2</sub>O

\*\*\* When sulphur is required, apply this rate of sulphate sulphur

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Crops	Nitrogen (N) (lb./acre)		Phosphate P <sub>2</sub> O <sub>5</sub> (lb./acre)	Potash** K <sub>2</sub> O (lb./acre)	Sulphate*** Sulphur (S) (lb./acre)	Comments
	Fallow or Legume* Breaking	Stubble				
Oilseeds Sunflowers	0 - 30	55 - 90	30 - 40	15 - 30	20	<p><b>Sunflowers</b> - Germinating sunflower seeds are sensitive to fertilizer placed with the seed.</p> <p>Row equipment - when sunflowers are seeded with row equipment, all phosphate and potash should be sidebanded 2 in. beside and below the seed at time of seeding. Some or all of the nitrogen may also be sidebanded. The total amount of fertilizer material side-banded should not exceed 300 lb./acre.</p> <p>Discer Seeder - When sunflowers are solid-seeded with a discer seeder in 12 - 24 in. row spacing, up to 25 lb./acre. P<sub>2</sub>O<sub>5</sub>, can be applied provided all fertilizer runs are left operating. If all phosphate must be placed with seed, the amount of phosphate should not exceed 15 lb./acre P<sub>2</sub>O<sub>5</sub> for 12 in. row spacing, 10 lb./acre P<sub>2</sub>O<sub>5</sub> for 18 in. row spacing and 5 lb./acre P<sub>2</sub>O<sub>5</sub> for 24 in. row spacing.</p> <p>Nitrogen requirements not side-banded should be placed away from the seed as a band or broadcast application.</p>
Special Crops Buckwheat Corn	0 - 20 0 - 30	40 - 65 65 - 135	30 - 40 30 - 40	30 - 60 30 - 100	15 20	<p><b>Buckwheat</b> - Any nitrogen in excess of 6 lb./acre, phosphate in excess of 20 lb./acre P<sub>2</sub>O<sub>5</sub> and all potash and sulphur should be placed away from the seed to avoid injury.</p> <p><b>Corn</b> - When possible, phosphate, potash and nitrogen should be banded 2 in. beside and below the seed at time of seeding. The total amount of fertilizer material side-banded should not exceed 300 lb./acre. Nitrogen requirements not side-banded at time of seeding should be side-dressed before the corn is 6 in. high. Excessive nutrient levels may occur when high rates of fertilizer are used on continuous corn. Soil testing to a depth of 24 in. is strongly recommended to monitor nutrient levels and avoid over-fertilization.</p>
Potatoes	30 - 45	60 - 90	45 - 55	45 - 80	20	<p><b>Potatoes</b> - Side-banding 2 in. beside and below the seed at time of seeding is the most efficient use of fertilizer. Leaching loss of N can be reduced by split applications. In-season N may be top-dressed prior to hilling, side-dressed or fertigated.</p>
Canary Seed	General fertilizer recommendations for rye or triticale may be used.					

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	Fallow or Legume* Breaking	Stubble				
<b>Pulse Crops</b>						
Fababeans	Inoculate seed		30 - 40	30 - 60	20	<p><b>Pulse Crops</b> - Nitrogen is not recommended for most crops. Add proper inoculum to seed so that nodules will fix nitrogen requirements.</p> <p>Field beans may require 40 - 60 lbs nitrogen/acre, or up to 90 lb/acre in some cases.</p> <p>All phosphate in excess of 20 lb/acre P<sub>2</sub>O<sub>5</sub> and all potash and sulphur should be placed away from the seed to avoid seed injury.</p> <p>Where field beans or soybeans are seeded in wide rows, all fertilizer should be placed away from the seed. Applying seed placed fertilizer to beans and soybeans in wide rows may cause stand reductions.</p>
Field peas	Inoculate seed		30 - 40	30 - 60	20	
Lentils	Inoculate seed		30 - 40	30 - 60	20	
Soybeans	Inoculate seed		30 - 40	30 - 60	20	
Field beans	0	40 - 60	30 - 40	30 - 60	20	
<b>Forage Crops</b> (A) Grasses						
New stands	0 - 20	40 - 60	30 - 40	45 - 90	15	<p>Phosphorus fertilizer can be applied most effectively by banding the materials 1 in. to the side and below the seed. If phosphorus cannot be banded, incorporate it and all other fertilizer materials into the soil before seeding.</p> <p>(1) An economic return to the application of nitrogen fertilizer on established grass stands is questionable when the selling price of hay is low and the yield potential is low due to dry soil moisture conditions. When the prices are high and soil is moist, apply 70 - 110 lb/acre of nitrogen. (refer to Figure 2)</p> <p>Response of grasses to applied nitrogen depends on the type of nitrogen fertilizer, time of application, amount applied, species of grass, age of stand, number of cuts and climatic conditions. Annual broadcast applications of phosphorus, potassium and sulphur fertilizer on established grass crops may be in late fall or early spring. Do not apply fertilizer to frozen soils subject to water run off.</p>
Established stands	(1)	(1)	20 - 30	30 - 60	15	

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	Fallow or Legume*	Breaking Stubble				
(B) Legumes						
New stands	Inoculate seed		55 - 75	60 -150	30	Phosphorus fertilizer can be applied most effectively by banding the materials 1 in. to the side and below the seed. If phosphorus cannot be banded, incorporate it and all other fertilizer materials into the soil before seeding.  Annual applications of fertilizer on established legume crops may be done in the fall or early spring. Do not apply fertilizer to frozen soils subject to water run off.
Established stands	Nitrogen is not recommended		40 - 55	40 - 100	30	
(C) Grass-legume mixtures						If the mixed stand contains more than 25% legume, fertilize as for a pure legume stand. If there is less than 25% legume in the stand, use the recommendations for pure grass stands.

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