



September 23, 2013

This week...

- Soybean harvest underway
- Pulse crop variety market share
- Fall frost update
 - NEW Soybean School West
- Soybean harvest checklist
 - Visual guide to harvest losses
 - Minimize compaction

In Every Issue... Crop Conditions

Soybean harvest got underway last week but has been interrupted by periodic rainfall and it looks like it will be on hold this week in many parts of the province as thunderstorms roll through. A killing **frost** swept across parts of the province on the mornings of Sept 16 and 21, although some parts of Western Manitoba remain unaffected.

Soybeans in Central and Eastern Manitoba are at R-8 and are ready for harvest when weather conditions permit. Harvest is beginning between 13 and 14% moisture. Soybeans in Western Manitoba are between R-7 and R-8, with a few fields in the Northwest at R-6.5 which may not make it to full maturity without frost, and some yield loss would be expected.

The first reports of harvest started on September 10 with the earlier planted fields and early varieties. Yield reports so far range from 35 to 50 bushels/ac. Higher yields coincide with areas that received timely rainfall in August.

Edible bean harvest also continues with above average yields being reported. The diseases white mould and Fusarium sp. are being found.

Growing Season Weather Review from May 15 to September 15

Accumulated Crop Heat Units: Crop heat units are normal for Eastern and Central Manitoba (100-105%) while the West saw higher than normal heat unit accumulation for the second year in a row (105-110%), which has facilitated soybean maturity in some non traditional areas, along with late frost.

Accumulated Precipitation: The precipitation map is extremely variable, which will likely result in variable soybean yields, since some areas received little rainfall in August. The trend is above average in the Southwest and below average in the Eastern and Interlake areas. (Data source: MAFRI)

Did you miss an issue of The Bean Report? [View previous issues here.](#)

2013 Pulse Crop Variety Market Share

Each year, Manitoba Agricultural Services Corporation (MASC) comes out with their Variety Market Share Report describing what percentage of the market each variety holds. This table outlines the varieties for soybeans, edibles and peas that held the most market share in 2013.

SOYBEANS	% of acres	FIELD PEAS	% of acres	NAVYS	% of acres
24-10 RY	11.6	CDC Meadow	41.7	T9905	46.3
TH 32004 R2Y	8.9	Agassiz	18.8	Envoy	29.5
900Y61	7.8	CDC Striker	8.2	T9903	16.3
Pekko R2	7.0	CDC Patrick	8.1	Cargo	5.4
25-10 RY	6.1	4010	3.5	Portage	1.9
23-10 RY	6.0	Total acres	45,500	Total acres	28,900
NSC Libau RR2Y	5.3	PINTOS	% of acres	KIDNEYS	% of acres
LS 004R21	4.5	Windbreaker	86.1	Pink Panther	73.6
NSC Richer RR2Y	3.9	Maverick	3.6	Red Hawk	10.7
900Y71	3.5	Sequoia	2.6	Clouseau	8.5
Total acres	1.06 M	Total acres	36,000	Total acres	8,700

Soybeans and Frost

The majority of soybeans in Manitoba are safe from a fall frost (R-7 to R-8), but some crops in Northwest Manitoba remain at risk. Soybeans are at risk of frost damage until they reach R-7, where 95% of pods are yellow and at least one pod on the main stem has reached its mature brown color.

Temperatures around 0°C may cause leaf damage while -2°C will cause damage to leaves, stems, pods and seeds. Longer durations of freezing temperatures increases damage. Watch this [Soybean School West](#) video for more information on assessing soybean maturity, susceptibility to frost and harvest timing.

Growth Stage	Days After Bloom Begins	Approx. Days to Maturity	Percent of Total Yield	Percent yield loss with killing frost
R-3 Begin pod	15	68	--	
R-4 Full pod	24	59	--	
R-5 Begin seed	33	50	25	
R-6 Full seed	48	35	47	up to 53%
R-7 Begin maturity	73	10	95	0-5%
R-8 Full maturity	83	0	100	None



Adapted from D. R. Berglund, NDSU

Frost damaged leaves will stay attached to the plant

Harvesting Frost Damaged Soybeans

If soybeans are immaturely green when a killing frost occurs, seeds will shrivel, be discoloured and often are wetter than what a moisture test indicates. As a result caution should be taken in harvesting and storing them. Deductions may take place if immature, damaged seeds exceed acceptable tolerances at the elevator. More information on managing frost damage soybeans is available [here](#).

Fall Harvest Checklist

✓ Was your soybean crop mature by Sept 15 or 20?

The average frost date in Western MB is Sept 6-16 while Eastern Manitoba is Sept 11-26. If your soybean crop was not mature by these dates, you may need to rethink your variety selection for next year. And remember to look at days to maturity in addition to the crop heat unit rating. Days to maturity may be more accurate due to effects of moisture and day length. Stay tuned for Seed Manitoba 2014, there are great looking options for next year.

✓ Assess and reduce harvest losses

4 soybean seeds per square foot = 1 bushel /ac loss.



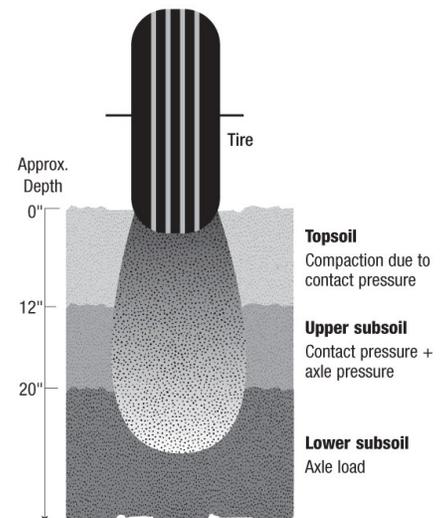
Remember, nearly 80% of harvest losses occur during gathering! The best way to assess gathering losses is to back up the combine 15' and assess the ground, without having to sort through trash.

1. Loose stalk: unshelled pods on loose stalk may be due to slow reel speed (reel speed should be 25% faster than ground speed).
2. Pods on uncut stubble are a result of low pod height, which is being observed often this year due to short plants. Some headers are able to go lower than others.
3. Loose seeds may be the result of excessive batting from a reel that is moving too fast
4. Loose, unshelled pods may occur due to reel speed being too fast or if reel position is too far forward (reel axle should be 6-12" ahead of the cutterbar).

✓ Minimize risk of soil compaction with properly inflated tires during harvest and tillage operations

Soil compaction has negative effects on soil structure, nutrient uptake, crop establishment, growth and yield. The most severe soil compaction occurs in wet soil conditions, and although we are more dry than wet, caution should still be taken with combines, grain carts and tillage implements. *Overly inflated tires* can increase topsoil compaction while *axle loads* of 10 tonnes or higher increase risk of subsoil compaction.

✓ Soil test - more information will follow in the next Bean Report



Causes of soil compaction

Source: Pennsylvania State University Extension