

# Field Crop Report



## Forages/Pastures: Joel Bagg/Jack Kyle

**Forages:** With recent rains, forage growth has been excellent. Making dry hay has been challenging in August, with lots of baleage being made. Forage inventories and quality are generally good in most parts of the province. Considerable wheat acres are being followed by oats, Italian ryegrass and alfalfa mixtures <http://fieldcropnews.com/?p=9028>. We are seeing more situations with a yield response to applying sulphur (S) on alfalfa. In some field trials the response is quite dramatic; in others there is little or no response. Deficiencies are more likely on soils low in organic matter or with no recent manure application. Tissue testing at mid-bud to early-flower stage is a suitable diagnostic. Sample the top 6 inches of 30 - 40 stems and send to a lab. Critical level below which alfalfa will respond to application is 0.25% S. The sulphate form of S is taken up by the plant. Sulphate fertilizers include ammonium sulphate (21-0-0-24), potassium sulphate (0-0-50-18), sulphate of potash magnesia (Sul-Po-Mag or K-Mag) (0-0-22-20) and calcium sulphate (gypsum) (0-0-0-17). Elemental S (0-0-0-90) consists of finely ground S that has been pelletized. It is cheaper than sulphate, but must be oxidized by soil bacteria before plants can utilize it, and so is available slowly. A single application of 22 kg (50 lbs) elemental S/ac may last the life of a productive 3-year stand. Applying elemental-S bulk blended with other fertilizer is a cost effective method of providing long-term S, but sulphate-S can be applied in spring at green-up providing a more immediate yield response <http://fieldcropnews.com/?p=9092>.



Figure 1. Response to potassium sulphate (left and right) applied on alfalfa following 1st cut. Check plot centre. FarmSmart Expo, Elora

**Pastures:** Timely rains and adequate soil moisture have provided good summer pasture growth. Application of 40-50 kg nitrogen/ha along with phosphorous and potassium will provide extra pasture and strengthen plants for winter survival. Pastures will benefit from a rest and recover period during September and early October to develop good root reserves for winter survival and good growth in spring 2015. Annual forages provide an opportunity to rest permanent pastures. Corn can be grazed at any time, well into late fall or early winter. Maximum energy will be when kernels are well developed but still milky and foliage is green. Summer seeded oats should be grazed prior to heading, which will allow some re-growth in fall. Cereal rye can provide limited grazing this fall, but excellent grazing early next spring. Italian annual ryegrass is another option for late fall and early spring grazing. Management tips for strong pasture are at: <http://www.omafra.gov.on.ca/english/crops/field/news/croptalk/2007/ct-0907a1.htm>

## Soybeans: Horst Bohner

Soybeans are now at R4 (full pod) to R5 (beginning seed) growth stage. Although vegetative growth has been good, a relatively cool summer has not been ideal for pod set. Ideal daytime temperature for soybeans is about 28°C. Good growing conditions for the remainder of August and September will be necessary for high yields. This has been the worst year in recent memory for poor root nodulation and nitrogen (N) fixation. Some fields did not turn dark green due to N deficiency. In some cases it was due to excess water, but in many, N deficiency was due to poor nodulation. This was a particular problem in first time fields, but also observed in fields with limited soybean history. Even fields that were inoculated are showing poor nodulation. In cool years nodules can be extremely slow to establish and may not occur at all in first time fields. Inoculant that was put on the seed may actually die in the soil before the plant allows the bacteria to invade the roots. When conditions turn dry and cool immediately after seeding on a first time field as in 2014, the bacteria never have the opportunity to establish themselves on the roots before they die out in the soil. This problem has occurred previously in cool years so the general recommendation is to apply two inoculant products to increase likelihood of good nodulation on first time fields. Some first time fields that used only one product or a pre-inoculant have no nodules this year. The only remedy to a nodulation failure is to apply N fertilizer at first flower or early pod set. White mould has been found across the province. Most infected fields have low disease pressure with pockets of dead plants, but severely impacted fields are more prevalent than usual this year. A low level of white mould pressure is common in Ontario fields and has limited impact on yield. Severe infestations reduce yields significantly. It is too late to spray a foliar fungicide to suppress white mould. Fungicides in soybean are largely preventative and must be applied during flowering and early pod set for a yield benefit. Take note of fields with white mould to make future management decisions. Fields with white mould should not be seeded to soybeans next year. Two-spotted spider mites have been a problem in limited fields this year. Mites feed on individual plant cells on the underside of leaves where each feeding site causes a stipple/dot. Severe stippling causes yellowing, curling and bronzing of the leaves. Damage is more severe in hot, dry weather. Fields should be sprayed if above threshold of one damaged leaf per plant, up to R6 growth stage (seeds within one pod on the top four nodes fills the pod cavity).

Soybean aphid numbers continue to build especially in Eastern Ontario. Some fields have been sprayed in that part of the province. Aphid numbers remain low or non-existent in southwestern Ontario. Fields need to be monitored until plants have reached R6 (full seed) stage, which will not occur until well into September for longer season varieties this year.

## Weather Summary



Location	August 2014	Temperature (°C)		Rainfall (mm)	Heat Units CHU	Total Since May 1	
		Max	Min			Rain	CHU
Outdoor Farm Show	2014	20.6	10.0	3.5	122.7	303.6	2165.9
	30 Yr. Avg.	25.4	14.3	15.6	171.8	305.8	2338.6
Windsor	2014	24.4	14.2	16.1	168.0	370.6	2586.9
	30 Yr. Avg.	26.4	15.7	18.2	183.2	276.6	2543.5
Trenton	2014	21.1	10.5	15.0	133.9	347.7	2320.4
	30 Yr. Avg.	25.2	13.8	14.7	168.3	278.1	2256.6
Mount Forest	2014	19.1	9.4	8.3	112.3	331.2	2044.7
	30 Yr. Avg.	24.6	13.2	17.5	162.7	304.5	2170.7
London	2014	21.3	10.7	9.8	138.4	316.5	2307.8
	30 Yr. Avg.	25.6	14.4	15.0	173.0	303.6	2363.4
Hamilton	2014	21.5	10.7	1.2	137.8	274.0	2230.2
	30 Yr. Avg.	25.7	15.0	16.1	176.9	286.5	2373.7
Ottawa	2014	19.9	10.8	47.5	124.7	404.3	2352.4
	30 Yr. Avg.	25.6	14.1	13.8	171.2	310.8	2346.0
Elora	2014	19.6	8.9	5.9	108.5	317.3	2028.3
	30 Yr. Avg.	25.1	13.4	16.9	165.5	304.0	2231.7
Peterborough	2014	20.3	9.7	20.7	117.8	354.5	2110.1
	30 Yr. Avg.	24.9	13.4	15.6	165.0	282.2	2221.7

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