




R-2 full bloom, an open flower is visible on one of the top two nodes.

- **Short soybeans? Growth will continue**
- **No soybean aphids yet**
- **Soybean School: Disease identification**
- **Dry bean fungicide considerations**
- **All pulse crop acres  in 2014**
- **MPGA Field Tour West - July 31**
- **MPGA Field Tour East - August 7**

## Soybeans

Soybean staging is variable. Fields affected by excess moisture and late planted fields have 5-6 trifoliolate leaves with first flowers visible (R-1). Flowers will first appear in the middle of the plant and open up and down the main stem. Earlier planted fields are in full flower (R-2) with 6-7 trifoliolates. Soybeans will flower for about 2 weeks. The most advanced fields have small pods present on lower nodes and will reach R-3 (early pod) when pods are 1/4" long on one of the top four nodes. A [visual guide to soybean staging](#) is available here. When staging soybeans during reproductive stages, it is *important to identify the top nodes of the plant*. The top node will be the first node at the top of the main stem with an unrolled trifoliolate leaf attached.

Short soybeans? In some cases, soybeans that have been impacted by moisture are only 12-14 inches tall. But good news - soybeans at R-2 have only obtained about 50% of their mature height. Growth will continue until R-5 (beginning seed). Soybeans grown in Manitoba are *indeterminate plants*, meaning that vegetative growth continues during reproductive stages.

Canopy closure is still not present in many fields. This lack of vegetative growth from stressful growing conditions may reduce overall plant height and number of nodes. Yield potential will improve if conditions improve during pod set and seed fill (warm-hot temperatures, adequate rainfall).

Bacterial blight, septoria brown spot and root rot are present in fields. The latest [Soybean School West](#) video, provides an excellent tutorial on identifying brown spot, bacterial blight, herbicide injury and downy mildew. Foliar diseases of soybean in Manitoba have not been observed at economic levels in soybeans and do not warrant a fungicide application.

## Dry beans

Dry beans vary are from V-6 to R-2 (50% flower with first sign of pin beans). Fungicide applications have taken place in fields that came into bloom earlier in July. Low plant populations in all types are being observed and reported. This has made weed control important but also reduces risk of white mold infection.

## Soybean Root Rot

Extended periods of wet soil this spring were good conditions for post emergent damping off (root rot) to develop in soybeans. Symptoms of root rot are wilted, dead or dying plants. Lesions will also be present on roots near the soil surface. Root rot will generally not “spread” throughout the field but due to a range of severity, some plants that look healthy now may be impacted later in the season. This is because the root system may be moderately impacted by root rot and water uptake will be impaired if conditions become hot and dry.



There are several pathogens that cause root rot and often plants are affected by more than one disease pathogen. For example, *Phytophthora* with secondary infection by *Fusarium*. There is nothing that can be done in season to manage root rot, but if your field is severely affected this year, consider increasing the number of years until your next soybean crop and/or using a fungicide seed treatment the next time you plant soybeans in that field.

## Soybean Insect Update

Soybean aphids have *not* been observed in North Dakota or Manitoba. The last major soybean aphid occurrence was in 2011. Soybean aphids will typically show up in late July. Monitoring for aphids should continue to until early August. Be sure to look in the unrolled trifoliolate leaves at the top of the plant, where aphids like to hide.

Young grasshoppers are feeding on soybeans in some areas but not at economical levels. Monitor defoliation levels. Grasshoppers were negatively impacted by the cool, wet weather but are doing well with the recent hot, dry weather.

Ladybugs are present in high numbers this year! Ladybugs are beneficial insects and are a natural predator for aphids and other soft-bodies insects.



Ashgray blister beetles are being found in soybean fields. They may feed a bit on soybeans but are not considered an economic pest. Their larvae feed on grasshopper eggs.



## Dry Bean Fungicide Considerations

According to risk factors developed by the University of Nebraska-Lincoln, we are currently at a reduced to moderate risk for white mold infection in dry bean. Risk is increased when high precipitation and humidity occur prior to flowering but is reduced with warm, dry conditions that being forecasting in the next few weeks. Consistent moisture in top 5-7 cm of soil is required for apothecia to germinate from sclerotia. THEN, 40+ hours of sustained humidity on dead blossoms is required for ascospores to infect.

Beans planted in narrow rows are at higher risk compared to those in wide rows. However, wet conditions have led to lower plant population and delayed canopy closure in both narrow and wide row fields, which will reduce risk of white mold due to more rapid drying of the canopy.

**What product should you use? A review of research.** In Manitoba, MPGA funded on-farm trials have compared single applications of Acapela, Allegro, Lance and Propulse to an untreated control. Compared to the untreated control, Allegro, Lance and Propulse significantly increased yield in 2013. When environmental conditions are not conducive to white mold, such as in 2012, there were virtually no yield differences between the fungicide treatments and untreated.

From 2009-2011, an intensive University of Guelph study has found that Allegro provides good yield and economic return under both medium and severe disease pressure. Fluopyram (one of the active ingredients in ProPulse) also performs well. In North Dakota studies from 2009-2013 (Wunsch, 2014), Lance has consistently performed well. ProPulse has also performed well but warrants more rigorous testing. Allegro has had mixed results and will perform better with good coverage and on upright varieties.

### **When to apply?**

Fungicides should be applied when 30% of flowers are open on the main stem or at first sign of pin beans (R-1 to R-2). Prior to canopy closure is important to ensure good coverage on blossoms and lower stem.



## **Projected Pulse Crop Acres for 2014**

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Manitoba Agricultural Services Corporation (MASC) has released its projections for 2014 seeded acreage reports on July 14. Manitoba growers planted **1.3 million acres of soybeans**, reaching the 20% increase that was expected from 2013. This continues the exponential growth in soybean acres seen since 2006.

For **dry beans a total of 128,000** acres were planted (44,000 ac pintos, 40,000 ac navy beans, 14,000 ac black beans, 12,000 ac kidney beans, 4,200 ac cranberrys and 13,000 ac other dry bean types). This is a 13% increase compared to last year. **Field peas were planted on 50,000 acres**, increasing since the 2011 low.

Crops in all regions, but especially the southwest, have been affected by excess moisture and flooding. It is expected that harvested acres will decrease although the extent is still unknown. Keystone Agricultural Producers estimate 3.5 million acres of cropland in Manitoba are impacted.

## **MPGA Field Tour—East and West**

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*Everyone is invited to attend the MPGA Field tours to learn about soybean and pulse crop production and research. **Registration starts at 8:45 a.m. and the tours will finish with a free lunch at noon.***

For the first time, an MPGA Field Tour will be held in Brandon on **Thursday, July 31**. The tour will be held at Phillips Farm (AAFC Field Research Site). Phillips Farm is location 9 miles north of Brandon on Hwy 10 and 2.5 miles east.

The annual MPGA Field tour in Morden (Agriculture and Agri-Food Research Station) will be held on **Thursday, August 7th**.

