

## 2022 Snobelen Farms Yield Challenge Newsletter

### Weed of the Week: Dandelion

Dandelions seemed to be more common in many fields this spring. They have a basal rosette with one deep taproot. Dandelion leaves are long and deeply lobbed or shallowly toothed. Dandelion leaf shape can vary from plant to plant. Many of us recognize dandelions by their yellow flower heads. These flower heads are located on hollow hairless stalks. When dandelions go to seed, they have a seed head attached to a tuft of white hair. On average 15-200 seeds are produced per flower and up to 15,000 seeds per plant. (OMAFRA)



### **Favourable Conditions**

Dandelions can be found across all sorts of environments. They can be seen in no-till fields with no fall burndown herbicide treatment.

### **Management**

According to Mike Cowbrough fall management of dandelions is most effective. In fall glyphosate at 540g/L at 1.34L/ac has 90% control.

According to the Pest Manager app the best control for dandelions in soybeans is:

### **Pre-emerge**

Trade name	Control percentage
Commenza	80% control
Sencor or Tricor	80% control
Bifecta co-pack	80% control

### **Post-emerge**

Trade name	Control percentage
Classic or Chaperone + non-ionic surfactant	60% control
Basagran Forte	50% control
Cleansweep co-pack	50% control
Blazer Ultra	50% control

## Soybean Aphids

*Information courtesy of Early Season Field Crop Pests*

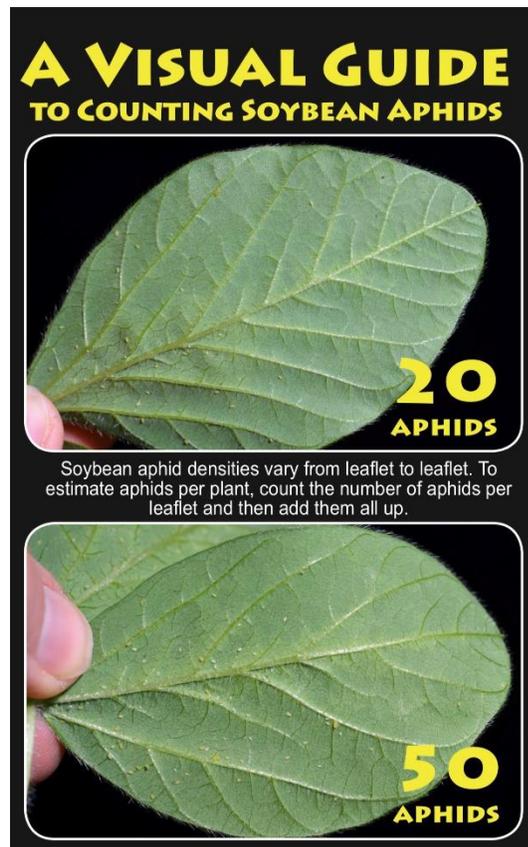
Aphids are a pale green-yellow colour that are around 1.5mm in length.

### Life Cycle

During the spring and summer months the population is made up of females. They overwinter as eggs on the branches of the European buckthorn. Nymphs hatch from the eggs in the spring and then molt into adults. There are two generations on the buckthorn before they develop wings and move to soybeans. They continue to produce new generations until the Soybean aphids become crowded.



The next generation will consist of winged adults, and they will move to other plants or fields. They can easily migrate to close by fields or even far distances via storm fronts. The adults are born pregnant and give birth to live young, meaning populations build quickly. When fall comes females produce winged males and females which will fly to the buckthorn to mate and produce eggs.



### Damage

Aphids pierce and suck the juices and nutrients from the soybean plants. At threshold levels aphids can cause soybeans to abort flowers, plant stunting and reduced pod and seed production. Yield loss is the highest when the soybean plants are at their reproductive stages. This is because the flowers can be aborted and impact pod establishment.

High infestations during the pod filling stage can reduce seed size and seed quality. Injury can be much worse if there are dry conditions, and the plants are stressed. Aphids are also a vector of soybean mosaic virus.

### Action Threshold

The threshold is 250 aphids per plant on average with an increasing population as well as plants that are in the beginning flowering to the beginning seed stages. Once the soybeans have reached full seed there is not much yield gain to treating the issue.

When looking for aphids turn over leaves and keep an eye out for ants and ladybugs. Both these insects will eat the aphids and can help keep populations in check. When checking the field look at 20-30 different plants. Look at the entire plant and estimate the population of aphids. To make counting easier it is best to estimate in increments. Count by groups of 20 50 or 100, you count by leaflet and add the total at the end.



*Field Crop News*

**Management**

Bloom to pod development (R1-R4) are critical stages to protect. Heavy feeding during these stages may lead to the plant aborting flowers. It is important to not apply an insecticide at too early of a crop stage or when aphid levels are below threshold. The population can continue to grow, and the insecticide may need to be reapplied at a later date.

Sefina from BASF is specific to aphids and will not damage beneficials.

According to the Pest Manager app the best control for soybean aphids is:

Trade name	Control percentage
Concept	80% control
Endigo	80% control
Cygon	80% control
Matador	80% control

<http://www.soybeanresearchinfo.com/pests/aphid.html>

Biological Control: natural enemies help keep aphid populations in check. Some of these biological controls include ladybugs and their larvae, orius insidiosus, syrphid fly larvae, parasitic wasps and lacewing larvae.

Rain can also help keep aphid populations in check. Heavy down pours can wash populations off the soybean plants.



<https://www.albertafarmexpress.ca/crops/how-are-biocontrol-agents-like-james-bond/>

<http://urban-ipm.blogspot.com/2012/06/lacewing-larvae.html>

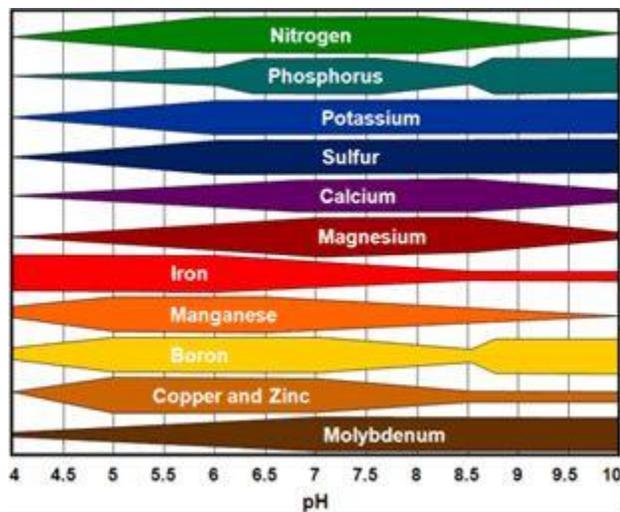
## Potassium Deficiency



leaves to the upper leaves.

Stress factors such as weather or soil conditions can limit the soybeans potassium uptake. This deficiency can be recognized by the yellowing margins of the leaves. With the dry stretch of weather we have had, we have noticed this deficiency while out scouting. Knowing your soil test is very important factor right now with the dry spell. The potassium may not be available in the soil because it needs moisture to bring the potassium into the soil solution to make it available to the plant even though your soil test may show adequate levels of Potassium.

Potassium helps the plant by regulating the opening and closing of pores for the movement of gases and water vapour. Potassium is very important in drought times because it helps with retaining water in the plant and fighting disease vs plants that are stressed from lack of potassium. Potassium is mobile in plants and moves from the lower



Not all of the potassium in a soil sample is available to the plant. A lot will be locked up in mineral structures. The above image shows the relative availability of plant nutrients by the soils pH.

Dry and liquid fertilizers can be used to correct potassium deficiencies.

<https://crops.extension.iastate.edu/cropnews/2018/08/soybean-potassium-deficiency-symptoms-during-early-and-late-growing-stages>

[https://www.pioneer.com/us/agronomy/soil\\_sampling\\_interpret.html](https://www.pioneer.com/us/agronomy/soil_sampling_interpret.html)



### Growing Degree Days and Crop Heat Units

The following table will provide a look at the approximate growing degree days and crop heat units in your area for a planting date of May 10<sup>th</sup>.

**Table 1:** Cumulative growing degree days and crop heat units

Location	Growing Degree Days July 5-12	Crop Heat Units June 5-12	Cumulative Growing Degree Days	Cumulative Crop Heat Units
Brantford	454.8	186.9	3729.3	1425.4
Lucknow	445.5	183.8	3634.1	1359.6
Palmerston	431.4	173.1	3514.1	1274.6
Stratford	441.1	180.5	3577.9	1320.9
Tiverton	446.0	184.3	3638.5	1365.1

### Notes from Bayer's Grow Time Event

We had the opportunity to attend Bayer's grow time event on July 6<sup>th</sup>. Here are some of the notes we took away from this educational event.

#### The wheat stop

Prosaro pro- Needs an adjuvant vs prosaro xtr does not.

Miravis ace and prosaro pro- similar yields. Moisture 0.7 % drier than ace

Ace can be 2-3 points wetter than prosaro. Prosaro doesn't delay harvest - bob thirwall " right amount of green"

Pro 2-3 bu yield bump vs xtr

Infinity fx-

- Fall application timing, can be applied after 1 leaf. Fluroxypyr is difference between infinity vs fx. Good control of chickweed, dandelion, fleabane. Can get away without a spring herbicide app.
- Below 5 degrees in spring when you have fungicide and herbicide you can have phytotoxicity and some visual effect

In US the epa has said that if a label has areial application on the label you can use a drone to spray that product. Pmra in canada has not allowed this yet.

### Bayer traits

Trecepta- vt double pro with more traits

Smartstax pro-

- 3 modes of action against corn rootworm. Will be launched in 2023
- Now is a good time to dig up corn roots to see corn rootworm feeding. Would find larvae in the ground.

Vt double pro has no below ground protection from corn rootworm

VT 4 PRO-

- Takes trecepta and uses rna technology and another trait. Likely launched 2024-2025

Xtendflex- dicamba, glufosinate, glyphosate

HT4- xtend flex plus 2-4d and mesotrione (HPPD) tolerance

Bayer is breeding more varieties with PeKing to fight resistance of p188788. They will release varieties with PeKing IF they have the yield.

Ilevo seed treatment will get some early season septoria control in soys

### **Herbicides/Fungicides**

Apply xtendimax. Use full rate early or late in season. Glufosinate use up to R1

Dicamba 2 week residual vs 2-4d

Corvus- converge xt but no atrazine and put in group 2 grass herbicide. Can be applied and incorporated

Can put atrazine with it

Corvus is best pp, ppi or early post. If corn is 2-3 leaf go to laudis and it has a safner in it vs corvus.

Varro is the group 2 in corvus. Good bluegrass control.

Laudis and pardner are good tank mix partner

Delaro complete is a combination of; Prothioconazole/Trifloxistrobi/Fluopyram

Proline fungicide prothioconazole,

Trifloxistrobi- With application of a strobi u get a bit of drought stress mitigation

Fluopyram- trade name luna. Long residual activity

Highly effective on mould and mildew.

3 modes of action for fungicide

Delaro complete-Delaro is stratego pro out west

Fluopyram is best active on powdery mildew

Stratego pro is 2 modes of action , delaro complete is 3 modes of action.

Soys apply r1.5 for white mould protection

If using 2 applications of Delaro Complete apply r1 then 10-14 days later apply second app in soys

30acre/jug 237 ml/acre



GROWING FORWARD. SINCE 1971.

SNOBELEN FARMS

July 14<sup>th</sup>, 2022

Soys- takes about 6 weeks for white mould infection to inoculation

Soy fungicide application

2.3 bu/ac increase in soy yield

2bu is breakeven cost in soys

Corn application vt to r3 application window

Delaro complete will prevent northern corn leaf blight, grey leaf spot and tar spot

When identifying Tar spot black pustules go through the corn leaf

Delaro complete top up with half rate proline to get don reduction in corn

20% reduction in vom on corn

2 choices for tar spot- delaro complete and veltyma

Achilles heal of miravis neo is not as good control on tar spot

Most common corn disease is northern corn leaf blight