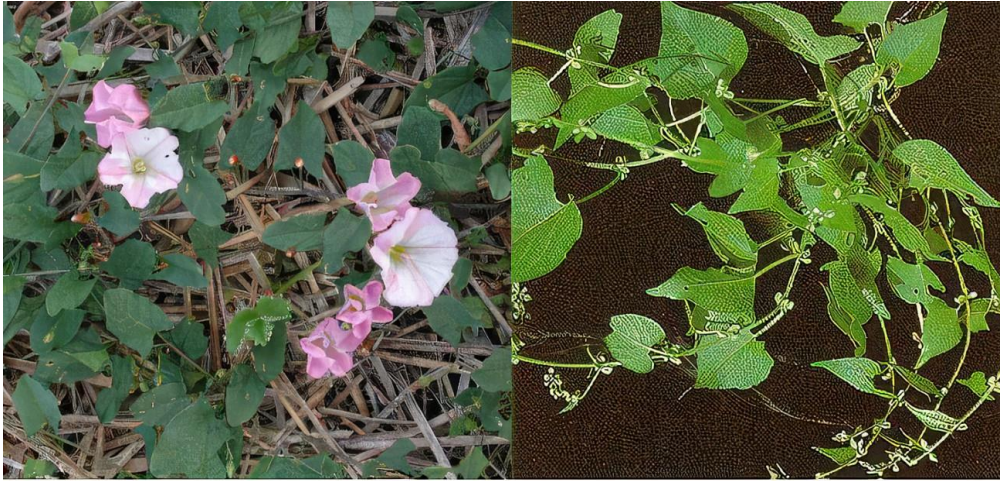


2022 Snobelen Farms Yield Challenge

Weed of the week: Field Bindweed

Field bindweed is a perennial weed and is often confused with hedge bindweed and wild buckwheat. It has a large root and rhizome system. The stem is slender twining with alternate arrowhead shaped leaves. It often grows in a dense mat and has white to pink trumpet shaped flowers. The flowers can be 2cm long and 2.5cm across. There are 2 small leafy bracts that are usually anywhere from 2-4mm long located halfway between the flower and main stem.

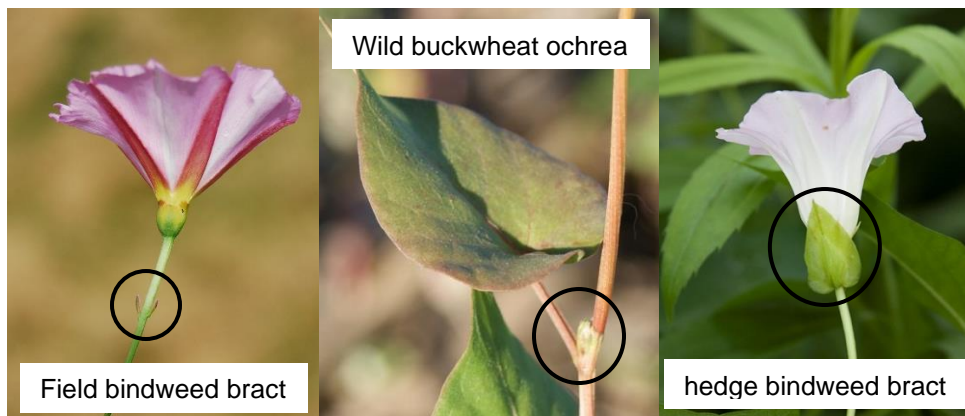


Field Bindweed

Wild Buckwheat

<https://pnwhandbooks.org/weed/problem-weeds/bindweed-field-perennial-morningglory-convolvulus-arvensis>

Field bindweed appears very similar to hedge bindweed, but its flowers, leaves and seeds are smaller. The bracts on hedge bindweed enclose the base of the flower and are 10-20mm long. Hedge bindweed is often found in pastures, abandoned fields or hedgerows and not in cultivated fields. Wild buckwheat similar to field bindweed has a twinning stem and arrow shaped leaves but is an annual. Unlike field bindweed wild buckwheat has larger leaves and has a thin membrane (Ochrea) surrounding each node. Wild buckwheat has clusters of small green flowers.



<https://crops.extension.iastate.edu/encyclopedia/wild-buckwheat>

Stink Bugs



Brown stink bug



Green stink bug



Stink bug eggs

Stink bugs range in size from ½ an inch to 1 inch they all have a similar shield like shape. The most common stink bugs found around here is the green stick bug and the brown stink bug. They are called stink bugs because of the scent they let off as a defense mechanism. Stink bugs like soybean plants when they are in bloom and early pod stages, and this is likely the time when you will see them.

Life Cycle

Stink bugs go through the egg, nymph and adult stages. In the warmer months stink bugs lay eggs in clusters on the leaves and stems of soybeans. Once hatched the nymphs will molt a few times before becoming adults. Stinkbugs over

winter as adults and generally has a single generation in the norther latitudes, more generations are possible in warmer temperatures.

Damage



Stink bug damage

Damage from adult and nymph stink bugs is mainly done to the pods and seeds of the soybean plant. They pierce the plant and release digestive enzymes and then suck out the predigested plant fluids. Their feeding leaves no scarring and damage is only obvious come harvest time. Newer seeds can be



deformed, small or aborted and older seeds can be discoloured and shrivelled. The feeding entry point can allow diseases to enter the pod, further reducing seed quality.

Stink bugs may also feed on the plant leaves, flowers and stem. This damage can indirectly cause a delay in the plant's maturity and leads to abnormal production of leaflets and pods which is known as a condition called green stem syndrome. Areas of the field will remain green while the rest matures normally. The pods on these green plants will be small and dried.

Control

To find the stink bug population in your field you can use the sweep net sampling method with a 38cm diameter net. Take 20 sweeps in 5 areas of the field and determine the average per sweep by dividing the total count by 100.

In IP soybeans if there is an average of 1 stinkbug per 30cm of row or 0.2 bugs per sweep in the R3 to R6 stages then control is warranted. There are no products registered for stink bugs on soybeans but products that work on the soybean aphid will provide control for stink bugs.

<https://fieldcropnews.com/2021/07/stink-bugs-showing-up-in-soybeans-and-dry-beans/>

<https://www.croplife.com/crop-inputs/fungicides/new-players-may-make-pest-headlines/>

<https://www.mississippi-crops.com/2013/09/14/managing-late-season-stink-bugs-in-mississippi-soybean/>

Phosphorus Deficiency in Soybeans



When it comes to fertilizing soybeans often the emphasis is put on potassium. This is because it is often said soybeans do not respond to phosphorus fertilizer and they remove much larger amounts of potassium. Now there is evidence supporting that phosphorus is key to having high yielding soybeans. If your soil test comes back with low levels of P there can be a good yield response to added P_2O_5 .

Nutrient Uptake & Removal: 60 Bushel Soybean

| Nutrient | Required to Produce (acre ⁻¹) | Removed with Grain (acre ⁻¹) |
|----------|---|--|
| N | 245 | 179 |
| P_2O_5 | 43 | 35 |
| K_2O | 170 | 70 |
| S | 17 | 10 |
| Zn(oz) | 4.8 | 2.0 |
| B(oz) | 4.6 | 1.6 |

So why is Phosphorus in soybeans so important? Like nitrogen and potassium, it is an essential nutrient to the soybean life cycle. In young soybeans phosphorus plays a big role in growth and development. Phosphorus is responsible for storing and transferring the energy from photosynthesis to be used for growth and reproduction. Without sufficient P plants will have growth issues and will have a harder time dealing with stress. P is also a part of cell membranes and DNA structure.

Visual symptoms of P deficiency are rare and not easily identified. When there is a large deficiency sometimes plants will grow slowly with smaller leaves or a different colour.

Discolouration is the best identifying factor the plants can have a dark green, blueish-green or greenish-purple colour.

The change in colour will be seen in the

Bender et al., 2015. Agronomy Journal (107:-563-573)

oldest leaves first and move to the younger leaves. Soil erosion can lead to major losses of phosphorus from the land to water. It can also leave the field as surface runoff or through tile drains. Using practices to reduce soil erosion such as cover crops can help limit the loss of phosphorus. Right now, after wheat harvest, is a good time to apply fertilizer. If you decide to apply phosphorus after the growing season in the fall it should be incorporated into the soil. Building low soil testing fields over a few years is a good management practice.

<http://omafra.gov.on.ca/english/crops/field/news/croptalk/2017/ct-0917a1.htm>

Snobelen Farms Winter Wheat

It is time to start thinking about Winter Wheat! Our early order program is on until August 31, 2022. If you order your seed before August 31, you can get \$1.75/unit off.



Branson

- Consistently a top performer
- Responds very well to intensive management
- Sound agronomics (winter survival, disease reaction, lodging, etc.)
- Performs well on tougher soil types and challenging environments
- Awnless



Marker

- Consistently a top performer
- Responds very well to intensive management
- Sound agronomics (winter survival, disease reaction, lodging, etc.)
- Performs well on tougher soil types and challenging environments
- Awnless



B654SRW

- Highest yielding wheat variety in Area II over the last 5 years
- Responds well to Intensive management
- Leaf architecture fills in rows quickly (absorbs more sunlight)
- Awnless
- Consistently high yielding

Seed Treatments:

Vibrance Quattro- Consisting of four fungicide active ingredients, Vibrance® Quattro protects against damage from many important cereal plant diseases. Vibrance Quattro may be applied in tank mixes, or sequentially with other EPA-registered seed treatment pesticide products.

Cruiser Vibrance Quattro- is the trusted wireworm solution in cereals and provides excellent performance on a broad spectrum of seed- and soil-borne diseases. It also features the added benefits of Rooting Power® and Vigor Trigger™ to help get your crop off to a vigorous, strong-standing start. Use in sandy soils, no-till in alfalfa and pasture fields or fields with history of wireworms.



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 10th.

Table 1: Cumulative growing degree days and crop heat units

| Location | Growing Degree Days July 26-August 2 | Crop Heat Units July 26- August 2 | Cumulative Growing Degree Days | Cumulative Crop Heat Units |
|------------|--------------------------------------|-----------------------------------|--------------------------------|----------------------------|
| Brantford | 445.8 | 179.2 | 5123.6 | 2002.8 |
| Lucknow | 453.6 | 189.4 | 5030.3 | 1945.0 |
| Palmerston | 438.6 | 179.9 | 4866.3 | 1836.3 |
| Stratford | 430.5 | 173.0 | 4910.3 | 1867.3 |
| Tiverton | 450.0 | 187.3 | 5029.3 | 1948.4 |

