Cornell University
Cooperative Extension


***Capital Area Agricultural & Horticulture Program Staff***

vacant
*Farm Business Management*

Aaron Gabriel
*Crops and Soils*

Rachel Moody
*Livestock Production & Marketing*

Steve Hadcock
*New Farmer / Market Development*

Jingjing Yin
*Commercial Ornamental Horticulture*


***The Ag Report is produced by Aaron Gabriel***

***In this issue:***


# Capital Area Ag Report

# March 28, 2023

## Calendar

Stay Tuned for the **Spring Turn Out Grazier Meeting**—details forth coming.

## FYI

**Appropriate Technology Transfer for Rural Areas** (ATTRA) has a variety of resources including a YouTube Channel, Podcasts on Spodify and Itunes, as well as resources on their website. Topic range from rye to pastured pigs, solar grazing and more.

Find the following article in **The Manager**, the ProDairy newsletter:

- Alfalfa-grass mixes increase forage quality to support high-producing dairy cows
- Best management practices for dairy producers to reduce their GHG emissions from manure
- Making cover crops work in the Northeast: Termination strategies for success
- Forage opportunities to combat rising costs
- Technology makes on-farm research easier: Single-strip spatial evaluation approach (SSEA)
- Herbicide-resistant weed management strategies
- Northeast dairy and the circular economy

**"Sorghum vs Silage?? Some Points To Remember"** in American Agriculturist is a good article about using male-sterile sorghum for silage.

Did you miss the webinar series **Maximizing Fertilizer Efficiency with Peak Fertilizer Prices?** Find the recordings on the CCE Oneida YouTube Channel.

Cornell research on **weed electrocution**.

**Managing Burcucumber in Corn and Soybeans** by Iowa State University will help you figure it out this difficult weed. One key is to plant late, so that pre-emergent **and** post-emergent herbicides can be timed better.

**Dry Bean Production in the Northeast** webinar recordings are now available:

- February 17, 2023: **Growing Dry Beans in the Northeast**
- March 3, 2023: **Basics of Dry Bean Production**

**Making Cover Crops Work in the Northeast: Termination Strategies**

# Agronomy Notes—Aaron Gabriel

Winter meeting season is over, which means that Spring is here!! How early can you plant spring grains and hay seedings? As soon as it is dry enough in late March or early April, you should be planting as long as we are getting 40$^{O}$F weather. Early spring planting is the key to successful grain and hay crops.

### Weed Seeds and Flower Habits of Annual Weeds
### Aaron Gabriel

Spring, winter and summer annuals depend on seeds for survival. So, a key to managing annual weeds is to prevent seed production. Easier said than done. Today, I went out to spray herbicide on some pennycress in my garden. The temperature was 45$^{O}$F. My purpose was to see if 2,4-D will work on these winter annual weeds first thing after snowmelt. I will report back in a couple of weeks. The amazing thing is that some pennycress already had flower buds. I could see the white petals. How can it flower this early? Pennycress is a winter annual like chickweed, marestail, wild radish, and downy brome. Its growth began last fall and obviously for this one plant, it began early in the fall/late summer because is it was already a big fully grown plant. Its next step in life was to produce seed, as soon as the snow was gone and the temperature was up. Pennycress (as well as other winter annuals) probably can grow at temperatures not far above freezing, like oats, rye, and wheat.

Winter annuals do flower very early. Some flowering is initiated when days get longer (some winter annuals). For others, flowering begins as days get shorter (some summer annuals). For other annuals, flowering begins once the plant has developed enough.

Pennycress has a fairly determinant flower habit. It will produce all its flowers in a relatively short period of time once reaches adequate size towards the end of its life. Indeterminant flowering plants, like in chickweed, begin flowering when they are small and continue to flower and produce seed throughout their life span.

These weeds that dribble seeds very early in the year are hard to control because field are typically too wet for any field operation—cultivating or even spraying. Cover crops are one way to compete with these weeds and suppress them to reduce their seed production. This very early flowering is another reason to control weeds in the fall, plus they are small and easier to control.

Another challenge with determinant winter annuals is that they will send up new flower stalks if you mow the flower stalk. They will need to be mowed three or more times before they run out of energy. Indeterminant weeds will just keep growing unless they are up-rooted and dry out completely. Chickweed and purslane easily re-root. It is much more effective to kill annuals when they are small, no matter the strategy that you use.

Biennials have determinant flowers. Plants send up a seed stalk in year two to produce a large number of seeds. Two or more successive seed stalks will come up if you simply mow off the tops, even if it is a close mowing. To control biennials, you need to remove the growing points which typically are right at the soil surface in the crown of the plant. A slice with a shovel or a flat cultivator blade parallel to the ground and just below the surface will remove the growing points and kill the plant.

Some summer annuals like redroot pigweed is daylength sensitive and flowers once the days get shorter. The earlier the plant begins growth in the spring, the larger it will be when flowering is triggered in the summer—and the more seeds it will produce. It is worth rouging out individual weeds to stop production of thousands or tens of thousands of weed seed.

When you seed a flowering weed, think seeds. Seeds are what continue the work of weed management. As best you can, control annuals when they are small. They are easier to kill and it will prevent the weed seedbank in the soil from increasing. The weed seedbank in the soil will decrease as you stop seed production and let seeds in the soil die naturally.

## Herbicide Programs Compatible with Cover Crops
**Aaron Gabriel**

Cover crops are a great way to reduce weeds and build soil health as well as improve long-term yields. However, if you use herbicides, the herbicide program needs to be compatible with the cover crop program. Remember that on an herbicide label cover crops are different than “cover crops harvested for forage”. If cover crops are harvested for forage, they are a forage and your herbicide label must allow harvesting for forage.

Another point to consider is when you will be planting cover crops (or short-term forage crops). Consider when herbicide residues and activity will decline sufficiently to safely plant. Will cover crops be planted in the fall, or late summer, or inter-seeded in June or July? Half rates of residual herbicides may help prevent cover crop damage or all post emergent herbicide programs may be appropriate. To decide, you **first** need to know which weeds you have and how to effectively control them. What is the weed life cycle and when are them most vulnerable?

There are several herbicide programs that are compatible with cover crops. Here are some articles and tables to help you determine which herbicides are cover crop friendly and which cover crops are most sensitive to herbicides. This data is from other states, so use it wisely. Notice in this first article that herbicides that are safe for cover crops in one state, were not in other states. Herbicides will behave differently in different environments. Consider that herbicide breakdown (half-life) is influenced by moisture, temperature, soil microbes, sunlight, plant uptake, soil properties, and probably more.

- https://www.covercropstrategies.com/articles/417-evaluating-herbicide-carryover-on-cover-crops
- https://extension.psu.edu/corn-herbicides-and-rotation-to-cover-crops
- https://extension.psu.edu/corn-herbicides-and-rotation-to-cover-crops
- https://midwestcovercrops.org/wp-content/uploads/2016/10/WI_2015_Herbicide-Rotation-Restrictions.pdf