

# Northern Ohio Agronomy Update

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This week's topics include:

- Emergence Timing of Early Planted Crops
- Be Alert for Spring Pests
- Difficulties From Winter Annual Weeds

## Emergence Timing of Early Planted Crops

Included here is a GDU and estimated emergence update. It finally looks like warmer temperatures will stick after the beginning of this week.

Air temperature is most commonly used to calculate GDUs for corn growth (and soybean emergence). However, from planting until roughly V6, germination and development of corn seedlings (and soybean seeds before emergence) respond more directly to soil temperature than air temperature. Soil temperatures usually don't change as much as air temperatures, but still fluctuate throughout the day.

This year, with a prolonged time between planting and emergence, factors that impact soil temperature, such as soil moisture, soil color, soil texture, residue cover, and tillage, will have a large impact on emergence timing. This can also lead to variability of emergence within a field.

While there can be significant variation based on management/environmental/soil conditions, the following are "rules of thumb" for emergence timing:

- Corn: aprx. 115-130 GDUs
- Soybeans: aprx. 90-120 GDUs



### Archbold, OH

	Plant Date	High	Low	GDUs
Observed	4/12/2023	80	55	17.5
	4/13/2023	82	50	16.0
	4/14/2023	85	43	17.5
	4/15/2023	84	50	17.0
	4/16/2023	71	41	10.5
	4/17/2023	41	33	0.0
	4/18/2023	54	34	2.0
	4/19/2023	67	27	8.5
	4/20/2023	82	45	16.0
	4/21/2023	63	45	6.5
	4/22/2023	54	36	2.0
	4/23/2023	48	33	0.0
	4/24/2023	50	31	0.0
	4/25/2023	46	27	0.0
	4/26/2023	57	27	3.5
	4/27/2023	64	30	7.0
4/28/2023	53	43	1.5	
4/29/2023	66	44	8.0	
4/30/2023	54	39	2.0	
Forecast (Wunderground)	5/1/2023	42	36	0.0
	5/2/2023	44	36	0.0
	5/3/2023	55	38	2.5
	5/4/2023	62	39	6.0
	5/5/2023	65	44	7.5
	5/6/2023	65	44	7.5
	5/7/2023	72	49	11.0
	5/8/2023	74	54	14.0
	5/9/2023	71	56	13.5
	5/10/2023	76	53	14.5
Estimated Emergence				
Soybeans may begin emerging slightly earlier than corn planted on the same day (based on current forecast)				
Planted April 13: April 30-May 5				
Planted April 15: May 5-10				
Planted April 19: May 9-13				
Planted April 26: May 12-16				

### Norwalk, OH

	Plant Date	High	Low	GDUs
Observed	4/12/2023	82	54	18.0
	4/13/2023	84	53	18.5
	4/14/2023	86	44	18.0
	4/15/2023	86	55	20.5
	4/16/2023	80	44	15.0
	4/17/2023	44	35	0.0
	4/18/2023	55	34	2.5
	4/19/2023	62	28	6.0
	4/20/2023	87	42	18.0
	4/21/2023	69	44	9.5
	4/22/2023	57	42	3.5
	4/23/2023	47	35	0.0
	4/24/2023	49	31	0.0
	4/25/2023	52	33	1.0
	4/26/2023	56	38	3.0
	4/27/2023	65	30	7.5
Forecast (Wunderground)	4/28/2023	62	44	6.0
	4/29/2023	67	51	9.0
	4/30/2023	57	42	3.5
	5/1/2023	46	36	0.0
	5/2/2023	44	37	0.0
	5/3/2023	51	39	0.5
	5/4/2023	58	40	4.0
	5/5/2023	62	42	6.0
	5/6/2023	64	46	7.0
	5/7/2023	69	50	9.5
5/8/2023	74	55	14.5	
5/9/2023	69	57	13.0	
5/10/2023	74	54	14.0	
<h3>Estimated Emergence</h3> <p>Soybeans may begin emerging slightly earlier than corn planted on the same day (based on current forecast)</p> <p><b>Planted April 13:</b> Emerging</p> <p><b>Planted April 15:</b> May 5-9</p> <p><b>Planted April 19:</b> May 8-12</p> <p><b>Planted April 26:</b> May 12-16</p>				

Approximately 120 accumulated GDUs are required for emergence of corn and soybeans. This can increase based on soil type, residue cover, tillage practices, and more. Note: germination and emergence timing is based on Soil GDUs, which are likely to lag behind air GDUs.

Stand Counts and Evaluation Details:

<https://corteva.showpad.com/share/mfP3CWnjtnIQ42iJsquC1>

## Be Alert for Spring Pests

**Black Cutworm:** For the first three weeks of April, Purdue's black cutworm moth counts have been significantly higher than the same time last year. A similar phenomenon is likely occurring in Ohio as well. It is difficult to predict a heavy black cutworm event; however, a high population of adult moths that will lay eggs is a large factor. Moths are attracted to green vegetation to lay their eggs such as fields with cover crops or weedy fields with winter annuals. **Pioneer AM and Q products offer superior black cutworm protection compared to VT2PRO hybrids. In addition, Lumivia insecticide (standard) offers excellent protection as well;** however, control is not 100% which can be noticed in very high infestation situations. An insecticide treatment is warranted if cut plants reach 3% and the black cutworm larvae are less than 1 inch in length.



**True Armyworm:** Much like black cutworm, moth monitoring takes place every year. Elevated moth counts have been noted in some parts of the Midwest. 2020 was a year with high levels of true armyworm throughout the area. Wheat fields are the highest concern, as armyworm can strip leaves and cut heads. Corn and soybean fields should be monitored as well, especially where near wheat fields. **While larvae are not currently being found in Ohio, this will need to be monitored over the next several weeks.**



**Alfalfa Weevil:** While feeding has been very slow due to cool weather, **warmer temperatures will soon lead to peak larval feeding activity of alfalfa weevil.** It is important to scout regularly for alfalfa weevil until at least the first cutting. Young alfalfa weevil larvae are gray with a black head. As they grow, they become green with a white stripe on their back, and are about 3/8" long when fully grown. Weevil feeding can reduce tonnage and quality, and stunt plants. To scout, select 10 stems and note percentage where leaf tip feeding is present. Then knock stems in a bucket to count larvae (small



larvae like to feed in folds of new leaves and can be hard to spot). Make sure to check several parts of the field, as pressure will vary. As alfalfa grows, the threshold for larvae and damage increases. Most damage will occur prior to the first cutting; however, if the first cutting is moved earlier as a weevil control tactic, make sure to scout following the cutting to ensure additional treatment is not needed.

Table 1. Action thresholds relevant to stand height, tip feeding, and density of larvae per stem.

Stand Height Inches	Indication of Problem % Tip Feeding	Problem Confirmation Larvae per Stem	Recommended Action
6	25	1	Recheck in 7 days
9	50	> 1	Spray
12	75	> 2	Spray or harvest
16	100	> 4	Harvest early

When harvested early due to weevil, check within one week for regrowth.

## Management of Winter Annual Weeds

Now is the time to take note of any problematic fields that have high infestations of winter annual weeds. Keeping a record is a great first step to correcting the problem which is most effectively done with a fall herbicide application. Notes taken this spring can provide a nice reminder in the fall so that a targeted approach can be implemented. Most of the time tillage or herbicide used in the spring do not effectively interrupt the life cycle of winter annuals weeds and eradication is not achieved. Those problem fields are a problem again next year. Many farmers waste time and fuel performing a second tillage pass due to winter annual weeds. Often the second tillage pass necessitated by the weeds causes the soil to be left "too fine" which can lead to other problems. This frustration is often long forgotten at fall herbicide application time, a good record will serve as a reminder. Common winter annual weeds seen in Ohio fields are henbit, chickweed, purple deadnettle, shepherd's purse, cressleaf groundsel, and others.

### Winter annual weeds cause:

- A green cover that is attractive to many insect species
- Slower warm up to soils in the spring
- Serve as a host for soybean cyst nematodes
- Interfere with drying of the soil potentially delaying planting or field work
- Increase the cost of spring burndown applications
- Create problems with tillage & seedbed uniformity.

