Northern Ohio Field Notes

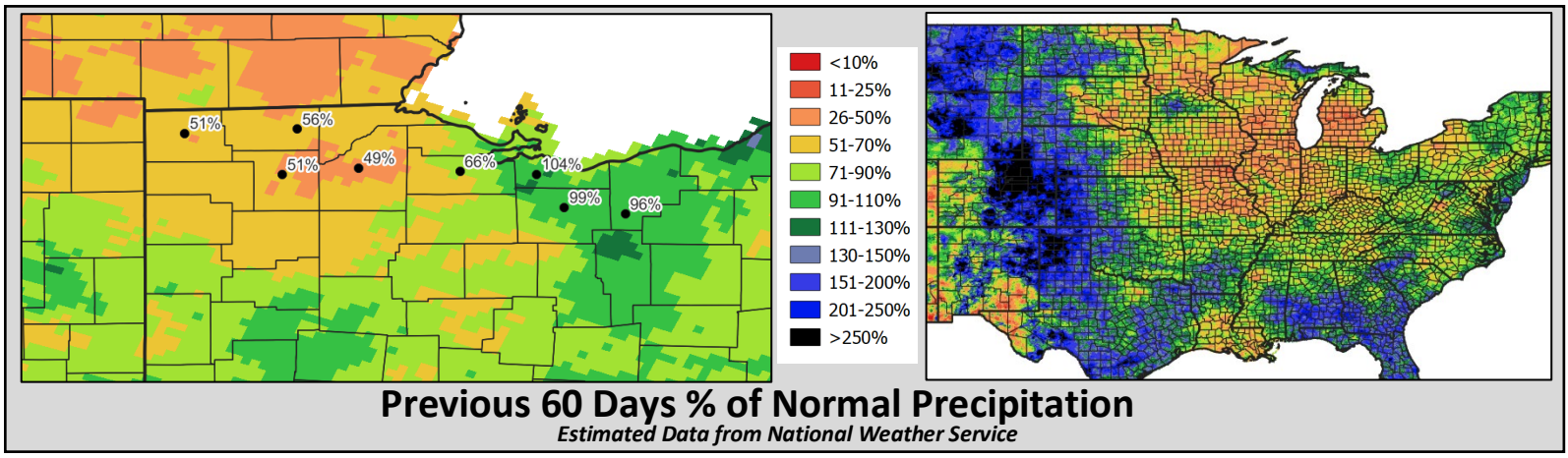
June 20, 2023 John Schoenhals, Pioneer Field Agronomist

This week's Agronomy Update includes:

- **Current Conditions – Drought/Flooding/Hail**
- **Corn Herbicide Growth Stage Restrictions**
- **Canada Thistle Management Tactics**

Current Conditions

While most areas have received beneficial moisture in the last 10 days, most of northwest Ohio received under 1" (hopefully enough to make it to the next rain chances), while north central Ohio received widespread 2-4+". This heavy rainfall was accompanied by severe hail, wind, tornadoes, and flooding in several areas.



Previous 60 Days % of Normal Precipitation

Estimated Data from National Weather Service

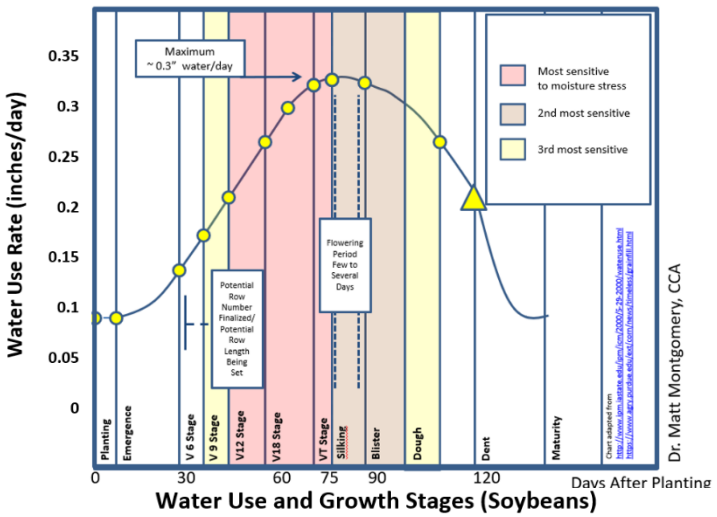
Flooding: while flooding/saturated soils for 2-4 days can kill young plants, higher concern from the recent event is residue piling and muddy leaves. 7+ days of muddy leaves and warm temperatures will make it difficult/unlikely for small soybeans to recover.

Hail: Evaluation and impact details were shared with Pioneer Sales Reps in impacted areas late last week. Additional details can be found at these links. Click this link for Corn Hail Assessment. Click this link for Soybean Hail Assessment. Hail damage at young growth stages is less severe than later in the season, but severe damage has been noted in isolated areas from last weeks storms.

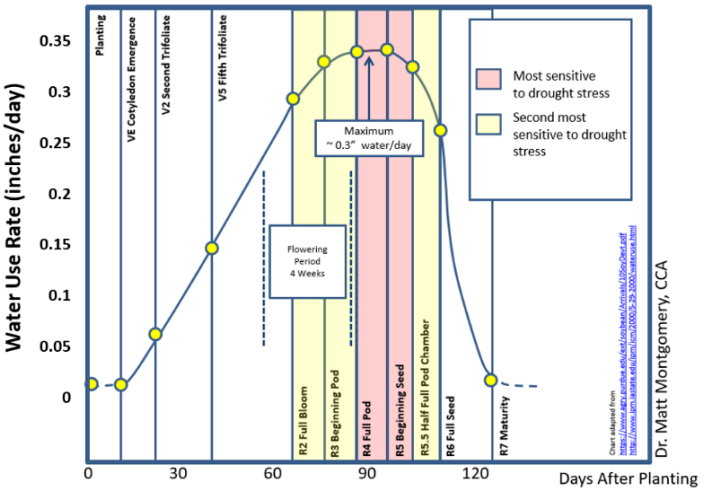
Dry Weather: Even in places where rainfall has been around 50% of normal since mid-April, crop appearance has remained fair/good, with the exception of compacted areas, planter issues, and certain soil types. Cool nights and overall GDU accumulation running about 10% below average has helped crops throughout a very dry spring. As crop development continues, crop water needs will drastically increase. Along with this, the risk of yield loss as plants (especially corn) reach critical stages will increase if drought conditions worsen.

In addition to corn leaf curling and soybean leaf flipping, nitrogen and potassium deficiencies are more common in drought stressed fields. While still early in the season, spider mites in soybeans are a higher risk in dry weather. Avoiding mowing ditchbanks can help slow the movement of spider mites into soybean fields.

Water Use and Growth Stages (Corn)



Water Use and Growth Stages (Soybeans)



Common Corn Herbicide Growth Stage/Size Cutoffs

As planned, delayed, or respray herbicide application occur on corn, be sure to pay attention to herbicide growth stage/size restrictions. With some products, ear development can be impacted when applications are made too late.

Product	Height or Growth Stage cutoff
Acuron	**up to 12" corn**
Atrazine	**up to 12" corn**
Callisto	**up to 30" or 8 leaf stage**
Capreno	**V1 to V6 or 20" tall**
Cinch Atz, Bicep II Magnum	**up to 12" corn**
Fulltime NXT, Degree Xtra, Volley ATZ, Harness Xtra	**up to 11" Corn**
Glyphosate	**through V8 or 30" corn, use drop nozzles between 30-48"**
Liberty	**up to 24" corn or 7 leaf collars**
Realm Q	**up to 20" corn or through V6 (Prior to V7)**
Resicore	**up to 11" Corn**
Status	**V2 or 4" up to 36" corn or V8**
Surestart II, Tripleflex	**up to 11" Corn**

**Always read and follow label instructions

Canada Thistle Management Strategies

Canada thistle patches have seemingly been increasingly difficult to manage in recent years. In order to manage this weed, an understanding of growth habits is helpful.

Canada thistle plants form thick, fleshy roots. Buds from roots develop into new shoots. Small root pieces (less than ½" long) can also regrow to produce new plants. Seeds can lead to dispersal and new plants, but Canada thistle seeds are not very competitive, and do not usually travel long distances.

The large size of Canada thistle roots presents difficulty in management. Root systems often reach depths of 6-10+ feet, and can grow outward up to 20 feet per year. The entirety of a thistle patch is usually an interconnected plant, with massive reserves of energy stored in the roots.

With established thistle patches, management will require repetition over several years – it is unlikely that 1 herbicide treatment will totally kill a thistle patch.

Overall: Applications of glyphosate alone in the fall, before a hard freeze, are most effective, as thistle plants are actively moving energy stores to the roots for the winter and regrowth in the spring. Additionally, repeated mowing or removal of the top growth can weaken plants, but this may need to be repeated many times.

Corn: Stinger (or products that contain clopyralid) is highly effective on thistle, especially when applied to plants before the bud stage. *Note that there is a 10.5 month plant back interval for soybeans*. Glyphosate is most effective when applied to thistles in at least the bud stage, although earlier applications can help suppress growth. Status, dicamba, and glufosinate (Liberty) can help suppress top growth for the season, but are unlikely to kill the roots.

Soybeans: Glyphosate is most effective when applied to thistles in at least the bud stage, although earlier applications can help suppress growth. Multiple applications may be needed. Enlist + glyphosate can also be very effective. In Plenish soybeans, glyphosate is the best option. Flexstar, Cobra, and Basagran can also be effective at limiting competitiveness in the season.