



AgVantage Green Notes



Volume 14, Issue 6

Considerations for Postemergence Applications in Corn

By Aaron Hager, University of IL—Cornfields across areas of Illinois (and Indiana) will soon be treated with various postemergence herbicides to control a broad spectrum of weed species. The forecasted high temperatures will accelerate the growth of emerged weeds, making timely applications of postemergence herbicides a bit more challenging. This article highlights a few considerations for postemergence herbicide use in corn.

Herbicide application timing. The governing principle of postemergence herbicide programs is that crop and weeds can coexist for a critical period of time without resulting in yield loss. Weed scientists generally suggest an interval, based on either weed size (in inches) or days after crop/weed emergence, during which postemergence herbicides should be applied to avoid yield loss through weed interference. This interval for corn is often recommended to be before weeds exceed 2 to 4 inches in height. If weeds are allowed to re-

main with the crop past this size range, the risk of crop yield loss substantially increases. Apart from preserving crop yield, another advantage of removing weeds at these suggested sizes is that small weeds are usually much easier to control than large ones.

Staging the corn crop. The labels of most postemergence corn herbicides include application restrictions based on a maximum corn size (specified as corn height or as leaf or collar number, or sometimes both). For product labels that indicate a specific corn height *and* growth state, be sure to follow the more restrictive of the two. If these restrictions are not followed, there can be substantial injury to the crop that may lead to yield reductions. Adverse environmental conditions (such as prolonged periods of cool air temperatures) can sometimes result in corn plants that are physiologically older than their height would suggest, so be sure to accurately assess plant developmental stage by leaf/collar number in addition to plant height.

Inside this issue:

<i>Ceres South Summer Crops Meeting</i>	2
<i>Tillage Choices for June Planting</i>	2
<i>Soybean Replant Decisions</i>	3
<i>Just Stuff</i>	3
<i>Grain Update</i>	4

Replant Considerations for Flooded Corn

Ponded or flooded crop fields in early to mid-June are not a desirable sight for growers and ag. industry alike. Growers must decide on management options that best minimize their potential losses in income and yield while the ag. industry scrambles to meet the anticipated demand for replant seed and other inputs required by their customers over the coming weeks. All of this falls in the middle of the time period that is already busy with applications of sidedress nitrogen and post-emergence herbicide.

Let me address a few more issues specifically related to replanting options for flooded cornfields.

Crop Insurance Considerations -Growers who have purchased crop insurance and are interested in replanting damaged cornfields or parts of fields at this late date should first consult with their crop insurance agent to determine the ramifications of a replant decision on their insurance coverage or payout. Crop insurance policies can vary greatly in their impact on replant decisions farmers may make ([Patrick, 2008](#)).

Replanting Back to Corn -Replanting damaged cornfields back to corn is becoming an increasingly uncertain choice, especially for growers in the northern two-thirds of Indiana because of the rapidly shortening growing season and the prospects for significantly lower yield potential. Some folks, though, may feel obligated to replant to corn for various reasons (nitrogen already applied, herbicide already applied, landlord's insistence, etc.).

The following table lists the approximate "safe" relative hybrid maturities that could be planted over the coming weeks throughout Indiana that will mature 1 week before a killing frost.

Crop District	Typical CRM	Expected fall frost date	June 14	June 21	June 28
NW	109	Oct 6	102	99	95
WC	112	Oct 13	112	107	103
SW	116	Oct 20	118+	118+	115
		50% fall frost risk			

The challenge for many growers in this regard will be that the suggested hybrid maturities are less adapted to their areas of Indiana than normal full-season hybrids, especially in terms of disease resistance, and thus must be considered with great caution. Secondly, the seed availability of these early maturity hybrids will undoubtedly be

Ceres Solutions South Summer Crops Meeting—June 27

Please join us for our Ceres Solutions Summer Crops and Crop Protection Meeting at Ceres Solutions Seed Plot -Friday June 27 (Note new date), 2008 – ½ mile north of Farmersburg, IN on the west side of US 41.

8:0-8:30 a.m. Registration – Private Applicator Recertification Points Will Be Awarded – Please bring your Private Applicator certification card and \$10 to get credit for the meeting.

8:30a.m. Growing High Yield Corn – Jeff Nagel, Ceres Solutions Agronomist will discuss all the ways we can protect crop yield. Randy Fry, Seed Specialist will review all the traits on the market.

9:15 a.m. Growing High Yield Soybeans – Betsy Bower, Ceres Solutions Agronomist will discuss all the ways we can protect soybean yield. Randy Fry will discuss how to choose the right genetics.

9:45-10:15 a.m. How Can You Make Your Glyphosate \$ Go Further – Betsy Bower and Jeff Nagle, Ceres Solutions agronomists will discuss how you can use other crop protection products to enhance the performance and reduce the reliance on glyphosate.

10:15-10:45 a.m.. Reports from the Field Ceres Solutions Local Crops Professionals and Jeff Nagel and Betsy Bower, Ceres Solutions agronomist review the year to date regarding pests

10:45-11:30 a.m. DOT Rules for the Road - Fred Whitford, Purdue Pesticide Programs will provide and update on all the DOT rules regarding all types of farm trucks and trailers.

11:30- 11:45 a.m. PARP Topic Sara Green

12:15 p.m.- 1:00 p.m.. Grain Market Update – Chris Hurt, Purdue will provide comments on current and future grain markets.

Tillage Choices for June Planting or Replanting after Flooding

By Tony Vyn, Purdue Crop Systems—Farmers who decide to replant ponded areas or even entire fields that were flooded will want to do so with as little tillage as possible. In most field situations, intensive tillage does not make sense because of the additional cost and time and the risk of creating cloddy seedbeds. Most often, No-till is the preferred tillage system for June planting. Here are some tips for tillage and planting decisions for such late planting situations:

1. No-till normally makes the most sense. With warm air and soil temperatures during most of June, yield differences between tillage system are even less than they could be with April planting.

2. Consider compromises to the “ideal” seedbed moisture condition. Although it is preferable to wait until the surface 2 inches of soil are dry enough to avoid sidewall compaction with planter disk openers, the reality is that corn and soybean yield losses grow with each passing day. If weekly rainfall occurs for the first 3 weeks after June planting, then some sidewall compaction can be tolerated with little negative effects. However, if hot and dry weather conditions are expected, it would be foolish to “smear” the seed in..

3. Use minimum down pressure on the row units and seed closing wheels. Soils that have been saturated for some time tend to have excess moisture below seed depth. Compaction of those layers with high down pressures can cause problems for root expansion later in the season. Set the down pressure to use the least pressure required to get sufficient penetration of the seed disk opener, constant seed depth, and adequate closure of the seed furrow.

4. Consider tools to aid soil drying before planting. Superficial tillage (with shallow harrows, coulters and/or rolling baskets) may be helpful

to speed up the rate of surface soil drying in cases with matted surface residue or crusted soil.

5. Recognize the consequences of flooding to soil structure. Soils that have been wet for some time are always the soils most vulnerable to forming clods when they are tilled.

6. Avoid thinking of tillage as the only way deal with herbicide resistant crops.

7. Try to spray burndown herbicides as early as possible. Control ling weeds is essential to improve the evaporation rate at the soil surface, and achieving early weed control is more essential for reduced tillage planting situations in June than in April. However, the presence of very tall weeds because of excessive rainfall in May, as well as the recent rains in the first week of June, may limit certain herbicide control options and force some tillage in what earlier might have been candidate fields for no-till cropping.

8.Keep any tillage operations shallow. June tillage pre-planting operations should never be deeper than 3 inches.

9. Automatic guidance is helpful. In re-planting situations, automatic guidance (and particularly the most accurate RTK system) assists farmers planting their rows precisely.

10. Remember where the poorly drained areas are. No field drainage system can never be sufficient for 10 inch downpours, but additional drainage may limit the size of areas requiring replanting this year, and would also improve the odds of success with no-till and strip-till cropping systems.

Replanting Corn into Recently Flooded Fields Cont.

limited and so growers ought to be talking with their seed dealers now if they anticipate replanting damaged areas.

One of the frustrating issues with making a replant decision this late in the season is that there is essentially no data-based information we can rely on to estimate yield potential for corn replanted in late June. Based on conversations with a number of colleagues, we believe that corn planted in late June would yield approximately 50% of that planted in “normal” planting periods (assuming the corn matures safely prior to a killing fall frost). However, coupled with current high corn grain prices, even that low of a yield prospect may be worth the risk for some growers.

Be aware that corn replanted late, especially if replanted into a flooded pocket within a field, will be very attractive to corn rootworm beetles during pollination. Growers should monitor and be prepared to

apply foliar insecticides if warranted. **Replanting Back to Soybean** Some growers will choose to forego replanting damaged cornfields back to corn in favor of replanting back to soybeans. Recognize that while the choice to replant damaged cornfields back to soybeans is the prerogative of the grower, the risk of damage to the soybean crop from previously applied corn herbicides is borne solely by the grower. Recognize that seed supply for replant soybean will also be in short supply.

Replanting Back to Grain Sorghum Growers interested in replanting damaged cornfields to grain sorghum should consult the article we published recently ([Nielsen et al., 2008](#)). Please recognize, however, that if you have never before grown that crop, doing so under a crisis mindset may not be the best time to learn. I've also been told that seed supply of that crop will be in short supply.

Soybean Replant Decisions from Hail Damage and Flooded Fields

By Palle Pederson, U of IA—After talking to many agronomists and farmers around the state today (May 30) it seems that many will have to replant a few fields because of the extensive rainfall that we have received over the last week.

In several of those heavy rainfall areas hail also occurred. This adds a whole new dimension to crop injuries when making replant decisions.

Hail damaged soybean plants -Hail damage early in the growing season often looks worse than it really is and flood damage is often more detrimental than hail damage in the beginning of the growing season. That does not mean that we should ignore hail damage. As soon as the soybean plant emerges the growing point, located in the cotyledons, is above ground. This makes soybean particularly susceptible to damage from hail, frost, insects (such as bean leaf beetles), or anything that cuts the plant off below the cotyledons early in its life.

The soybean plant is considered dead if it is in the cotyledon stage and it is cut off below the cotyledons, or if it is damaged by hail that there is no remaining green leaf tissue or regrowth.

It is important to wait several days (three to five) after a crop has been damaged (or has emerged) before replanting. Injury can look very serious the day after the event but recovery may be possible.

Previous ISU studies have shown that a final stand as low as 73,000 plants per acre has consistently yielded more than 90 % of the optimum plant population. That is a little bit more than 2 plants per foot of row in 15" rows and about 4 plants per foot of row in 30" inch rows.

Just Stuff

The following are a few experts from a daily Indiana Agriculture Update Named "Hoosier Ag Today" with Gary Truitt—www.hoosieragtoday.com.

Indiana Flooding Causes Serious Erosion Damage 06/09/2008, by Gary Truitt—The major flooding occurring across parts of central and Southern Indiana is causing serious soil erosion problems. Some of the worst flooding in nearly a hundred years has damaged roadways, bridges, levies, dikes, and other soil control structures, according to State Conservationist [Jane Hardesty](#)

The [Natural Resources Conservation Service](#) (NRCS) has emergency programs designed to provide for repairs, Hardesty said it is called the Emergency Watershed Protection Program, "This program will provide financial and technical assistance to remove debris from streams, damage to levies, dikes, or other erosion control structures." Hardesty said if you are aware of a serious problem, contact your local NRCS office immediately for help with assessing the situation and arranging for repair. NRCS can pay up to 75% of the cost of repair.

The [Farm Service Agency](#) (FSA) also has a program that can help farmers clean up the damage to their fields caused by the flooding. Contact your local FCS office and ask for details on the Emergency Conservation Program.

Indiana Stat Offices Want to Hear From Flooded Farmers-

"Hoosier Ag Today"—6-11-2008, by Andy Eubank—The state of Indiana is responding to the needs of flooded Indiana farmers, but it needs help from those very farmers. Monday Governor Daniels sent a letter to USDS Secretary Ed Schager asking him to consider expedited agriculture disaster assistance. The request covers the 44 counties which had already been included as part of FEMA requests. Indiana Agriculture Director Andy Miller Says farmers with affected crops and forage can help support the governor's request.

Miller told Hoosier Ag Today there is help for farmers with other flood

related problems. Keep in mind the lower the stand count; the more weeds will become a problem due to less shading, especially later in the growing season. If a reduced stand is saved, weed control must be a top priority.

There also are some secondary problems associated with flooding and hail damage. Pathogen problems may increase and further reduce stands since plants that have been damaged or wounded are more susceptible to infection from plant pathogens such as *Phytophthora root rot* and *Pythium spp.*

In addition to all this, seed quality was a serious issue this year and flooding and pathogens will have a greater impact when poor-quality seed is used than when the seed is not mechanically damaged and is free of seedborne pathogens.

Soybean plants that have torn stems should be watched closely in the coming weeks for evidence of pathogen infection. Lesions around the base of the stem and plant wilting are often good indicators. If this is the case, it will be necessary to estimate the number of viable plants in the field again, and make a decision concerning replanting. However, it is difficult to assess this type of injury soon after flooding or a hail event. Therefore, if the field has a history of pathogen problems and it continues to rain, loss of wounded plants will probably increase.

When it is possible to get back into the fields, take time to visit each field and make a good estimation of the number of viable plants in the stand where flooding or hail has occurred. A replant decision based on a quick look at a field may therefore underestimate the existing plant population.

related problems.

"If you have an animal issue you likely need to call the board of animal health as quickly as possible. If you have a spill issue you need to call IDEM spill hotline. If there are any other challenges you need help with you can call our office, you call the board of animal health, you can call the state chemists office, call USDA. We're all working very, very closely on this and are in constant communication, and we are shoving the requests to the appropriate group of folks as quickly as we can. We've also asked our division of soil conservation folks to be on call to help in whatever way they can be."

Phone numbers and helpful website links for flood victims:

State Dept of Ag—www.in.gov/isda — 317-2328767

Board of Animal Health—www.in.gov/boah — 317-227-0300

Indiana Department of Environmental Management's Spill Hotline—317-233-7745 or 888-233-7745

Information about the latest storm damage www.in.gov/gov/3725.htm

Well Testing Information—If any of you are concerned about the quality of your water in your well after recent flooding water testing is available. Environmental Certification Labs, Inc in Farmersburg will test water for Nitrate (\$20 per sample) and Coliform (EColi) (\$25 per sample) levels to see if it is safe to drink. You will need to pick up a testing kit at Farmersburg before testing the water. You can access approved water testing facilities at the state of Indiana website. Here is the contact info:

Environmental Certification Labs, Inc
Jac L. Padgett, Lab Director, Supervisor
11422 US Highway 41N
Farmersburg, IN 47850-0569
(812)696-5076 Ext 23

Grain Update

USDA Summary—June 10, 2008

Estimates in Million Bushels

	Jun USDA—07/08	May USDA—07/08
Corn		
Carry-in	1433	1383
Production	11,735	12,125
Total Supply	13,523	13,523
Feed and Residual	5,150	5,300
Ethanol	4,000	4,000
Exports	2,000	2,100
Total Use	12,512	12,760
Carry-out	673	763
Soybeans		
Carry-in	125	145
Production	3,105	3,105
Total Supply	3,258	3,258
Crush	1,840	1,850
Exports	1,050	1,050
Seed	90	90
Residual	82	82
Total Use	3,063	3,073
Carry-out	175	185
Wheat		
Carry-in	254	239
Production	2,432	2,392
Total Supply	2,786	2,732
Food	960	960
Seed	84	84
Feed & Resid	255	230
Exports	1,000	975
Total Use	2,299	2,249
Carry-out	487	483

Delivery, Basis and Cash Bids for Ceres Solutions Elevators as of Tuesday Friday June 13th.

	Delivery	Basis	Cash
Pleasant Ridge			
# 2 Yellow Corn	June 08	-0.32	6.77
	July 08	-0.25	6.84
	Fall 08	-0.50	6.90
Soybeans			
	June 08	-0.20	14.93
	July 08	-0.27	14.86
	Fall 08	-1.00	14.13
Wheat			
	July 08	-1.80	6.71
Kersey			
# 2 Yellow Corn	May 08	-0.45	6.64
	Jul 08	-0.35	6.74
	Fall 08	-0.62	6.78
Soybeans			
	June 08	-0.33	14.82
	Jul 08	-0.40	14.73
	Fall 08	-1.12	14.01
Wheat			
	July 08	-1.90	6.61
Roselawn			
# 2 Yellow Corn	Delivery	Basis	Cash
	June 08	-0.45	6.64
	Jul 08	-0.35	6.74
	Fall 08	-0.62	6.78
Soybeans			
	June 08	-0.33	14.40
	Jul 08	-0.40	14.73
	Fall 08	-1.12	14.01
Wheat			
	July 08	-1.90	6.61
Teft			
# 2 Yellow Corn	Delivery	Basis	Cash
	June 08	-0.46	6.63
	Jul 08	-0.36	6.73
	Fall 08	-0.63	6.77
Soybeans			
	June 08	-0.34	14.79
	July 08	-0.41	14.72
	Fall 08	-1.13	14.00
Wheat			
	July 08	-1.90	6.61
Ade			
# 2 Yellow Corn	Delivery	Basis	Cash
	June 08	-0.45	6.64
	July 08	-0.35	6.74
	Fall 08	-0.62	6.78
Soybeans			
	June 08	-0.33	14.80
	July 08	-0.45	14.68
	Fall 08	-1.12	14.01
Wheat			
	July 08	-1.90	6.61
Cherry & Whitesville			
# 2 Yellow Corn	Delivery	Basis	Cash
	Jun 08	-0.33	6.76
	July 08	-0.31	6.78
	Fall 08	-0.55	6.84
Soybeans			
	June 08	-0.13	14.99
	July 08	-0.13	14.99
	Fall 08	-1.13	13.99
Wheat			
	June/ July	-1.65	6.86

	Delivery	Basis	Cash
Wingate			
# 2 Yellow Corn	June 08	-0.34	6.75
	July 08	-0.32	6.77
	Fall 08	-0.60	6.79
Soybeans			
	June 08	-0.08	15.04
	July 08	-0.08	15.04
	Fall 08	-1.11	14.01
Browns Valley			
# 2 Yellow Corn	Delivery	Basis	Cash
	June 08	-0.37	6.72
	July 08	-0.35	6.74
	Fall 08	-0.65	6.74
Soybeans			
	June 08	-0.15	14.97
	July 08	-0.15	14.97
	Fall 08	-1.16	13.96
Brazil			
# 2 Yellow Corn	Delivery	Basis	Cash
	June 08	-0.30	6.79
	July 08	-0.28	6.81
	Fall 08	-0.70	6.70
Soybeans			
	June 08	-0.25	15.08
	July 08	-0.33	15.12
	Fall 08	-1.20	13.93
Wheat			
	Jun 08	-2.40	6.11
	July 08	-2.40	6.11
Clay City			
# 2 Yellow Corn	Delivery	Basis	Cash
	Jun 08	-0.31	6.78
	July 08	-0.29	6.80
	Fall 08	-0.70	6.70
Soybeans			
	Jun 08	-0.29	15.08
	July 08	-0.25	15.12
	Fall 08	-1.20	13.93
Wheat			
	Jun 08	-2.40	6.11
	July 08	-2.40	6.11

Postemergence Herbicides Cont.

Corn response. Corn plants under stress may be more prone to injury from postemergence herbicides. Stress can arise from a number of factors, including cool temperatures and wet soils. Be sure to consult the product label when selecting spray additives to include with postemergence herbicides. Many labels suggest changing from one type of additive to another when the corn crop is experiencing stressful growing conditions. Attempting to save a trip across the field by applying a postemergence corn herbicide with a liquid nitrogen fertilizer solution (such as 28% UAN) as the carrier is not advisable. While applying high rates of UAN by itself can cause corn injury, adding a postemergence herbicide can **greatly increase** corn injury.

Herbicide	Corn Size	Herbicide	Corn Size
Accent	Up to V6 or 20"	Option	V2 (4") to V6(20")
Callisto	Up to V8 or 30"	Roundup (RR Corn)	Up to V8 or 30"
Impact	Spike up to 45 days preharvest	Resolve Q	Up to V7 or 20"
Liberty (LL Corn)	VE to V7 or 24"	Status	4-36"
Lightning (CL Corn)	VE to V5 or 20"	Sterling Blue	VE-36"

Be sure to read all label directions before application.

Where it fits consider tank mixing Status @ 2.5 oz/A with a standard rate of glyphosate. Status provides excellent activity on key broadleaf weeds like giant ragweed, morningglory, lambsquarter, waterhemp, etc. . Interlock (a great anti-drift adjuvant) @ 2-4 oz/A does an excellent job of improving deposition and reducing off-target movement.