ROUNDUP READY PLUS®
CROP MANAGEMENT SOLUTIONS

WEED MANAGEMENT FOR UNPLANTED ACRES

What You'll Learn...

- Heavy spring rains have resulted in flooded fields that may delay planting, prevent planting, or drown out already planted fields.
- Once the decision has been made to leave a field unplanted, then agronomic decisions need to be made involving weed management and cover crops.
- Those filing claims under prevented planting crop insurance should discuss conditions and requirements with a crop insurance professional.

Weed Management Basics

Removing weeds prior to seed set can reduce increases to the weed seed bank. Also, this strategy can help minimize the waste of nutrients intended for crop growth. There are several options for weed control including one or more of the following: herbicides, tillage, cover crops, and mowing. Any of these tools should be employed prior to weeds setting seed.

Herbicides

There are different herbicide options depending on if a cover crop will be planted. If considering a cover crop, then a burndown and possibly an in-crop application may be options. If no cover crop will be planted, then additional herbicide options are available and annual maximum use rates have increased relevance.

Due to effectiveness and economics, Roundup® brand glyphosate-only agricultural herbicides, 2,4-D, and XtendiMax® herbicide with VaporGrip® Technology are common herbicide options for unplanted acreage. All three herbicides can be used as a burndown prior to certain cover crops, but Roundup brand glyphosate-only agricultural herbicides have the least restrictive plant-back restrictions (Table 1). The plant-back restrictions are related to if the intended crop is on the herbicide label.

Tillage

If considering a cover crop, tillage alone can be highly effective on small weeds and has no plant-back restrictions. If weeds are larger, tillage can be used in conjunction with a burndown herbicide to increase control. For most perennial weeds and weeds under stressful conditions, waiting 5 to 7 days after the herbicide application to perform tillage can help improve weed control by allowing time for translocation. Good growing conditions can reduce the time needed for herbicide translocation. If tillage has been completed, time has passed, and a burndown herbicide will be applied, note that large weeds may not have been controlled with tillage, but rather injured and may regrow. This can result in misjudging weed height due to part of the weed being buried below ground.

Using tillage for season-long weed control may be detrimental to soil health. Tillage can break up compaction in the tillage zone, but it can also create a layer of compaction underneath the tillage zone. Also, repeated trips across the field with heavy equipment may increase compaction. Leaving the field fallow and weed-free with tillage also increases the risk for wind and water erosion, as well as deterioration of organic matter as the soil is constantly being exposed to the elements. Additionally, with minimal weed growth, the risk for fallow syndrome in corn is greater the following season. Fallow syndrome is primarily characterized by phosphorus deficiency symptoms and slow early growth.

Mowing

Larger weeds can be managed with mowing versus tillage, but weeds should still be controlled prior to setting seed. Mowing can be used in conjunction with tillage or herbicides. As with tillage, waiting 5 to 7 days after the herbicide application to mow can help improve weed control by allowing time for translocation. Good growing conditions can reduce the time needed for herbicide translocation. Mowed weeds will be older and more hardened off than what the height would indicate so rates should be adjusted accordingly. The risk for erosion and fallow syndrome in corn would likely be less with mowing versus tillage. The key to mowing is making sure it is completed prior to weeds setting seed.

Cover Crops

A cover crop can often aid in weed control, help minimize erosion, and help minimize the effects of fallow syndrome, which may be observed in corn that is planted into fields that were flooded or fallow the previous season. If a cover crop will be used, it is very important to check rotation restrictions of burndown herbicides for the specific cover crop(s) planted.

Characteristics of three common herbicides (Roundup® brand glyphosate-only agricultural herbicides, 2, 4-D, XtendiMax® herbicide with VaporGrip® Technology) used for burndown and/or fallow situations are listed in Table 1 on page 2.

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WEED MANAGEMENT FOR UNPLANTED ACRES (CONTINUED)

(Continued from page 1)

Table 1. Characteristics of three commom herbicides used for fallow situations.

Characteristics	Roundup® brand glyphosate-only agricultural herbicides (4.5 lbs a.e./gal)*	2,4-D (3.8 lbs a.e./gal)**	XtendiMax® herbicide with VaporGrip® Technology
Maximum Annual Application	5.3 qts/acre	For fallow limited to 2 applications/year and maximum application of 4.2 pts/acre (2 lbs a.e./acre) per application, minimum of 30 days between applications.	88 fl oz/acre Do not broadcast more than 44 fl oz/acre in any single application.
Rate Structure	**Weeds** Less than 4" = 32 fl oz/acre For tough to control species = up to 44 fl oz/acre. Refer to product label for specific rates for weed species and cropping systems.	**Annual weeds** = 1 to 2 pts/acre **Biennial weeds** = 2 to 4 pts/acre **Perennial weeds** = 2 to 4 pts/acre **Wild onions and garlic** = 4 pts/acre	**Annual weeds:** Small actively growing 11 to 22 fl oz/acre Established weed growth 22 to 33 fl oz/acre **Biennial weeds:** Rosette diameter 1 to 3" 11 to 22 fl oz/acre Rosette diameter greater than 3" 22 to 44 fl oz/acre Bolting 44 fl oz/acre **Perennial weeds:** Top growth (TG) suppression 11 to 22 fl oz/acre TG control and root suppression 22 to 44 fl oz/acre TG and root control ***
Additives	8.5 to 17 lbs AMS/100 gal spray solution	COC 1% v/v or NIS at 0.25% v/v	Refer to product label for surfactants, adjuvants and drift reduction additives.
Plant-back Restrictions **Refer to product and supplemental labels for use of these products**	**Labeled Crops:** no plant back restrictions. **Other Crops:** 30 days	**Labeled crops:** within 29 days after application. Labeled crops may be at risk of crop injury or loss if planted soon after application, especially the first 14 days. Degradation factors should be considered. **Other crops:** may be planted 30 or more days after application without concern for illegal residues in the planted crop. However, there may be a risk for crop injury to susceptible crops. Under normal conditions, any crop may be planted without risk of injury if at least 90 days of soil temperature above freezing have elapsed after application. **Degradation factors:** risk of crop injury is less with lower use rates and/or warm, moist soil conditions that favor rapid breakdown of 2,4-D.	**33 fl oz/acre or less -** Do not plant barley, oat, wheat, and other grass seedings for 15 days per 11 fl oz/acre applied east of the Mississippi River and 22 days per 11 fl oz/acre west of the Mississippi River. No planting restrictions apply beyond 120 days after application of this product. Soybeans (except Roundup Ready 2 Xtend® soybean) following application and 1 inch of rainfall or irrigation, a waiting interval of 14 days is required for 11 fl oz/acre or less and 28 days for 22 fl oz/acre. Cotton (except cotton seed with XtendFlex® technology) following application and 1 inch of rainfall or irrigation, a waiting interval of 21 days is required for 11 fl oz/acre. **Greater than 33 fl oz/acre & up to 44 fl oz/acre– Wait 120 days before** planting corn, sorghum, and cotton (except cotton with XtendFlex® technology) east of the Rocky Mountains and before planting all other crops (except Roundup Ready 2 Xtend® soybean grown in areas receiving 30 inches of more rainfall annually. Wait a minimum of 180 days before planting crops in areas with less than 30 inches of annual rainfall. Wait a minimum of 30 days for every 22 fl oz/acre before planting barley, oat, wheat, and other grass seedings in areas east of the Mississippi River and 45 days for every 22 fl oz/acre in area west of the Mississippi River.

*Roundup brand glyphosate-only agricultural herbicides information based on 4.5 lbs a.e./gal products.
**2-4-D herbicide information based on 3.8 lbs a.e./gal products.
*** See product label for suggested rates, tank-mix partners, and whether sequential application may be needed for various species.

Sources:

[1] Gunsolus, J. 2013. Weed management in prevented planting acres. Minnesota Crop News. University of Minnesota Extension. http://blog-crop-news.extension.umn.edu/2013/07/weed-management-in-prevented-planting.html.
[2] Zollinger, R. 2010. Weed management after a flood—Strategies for this year and next. North Dakota State University. https://www.ag.ndsu.edu/flood/farm-ranch/weed-management-after-a-flood.. Web sources verified 06/30/17

For additional information, contact your local seed representative. Developed in partnership with Technology Development & Agronomy by Monsanto.

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