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2025 MidSouth Cotton Defoliation Guide







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MidSouth Cotton Specialists' Working Group

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Introduction

Chemical harvest aids are applied to almost every cotton acre in the Midsouth. These products allow the perennial crop to be manipulated into a timely, single-pass harvest. Leaf material remaining on the plant at harvest is the primary source of staining and trash. When properly applied, the removal of leaves and opening of bolls generated by harvest aids results in a substantial increase in yield, improvement of fiber quality, reduction of boll rot, and increase in picker efficiency. Harvest aids used in cotton production are broadly organized as either defoliants, boll openers, or desiccants.

Defoliants

Defoliation, in the context of cotton production, is the process of removing cotton leaves in preparation for harvest. Defoliation relies upon the natural process of leaf shedding which occurs when special cells located in the 'abscission zone', the area where the leaf petiole joins the stem, develop into an 'abscission layer' and allow the leaf and petiole to fall, or shed, from the plant. This process can be initiated by a light frost, insect damage, changes in solar radiation, leaf age, disease, drought, and mineral deficiencies, but whole-plant defoliation is typically generated at the end of the season through the application of chemical defoliants. These products initiate development of the abscission zone indirectly through damaging leaves and/or directly by altering the hormonal balance at the base of the petiole.

Selection of a defoliant product and/or rate that is too harsh may generate too much damage to the leaf too quickly and thereby prevent the formation of the abscission zone. In that scenario, leaves will be 'stuck'; dead leaves will remain on the plant through harvest. In contrast, poor coverage and/or selection of a product and/or rate which is not harsh enough will not support complete development of the abscission zone and result in green leaves remaining on the plant through harvest. The presence of either stuck or green leaves at the time of harvest will increase the amount of trash and/or staining in the harvested seedcotton and reduce fiber quality.

Boll openers

Boll openers work differently than defoliants. Instead of generating injury to vegetative material or altering the hormonal balance at the base of the petiole, most boll openers mimic the plant hormone ethylene to alter the hormonal balance along the boll sutures and speed suture development. Similar to the abscission zones at the base of leaf petioles, boll sutures contain specialized cells which naturally separate when the boll is mature. By properly applying boll openers, growers can limit the length of time older, mature bolls weather on the bottom of the plant and still harvest younger, less mature bolls in the top of the canopy.

Desiccants

Rarely used in Midsouth production, desiccants aggressively disrupt cell walls and cause a rapid dry down of plant tissue. Due to the speed of desiccants, cells within the abscission zones often do not have time to develop. Acres which receive applications of desiccants are typically characterized by far greater levels of stuck leaves. In Midsouth production, desiccants are rarely applied; the most common use of desiccants as Midsouth cotton harvest aids are when a freeze is imminent, but even then, the application should be considered very risky.

Application Timing and Conditions

Defoliation is often referred to as an art, not science, due to the numerous factors that influence plant responses to applications. Unfortunately, the decisions concerning timing, product selection, and rate are often overcomplicated. Most simply, there are four main factors which must be considered in determining the proper timing and concoction. First, the harvest aid application should be timed early enough to prevent excessive weathering of older, mature bolls but should generally not be too early to prevent maturation of the identified uppermost harvestable boll. Second, weather conditions immediately prior to and following the application must be considered. Third, plant conditions should be considered. Finally, the application should be adjusted to address the leaf material and unopened bolls remaining on the plant.

Timing the first application

There are a variety of ways to determine proper defoliation timing. Historically, 60% open boll or Node Above Cracked Boll (NACB) equal to 4 have been used. While these measurements can be helpful, the simplest and most effective method is the sharp knife technique. Although all three are covered in this guide, the sharp knife technique should always be used to validate any defoliation timing method.

The first step in all three of these methods is to properly identify the uppermost *harvestable* boll. It is very common to have bolls in the upper canopy which are either quite small (less than the diameter of a quarter) or very immature, relative to the remainder of the present bolls. These small and/or immature bolls often make up a very small percentage of the crop and waiting on them to mature often results in excessive weathering of most of the crop. Bolls which are not deemed harvestable should not be considered when assessing percent open, NACB, or the sharp knife technique.

It is appropriate to point out here that **preconditioning** refers to an application of harvest aids made prior to the uppermost harvestable boll reaching maturity. Preconditioning is not recommended. The majority of photosynthate found within a given boll is provided by the boll's subtending leaf. Since the youngest bolls and these subtending leaves are located along the perimeter of the plant, preconditioning actually strips the most active and important tissues responsible for maturing these immature bolls from the plant. Instead of preconditioning, make the first harvest aid application when the uppermost harvestable boll is mature with the intent of opening as many bolls as possible and removing as many leaves as possible.

Percent Open Boll

Measuring percent open boll has been the standard defoliation technique for many years. It is generally safe to defoliate when 60 percent of the bolls are open. However, this strategy may not work well in situations where fruit has been set over a varying period of time due to plant stresses such as insect damage. In some situations, defoliation at 60 percent open may be premature and cut short the development of bolls in the upper canopy, thereby reducing yield and micronaire. In other situations, a crop set in a short period of time may safely be defoliated at 40 to 50 percent open. Many producers tend to underestimate percent open boll by 10 to 20 percent, resulting in an application timing closer to 70 or 80 percent open. Underestimating percent open boll is extremely common when the assessment is made from the truck. To accurately determine percent open bolls, measure three feet of row in ten places in the field, count open and closed bolls, and then use those counts to calculate percent open.

Node Above Cracked Boll (NACB)

To use the NACB method, find the uppermost first position cracked boll and count nodes upwards on the plant to the uppermost harvestable boll. Once NACB has been determined, cut the uppermost harvestable boll with a sharp knife to inspect the lint and seed. If mature, defoliation is safe. A NACB of 4 is generally safe for defoliation. If the sharp knife reveals an immature uppermost harvestable boll, wait until a NACB of 3. Note that low plant populations (less than two plants per foot of row) may require a NACB count of 3, as low plant populations result in higher numbers of bolls set on vegetative branches and outer positions of fruiting branches.

Sharp Knife Technique

The sharp knife technique should be used to validate all methods of defoliation timing. The uppermost harvestable boll should be sliced horizontally with a sharp knife. Generally, this boll will be located 4 to 5 nodes below the terminal depending on end of season stresses. Bolls are considered mature enough to open with ethephon when they are 1) difficult to cut, 2) the seeds do not contain jelly and 3) the seed coats have faint color. A survey of agronomists throughout the Midsouth was conducted in 2021 to identify which boll in the below image would likely open with an application of ethephon. While 100% indicated they would be able to open boll 11, 70% indicated they would be able to open boll 8.

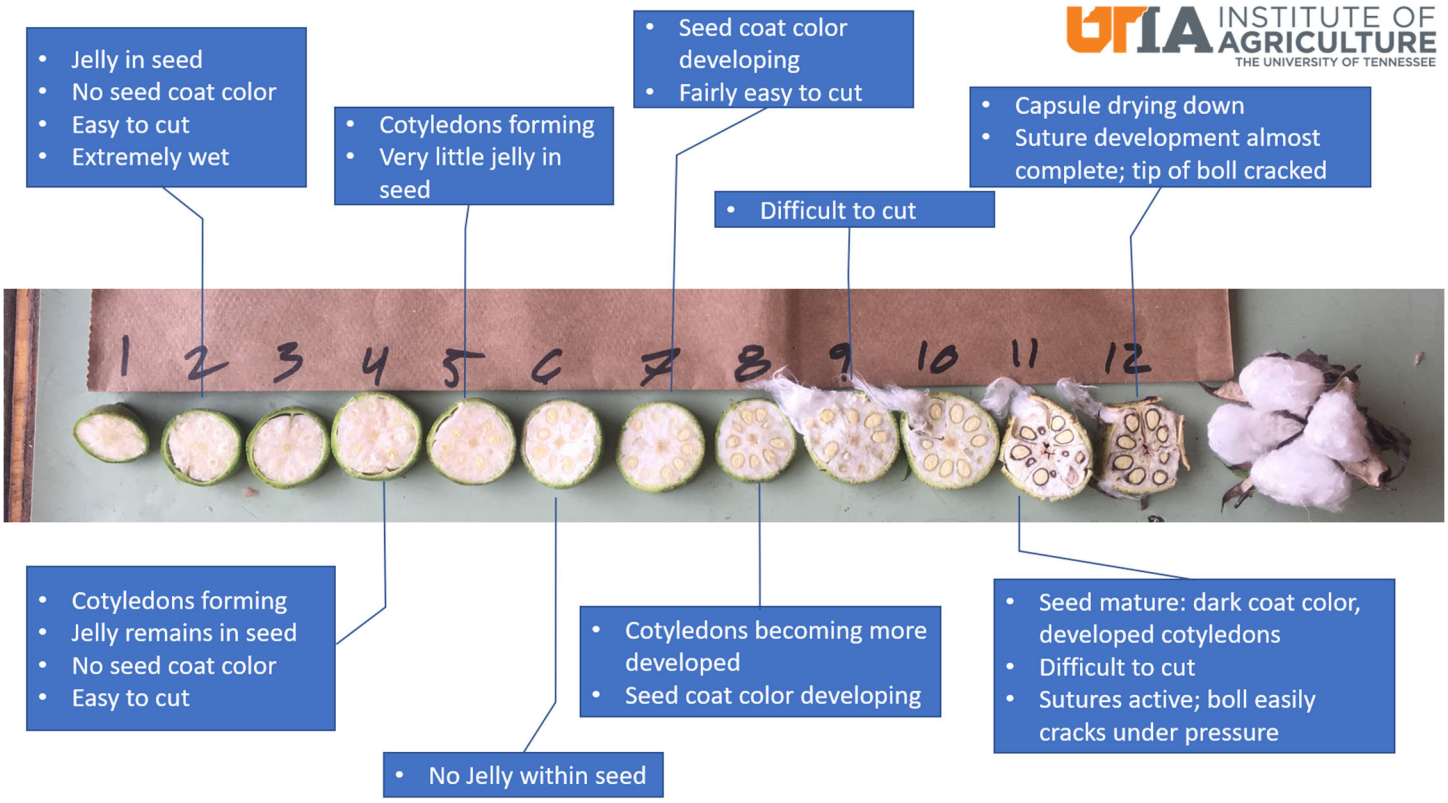


Figure 1: Boll maturity from immature (1) to mature (12). While a 2021 survey of MidSouth agronomists revealed 100% of participants believed they could successfully open boll 11 with ethephon, 70% indicated they would be able to open boll 8 with ethephon.

Weather

Weather conditions immediately prior to the time of application and three to five days following application have a significant effect on cotton response to harvest aids. Harvest aids are most active when temperatures, sunlight intensity and relative humidity are high. Nighttime temperatures above 60 F are especially important for activity of certain harvest aids. At temperatures above 60 F, the rate of leaf drop roughly doubles for each 10-degree rise in temperature. It is generally easiest to properly select products and rates when weather conditions are stable; if a major front is expected, it may be best to delay the application until after the front passes and conditions stabilize. Applications prior to a substantial rainfall event should be avoided, since rain in a cracking boll can increase hard lock and boll rot.

Regardless of boll maturity, applications of harvest aids should typically be made no later than 10 days before average first frost dates for your given area. Failure to start the process of boll opening while temperatures are warm enough to allow the development of the boll sutures may result in bolls freezing shut. If a freeze is imminent, a harvest aid application should be made 2-3 days prior to the event with up to the remaining amount of ethephon allowed, by label. Aggressive applications of harvest aids may also be appropriate if harvest is to be pushed prior to the onset of a prolonged period of cloudy, rainy conditions (to avoid a hurricane, for example).

When the forecast contains clear skies and night temperatures above 60F, acceptable levels of defoliation and boll opening will likely be achieved with less harsh products applied at low rates. If several cloudy days are included in the forecast and night temperatures are below 60F, more aggressive products will have to be applied at higher rates. More information on product activity at different temperatures is included in Table 2.

Plant Condition

The environmental conditions experienced by the plant will influence product selection and rate. Mature, well-fruited, uniform plants that have cutout but are not drought stressed are relatively easy to defoliate. These plants typically have few juvenile leaves and will have shed most large mainstem leaves low on the plant. Since defoliation is a physiological process, active, relatively healthy plants will be much more apt to develop abscission zones with low rates of defoliants. However, excessive applications of nitrogen, late-season foliar fungicide applications, and over-application of irrigation can all prevent the plant from naturally shedding lower leaves in the canopy and require additional applications to generate adequate coverage and defoliation.

Severely drought stressed plants have thicker leaf cuticles and will likely require much more aggressive applications of defoliants to achieve acceptable levels of defoliation. Furthermore, since the plants are relatively inactive, the process may take longer. One of the most challenging defoliation scenarios consists of a crop which has undergone a mid-season period of moderate drought stress that is then followed by a large rainfall event. That sequence of events typically generates a flush of juvenile leaf growth at most axillary positions and will require multiple applications to achieve adequate coverage and defoliation.

Leaf type and boll opening

Leaves present on the plant at the end of the season can generally be classified as either juvenile or mature. Juvenile leaves are often the most difficult to convince the plant to shed, since their photosynthetic potential is great and the plant wouldn't normally shed these leaves were much older. In contrast, large, mature leaves which are much older have typically passed their peak of photosynthetic production and they are naturally reaching the point in time where the plant would begin the abscission process. Subsequently, low rates of defoliants are often all that is required to shed mature leaves.

If many immature bolls are present on the plant, particularly along monopodial branches, relatively high rates of boll opener may be required to generate acceptable levels of opening. In contrast, if almost all bolls are mature on the plant, less than 16 oz per acre of a 6lb ai per gallon ethephon product may be required.

Other factors to consider when defoliating

Coverage is key

Most harvest aid materials do not translocate, or move, within the plant. Therefore, application coverage is critical! Hollow cone nozzles are superior to air-induction nozzles as they improve foliar coverage using ground application equipment. Two equally spaced hollow cone nozzles per row will give adequate coverage. Spray pressure, ground speed and nozzle size should be matched appropriately to apply the desired spray volume in accordance with label instructions. The amount of water used as a carrier in each defoliation application should not be lower than 5 gallons per acre for aerial applications and 15 gallons per acre by ground.

A planned two-application approach

In situations where a large number of leaves are present in the canopy or there are significant numbers of unopened bolls, two applications are typically required to achieve acceptable levels of defoliation and boll opening. Planning a two-pass approach is often recommended, especially in lush cotton. In a two-pass approach, the goal of the first application is to remove as many leaves and open as many bolls as possible without causing desiccation. Products in the second application can be selected based on what remains on the plant; products and rates selected for the second shot will depend on the presence of either large mainstem leaves low in the canopy, juvenile leaves, unopen bolls, or a combination of the three. A common mistake is to increase rates to achieve better defoliation. Increased rates are likely to cause leaf desiccation at the top of the plant where most spray solution is intercepted. The best approach is to apply normal rates and plan to make a second application.

Timing applications in front of the picker

Do not defoliate all cotton at one time. Defoliants should be applied 10 to 14 days prior to anticipated harvest date. Leaf drop should start in about four days and be complete in about ten days. Rain six to eight hours after application of a defoliant does not lessen the effectiveness of most chemicals except for thidiazuron, which requires a 24-hour rain-free period.

If a significant amount of time passes between the application and harvest, the defoliated plant may begin to re-grow. This growth is particularly troublesome as it is immediately adjacent the stalk and can be very difficult to remove after it develops. Re-growth is particularly troublesome if rainfall occurs following a harvest aid application. If applied at sufficient rates, several commonly used harvest aids will suppress re-growth (Table 2). Re-growth is not as big of a concern during cooler weather compared to warmer weather.

Opening bolls before a freeze

Boll opening requires the development of sutures. If these structures freeze before developing, the boll will not open. A hard freeze in the forecast should be considered the end of boll opening activity. If unopened bolls remain in the field before a freeze, ethephon should be applied several days prior to the event to generate the greatest levels of boll opening. Paraquat is occasionally used to assist in boll opening when no leaves remain on the plant and there is limited time between the application date and the imminent freeze, but paraquat will only open almost mature bolls and the response is best characterized as inconsistent. If harvest is delayed seven days or more after application, bark content will likely increase.

Types of Defoliants

Defoliants can be categorized as having either herbicidal or hormonal activity. Folex, Aim, Display, ET, Reviton and Sharpen are herbicidal-type defoliants that injure the plant, causing it to produce ethylene in response to the injury. Ethylene production promotes formation of an abscission layer and ultimately, leaf drop. Increased application rates of these materials during periods of warm temperatures may kill the leaf prior to ethylene synthesis. This results in desiccation or "leaf stick" instead of the desired defoliation (leaf drop).

Thidiazuron, Ginstar/Cutout/Adios, Finish, and ethephon are hormonal defoliants that result in increased ethylene synthesis by the plant. Ethephon releases ethylene, which stimulates further ethylene synthesis in the plant, resulting in abscission zone activation in the boll sutures and the base of leaf petioles. Thidiazuron mimicks a hormone known as a cytokinin. Although cytokinins promote leaf health in most plant species, in cotton very high concentrations of cytokinins promote ethylene synthesis and act as a defoliant. Because these hormonal-type defoliants bypass herbicidal injury, they are not as likely to cause desiccation (leaf stick) as herbicidal defoliants.

Herbicidal Defoliants

Folex: Phosphate-type materials containing tribufos (active ingredient in Folex) have been used for years and are regarded as standards. Their performance is essentially equal and effective over a broad range of environmental conditions. Minimum temperature for optimum performance is 55-60 F. These materials do not inhibit re-growth or appreciably improve boll opening. Activity improves with advanced maturity of the crop. Leaf removal with each of these products is usually rapid and addition of surfactants offers benefit only under adverse conditions. These products have a pungent odor.

Labeled Rates: 16-24 oz per acre, lower rates may used in mixtures with other harvest aids or under warm conditions.

Aim: Aim (carfentrazone) has excellent activity for desiccation of juvenile growth but does not inhibit re-growth. In mature cotton, and/or cool conditions, Aim activity may be similar to Folex. However, in warm conditions less-than-desirable defoliation and excessive desiccation have been observed. When two applications are necessary, Aim has

performed very well as the second application. Aim has shown excellent activity in desiccating morninglories. Aim can be tank-mixed with any defoliant, and the addition of 1 percent v/v crop oil is needed.
Labeled Rates: 0.25-1.6 oz per acre.

Display: Display is a combination of the herbicides carfentrazone (Aim) and fluthiacet-methyl (Cadet). Similar to other herbicidal defoliants, Display has excellent activity on juvenile leaves including re-growth. However, Display will not inhibit re-growth. Under warm conditions, less-than-desirable defoliation and excessive desiccation may be observed. In situations in which two applications are necessary, Display has performed very well when included in the second application. Display alone or in combination with other defoliants will desiccate morninglories very well. The addition of 1 percent v/v crop oil concentrate or 0.25 percent v/v NIS is needed.
Labeled Rates: 0.3-1.0 oz per acre

ETX: ETX (pyraflufen ethyl) has excellent activity for desiccation of juvenile growth but does not inhibit re-growth. In mature cotton, and/or cool conditions, ETX activity has been shown to be similar to Folex. However, in warm conditions, less-than-desirable defoliation and excessive desiccation is likely with ETX. In situations in which two applications are necessary, ETX has performed very well as the second application. ETX can be tank-mixed with other defoliants, and the addition of 0.5-1.0 percent v/v crop oil is needed.
Labeled Rates: 0.9-1.7 oz per acre.

Reviton: Reviton (tiafenacil) is a newly released herbicidal defoliant/desiccant with excellent activity on mature and juvenile leaves including regrowth. Reviton will not provide inhibition of re-growth and during periods of warm to hot temperatures, an application of Reviton may lead to excessive desiccation. Similar to other PPOs, Reviton fits well in the second application. The addition of 1 percent v/v crop oil concentrate or 0.25 percent v/v NIS is needed.
Labeled Rates: 1.0-3.0 oz per acre

Sharpen: Sharpen (saflufenacil) is a herbicidal defoliant/desiccant. Sharpen has excellent activity on mature and juvenile leaves including regrowth. Sharpen will provide little to no inhibition of re-growth. During periods of warm to hot temperatures, application of Sharpen may lead to excessive desiccation. However, in a two-pass defoliation scenario, Sharpen has performed very well in the second application. Sharpen must be applied with methylated seed oil (MSO) at 1 percent v/v plus ammonium sulfate (AMS) or urea ammonium nitrate (UAN)
Labeled Rates: 1.0-2.0 oz per acre

Hormonal Defoliants and Boll Opening Materials

Thidiazuron (many formulations): Thidiazuron SC is formulated as a soluble concentrate, requires a 24-hour rain-free period, and is sensitive to cool weather. Thidiazuron should not be applied when the average 24-hour temperature is predicted to be below 65 F for two to three days after application. In addition, thidiazuron products are slower with regard to leaf removal than Folex and may leave some bottom leaves; however, they effectively remove juvenile foliage. Thidiazuron does not improve boll opening; however, it will strongly inhibit re-growth when applied under favorable weather conditions at appropriate use rates. The potential for leaf desiccation is reduced with thidiazuron compared to herbicidal defoliants, especially when applied during periods of high temperatures. If thidiazuron is applied under less-than-favorable conditions, the addition of crop oil concentrate may enhance the activity of these materials. It is important to follow suggested sprayer cleanout procedures with thidiazuron.
Labeled Rates: 1.6-6.4 oz per acre.

Ginstar/Cutout/Adios : Ginstar/Cutout/Adios is an emulsifiable concentrate formulation of thidiazuron and diuron (Karmex, Direx). Ginstar/Cutout/Adios should be applied to mature cotton at least five days prior to scheduled harvest; however, defoliation may take longer under cool conditions. Addition of adjuvants or excess Ginstar/Cutout/Adios rates can cause desiccation or “stuck leaves” under warm conditions. The Ginstar/Cutout/Adios labels do not discuss tank-mixtures; however, tank-mixtures with ethephon have enhanced boll-opening activity.

Labeled Rates: 6.4-16 oz per acre. Lower rates may used in mixtures with other harvest aids or under warm conditions.

Finish 6 Pro/Terminate: Finish 6 Pro/Terminate contains ethephon and the synergist cyclanilide, which aids in defoliation. Finish 6 Pro is an excellent boll opener and may serve as a standalone product in warmer temperatures and well-cutout situations. Finish 6 Pro exhibits a limited level of re-growth control and is generally a faster boll opener than ethephon. Finish 6 Pro can be tank-mixed with thidiazuron, phosphate materials and Ginstar/Cutout/Adios.
Labeled Rates: 1.33-2.33 pints per acre.

Ethephon 6, BollBuster, etc.: Ethephon is a boll opening material that also enhances defoliation when applied in combination with other harvest aids. Acceptable defoliation with ethephon alone usually requires mature leaves, warm weather, and high use rates. Ethephon does not help bolls mature, but helps open mature and immature bolls. The addition of thidiazuron is recommended in cases where re-growth is expected.
Labeled Rates: 1.33-2.33 pints per acre.

Desiccants

Paraquat (Gramoxone SL; Firestorm): Paraquat can aid in opening of mature bolls when 3.1 to 5 oz/A is applied in combination with Folex, thidiazuron, or ethephon. Development of immature bolls will be inhibited by paraquat application. Paraquat is not recommended for use as a defoliant or boll opener for spindle-picked cotton unless a freeze is imminent. Use higher rates for desiccation of weeds and for stripper-harvested cotton.
Labeled Rates: 3.1-32 oz per acre.

Sodium Chlorate (Numerous Brands Available): Higher rates of sodium chlorate may act as a desiccant, tending to stick leaves on the cotton plant. At normal use rates for defoliation, sodium chlorate is generally not as effective as the other defoliants. It is not a strong inhibitor of terminal growth. Do not mix the chlorates with phosphate defoliants, phosphate insecticides or Prep.

Rotational Crop Restrictions

Producers who wish to follow a cotton crop with a small grain such as wheat should observe the following re-crop intervals to prevent crop injury or stand failure.

Table 1: Label restrictions for planting small grains following harvest aid application in cotton.

Harvest Aid	Small Grain Re-Crop Interval
Thidiazuron	**14 days**
Ginstar/Cutout/Adios	**1 month/1 month/2 months**
Folex 6	**None**
Aim	**None**
Display	**None**
ETX	**1 day**
Reviton	**None**
Sharpen	**None**
Finish 6 Pro	**1 month**
Ethephon	**1 month**
Paraquat	**None**
Sodium Chlorate	**None**

Table 2: Label restrictions for planting small grains following harvest aid application in cotton.

Harvest Aid[1]	**Labeled Broadcast Rate/Acre**	**Max. Use per Season**	**Rainfree Period (hours)[2]**	**Pre-Harvest Interval (Days)**	**Estimated min. temp.**	**Mature leaves**	**Juvenile leaves**	**Re-growth prevention**	**Boll opening**
Thidiazuron SC	1.6-6.4 oz	9.6 oz	24	5	65 F	Excellent	Excellent	Excellent	None
Ginstar/Cutout/Adios	6.4-16 oz	16 oz	12	5	60 F	Excellent	Excellent	Excellent	None
Folex 6	16-24 oz	24 oz	1	7	60 F	Excellent	Fair	Poor	None
Aim	0.5-1.6 oz	3.2 oz	8	7	55 F	Excellent	Excellent	Poor	None
Display	1.0 oz	2 oz	8	7	55 F	Excellent	Excellent	Poor	None
ETX	0.9-1.7 oz	5.5 oz	1	7	55 F	Excellent	Excellent	Poor	None
Reviton	1.0-2.0 oz	6.0 oz	1	10	55 F	Excellent	Excellent	Poor	None
Sharpen	2.0 oz	2.0 oz	1	5	55 F	Excellent	Excellent	Poor	None
Ethephon	21-42 oz	42 oz	6	7	60 F	Fair	Poor	Poor	Excellent
Finish 6 Pro	21-42 oz	42 oz	6	7	60 F	Excellent	Poor	Fair	Excellent
Desiccants									
Paraquat	3.1-32	32	30 min.	3	55 F	Fair	Excellent	Poor	Fair
Sodium Chlorate	4.5 # ai	N/A	24	7	55 F	Fair	Fair	Poor	None

[1] Addition of spray adjuvants may enhance defoliation during cold temperatures or when leaves are tough from drought-stressed conditions. However, adjuvants may increase leaf desiccation during the early season when temperatures are warm.

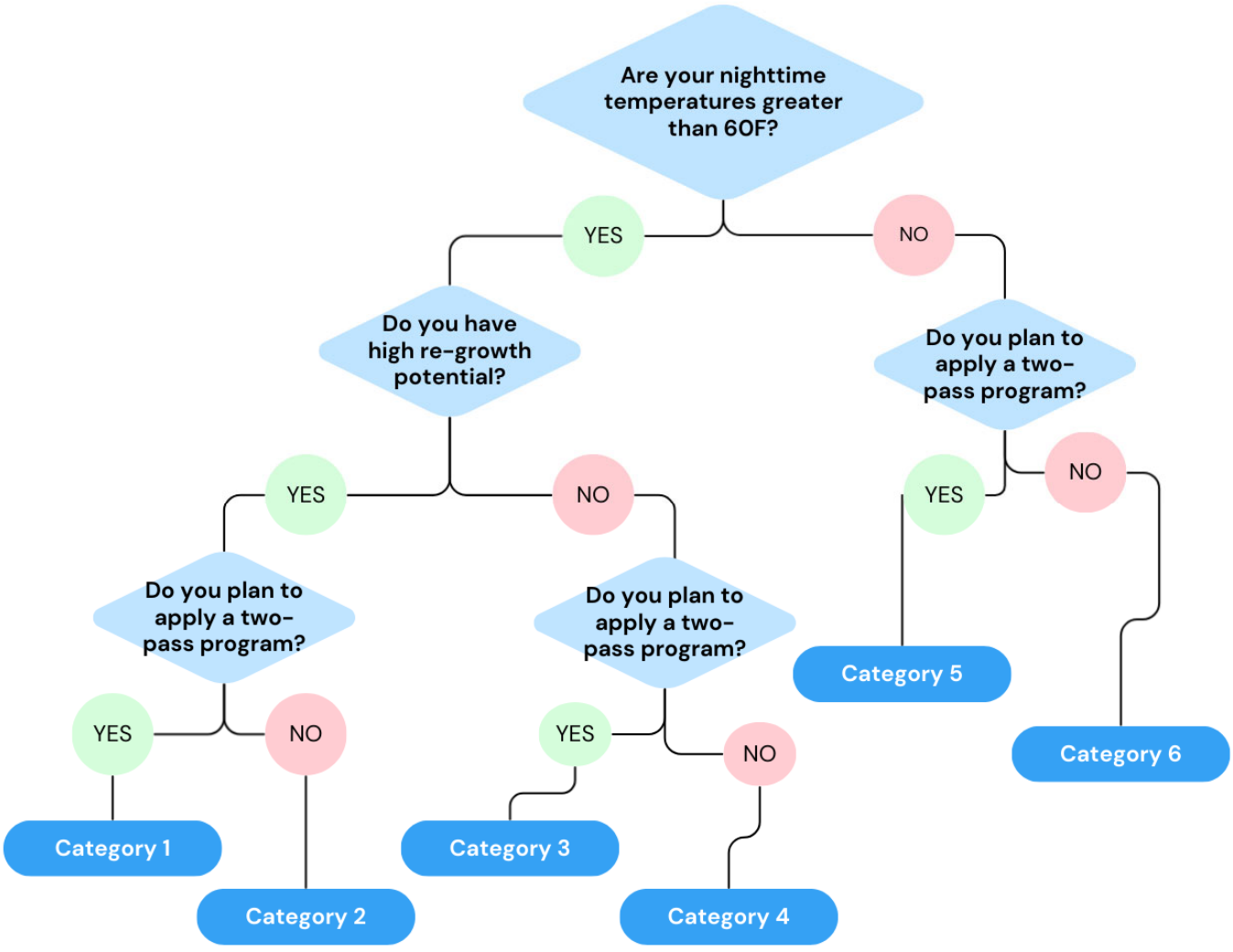
[2] Expected rainfree periods are estimates only and may or may not be exact. Other conditions, including temperature, moisture, and crop status, will play a role in product performance.

Defoliation Program Selection Guide

The following decision matrix should assist in the selection of both products and rates.

Boll openers

1. All concoctions listed below assume boll opening is required. If all bolls present are open, boll openers can be excluded.
2. Boll opener rates below refer to 6 lb ai/gallon ethephon containing products. If using an ethephon product of a lower ai/gallon, adjust rate accordingly.
3. Some boll openers contain the actives of both ethephon and cyclanilide (Finish 6 Pro, Terminate). Although ethephon products containing cyclanilide are preferred (work faster, provide some regrowth control, and can assist in leaf drop), they are more expensive than products only containing ethephon. One effective strategy to reduce cost is to split the recommended boll opener rate between the higher cost ethephon and cyclanilide product with a straight-good ethephon containing product, thereby allowing you to realize the benefits of cyclanilide at somewhat of a discount.



Defoliation Program Product Selection Guide

Category 1 — Warm temperatures; high regrowth potential; two-pass program

Thidiazuron 2-3 oz/acre **+** Boll opener 10-16 oz/acre

fb Folex 6 EC 6-8 oz/acre or a PPO **+** Boll opener 16-24 oz/acre

Thidiazuron 2-3 oz/acre + Folex 6 EC 4-6 oz/acre **+** Boll opener 16 oz/A

fb Folex 6 EC 6-8 oz/acre or a PPO **+** Boll opener 16-24 oz/acre

Ginstar/Cutout/Adios 2-4 oz/acre **+** Boll opener 10-16 oz/acre

fb Folex 6 EC 6-8 oz/acre or a PPO **+** Boll opener 16-24 oz/acre

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Category 2 — Warm temperatures; high regrowth potential; one-pass program

Thidiazuron 2-3 oz/acre **+** Boll opener 21-32 oz/acre

Thidiazuron 2-3 oz/acre **+** Folex 6 EC 4 oz/acre + Boll opener 21-32 oz/acre

Ginstar/Cutout/Adios 2-4 oz/acre **+** Boll opener 21-32 oz/acre

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Category 3 — Warm temperatures; low regrowth potential; two-pass program

Thidiazuron 2 oz/acre **+** Folex 6 EC 4-6 oz/acre **+** Boll opener 21 oz/acre

fb Folex 6 EC 6-8 oz/acre or PPO **+** Boll opener 21-32 oz/acre

Thidiazuron 2 oz/acre **+** Boll opener 16-21 oz/acre

fb Folex 6 EC 6-8 oz/acre or PPO **+** Boll opener 16-21 oz/acre

Folex 6 EC 6-8 oz/acre + Boll opener 16-21 oz/acre

fb a PPO **+** Boll opener 16-21 oz/acre

Category 4 — Warm temperatures; low regrowth potential; one-pass program

Thidiazuron 2 oz/acre + Folex 6 EC 4-6 oz/acre + Boll opener 21-32 oz/acre

Folex 6 EC 6-8 oz/acre + Boll opener 21-32 oz/acre

Ginstar/Cutout/Adios 4-6 oz/acre + Boll opener 21-32 oz/acre

Category 5 — Cooler temperatures; two-pass program

Folex 6 EC 10-16 oz/acre + Boll opener 16-21oz/acre

fb Folex 6 EC 10-16 oz/acre or a PPO **+** Boll opener 16-21 oz/acre

Ginstar/Cutout/Adios 6-9 oz/acre + Boll opener 16-21 oz/acre

fb Folex 6 EC 6-8 oz/acre or a PPO **+** Boll opener 16-24 oz/acre

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Category 6 — Cooler temperatures; one-pass program

Folex 6 EC 10-16 oz/acre + Boll opener 24-42 oz/acre

Ginstar/Cutout/Adios 6-9 oz/acre + boll opener 24-42 oz/acre



Disclaimer

This publication contains pesticide recommendations that are subject to change at any time. The recommendations in this publication are provided only as a guide. It is always the pesticide applicator's responsibility, by law, to read and follow all current label directions for the specific pesticide being used. The label always takes precedence over the recommendations found in this publication.

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