

SUGARCANE RIPENER RECOMMENDATIONS FOR 2020



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Glyphosate Program

Chemical ripeners for sugarcane in Louisiana provide an important benefit. When properly applied, ripeners can maximize recoverable sugar and minimize cane yield (tonnage) losses.

In 2020, the following glyphosate formulations are available as chemical ripeners: Roundup WeatherMAX and Roundup PowerMAX II. Note that these products are labeled for use in stubble sugarcane crops only and not in plant cane. When used according to the label and the following recommendations, these products increase recoverable sugar per ton of cane while minimizing losses in cane tonnage. Sugarcane response to ripener application may be lessened when conditions favor good natural ripening, during periods of plant stress or when conditions are not conducive to

glyphosate absorption. Ripener response varies among varieties. Ripener application will reduce vegetative growth and will reduce cane tonnage. However, cane tonnage losses are generally offset by increases in recoverable sugar, resulting in equal or greater yields of sugar per acre.

Rates

Please read the label before ripener use. The recommended application rate for Roundup WeatherMax and PowerMax II is 5.3 ounces per acre. For higher tonnage cane, such as L 01-299, consider higher rate ranges. The highest recommended rate is 7.4 ounces per acre. It is important to note that higher rates will not offset the number of treated days to harvest. Treatment to harvest interval is the most important aspect of any ripener management program.

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Sugarcane Ripeners Recommendations for 2020

Product	Recommended Rate	Recommended Rate Range	Label Rate Range
Glyphosate Formulation	Ounces per acre	Ounces per acre	Ounces per acre
Roundup WeatherMAX	5.3	5.3 to 7.4	4 to 12
Roundup PowerMAX II	5.3	5.3 to 7.4	4 to 12

Drift and Surfactants

Glyphosate can cause serious damage when drifted onto nontarget sites, such as newly planted cane, other crops or residential landscapes. Drift-control agents may be added to reduce drift. However, ripeners should only be applied when wind speeds are between 3 and 10 mph and should not be applied when there is a surface temperature inversion. A surface inversion occurs when the temperature at the surface is cooler than air above the surface — usually in the evening or early morning. Surface inversions restrict vertical air mixing and cause spray droplets to remain suspended. The spray droplets can then move laterally, reducing the effectiveness of the application and causing damage to off-target sites. Also, wind direction should be considered when applying a glyphosate ripener to avoid drifting onto off-target sites.

Rainfall less than six hours after application may reduce sugarcane response to glyphosate. The low use rate of glyphosate, when applied as a sugarcane ripener, results in a lower than ideal concentration of surfactant in the spray solution. This lower amount of surfactant may not provide the rain-fastening properties obtained when these formulations are applied at much higher herbicidal rates. Add a nonionic surfactant (0.25% by volume) only if rainfall is likely with six hours of application. Try to avoid ripener applications if rainfall is imminent.

Lodging in cane is common during the time ripeners are being applied. For best results, apply glyphosate to erect cane. If cane is recently lodged, allow sufficient time (seven to 10 days) for the cane to erect itself before ripener application.

Variety Response

Sugarcane varieties vary in their ripener response to glyphosate.

Highly Responsive Varieties	Moderately Responsive Varieties
HoCP 96-540	HoCP 00-950
L 99-226	L 01-283
L 01-299	Ho 07-613
L 03-371	HoCP 09-804
HoCP 04-838	L 11-183

Treatment-to-Harvest Intervals and Scheduling

A 35- to 49-day treatment-to-harvest interval is recommended following glyphosate ripener application. Harvesting prior to 35 days will not maximize recoverable sugar for ripener applications. Delaying harvest beyond 49 days could reduce yield potential in the current crop and may cause yield loss in subsequent crops. It is important to note again that a higher application rate is not a substitute for the recommended treatment-to-harvest interval. Treatment-to-harvest interval is the most important aspect of any ripener management program.

Sugarcane scheduled for harvest after Dec. 1 responds less to glyphosate because the crop is naturally mature at this time.

Response to glyphosate is based on sugar levels at the time of ripener application. Use a hand refractometer to test for juice Brix as an indicator of the cane's recoverable sugar prior to application. Fields with the highest Brix should be treated first; accordingly, fields with the highest Brix at the recommended treatment-to-harvest interval should be harvested first. Please refer to **Estimating Brix Values to Improve Sugarcane Quality**, AgCenter publication No. 2888. You can access the publication by holding the Ctrl key and clicking on the title.



Regrowth

Glyphosate ripener applications may delay shoot emergence following harvest and in the subsequent spring. In some years and in some varieties, spring shoots will appear bleached and stunted. Sugarcane will typically outgrow this injury as growing conditions improve with warmer weather.

Yield can be reduced in the following crop if harvest residue is not removed on a timely basis following harvest. In fields where mulch cannot be removed, a ripener should only be applied to the last stubble crop.

Ripener Additives

To date, research has shown no ripener additive has consistently improved glyphosate performance for ripening sugarcane in Louisiana.

Points to Consider When Applying Glyphosate as a Ripener

- Follow product labels and use recommended rates.
- Do not apply to seed cane or plant cane.
- Apply the higher recommended rates only to higher tonnage crops.
- The recommended treatment-to-harvest interval is 35 to 49 days. Exceeding the maximum treatment-to-harvest intervals of 49 days may cause yield loss.
- For best results, apply glyphosate to erect cane. If recently lodged, allow sufficient time (seven to 10 days) for the cane to erect itself.
- Add a nonionic surfactant (0.25% by volume) only if rainfall is likely with six hours of application. **Do not apply ripeners when rainfall is imminent.**
- Use a drift control agent to reduce off-target movement.
- Use a hand refractometer to measure juice Brix to optimize ripener scheduling.

Moddus Program

The plant growth regulator Moddus is labeled for use as a ripener on sugarcane in Louisiana. Moddus can be applied to **all** crops in the sugarcane crop cycle. Moddus alone does not increase recoverable sugar as effectively as glyphosate. The best use of Moddus has been as a tank mix with glyphosate.

Moddus Ripener Recommendation for Sugarcane in Louisiana

Product	Recommended Rate
	Ounces per acre
Moddus + Glyphosate	11 + 2.7

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