

Weed Management in Sesame¹

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Sesame is a relatively new grain crop being grown in Florida. Although this crop provides many system benefits as a rotation partner, weed control is an important consideration. Currently, there are few herbicides registered for use in sesame (Table 1). Therefore, choosing a field with a history of low weed pressure will be helpful. Additionally, the use of stale seedbed techniques should be considered. A *stale seedbed* means that the soil is prepared a few weeks or months ahead of planting, then the weeds that germinate are controlled—with tillage or, preferably, with herbicides—multiple times prior to planting. This strategy will help to deplete the seedbank in the upper few inches of soil and result in emergence of fewer weeds during the cropping season.

Rotational Considerations

Sesame is highly susceptible to herbicides used in soybean, peanut, and cotton—such as Pursuit (imazethapyr), Cadre (imazapic), and Envoke (trifloxysulfuron). Sesame should not be planted in fields treated with these herbicides within the past 26 months. Rotational intervals vary depending on herbicide, soil type, and rate. Check rotational intervals specified in the label before planting. Field bioassays are highly recommended before you consider planting sesame in fields treated with the aforementioned herbicides.



Figure 1. For sesame, weed control is an important consideration.
Credits: Doug Mayo, UF/IFAS

1. This document is SS-AGR-392, one of a series of the Agronomy Department, UF/IFAS Extension. Original publication date June 2015. Revised April 2021. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.
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Table 1. Herbicides for use in sesame.

Herbicide Active Ingredient (Trade/Product Names)	Mode of Action Group (MoA)	Application Rate per Acre (total per A/season or year)	Reentry Interval (REI)	Remarks
Preplant Burndown				
glyphosate (Roundup, or various)	9	0.5–1 lb acid equivalent	4 hrs	Glyphosate can be applied before, during, or after planting—but prior to crop emergence. Can be tank-mixed with preemergence herbicides but needs to be applied prior to crop emergence. Do not apply if crop has emerged—it will kill the crop.
paraquat (Gramoxone SL 2E—2 lb ai/gallon product) or (Paraquat 3.0 S—3 lb ai/gallon product)	22	2–3.75 pt or 1.3–2.5 pt	12 hrs	Paraquat can be applied before, during, or after planting—but prior to crop emergence. Can be tank-mixed with preemergence herbicides but needs to be applied prior to crop emergence. Do not apply if crop has emerged—it will kill the crop.
pyraflufen-ethyl (ET)	14	0.5–2 oz	12 hrs	For control of broadleaf weeds. Do not exceed 5.5 oz/ac/yr. The addition of a crop oil adjuvant will improve control. Planting can occur within 1 day of application. Can be mixed with glyphosate to increase weed spectrum.
Preemergence				
S-metolachlor (Dual Magnum)	15	1–1.3 pt	24 hrs	Effective on most annual grasses as well as pigweeds and Florida pusley. Sesame response to Dual Magnum can be variable, ranging from no injury to complete crop loss. Although crop loss is not common, it does occur. Therefore, Dual Magnum has an indemnified label. It can only be obtained by going to www.farmassist.com . You must register and accept the indemnification before the label can be downloaded. Follow label directions to reduce the likelihood of injury. Although the risk of Dual Magnum injury to crops is real, the risk of crop loss due to uncontrolled weeds is likely worse. Therefore, using Dual Magnum will be necessary in most fields.
ethalfluralin (Sonalan HFP)	3	1–1.5 pt	24 hrs	Sonalan HFP is registered for use in oilseed crops, including sesame. It will control a variety of annual grasses and some broadleaf weeds (such as Florida pusley). However, no research has been conducted in Florida to determine sesame crop safety. Use this product with caution. Sonalan HFP should be applied 45 days ahead of planting to allow soil concentrations to decline to levels that are non-injurious to sesame.
Postemergence				
sethoxydim (Poast)	1	1.5–2.5 pt	12 hrs	Effective on most annual grasses, but weaker on perennial grasses such as common bermudagrass. Do not exceed 5 pt/ac/yr. All applications should contain either a crop oil concentrate or methylated seed oil, not a surfactant. Do not harvest within 60 days of application. Poast Plus is not registered for use in sesame.
clethodim (Select Max)	1	9–16 oz	24 hrs	Effective on most annual grasses and more effective on perennial grasses than Poast. Apply with a non-ionic surfactant. To control bermudagrass, make a second application 14 days after the first. Do not exceed 64 oz/ac/yr. Do not harvest within 14 days of application. Do not apply during flowering or severe crop injury will result. This product should be used early in the season, prior to flowering, or at the end of the season when flowering has ceased.

Herbicide Active Ingredient (Trade/Product Names)	Mode of Action Group (MoA)	Application Rate per Acre (total per A/season or year)	Reentry Interval (REI)	Remarks
clethodim (various suppliers)	1	6–8 oz	24 hrs	Effective on most annual grasses and more effective on perennial grasses than Poast. Apply 6–8 oz/ac with a crop oil adjuvant. To control bermudagrass, make a second application 14 days after the first. Do not harvest within 14 days of application. Do not apply during flowering (see statement for Select Max).
Harvest Aid				
glyphosate (Roundup Weathermax)	9	32 oz	4 hrs	Only use Roundup Weathermax (which has a supplemental label for this use) or other glyphosate products that specify use as a harvest aid in sesame. Apply when 50% of sesame leaves are brown to terminate the crop for harvest.