

Weed Control in Sweet Potato ¹

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Sweet potatoes are a long season crop. Control of weeds during the production can be difficult. Early season competition of weeds is extremely critical and a major emphasis on control should be made during this period. Growers must plan a total weed control program that integrates mechanical and cultural methods of weed control with the use of herbicides.

At the present time, there are only four preemergence (to weeds) residual herbicides for sweet potatoes. Cultivation is also an effective way to manage weeds early in the season. Rolling cultivators either by themselves or behind hilling blades can uproot many annual weeds that have escaped the herbicide or have emerged since the last cultivation. Cultivation and hilling, while useful, will disrupt the efficacy of soil-applied herbicides. Fusilade may be applied at any time until 55 days of harvest and Poast or Select up to 30 days of harvest to control emerged grass weeds. These herbicides do not provide preemergence control.

Herbicide performance depends on weather, irrigations, soil type, proper selection for weed species to be controlled, and accurate application and timing (Table 1).

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Table 1. Chemical weed controls: Sweet potato, yam.

Herbicide	Labeled Crops	Time of Application to Crop	Rate (lbs. AI./Acre)	
			Mineral	Muck
Carfentrazone (Aim)	Sweet potato	Preplant directed-hooded Row-middles	0.031	0.031
Remarks: Aim may be applied as a preplant burndown treatment and/or as a post-directed hooded application to row middles for the burndown of emerged broadleaf weeds. May be tank mixed with other registered herbicides. May be applied at up to 2 oz (0.031 lb ai). Use a quality spray adjuvant such as crop oil concentrate (coc) or non-ionic surfactant at recommended rates.				
Clethodim (Select) (Arrow) (Intensity) (Select Max)	Sweet potato, yams, other tuberous corn vegetables	Postemergence	0.1 - 0.125	0.1 - 0.125
Remarks: For the control of emerged annual and perennial grass weeds. For Select Max, apply at 9 - 16 fl oz/A with a non-ionic surfactant. For the others, do not apply more than 8 fl oz with a crop oil concentrate. Do not apply within 30 days of harvest.				
Clomozone (Command 3 ME)	Sweet potato	Pretransplant Posttransplant	0.48 - 0.56	----
Remarks: For control of annual grasses and broadleaf weeds, apply broadcast 1.3 pints/acre. Also, may be applied as a single application post transplant to the crop and prior to weed emergence at a maximum rate of 1.5 pints/acre.				
Clomozone (Command 3 ME)	Tuberous and corn vegetables (arracacha, cassava, taniar, yams)		0.75 - 1.24	----
Remarks: For control of grasses and broadleaf weeds apply 2 to 3.3 pints/acre broadcast. Try on trial basis only on arracacha, cassava and taniar.				
DCPA (Dacthal)	Sweet potato	Posttransplanting or layby	8 - 10.5	----
Remarks: Controls germinating annuals. Apply to moist soil or overhead-irrigate. Apply to weed-free field up to 6 weeks after transplanting.				
Fluazifop (Fusilade)	Sweet potato, yams	Postemergence	0.188	0.188
Remarks: Controls actively growing grass weeds. A total of 48 oz. product may be applied per season. Do not harvest within 55 days of application. Apply a crop oil concentrate or non-ionic surfactant in the spray mixture. Consult the label for specific rates and growth stage for best control.				
Flumioxazin (Valor)	Sweet potato	Pretransplant	0.095	----
Remark: Valor must be applied prior to transplanting sweet potatoes at more than 3 oz product/A. Do not apply to any variety other than Beauregard unless user has tested Valor on the other variety and found crop tolerance to be acceptable. Do not apply in a tank mix other than labeled rates of clomozone. Check the supplemental label for complete instructions and precautionary statements.				
Glyphosate (Roundup, Durango Touchdown, Glyphomax)	Sweet potato	Chemical fallow preplant, preemergence, pretransplant	0.3 - 1.0	----
Remarks: Roundup, Glyphomax and Touchdown have several formulations. Check the label of each for specific labeling directions.				

Table 1. Chemical weed controls: Sweet potato, yam.

Herbicide	Labeled Crops	Time of Application to Crop	Rate (lbs. AI./Acre)	
			Mineral	Muck
Napropamide (Devrinol 50 DF)	Sweet potato	Posttransplanting	1 - 2	----
Remarks: Apply to soil surface immediately after transplanting. Will not control emerged weeds.				
Pelargonic Acid (Scythe)	Root and tuber vegetables, sweet potato, yam	Preplant preemergence Post-directed	3 - 10% v/v	3-10% v/v
Remarks: Product is a contact, nonselective, foliar herbicide. It has no residual activity. It may be tank mixed with soil residual herbicides. Consult the label for rates and timings.				
Sethoxydim (Poast)	Sweet potato	Postemergence	0.188	0.188
Remarks: For control of emerged annual and perennial grass weeds. Always add 1 qt oil concentrate per acre. Do not apply to drought-stressed grass weeds. Minimum time from application to harvest - 30 days.				