


POTATO

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs	
Refer to page 6 for Fall or Spring Early Preplant Herbicides.					
Soil-Applied Herbicides					
Eptam (EPTC ⁸)	3.5 to 9 pt EC 15 to 30 lb 20G (3 to 6 lb)	Grass and some broadleaf weeds.	PPI, Dragoff, or Directed spray at layby.	Incorporate immediately after application at 4 to 6 inches deep. Poor wild mustard control. Adjust rate for soil type. Allow a 45 day PHI. May be applied with metribuzin at 0.33 to 0.67 lb DF/A. A1-2 B1 N1	
	5.25 to 7 pt EC 22.5 to 30 lb 20G (4.5 to 6 lb)		Fall: Incorporate after October 15 until freeze-up.		
Treflan / generic trifluralin ³	1 to 2 pt EC 0.8 to 1.7 lb 60DF (0.5 to 1 lb)		Postplant incorporate (PoPI).	Adjust rates for soil type. Poor wild oat and no wild mustard control. Incorporate above the seed piece after planting or immediately following drag-off or hilling but before potato and weed emergence. Sonalan labeled only west of Hwy 281.	
Sonalan (ethalfluralin ³)	1.33 to 2.67 pt EC (0.5 to 1 lb)				
Prowl Prowl H2O (pendimethalin ³)	1.75 to 3.6pt 3.3EC 1.5 to 3 pt 3.8ACS (0.72 to 1.5 lb)		PRE or EPOST. Potato: Before 6 inches tall.	Incorporation improves consistency of weed control.	
Outlook / generic dimethenamid ¹⁵	16 to 21 fl oz EC (0.75 to 1 lb)		PRE. PHI: 40 days.	Only one application allowed.	
Dual//Magnum (S/metolachlor ¹⁵)	1 to 2 pt EC (1 to 2 lb)		PPI or PRE. PHI: 40 days.	Commercial mixture with metribuzin available as Boundary. A1-2 B1 B7 N1	
	1.67 pt EC (1.67 lb)		EPOST. PHI: 40 days.	Apply after hilling/lay-by. Will not control emerged weeds but will provide residual weed control. May be applied after PPI or PRE Dual application. Maximum season total = 3.6 pt/A.	
Lorox Linex (linuron ⁷) 	1 to 3 lb DF (0.5 to 1.5 lb) 1.5 to 3 pt L (0.75 to 1.5 lb)		Annual grass and broadleaf weeds.	PRE to potato. Small grass and broadleaf weeds.	Seed piece must be planted at least 2 inches deep. Apply after drag-off or hilling. Use higher rates for fine-textured soils. Apply with NIS at 1 qt/100 gal water to emerged weeds. A1-2 N1
Metribuzin ⁵	0.33 to 1.33 lb DF 0.5 to 2 pt 4F (0.25 to 1 lb)		Annual broadleaf weeds and grass suppression.	PRE to potato.	Apply after planting and before potato emergence or after drag-off. Do not incorporate. Adjust rate according to soil type. Commercial mixture with metolachlor available as Boundary. A1-2 N1 N3
	0.33 to 0.67 lb DF 0.5 to 1 pt 4F (0.25 to 0.5 lb)	POST. Weeds: Up to 1 inch tall. PHI: 60 days.		Only for russet type or white skinned varieties that are not early maturing. Do not use on early maturing, smooth skinned white or red-skinned varieties or Atlantic, Shepody, Chipbelle, Bellchip, or Centennial varieties. Soil residue may injure crops the following year. A1-2 N1 N3	
Willowood Sulfentrazone (sulfentrazone ¹⁴)	2 to 8 fl oz EC (0.75 to 2 lb)	Small-seeded broadleaf weeds.	PRE.	Refer to label for varietal restrictions, usage rates for soil textures and organic matter. Do not use on soils classified as "sand" with <1% organic matter. A1-2	
Chateau (flumioxazin ¹⁴)	1.5 oz WDG (0.77 oz)	Annual broadleaf weed control.	PRE to potato.	Apply after planting and before potato emergence. Seed piece must be planted at least 2 inches deep. Refer to label for use instructions. A1-2	
Reflex / generic fomesafen ¹⁴	0.75 pt EC (0.188 lb)		PHI for Reflex: 70 days.	Apply after planting and before potato emergence. Use is restricted to east of Hwy 281. Do not apply PPI or POST to potato. Refer to label for other restrictions. A1-2 N4	

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League (imazosulfuron ²)	4 to 6.4 oz WG (3 to 4.8 oz)	wild buckwheat, common	PRE	Be aware of rotation restrictions. Refer to label for use instructions.
	3.2 to 4 oz WG (2.4 to 3 oz)	lambquarters, yellow nutsedge,	POST	
	3.2 fb 3.2 oz WG (2.4 fb 2.4 oz)	pigweeds, common ragweed	POST fb POST	
Matrix / generic rimsulfuron ²	1 to 1.5 oz DF (0.25 to 0.375 oz)	Annual grass and small broadleaf weeds.	PRE to potato and weeds. After hilling or drag-off.	Requires precipitation after application for soil activation. Apply with soil-applied herbicides or in PRE followed POST sequential applications.
		Suppression of lambquarters and Canada thistle.	POST. Potato: Up to 14 inches tall. Annual weeds: Small.	Apply with oil adjuvant at 1 to 2 pt/A. Refer to label for application information and restrictions. A3 A5-8 N1-2
Matrix / generic rimsulfuron ² + Metribuzin ⁵	1 to 1.5 oz DF + 0.33 to 0.75 lb DF 0.5 to 1.12 pt 4F (0.25 to 0.375 oz + 0.25 to 0.56 lb)	Annual grass and quackgrass suppression and small broadleaf weeds including kochia,	PRE to potato and weeds. After hilling or drag-off but before potato emerge.	Refer to label for varietal restrictions. Injury may occur when metribuzin is applied POST to early maturing smooth-skinned white and all red- skinned potato varieties - use only the low rate of metribuzin and consider benefits of weed control vs risk of potato injury prior to application to "at risk" varieties. Allow a 60 day PHI. Use the low rate of metribuzin when applied PRE to coarse textured soil. A3 A5-7 N1-2
		lambquarters, wild buckwheat.	POST. Potato: Up to 14 inches tall. Annual weeds: Small.	
2,4-D LV4 ⁴ 2,4-D LV6 ⁴ (Use registered brands - See N5)	2.3 fl oz EC 1.6 fl oz EC (1.2 oz)	Broadleaf weeds suppression. Enhance and retain red color on skin.	Pre-bud - make sequential application 10 to 14 days later. PHI = 45 days.	Use on red potatoes grown for fresh market. Crop response may vary depending on variety, stress, and local conditions. Apply at 25 gpa by ground and 5 gpa aerially. Tank-mixtures with other pesticides and additives may increase risk of injury. A3 A6 N1 N5
Poast (sethoxydim ¹)	0.5 to 1.5 pt EC (0.1 to 0.3 lb)	Annual grasses.	POST. PHI: 30 days.	Add oil adjuvant at 1 gal/100 gal water but not less than 1.25 pt/A. Refer to label for tank-mix options.
Select Max 1EC Select 2EC Shadow 3EC (clethodim ¹)	9 to 16 fl oz EC 4 to 8 fl oz EC 2.66 to 5.33 EC (1 to 2 oz)	Annual grasses and quackgrass.	Grass weeds: Refer to soybean section on page 27.	Refer to Remarks in the POST grass herbicide section under Soybean for methods to avoid antagonism and reduced grass control from broadleaf herbicides. May be tank-mixed with metribuzin. A3 A5-6 N1
Zidua SC (pyroxasulfone ¹⁵)	2.5 to 3.25 SC (1.3 to 1.7 oz)	Annual grasses and some broadleaf weeds.	PRE	Apply after planting and drag-off and before potato emergence. Seed piece must be planted at least 2 inches deep. Refer to label for use instructions.

POTATO VINE DESICCATION

Herbicide	Product/A (ai/A)	Weeds	When to Apply	Remarks and Paragraphs
Reglone / generic diquat ²² + NIS	1 to 2 pt SL+ 2 qt/100 gal water (0.25 to 0.5 lb)	Desiccant.	PHI: Reglone = 7 days. Firestorm = 3 days Rely = 9 days. Aim = 7 days. Vida = 5 days.	Most active in hot, sunny conditions. Reglone/diquat at 2 pt/A can be applied to all potatoes varieties and seed potato. Sequential application may be made up to a total of 4 pt/A. Allow at least 5 days between applications. Paraquat use is for fresh market potatoes ONLY. Do not use paraquat on potatoes that will be stored or used as seed pieces. See specific paraquat label as not all carry this registration. B11
Generic Paraquat + NIS (paraquat ²²) RUP	0.7 to 1.3 pt 3SL + 2 qt/100 gal water (0.25 to 0.5 lb)			

Rely 280 + AMS (glufosinate ¹⁰)	21 fl oz SL + 3 lb/A (0.38 lb)			Do not apply to potato grown for seed pieces. Best results when applied at the beginning of natural potato vine senescence. Requires thorough coverage. Most active in hot, sunny conditions. Apply at > 20 gpa by ground and 5 to 10 gpa by air. Use higher spray volumes on dense potato vines. B9
Aim (carfentrazone ¹⁴)	3.2 to 5.9 fl oz EW (0.8 to 1.6 oz)			Add MSO at 1 qt/A. Use sequential applications and higher spray volumes on dense potato vines. Thorough coverage essential. Most active in hot, sunny conditions. B4
Vida (pyraflufen ¹⁴)	2 to 5.5 fl oz EC (0.05 to 0.14 oz)			
Sulfuric acid RUP	20 gal SL			Extremely corrosive.

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N1. Tillage through hilling and cultivation and herbicides are the two primary means of controlling weeds in potato. The first tillage operation after planting is usually a "blind" cultivation or harrowing before the crop emerges. The number of tillage operations will vary, but three cultivations and two hilling operations are common. After emergence, inter-row cultivation is used to control weeds and to form a ridge or hill over the seed piece and developing tubers. Besides controlling weeds, the ridge or hill helps protect tuber from sunburn (tuber greening), late season frosts, excessive rainfall or irrigation and reduces the amount of soil to be moved at harvest. Deep cultivation may cause root and tuber pruning.

N2. Matrix* (rimsulfuron) applied PRE or POST alone or with Metribuzin* controls annual grass and some broadleaf weeds. Use the low rate of Metribuzin* for PRE applications to coarse textured soil. Soil residual of Matrix* and Metribuzin* may injure susceptible crops the following year.

Matrix* controls eastern black nightshade and may control or suppress hairy nightshade but gives no black nightshade and lambsquarters control. Apply PRE to potato and weeds after hilling or drag-off but before potato emerge or POST before potato is 14 inches tall and annual weeds are less than 1 inch tall and quackgrass 4 to 6 inches tall. Best results occur when 0.75 inches of water occur soon after application. Apply with petroleum or MSO adjuvants at 1.25 pt/A to emerged weeds. Matrix* can be applied in a sequential program of 1 oz 25DF/A PRE followed by 1 oz 25DF/A POST. Matrix* may be tank-mixed with Eptam, Dual*, Metribuzin*, or Prowl. Follow label directions when tank-mixing Matrix* plus Metribuzin*. See Metribuzin paragraph for additional information.

N3. Metribuzin applied PRE or POST controls many broadleaf weeds and suppresses some grasses. Use lower rate on coarse textured soils and for weeds under 1 inch tall. Do not apply to red-skinned, early maturing, white-skinned varieties; or within 3 days after cool, wet, cloudy weather. Follow varietal restrictions according to Metribuzin* label. Injury may occur to russet type or white skin potato varieties; therefore, use only the low rate of Metribuzin* and consider the risk of weed control vs potato injury prior to application to "at risk" varieties. Refer to label for application information and restrictions.

N4. Reflex (fomesafen) applied PRE to potato controls many broadleaf weeds. A maximum of 0.75 pt may be applied in alternate years east of Hyw 281 in ND. Reflex can be tank-mixed with other registered herbicides. Do not apply PPI or POST or severe potato injury may occur. Potato varieties may vary in response to Reflex. Allow a 70 day PHI.

N5. 2,4-D products labeled for use in potato include but may not be limited to:
2,4-D LV4, Albaugh, Inc. Ankeny, Iowa
Weedone LV4 EC, Nufarm Americas, Inc. Burr Ridge, IL.
2,4-D Ester 6, Tacoma Ag, LLC. Durham, NC.
Turret, Nufarm Americas, Inc. Burr Ridge, IL.
2,4-D LV 6, Alligare, LLC. Opelika, AL.

*Or generic equivalent.

