

RANGE & PASTURE HERBICIDE MODE OF ACTION GUIDE*

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AMINO ACID SYNTHESIS INHIBITORS

This category of herbicides inhibits amino acid production in young, growing plants. Amino acid synthesis inhibitors can be selective (e.g., Pastora) or non-selective (e.g., glyphosate).

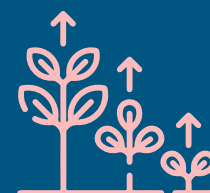


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GROWTH REGULATORS

The most common mode of action for rangeland herbicides. Growth regulators disrupt the plant hormone processes key to cell division, synthesis, growth, and respiration. These herbicides initiate rapid, uncontrolled growth at the cellular level to the point of plant death.



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PHOTOSYNTHESIS INHIBITORS

Photosynthesis inhibitors block plants from converting sunlight into usable energy. Upon exposure to light, plant death results indirectly as highly reactive molecules form and accumulate to cause plant destruction.



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CELL MEMBRANE DISRUPTORS

Cell membrane disruptors are primarily contact herbicides that rapidly induce the destruction of cell membranes, causing a rapid loss of chlorophyll and carotenoids.



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CELLULOSE BIOSYNTHESIS INHIBITORS

A unique mode of action that offers long-lasting weed control as a pre-emergent herbicide through the chemical inhibition of cellulose biosynthesis.



ACTIVE INGREDIENT	COMMON TRADENAME(S)	CHEMICAL FAMILY	MODE OF ACTION	REQUIRES PESTICIDE APPLICATOR'S LICENSE FOR PURCHASE?
2,4-D	(Numerous brands)	Phenoxy carboxylic acid	4	Yes
2,4-D + Aminopyralid	GrazonNext HL, Gunslinger AMP	Phenoxy carboxylic acid + pyridinecarboxylic acid	4	Yes
2,4-D + Picloram	GrazonPD3, Grazon P+D, Gunslinger P+D	Phenoxy carboxylic acid + pyridinecarboxylic acid	4	Yes
2,4-D + Clopyralid	Curtail	Phenoxy carboxylic acid + pyridinecarboxylic acid	4	Yes
2,4-D + Dicamba	WeedMaster	Phenoxy carboxylic acid + benzoic acid	4	Yes
Aminopyralid	Milestone, WHEATSTONE	Pyridinecarboxylic acid	4	No
Aminopyralid + metsulfuron-methyl	Chaparral	Pyridinecarboxylic acid + sulfonyleurea	4, 2	No
Aminopyralid + florypyrauxifen-benzyl	DuraCor	Pyridinecarboxylic acid + arylopicolinate	4	No
Aminocyclopyrachlor + Triclopyr	Invora	Pyrimidine carboxylic acid + pyridinecarboxylic acid	4	Yes
Chlorsulfuron	Telar XP	Sulfonyleurea	2	No
Clopyralid	Sonora	Pyridinecarboxylic acid	4	No
Clopyralid + aminopyralid	Sendero	Pyridinecarboxylic acid	4	No
Dicamba	RIFLE, Banvel, Clarity	Benzoic Acid	4	Yes
Flumioxazin	Promenade SC	N-phenylphthalimide	14	No
Fluroxypyr	FLAGSTAFF, Vista XRT	Pyridinecarboxylic acid	4	No
Glyphosate	(Numerous brands)	Organophosphorus	9	No
Hexazinone	Velpar	Triazinone	5	No
Imazapic	Panoramc 25L	Imidazolinone	2	No
Imazapyr	Arsenal	Imidazolinone	2	No
Indaziflam	Rezil, Esplanade	Alkylazine	29	No
Metsulfuron-methyl	MSM 60	Sulfonyleurea	2	No
Metsulfuron-methyl + chlorsulfuron	Cimarron Plus	Sulfonyleurea	2	No
Nicosulfuron + metsulfuron-methyl	Pastora	Sulfonyleurea	2	No
Picloram	Tordon 22K, Triumph 22K	Pyridinecarboxylic acid	4	Yes
Picloram + fluroxypyr	Surmount, Triumph XTR	Pyridinecarboxylic acid	4	Yes
Picloram + fluroxypyr + aminopyralid	MezaVue	Pyridinecarboxylic acid	4	Yes
Rimsulfuron	Laramie 25DF	Sulfonyleurea	2	No
Tebuthiuron	Spike 20P	Urea	7	No
Triclopyr	Remedy Ultra, Remedy	Pyridinecarboxylic acid	4	No
Triclopyr + clopyralid	Prescott	Pyridinecarboxylic acid	4	No
Triclopyr + fluroxypyr	PastureGard HL, CLEARGRAZE	Pyridinecarboxylic acid	4	No