

Table 21. Common Names of Registered Herbicides¹

Common Name	Trade Name	Producer	HRAC Group ²	Formulation
acetochlor	Surpass [®] , TopNotch [®]	Dow AgroSciences	K3	6.4EC, 3.2ME
acetochlor+atrazine	FulTime [®] , Keystone [®] , Keystone LA [®]	Dow AgroSciences	K3, C1	2.4+1.6ME, 3+2.25 SC, 4+1.5 SC
alachlor	Lasso [®] , Partner [®]	Monsanto	K3	4E, 65WDG
ametryn	Evik [®]	Syngenta	C1	76DF
atrazine	many	many	C1	many
atrazine+bentazon	Laddok S-12 [®]	Sipcam	C1, C3	2.5+2.5S
atrazine+dimethenamid-P	Guardman Max [®]	BASF	C1, K3	3.3+1.75L
atrazine+s-metolachlor	Bicep (II) Magnum [®]	Syngenta	C1, K3	3.1+2.4E
benefin	Balan [®]	United Agri-Products	K1	60DF
bensulide	Prefar [®]	Gowan	N	4E
bentazon	Basagran [®]	BASF	C3	4L
bromoxynil	Buctril [®]	Bayer Cropscience	C3	2E, 4EC
butylate	Sutan+ 6.7E [®]	Helm Agro	N	6.7E
carfentrazone	Aim [®]	FMC	E	40DF, 40EW
clethodim	Prism [®] , Select [®] , Select Max [®]	DuPont, Valent	A	0.94EC, 2EC, 0.97EC
clomazone	Command [®]	FMC	F3	3ME
clomazone+ethalfluralin	Strategy [®]	UAP/Platte	F3, K1	0.5+1.6 EC
clopyralid	Stinger [®]	Dow Agrosciences	O	3E
cycloate	Ro-Neet [®]	Helm Agro	N	6E
DCPA	Dacthal [®]	AMVAC	K1	75W
dicamba	Clarity [®]	BASF	O	4L
dimethenamid-P	Outlook [®]	BASF	K3	6E
diquat	Diquat [®] , Reglone [®]	Syngenta	D	2E
diuron	Karmex [®] , Direx [®] , Diuron [®]	Griffin, Drexel, others	C2	80DF, 4L
endothall	Desiccate II [®]	Cerexagri	–	2L
EPTC	Eptam [®] , Eradicane [®]	Gowan	N	7E, 20G, 6.7E
ethalfluralin	Curbit [®] , Sonalan [®]	United Agri-Products, Dow Agrosciences	K1	3EC
ethofumesate	Nortron SC [®]	Bayer CropScience	N	4SC
fluazifop-butyl	Fusilade DX [®]	Syngenta	A	2E
flumioxazin	Chateau WDG [®] , Chateau SW [®]	Valent	E	51WDG
flufenacet	Define DF [®]	Bayer CropScience	K3	60DF
fomesafen	Reflex [®]	Syngenta	E	2L
glyphosate	many	many	G	many
halosulfuron	Permit [®] , Sandea [®]	Monsanto, Gowan	B	75WSG
imazamox	Raptor [®]	BASF	B	1EC
imazethapyr	Pursuit [®]	BASF	B	70DG
imazethapyr+pendimethalin	Pursuit Plus [®]	BASF	B, K1	EC
linuron	Lorox [®] , Linex [®]	Griffin	C2	50DF, 4L
mesotrione	Callisto [®]	Syngenta	F2	4L
mesotrione+ s-metolachlor	Camix [®]	Syngenta	F2, K3	0.33+3.34EC
mesotrione+ s-metolachlor+atrazine	Lumax [®] , Lexar [®]	Syngenta	F2, K3, C1	0.268+ 2.68+1EC; 0.224+1.74+1.74EC
s-metolachlor	Dual (II) Magnum [®]	Syngenta	K3	7.6E
metribuzin	Sencor [®]	Bayer Cropscience	C1	4F, 75DF
napropamide	Devrinol [®]	United Phosphorous	K3	50DF, 2E
naptalam	Alanap [®]	Uniroyal	P	2L
nicosulfuron	Accent [®]	DuPont	B	75DF
norflurazon	Solicam [®]	Syngenta	F1	80DF
oxyfluorfen	Goal [®] , Galigan [®]	Dow Agrosciences Makhteshim-Agan	E	2E

Table 21. Common Names of Registered Herbicides¹ (continued)

Common Name	Trade Name	Producer	HRAC Group ²	Formulation
paraquat	Firestorm [®] , Gramoxone Max [®] , Gramoxone Inteon [®] , Parazone [®]	Chemtura, Syngenta, Makteshim Agan NA	D	3L, 2L, 3L
pelargonic acid	Scythe [®]	Dow Agrosciences	Z	4.2L
pendimethalin	Prowl [®] , Pendimax [®]	BASF, Dow Agrosciences	K1	3.3E, 3.8ACS
phenmedipham	Spin-Aid [®]	Bayer Cropscience	C1	1.3E
pronamide	Kerb [®]	Dow Agrosciences	K3	50W
pyrazon	Pyramin [®]	BASF	C1	65DF, 4.5SC
quizalofop	Assure II [®]	DuPont	A	0.88E
rimsulfuron	Matrix [®]	DuPont	B	25DF
sethoxydim	Poast [®] , Ultima 160 [®]	BASF	A	1.5E
sulfentrazone	Spartan [®]	FMC	E	75DF
2,4-D Amine	many	many	O	4L, 75WGS
terbacil	Sinbar [®]	DuPont	C2	80W
topramezone	Impact [®]	Amvac	F2	2.8EC
trifluralin	Treflan HFP [®] , Trilin [®] , Trifluralin [®]	Dow Agrosciences, Griffin, Gowan, Drexel, UAP, and others	K1	4E, 10G

¹ See inside front cover for abbreviations. ² Herbicide Resistance Action Committee Groups: Herbicides in the same HRAC group have similar modes of action for killing weeds. To reduce the risk of herbicide resistance, do not rely on herbicides in a single HRAC group year after year.

Disease Management Strategies

Effective disease management involves making the best possible decisions to reduce the risk of serious disease-related losses. Effective management is based on preventing disease and slowing its spread. That is, within a given season or over several seasons, the objective is to prevent disease outbreaks and the development of severe early-season epidemics. Several options for achieving this objective are discussed below.

Disease Diagnosis

Accurately diagnosing crop disorders is an essential first step in disease management. Knowing that certain diseases occur regularly in particular fields can be helpful when planning for future crops. The chances for bad decisions regarding the use of fungicides for protection or remedial treatment are greatly reduced with knowledge of diseases and their symptoms. Even the ability to distinguish between infectious disorders (those that can be spread from plant to plant) and noninfectious disorders (nutrient imbalances, herbicide injury, etc.) is valuable in making disease-control decisions because diagnosis in the field often involves eliminating unlikely possibilities first. Growers who have a reasonably good understanding of the types of infectious and noninfectious disorders that can occur, have a better chance of making the correct disease-control decisions.

Healthy Plant Material

One of the fundamental prerequisites for healthy crops is healthy seed or transplants. A crop started with infected or infested plant material will result in low yields with poor quality, and often will cost more to produce because of wasted chemical control efforts. Also, the diseased crop could thoroughly contaminate a field and remove it from production for an extended period. Diseases are occasionally introduced via contaminated seed from seed companies, but commercial seed companies remain the most reliable source of plant material. Saving vegetable seeds for next year's crop is not recommended. There has been a recent trend throughout the Midwest towards local greenhouse production of transplants (see Transplant Production, page 8). Although local transplant production offers advantages in environmental control over the crop and an escape from chronic southern soilborne diseases, there may be offsetting disadvantages in the risk of spreading seedborne disease and other diseases endemic to northern states.

Disease-Resistant Varieties

Using disease resistant varieties is among the most reliable and least expensive disease-control options. Although resistant varieties may not be as productive as