

# NORTHEASTERN WEED SCIENCE SOCIETY – 2018 COLLEGIATE WEED SCIENCE CONTEST, Hosted By BASF, Pine Level Research Farm

## HERBICIDE IDENTIFICATION – HERBICIDES, CROPS & WEEDS LIST

	Herbicide	Familiar Trade Name & Formulation	Herbicide Family	Mode of Action	Site of Action	Application Timing	Group Number	Application Rates: ai/Acre      ai/Ha	
1	Sethoxydim	Poast 1.5EC*	cyclohexanedione	Lipid synthesis inhibitor	ACCCase inhibitor	POST	1	0.191 lb	214.27 g
2	Chlorimuron	Classic 25WG	sulfonylurea	Amino acid synthesis inhibitor	ALS inhibitor	PRE	2	0.0156 lb	17.5 g
3	Halosulfuron	Permit/Sandea 75WG**	sulfonylurea	Amino acid synthesis inhibitor	ALS inhibitor	POST	2	0.5 oz	35.06 g
4	Imazethapyr	Pursuit 2AS*	imidazolinone	Amino acid synthesis inhibitor	ALS inhibitor	POST	2	0.063 lb	70.68 g
5	Cloransulam-methyl	FirstRate 84WG	triazolopyrimidine	Amino acid synthesis inhibitor	ALS inhibitor	PRE	2	0.0394 lb	44.2 g
6	Pendimethalin	Prowl H2O 3.8SC	dinitroaniline	Seeding root inhibitor	Microtubule inhibitor	PRE	3	1.0 lb	1.12 kg
7	2,4-D	Various (4lb/gal amine)	phenoxy	Plant growth regulator	TIR1 auxin receptors	POST	4	0.5 lb ae	0.56 kg
8	Dicamba	Clarity 4S **	benzoic acid	Plant growth regulator	TIR1 auxin receptors	POST	4	0.25 lb	280.46 g
9	Quinclorac	Drive XLR8/Facet 1.5L***	quinolone carboxylic acid	Plant growth regulator	Auxin receptors & Cell wall biosynthesis	POST	4	0.5 lb	0.56 kg
10	Atrazine	Aatrex 4L	triazine	Photosynthesis inhibitor	Photosystem II inhibitor site A	PRE	5	1.5 lb	1.68 kg
11	Metribuzin	TriCor 75DF	triazine	Photosynthesis inhibitor	Photosystem II inhibitor site A	PRE	5	0.375 lb	420.69 g
12	Bentazon	Basagran 5L*	benzothiadiazole	Photosynthesis inhibitor	Photosystem II inhibitor site B	POST	6	1.0 lb	1.12 kg
13	Diuron	Karmex 80DF	substituted urea	Photosynthesis inhibitor	Photosystem II inhibitor	PRE	7	0.5 lb	0.56 kg
14	Glyphosate	Roundup PowerMax (4.5 lb ae/gal)	amino acid analog	Amino acid synthesis inhibitor	EPSP synthase inhibitor	POST	9	0.77 lb ae	0.86 kg
15	Glufosinate	Liberty 280 2.34S*	amino acid analog	Nitrogen metabolism inhibitor	Glutamine synthetase inhibitor	POST	10	0.54 lb	0.61 kg
16	Clomazone	Command 3ME	isoxazolidinone	Pigment inhibitor	Diterpene biosynthesis inhibitor	PRE	13	0.375 lb	420.69 g
17	Flumioxazin	Valor SX 51WG	phenylphthalimide	Cell membrane disrupter	PPO inhibitor	PRE	14	0.064 lb	71.80 g
18	Fomesafen	Reflex 2L*	diphenyl ether	Cell membrane disrupter	PPO inhibitor	POST	14	0.25 lb	280.46 g
19	Saflufenacil	Sharpen 2.85WS***	pyrimidinedione	Cell membrane disrupter	PPO inhibitor	POST	14	0.0223 lb	25.02 g
20	Sulfentrazone	Aim 2EC*	triazolinones	Cell membrane disrupter	PPO inhibitor	POST	14	0.023 lb	25.80 g
21	S-Metolachlor	Dual II Magnum 7.64EC	chloroacetamide	Seedling shoot inhibitor	Long-chain fatty acid inhibitor	PRE	15	1.25 lb	1.40 kg
22	Pyroxasulfone	Zidua 4.17SC	isoxazoline	Seedling shoot inhibitor	Long-chain fatty acid inhibitor	PRE	15	0.106 lb	118.91 g
23	Paraquat	Gramaxone SL 2L**	bipyridylum	Cell membrane disrupter	Photosystem I electron diverter	POST	22	0.5 lb	0.56 kg
24	Mesotrione	Callisto 4SC**	triketone	Pigment inhibitor	HPPD inhibitor	POST	27	0.094 lb	105.45 g
25	Topramezone	Armezon 2.8SC***	pyrazolone	Pigment inhibitor	HPPD inhibitor	POST	27	.016 lb	18 g

**Note:** Adjuvants will be included in POST treatments according to product label. \*COC = crop oil concentrate at 1% (v/v); \*\*NIS = nonionic surfactant at 0.25% (v/v); \*\*\*MSO = methylated seed oil at 1% (v/v). Some herbicide formulations may include an adjuvant system and do not require additional adjuvants.

**List of Crops (planted from seed unless otherwise noted)**

1. Corn, field
2. Sweet corn
3. Soybean
4. Wheat
5. Canola
6. Field Pea
7. Sorghum, grain
8. Squash, pumpkin
9. Sunflower

### **List of Weeds**

1. Redroot pigweed
2. Ivyleaf and/or pitted Morningglory
3. Common lambsquarters
4. Common ragweed
5. Prickly sida
6. Velvetleaf
7. Common cocklebur
8. Wild mustard
9. Yellow nutsedge
10. Barnyardgrass
11. Large crabgrass
12. Green foxtail
13. Broadleaf signalgrass
14. Palmer amaranth