HERBICIDE RESISTANCE ACTION COMMITTEE

HRAC Mode of Action Classification 2024

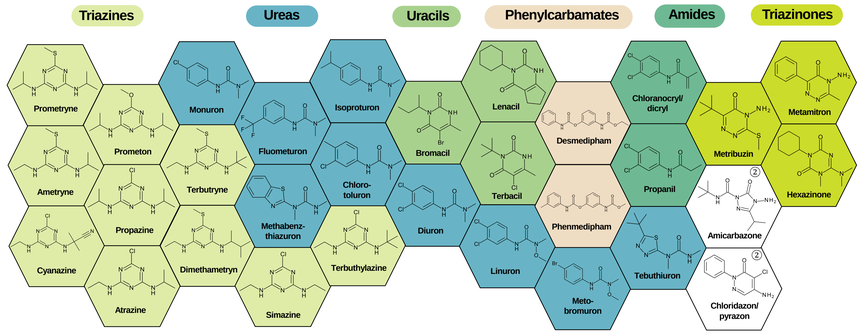
https://hracglobal.com/tools/2024-hrac-global-herbicide-moa-classification Here access the complete herbicide MoA classification excel database.

GO ON OUR WEBSITE

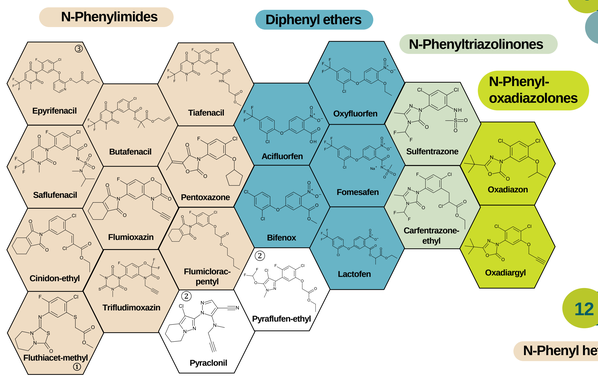
Light Activation of ROS[a]

5 Inhibition of Photosynthesis at PS II:

D1 Serine 264 binders (and other non-histidine 215 binders)

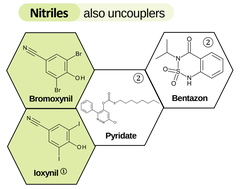


14 Inhibition of Protoporphyrinogen Oxidase (PPO)

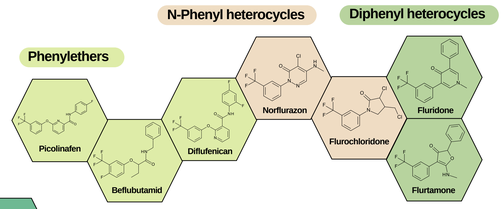


6 Inhibition of Photosynthesis at PS II:

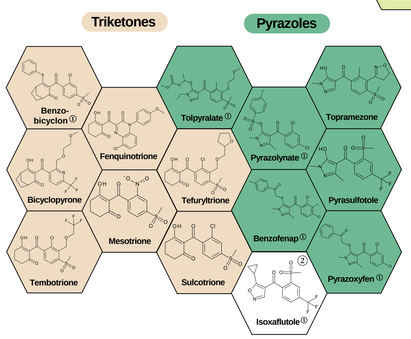
D1 Histidine 215 binders



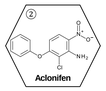
12 Inhibition of Phytoene Desaturase (PDS)



27 Inhibition of Hydroxyphenyl Pyruvate Dioxygenase (HPPD)

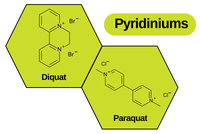


32 Inhibition of Solanesyl Diphosphate Synthase (SDPS)

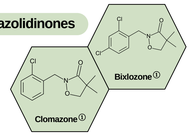


33 Inhibition of Homogentisate Solanesyltransferase (HST)

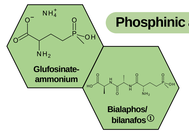
22 PS I Electron Diversion



13 Inhibition of Deoxy-D-Xylulose Phosphate Synthase (DXPS)

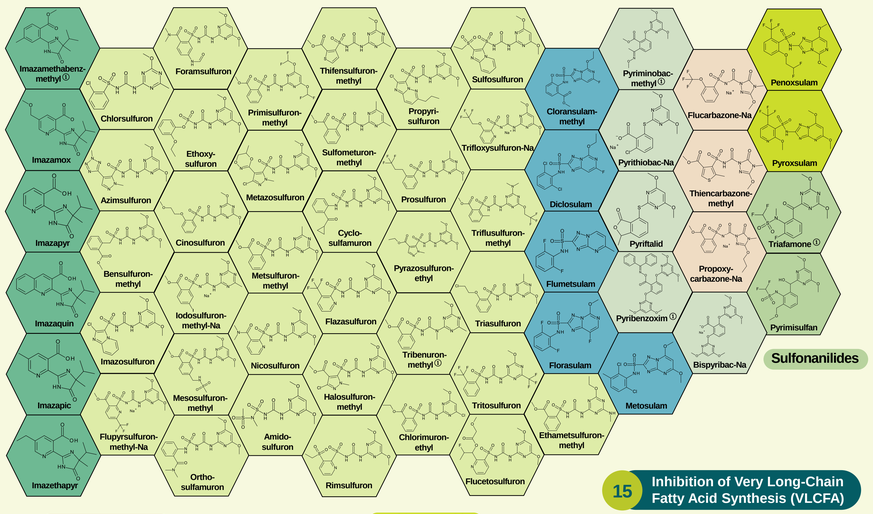


10 Inhibition of Glutamine Synthetase (GS)

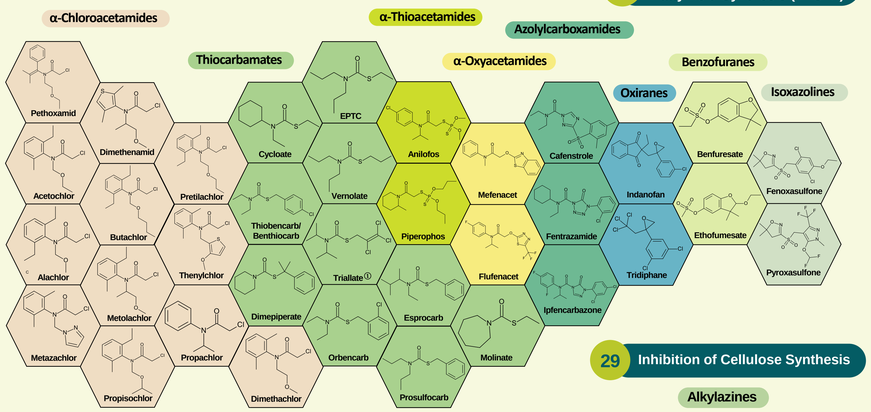


Cellular Metabolism

2 Inhibition of Acetolactate Synthase (ALS)

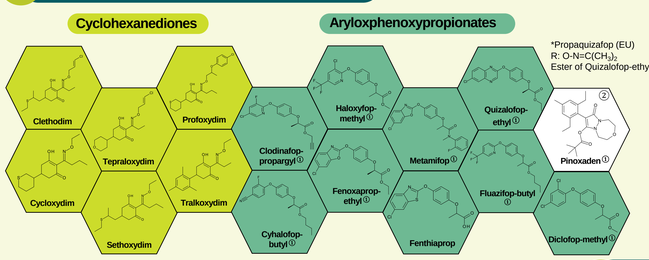


15 Inhibition of Very Long-Chain Fatty Acid Synthesis (VLCFA)

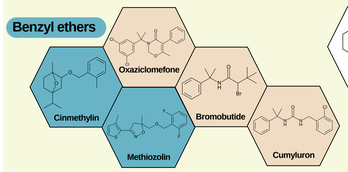


29 Inhibition of Cellulose Synthesis

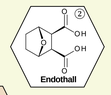
1 Inhibition of Acetyl CoA Carboxylase (ACCase)



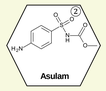
30 Inhibition of Fatty Acid Thioesterase (FAT)



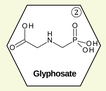
31 Inhibition of Serine Threonine Protein Phosphatase (STPP)



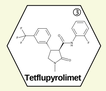
18 Inhibition of Dihydropteroate Synthase (DHPS)



9 Inhibition of Enolpyruvyl Shikimate Phosphate Synthase (EPSPS)

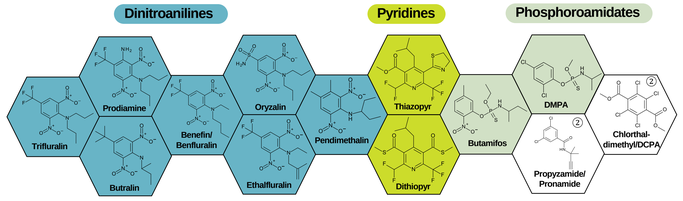


28 Inhibition of Dihydroorotate Dehydrogenase (DHODH)

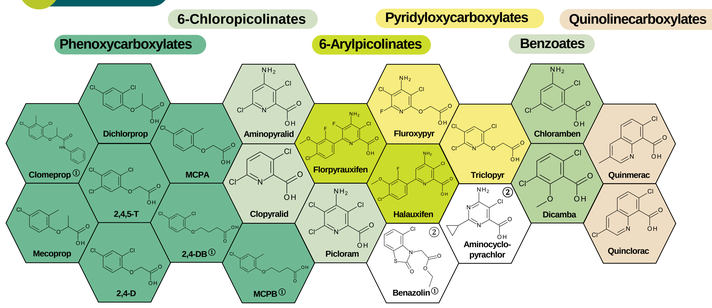


Cell Division and Growth

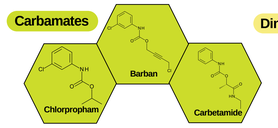
3 Inhibition of Microtubule Assembly



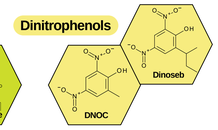
4 Auxin Mimics



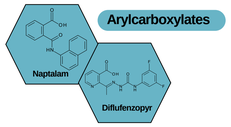
23 Inhibition of Microtubule Organization



24 Uncouplers

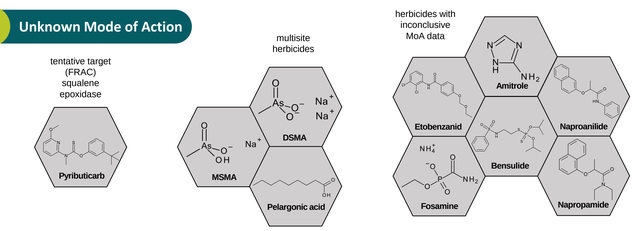


19 Auxin Transport Inhibitors



HRAC	Legacy HRAC	Mode of Action	HRAC	Legacy HRAC	Mode of Action
1	A	Inhibition of Acetyl CoA Carboxylase (ACCase)	18	I	Inhibition of Dihydropteroate Synthase (DHPS)
2	B	Inhibition of Acetolactate Synthase (ALS)	19	P	Auxin transport inhibitors
3	K1	Inhibition of microtubule assembly	22	D	PS I Electron Diversion
4	O	Auxin mimics	23	K2	Inhibition of microtubule organization
5	C1,2	Inhibition of Photosynthesis at PS II - D1 Serine 264 binders (and other non-histidine 215 binders)	24	M	Uncouplers
			27	F2	Inhibition of Hydroxyphenyl Pyruvate Dioxygenase (HPPD)
6	C3	Inhibition of Photosynthesis at PS II – D1 Histidine 215 binders	28	none	Inhibition of Dihydroorotate Dehydrogenase (DHODH)
9	G	Inhibition of Enolpyruvyl Shikimate Phosphate Synthase (EPSPS)	29	L	Inhibition of cellulose synthesis
			30	Q	Inhibition of Fatty Acid Thioesterase (FAT)
10	H	Inhibition of Glutamine Synthetase (GS)	31	R	Inhibition of Serine Threonine Protein Phosphatase (STPP)
12	F1	Inhibition of Phytoene Desaturase (PDS)	32	S	Inhibition of Solanesyl Diphosphate Synthase (SDPS)
13	F4	Inhibition of Deoxy-D-Xylulose Phosphate Synthase (DXPS)	33	T	Inhibition of Homogentisate Solanesyltransferase (HST)
14	E	Inhibition of Protoporphyrinogen Oxidase (PPO)			
15	K3	Inhibition of Very Long-Chain Fatty Acid Synthesis (VLCFA)	Ø	Z	Unknown mode of action

Ø Unknown Mode of Action



[a] Reactive oxygen species

① Indicates pro-herbicide

② HRAC's recommendation is not to include a chemical family name when there is one active in the family. Actives without chemical family names are indicated with a white background

③ New actives which are still in the process of registration at the time of release of the current poster version

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