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.

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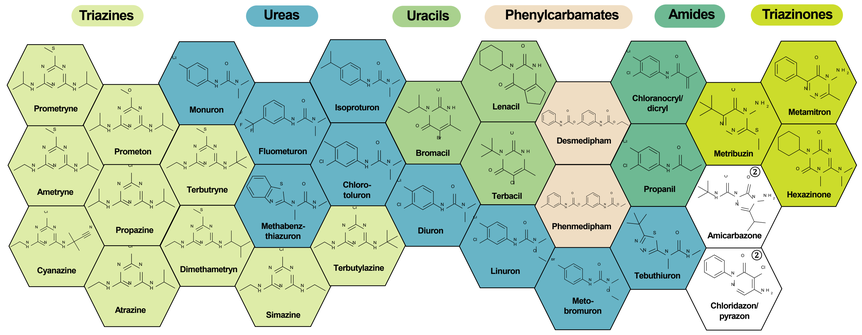
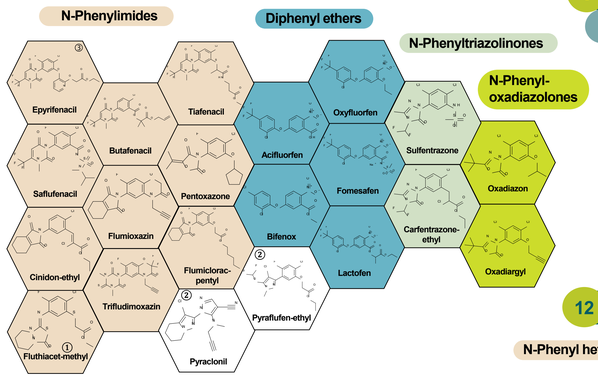
Light Activation of ROS[a]

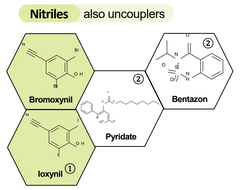
5 Inhibition of Photosynthesis at PS II:
D1 Serine 264 binders (and other non-histidine 215 binders)



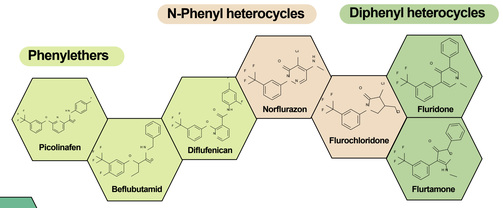
14 Inhibition of Protoporphyrinogen Oxidase (PPO)



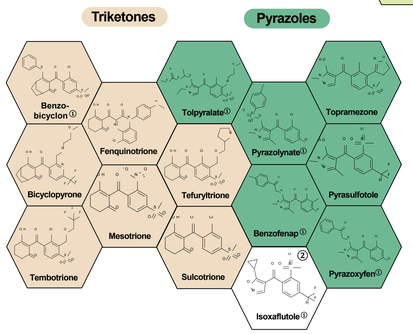
6 Inhibition of Photosynthesis at PS II:
D2 Histidine 215 binders



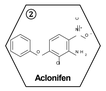
12 Inhibition of Phytoene Desaturase (PDS)



27 Inhibition of Hydroxyphenyl Pyruvate Dioxygenase (HPPD)

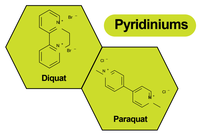


32 Inhibition of Solanesyl Diphosphate Synthase (SDPS)

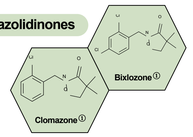


33 Inhibition of Homogentisate Solanesyltransferase (HST)

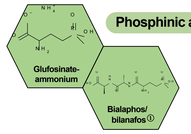
22 PS I Electron Diversion



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

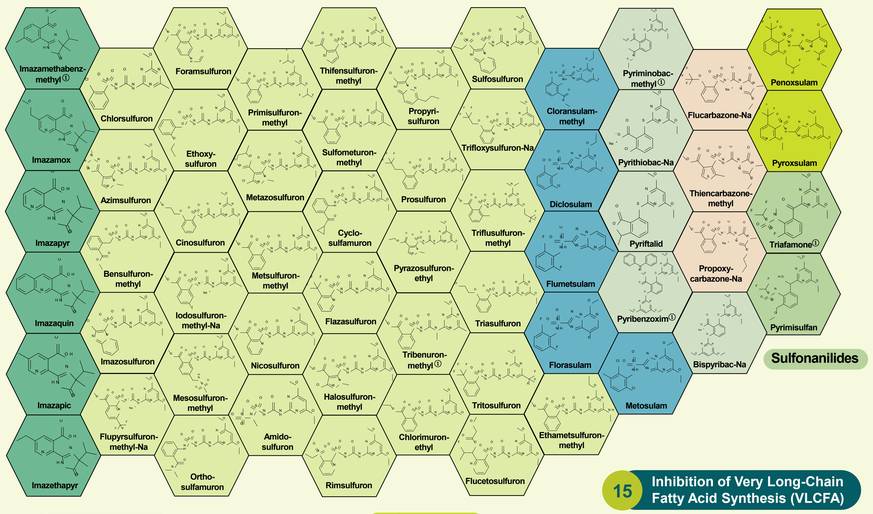


10 Inhibition of Glutamine Synthetase (GS)

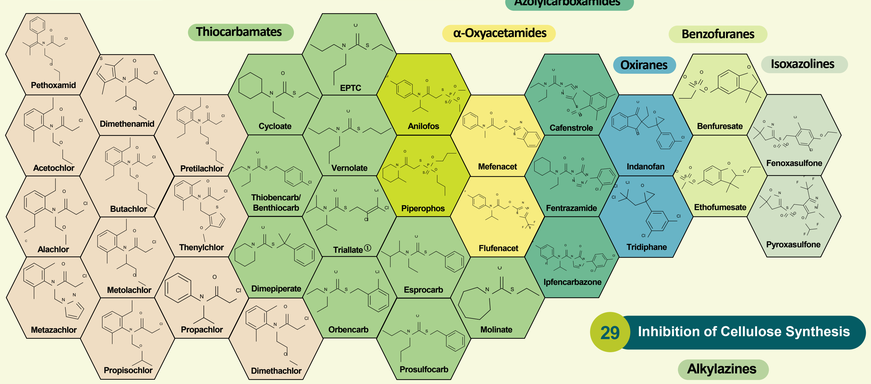


Cellular Metabolism

2 Inhibition of Acetolactate Synthase (ALS)

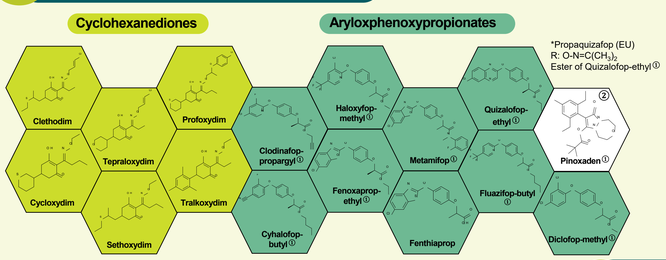


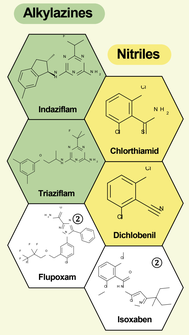
15 Inhibition of Very Long-Chain Fatty Acid Synthesis (VLCFA)



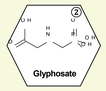
29 Inhibition of Cellulose Synthesis

1 Inhibition of Acetyl CoA Carboxylase (ACCase)

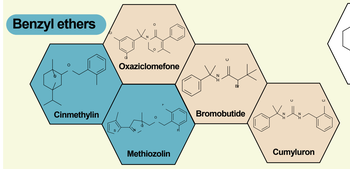




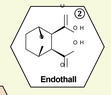
9 Inhibition of Enolpyruvyl Shikimate Phosphate Synthase (EPSPS)



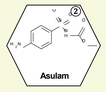
30 Inhibition of Fatty Acid Thioesterase (FAT)



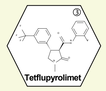
31 Inhibition of Serine Threonine Protein Phosphatase (STPP)



18 Inhibition of Dihydropteroate Synthase (DHPS)

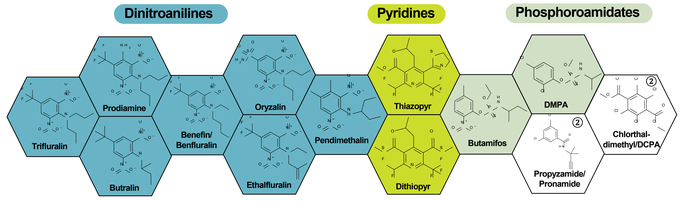


28 Inhibition of Dihydroorotate Dehydrogenase (DHODH)

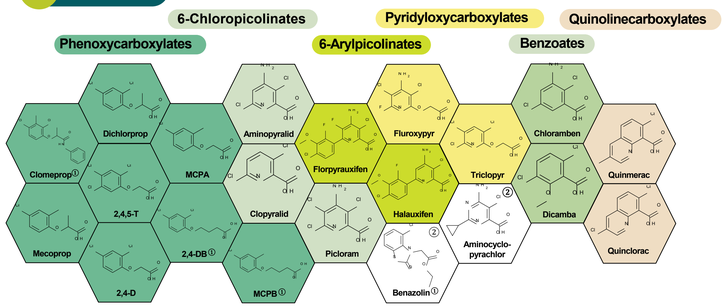


Cell Division and Growth

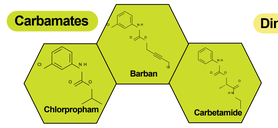
3 Inhibition of Microtubule Assembly



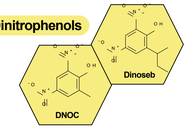
4 Auxin Mimics



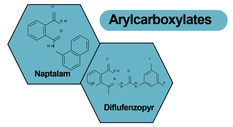
23 Inhibition of Microtubule Organization



24 Uncouplers



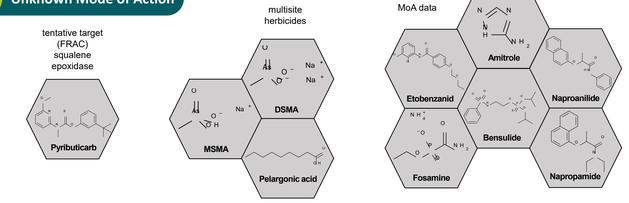
19 Auxin Transport Inhibitors



HRAC	Legacy HRAC	Mode of Action
1	A	Inhibition of ACCase
2	B	Inhibition of ALS
3	K1	Inhibition of microtubule assembly
4	O	Auxin mimics
5	C1,2	Inhibition of photosynthesis PS II – Serine 264 binders
6	C3	Inhibition of photosynthesis PS II – Histidine 215 binders
9	G	Inhibition of EPSP synthase
10	H	Inhibition of glutamine synthetase
12	F1	Inhibition of PDS
13	F4	Inhibition of DOXP synthase
14	E	Inhibition of PPO
15	K3	Inhibition of VLCFAs
18	I	DHPS inhibition

HRAC	Legacy HRAC	Mode of Action
19	P	Auxin transport inhibitors
22	D	PS I electron diversion
23	K2	Inhibition of microtubule organization
24	M	Uncouplers
27	F2	Inhibition of HPPD
28	none	Inhibition of dihydroorotate dehydrogenase
29	L	Inhibition of cellulose synthesis
30	Q	Inhibition of fatty acid thioesterase
31	R	Inhibition of serine threonine protein phosphatase
32	S	Inhibition of solanesyl diphosphate synthase
33	T	Inhibition of homogentisate solanesyltransferase
34	F3	Inhibition of lycopene cyclase
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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