



THE UNIVERSITY
of ADELAIDE

MANAGING HARD TO CONTROL WEEDS

CHRISTOPHER PRESTON

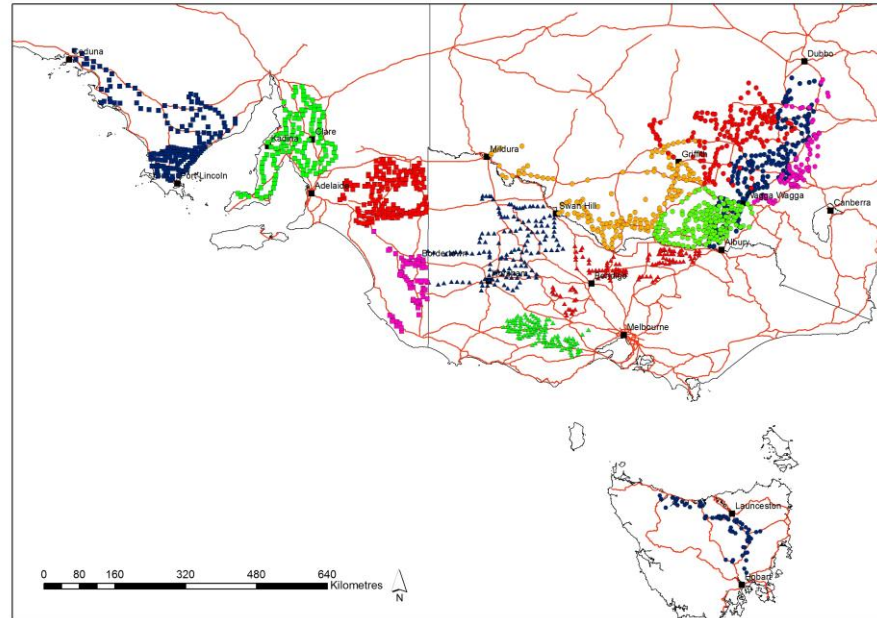


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WHY SOME WEEDS ARE HARD TO CONTROL

- New weeds we don't know much about
- Have evolved herbicide resistance
- There are no effective controls

HERBICIDE RESISTANCE IN ANNUAL RYEGRASS



HERBICIDE RESISTANCE IN ANNUAL RYEGRASS

Herbicide	Trade name	NSW	
		Western	Southern
Samples resistant (%)			
Diclofop-methyl	Diclofop-methyl	15	85
Clethodim	Havoc	1	3
Sulfometuron	Oust	29	74
Imazamox + Imazapyr	Intervix	7	75
Glyphosate	Roundup Dura	5	7
Trifluralin	TriflurX	2	1
Prosulfocarb + S-metolachlor	Boxer Gold	0	0
Pyroxasulfone	Sakura	0	0

MANAGING HERBICIDE RESISTANT RYEGRASS



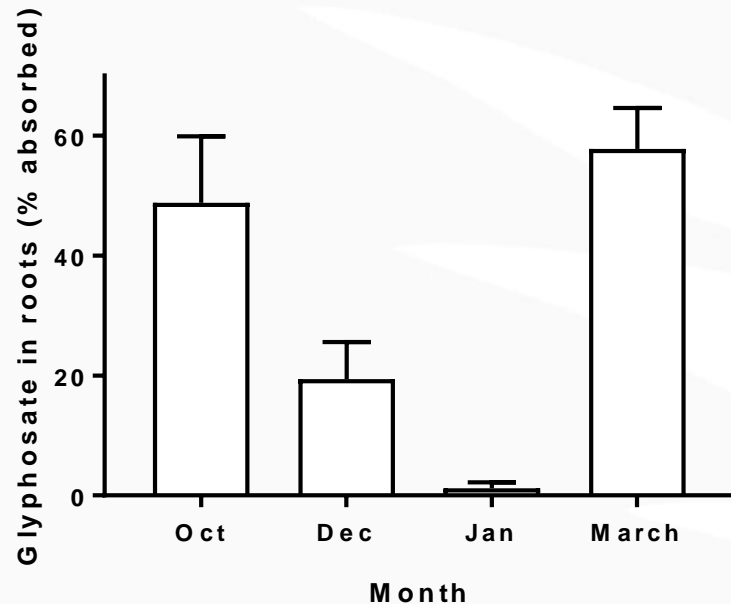


SILVERLEAF NIGHTSHADE

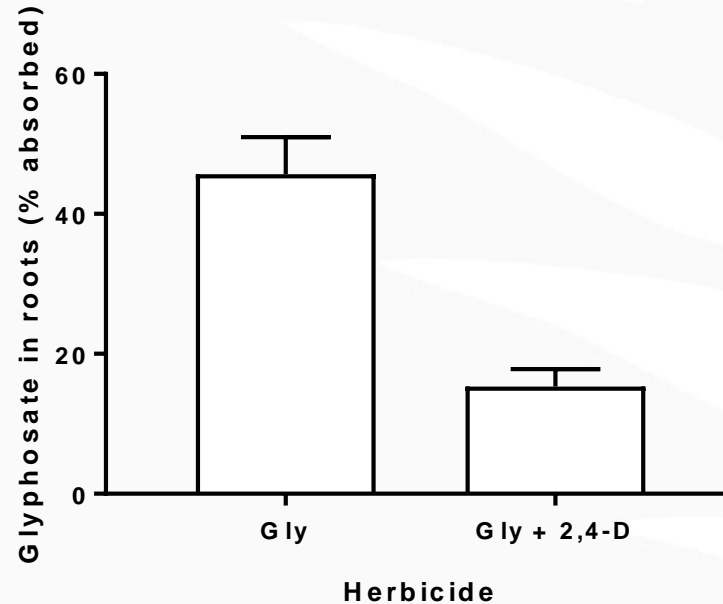
- Extensive root system – up to 3 m deep
- Germination is rare – mostly occurring in wet springs
- Spread mostly by sheep, maybe some by birds



TIMING OF GLYPHOSATE APPLICATIONS ON SILVERLEAF NIGHTSHADE



EFFECT OF ADDING 2,4-D ON GLYPHOSATE MOVEMENT TO ROOTS

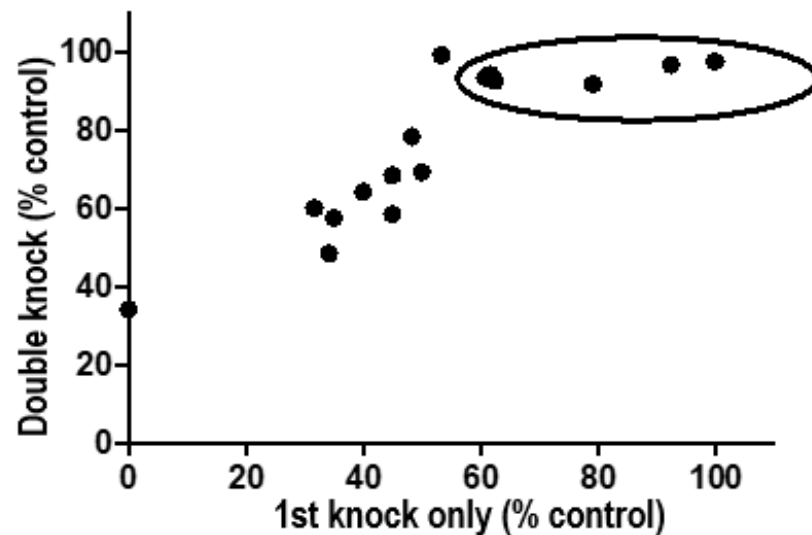
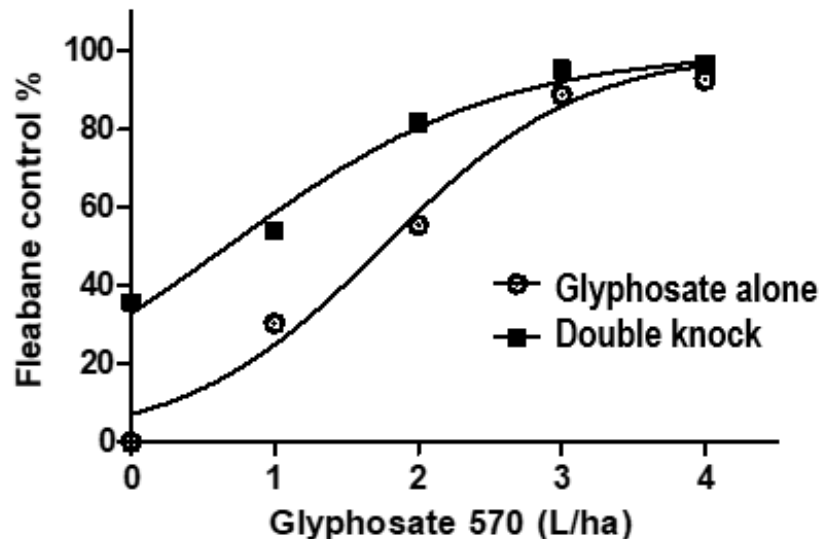


FLEABANE

- Small-seeded, surface germinating weed
- Germinates mainly in spring
- Can germinate at other times if sufficient water and temperature



GETTING THE DOUBLE KNOCK TO WORK

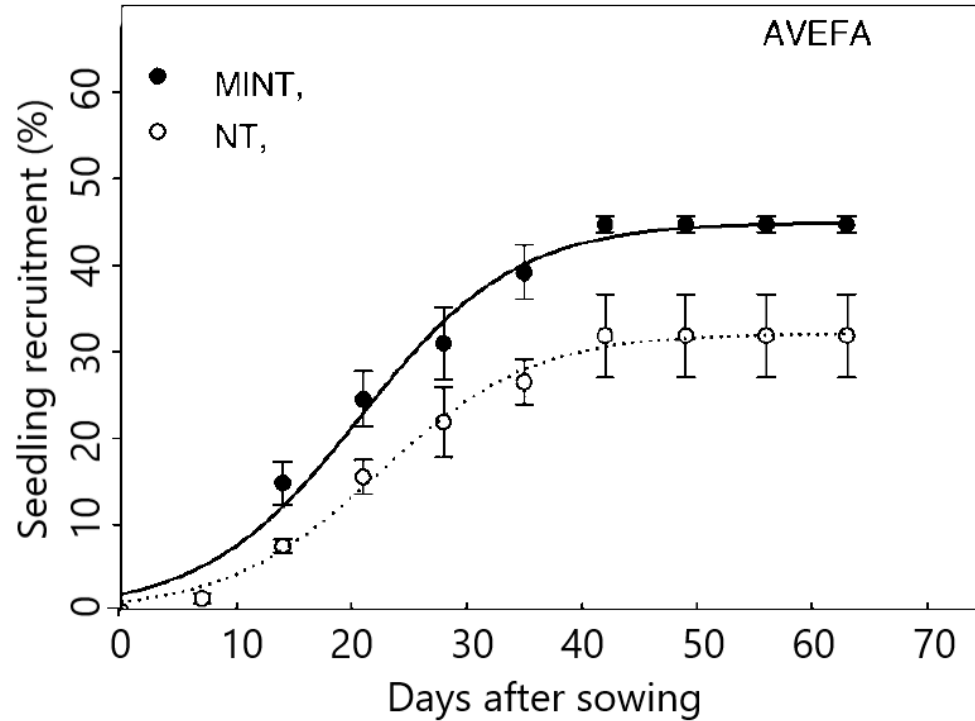


WILD OATS

- Resistance to Group A and B herbicides
- Extended emergence of seedlings
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WILD OATS HAS DELAYED EMERGENCE



MANAGING HERBICIDE RESISTANT WILD OATS

- Patterns of cross-resistance in wild oats can be more variable than in ryegrass



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