

The Growing Poppy Problem



Charlotte Morgan
Teagasc Oak Park
Trinity College Dublin

National Tillage Conference 2024

Wednesday, 31st January | Lyrath Hotel, Kilkenny

www.teagasc.ie/tillagecon24

Problem Broadleaf weed: Poppy

- Autumn and spring-germinating
- Very competitive
- 3rd most important weed in Europe, after blackgrass and Italian ryegrass
 - Cross-pollinating
 - High seedbank populations (20,000 seeds per plant)
 - Longevity (>10 years)
 - TSR and NTSR mechanisms



Some herbicide options for poppy control

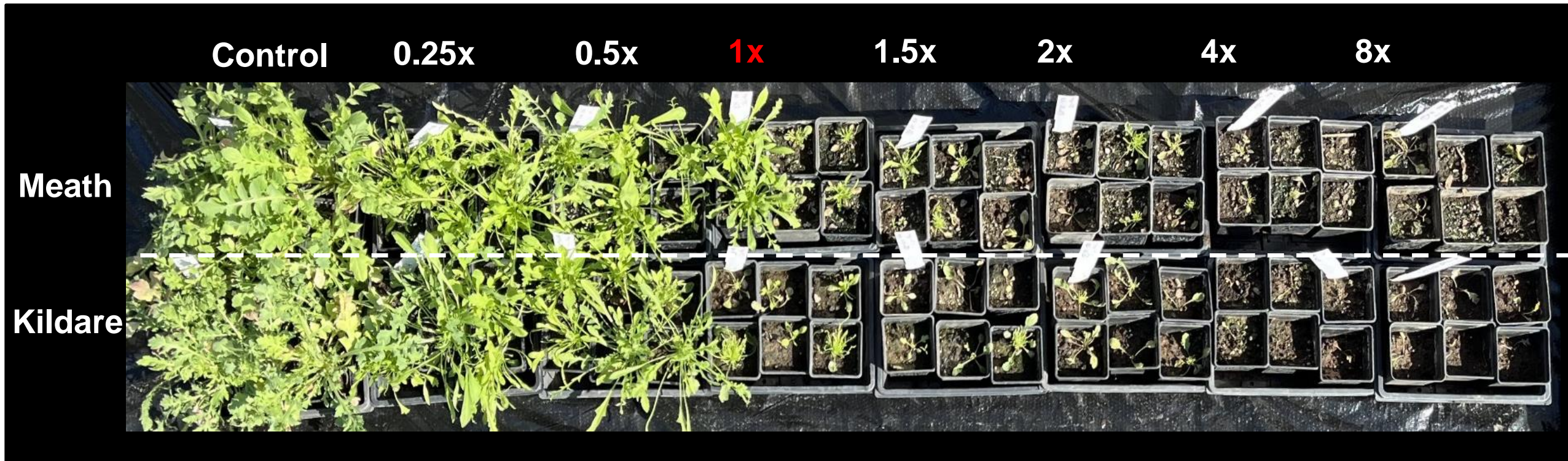
Herbicide (examples)	Active	Crop
Cameo Max (ALS)	Tribenuron + Thifensulfuron	Wheat, barley, oats
Ally Max (ALS)	Metsulfuron + Tribenuron	Wheat, barley, oats
Pacifica Plus (ALS)	Mesosulfuron+ Iodosulfuron	Winter wheat
Broadway Star (ALS)	Florasulam + Pyroxsulam	Wheat
Hurler (hormone)	Fluorxypyr	Wheat, barley, oats (& others)
Pixxaro (hormone)	Arylex + Fluorxypyr	Wheat, barley, oats (& others)
Zypar (hormone + ALS)	Arylex + Florasulam	Wheat, barley, oats (& others)
Astrokerb (non-ALS)	Propyzamide	Winter oilseed rape

Glasshouse resistance screening

- Two suspect populations from Meath & Kildare
- Plants grown and sprayed at 4-6 leaf stage
- Dose rates from 0.25 to 8 times the recommended label rates of
 - **Broadway Star (265 g/ha)**
 - **Ally Max (42 g/ha)**
 - **Cameo Max (60 g/ha)**
 - **Pacifica Plus (0.5 kg/ha)**



Effect of **Broadway Star** dose rate on poppy populations



*Counties used as sample ID

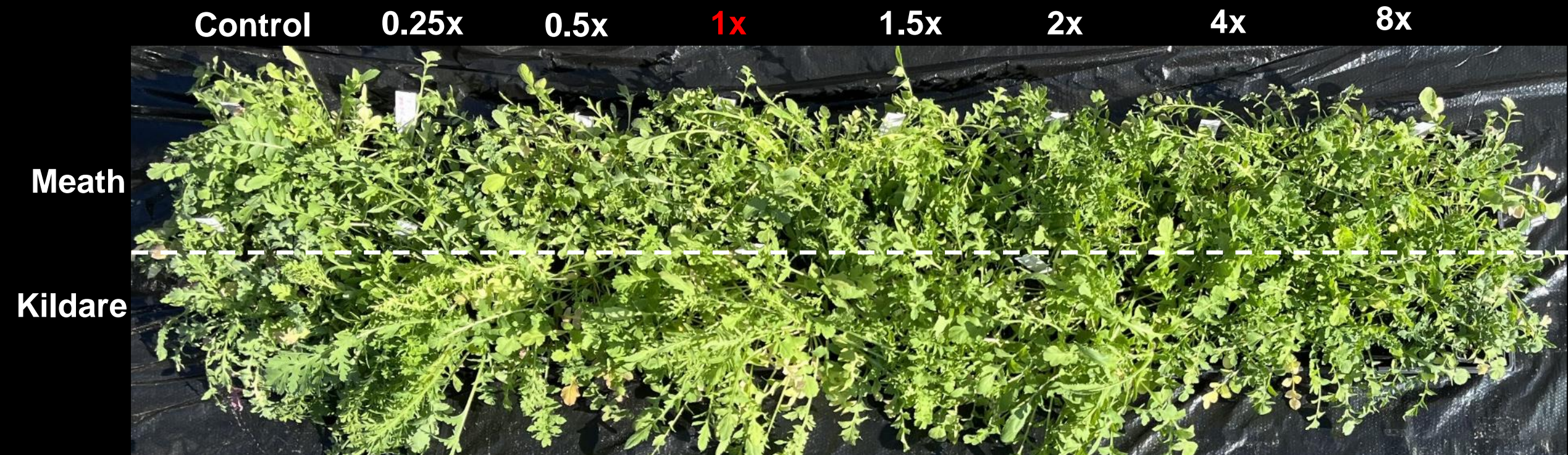
- **1.5x the label rate (this is well above the legal limit for farmer use) was required to achieve >80% control**

Effect of **Ally Max** dose rate on poppy populations



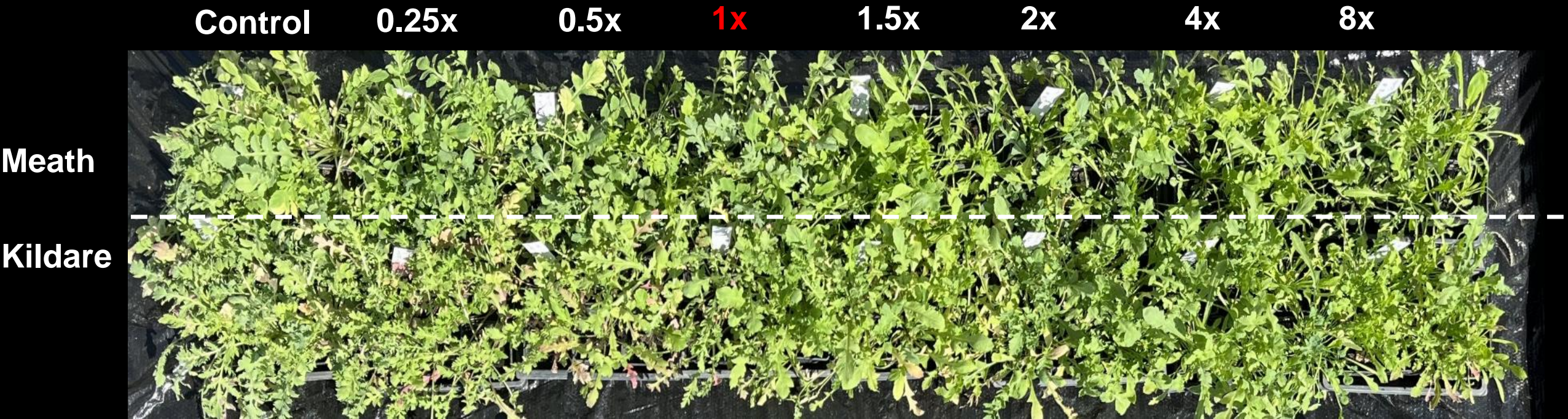
*Counties used as sample ID

Effect of **Cameo Max** dose rate on poppy populations



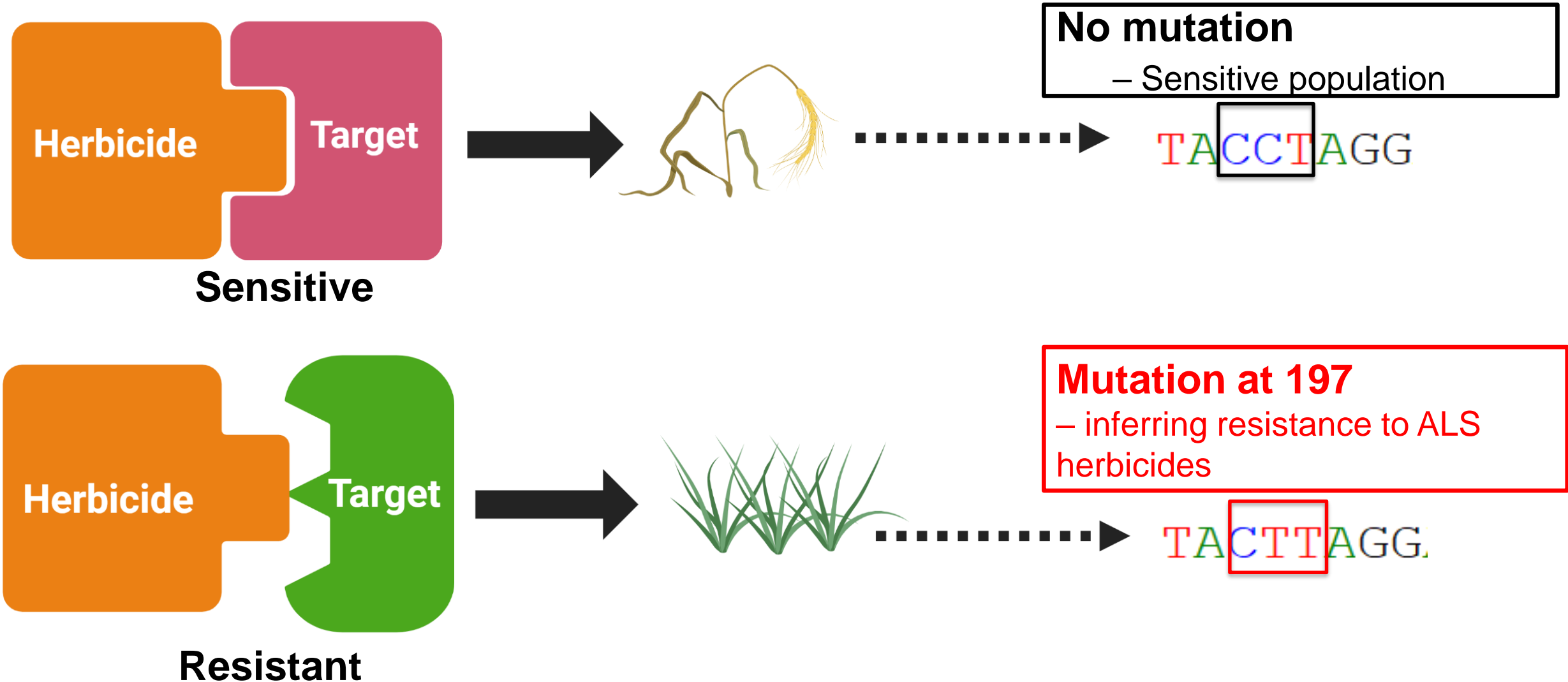
*Counties used as sample ID

Effect of **Pacifica Plus** dose rate on poppy populations



*Counties used as sample ID

Genetic work confirming TSR



Take home message

- These two populations have evolved TSR to ALS herbicides
- First poppy resistance in Ireland identified and verified molecularly
- **Need to be vigilant with all weeds and herbicides: resistance testing is critical**

In-field action

- Do not rely solely on ALS herbicides (Cameo Max etc.)
- Alternative herbicide modes of actions are crucial and very effective
 - Use Hormone types that are active on target weed (poppy)
- Integrated weed management approaches need to be developed

Acknowledgements

Thanks to:

Dr. Vijaya Bhaskar

Dr Susanne Barth

Prof Trevor Hodgkinson (TCD)

Dermot Forristal

Gerry Nolan

John Mahon



Have you un-controlled weeds in your crop at harvest? You may have herbicide resistance.

Avail of free herbicide resistance testing from Oak Park for grass or broad-leaved weeds in tillage crops.



Target fields :

- Where weed control is poor after herbicide use
- Where the same herbicide is used every year
- Particularly if blackgrass/ Italian ryegrass/ poppy is present.

We will test your weed and let you know the best herbicide and integrated weed management strategies to control this weed.

Contact your Advisor, or follow sampling and delivery instructions on: <https://bit.ly/3MrlcgR> or scan the QR code

