

Getting to grips with grassweeds



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Teagasc Oak Park

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www.teagasc.ie/tillagecon24

Sterile brome

- Mainly self-pollinating
 - Autumn emergence from top 5 cm
 - Short seed dormancy (< 5 years)
 - **Increased by**
 - Early-sowing winter cereals
 - Non-inversion (min-till, etc.)
 - Herbicide option only for winter wheat
 - ACCase/ALS resistance (Europe)
 - Reduced glyphosate-sensitivity (UK)
- **Ireland: populations are widespread; full resistance not yet documented**

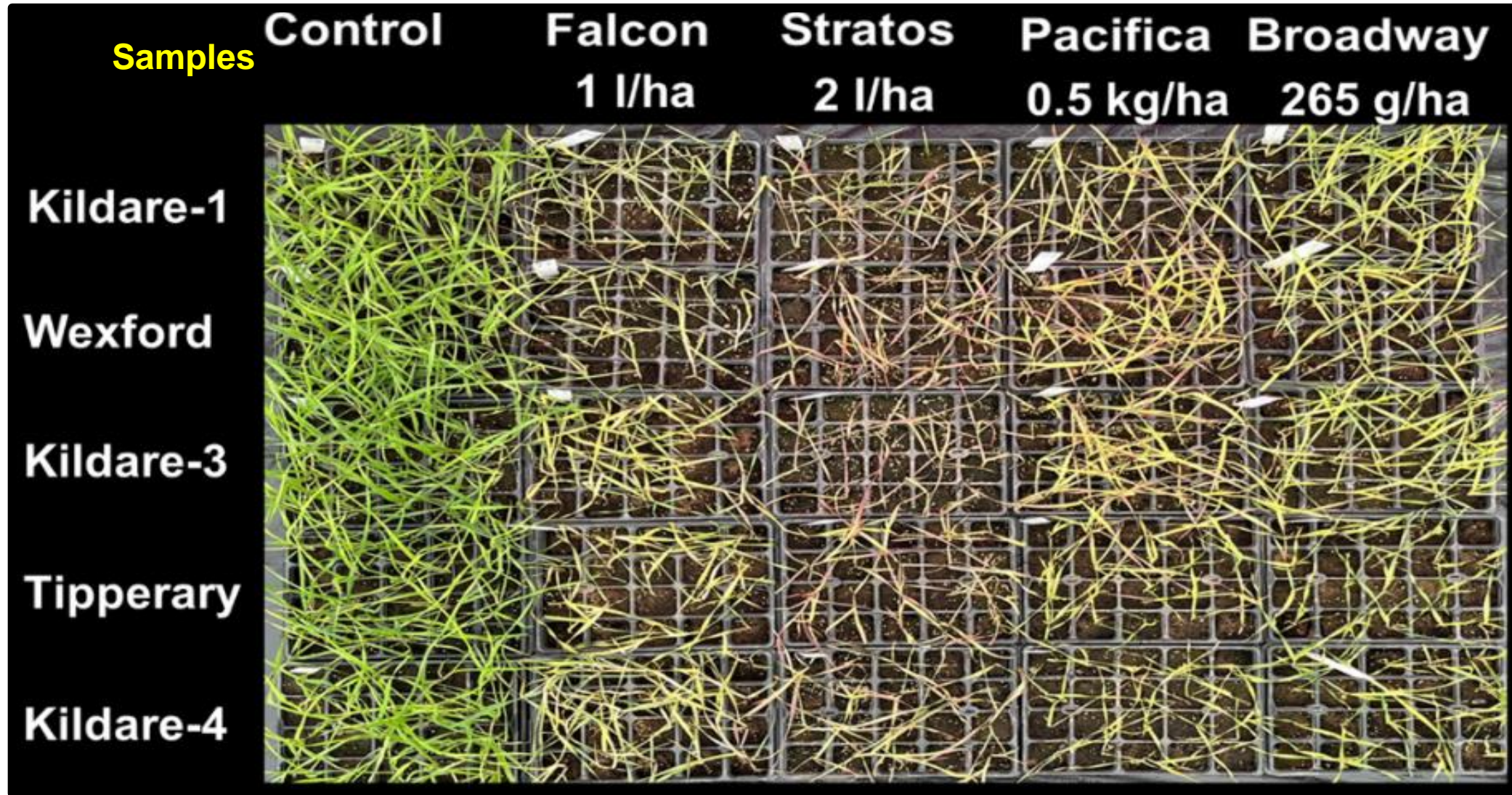


Sterile brome: herbicide options

Herbicide	Active	Crop
<i>Post emergence</i>		
Alister Flex (ALS) Pacifica (ALS) Monolith (ALS) Broadway Star (ALS)	Mesosulfuron + iodosulfuron +DFF Mesosulfuron + Iodosulfuron Mesosulfuron + Propoxycarbazone Pyroxsulam	Winter wheat
Falcon (ACCase) Stratos Ultra (ACCase) Centurion Max (ACCase)	Propaquizafop Cycloxydim Clethodim	Oilseed rape/beans (& others) Oilseed rape/beans (& others) Winter oilseed rape/beet
Kerb (non-ACCase & non-ALS)	Propyzamide	Winter oilseed rape

- Residual herbicides: limited control (tank-mixed or stacked products – can help)
- **No effective options in winter barley**

Sterile brome: screening (harvest 2022)



- All treated-plants at label rates showing yellowing & browning (death) of foliage

Italian ryegrass

- Cross-pollinating (rapid resistance evolution)
- Autumn emergence from top 5 cm
- Short seed dormancy (< 5 years)
- **Increased by**
 - Early-sowing winter cereals
 - Non-inversion (min-till, etc.)
- ACCase/ALS resistance (Europe & UK)
- Glyphosate resistance (Italy)



- **Ireland: ACCase/ALS-resistant strains are increasing**

Italian ryegrass: herbicide options

- Knowing the sensitivity status of your population is critical
- The herbicides listed below may only work, if your population is highly sensitive

Herbicide	Active	Crop
Post emergence		
Axial Pro (ACCase)	Pinoxaden	Wheat & barley
Alistar Flex (ALS)	Mesosulfuron + iodosulfuron +DFF	Winter wheat
Pacifica (ALS)	Mesosulfuron + Iodosulfuron	
Monolith (ALS)	Mesosulfuron + Propoxycarbazone	
Broadway Star (ALS)	Pyroxsulam	
Falcon (ACCase)	Propaquizafop	Oilseed rape/beans (& others)
Stratos Ultra (ACCase)	Cycloxydim	Oilseed rape/beans (& others)
Centurion Max (ACCase)	Clethodim	Winter oilseed rape/beet
Kerb (non-ACCase & non-ALS)	Propyzamide	Winter oilseed rape

- Residual herbicides: limited control (tank-mixed or stacked products - can help)

Italian ryegrass: screening (harvest 2022)

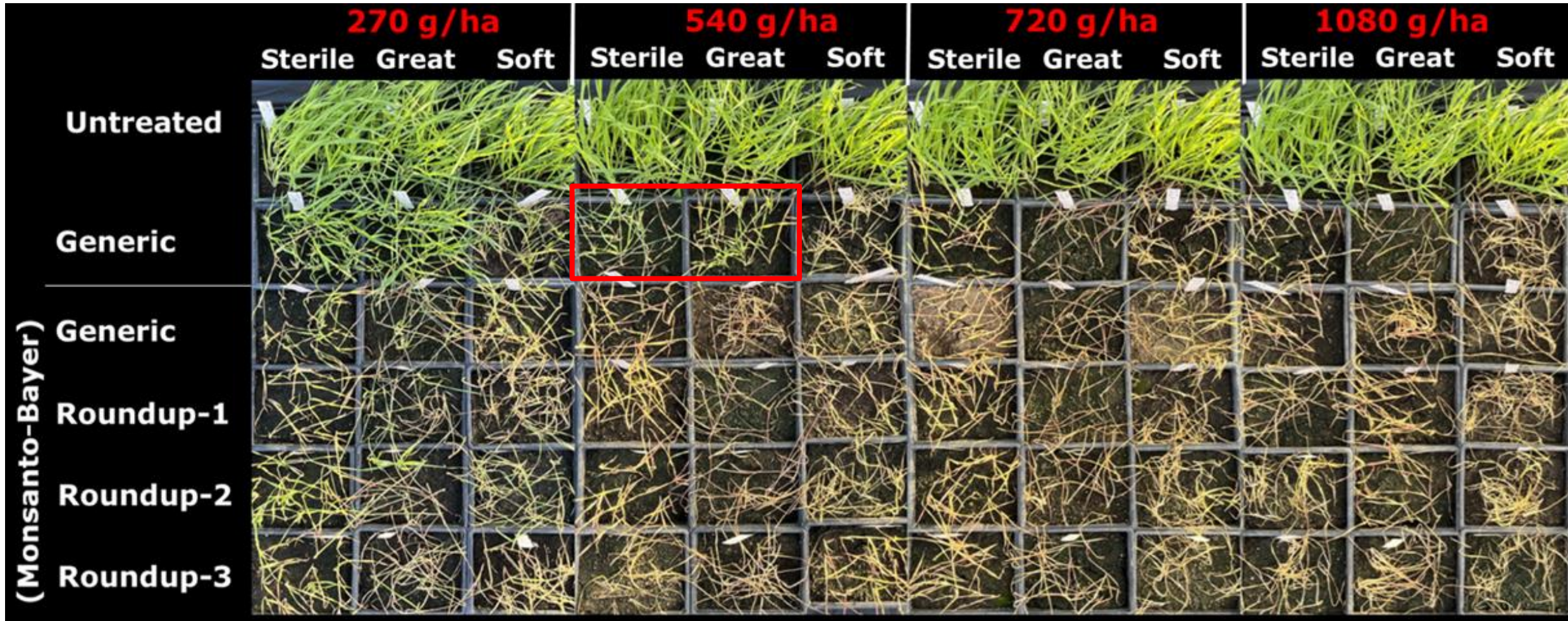


- Most of the populations are ACCase/ALS-resistant

Take home message

- Be vigilant
 - Do not use rates lower than the recommended
 - Use robust rate of glyphosate
 - **All Italian ryegrass – should be treated as resistance-suspect**
- Practice each & every IWM (eg. delayed sowing, spring cropping, ploughing, machinery hygiene, etc.)
 - **Brome fields:** winter barley / winter oats ???
 - **Large populations of resistant Italian ryegrass fields:** grass/leys ???
- **Avail free resistance testing for your population (grass or broadleaf weed) as a part of the EVOLVE grass-weed research project**

Glyphosate impact on smaller brome plants



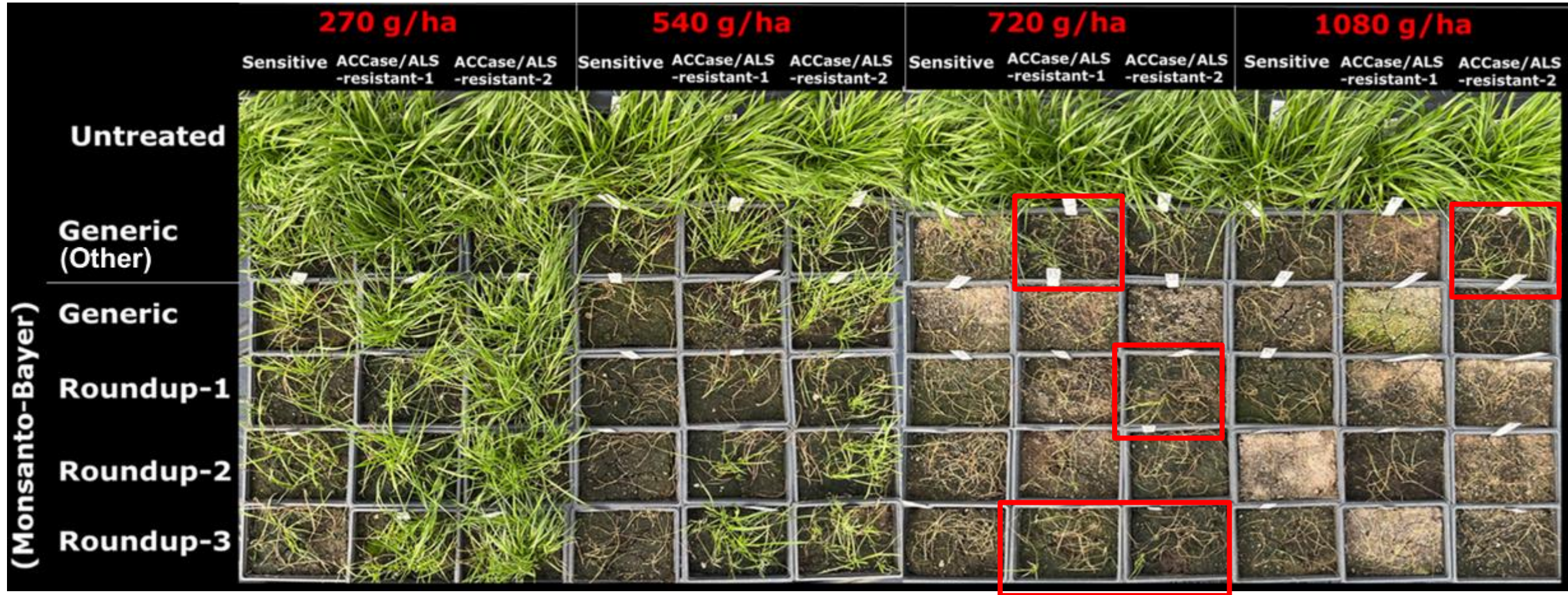
- ≥ 540 g/ha product critical

Glyphosate impact on larger tillering brome plants



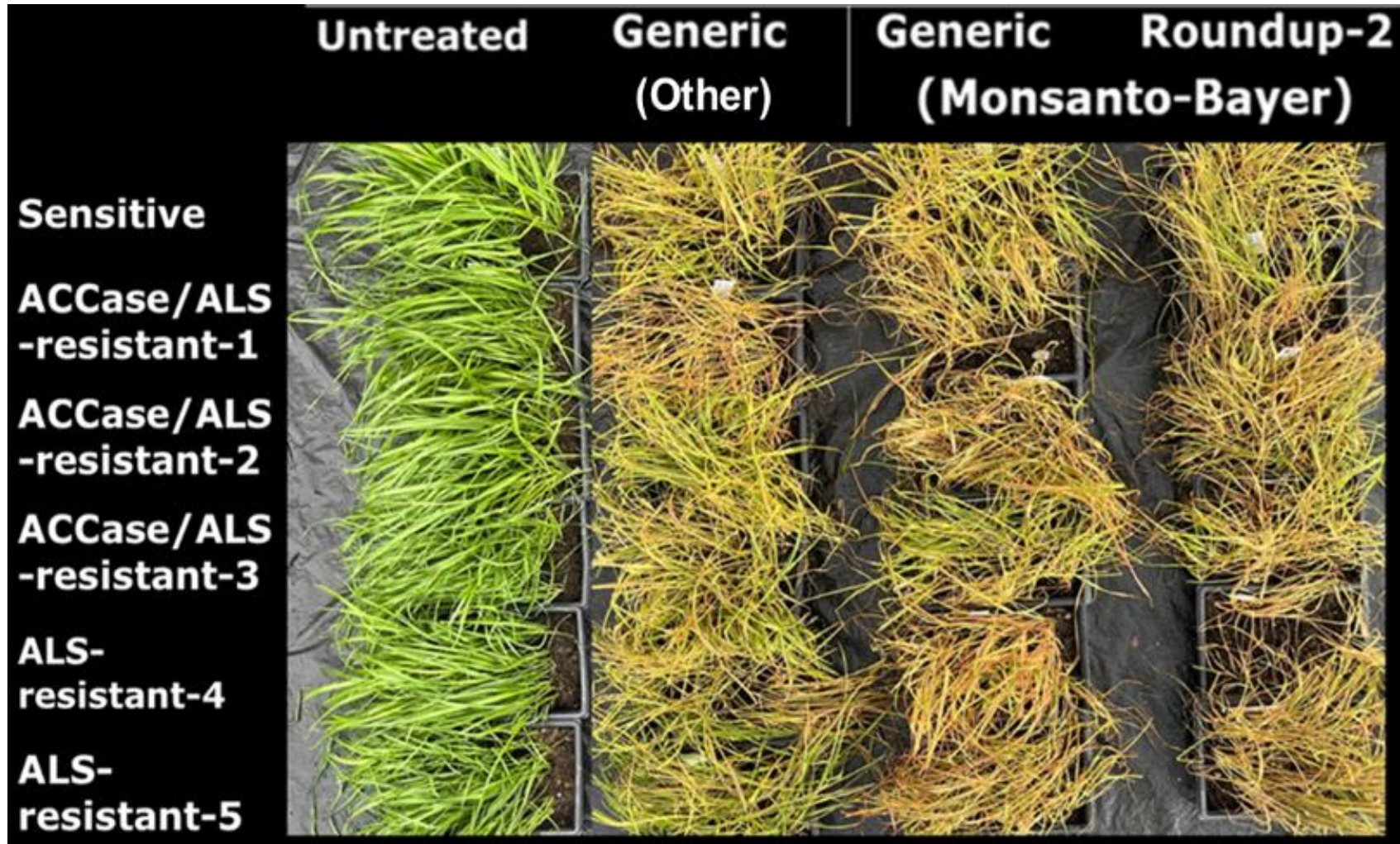
- 1080 g/ha of any product achieved effective control

Glyphosate impact on smaller Italian ryegrass plants



- 720 g/ha (Monsanto-Bayer) or 1080 g/ha (others) critical

Glyphosate impact on larger Italian ryegrass plants



- 1080 g/ha of any product achieved effective control

Acknowledgements:

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Thank you



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