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What do experts think the impact of pesticide use reduction on Irish tillage farming will be?

National Tillage Conference 2025

Wednesday, 29th January | Lyrath Hotel, Kilkenny

www.teagasc.ie/tillagecon25

Farm to Fork Strategy Goals

Aiming for

- 50% overall reduction (already nearly achieved in Ireland)
- 50% reduction of 'more hazardous' substances (not yet achieved in Ireland)

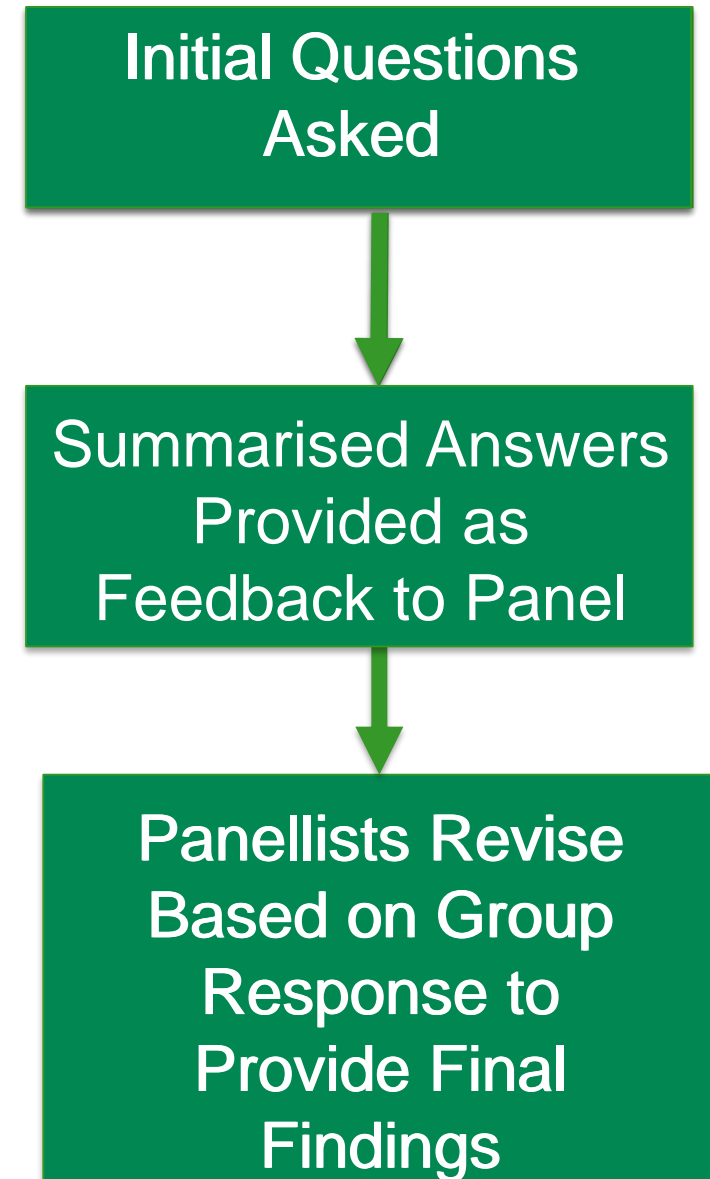
Fungicide	Insecticide	Herbicide
Benzovindiflupyr	Cypermethrin	Diflufenican
Cyprodinil	Esfenvalerate	Flufenacet
Difenoconazole	Gamma-Cyhalothrin	Metribuzin
Fludioxonil	Lambda-Cyhalothrin	Pendimethalin
Fluopicolide		Propyzamide
Metalaxyl		Tri-allate
Metconazole		
Paclobutrazol		
Tebuconazole		

Existing Data is Limited

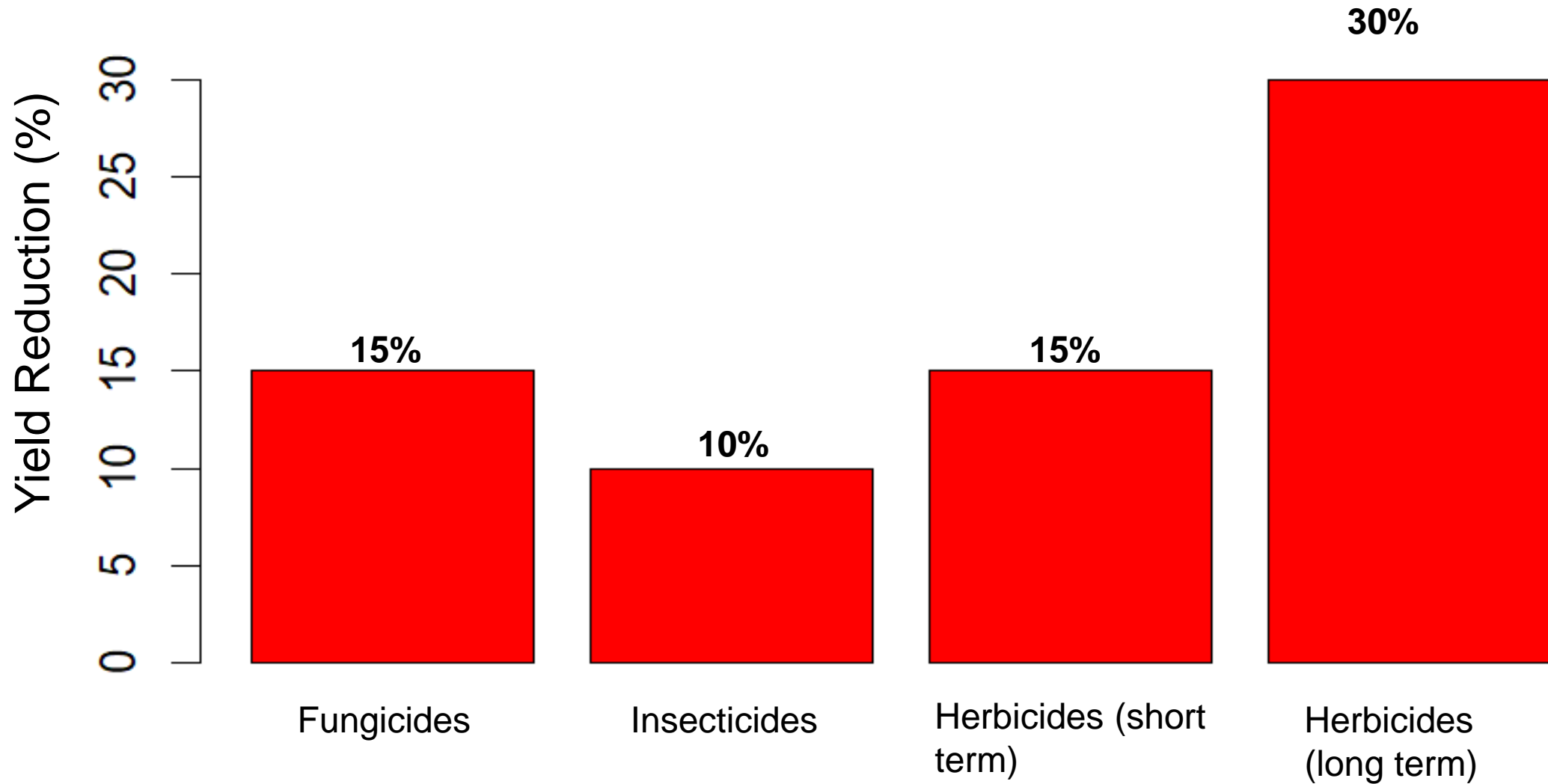
- Few published studies on reduced pesticide use in Ireland.
- Cannot rely on international data for Irish situation.
- Replicated field trials would be ideal, but time and resource intensive.
- Instead we looked to tap an untapped knowledge resource...

Irish Specific Repeated Expert Survey ('Delphi')

- Experts (17) recruited from throughout the Irish tillage sector – anonymous throughout
- Asked questions about impacts on yield (wheat, barley, oats), pesticide resistance and current management vs. IPM scenario
- Answers compiled and feedback provided – experts given the opportunity to revise



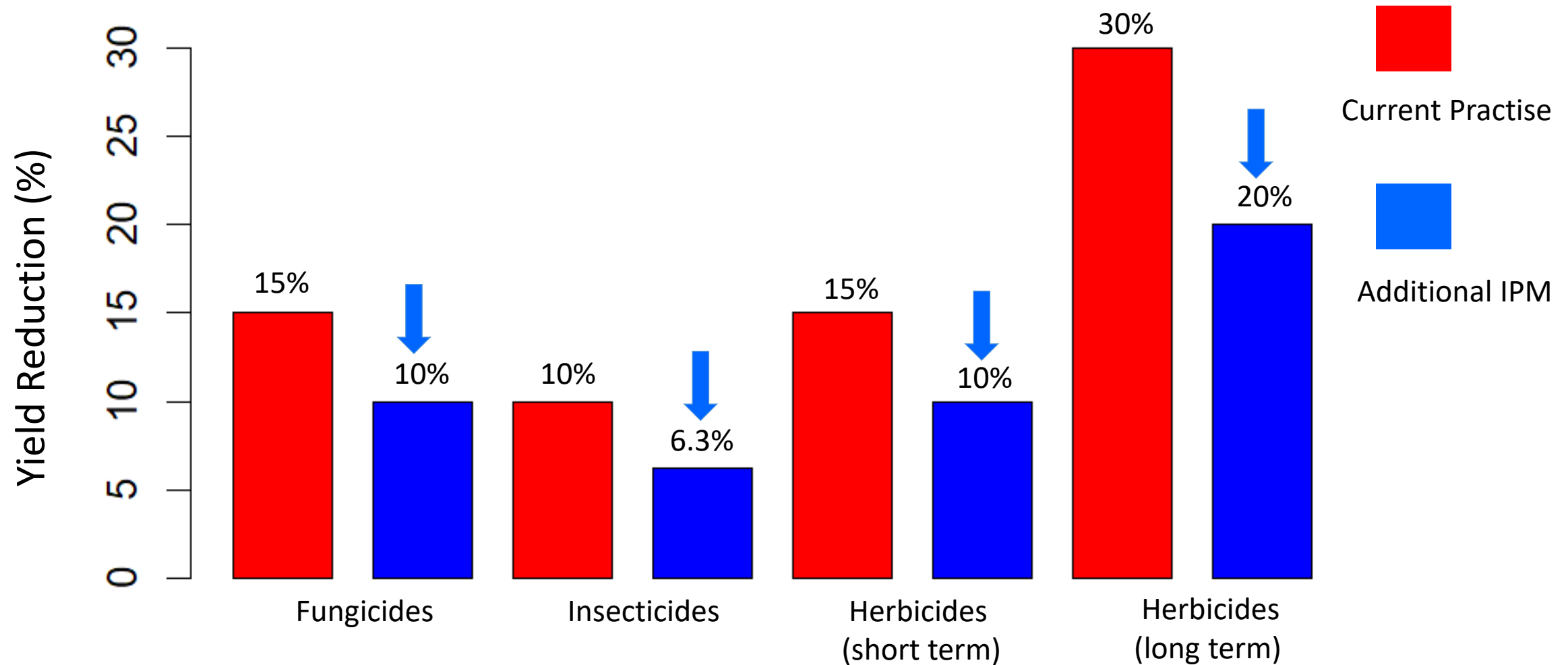
Impact on Winter Wheat Yield (current management techniques)



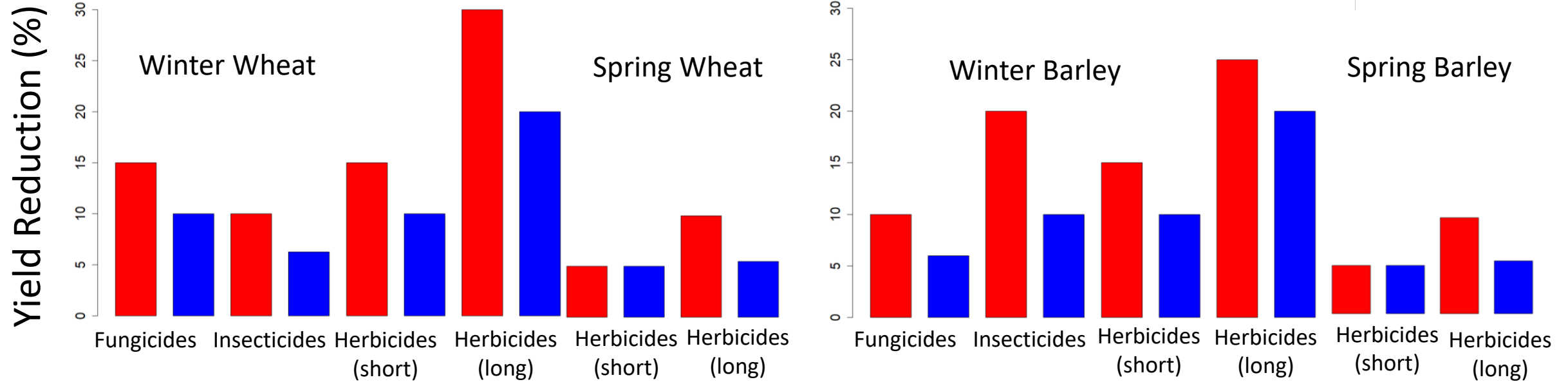
Top Ranked Mitigation Measures

Fungicide	Insecticide	Herbicide
Resistant/tolerant cultivars	Resistant/tolerant cultivars (BYDV)	Changes in Crop Rotation
Changes in sowing dates	Changes in sowing dates	Decision support services/Monitoring
Changes in crop rotation	Decision support services/Monitoring	Changes in sowing dates

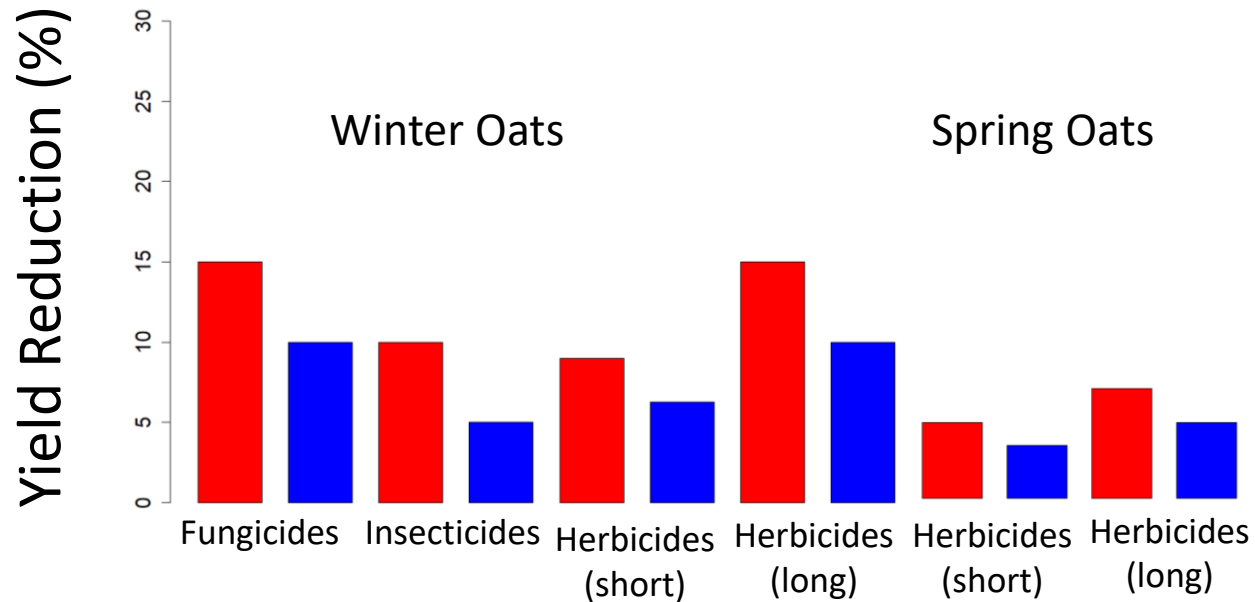
Impacts with Additional IPM (winter wheat)



Impacts with Additional IPM (all crops)



Note:
For impacts of fungicide and insecticide use reduction, crops were not separated by season and only a single timeframe was considered.



The Way Forward ?

- Data is just expert opinion
- Regional specific, farm scale evaluation trials
- These take time but when combined with full economic analyses provide clarity on impact of further pesticide reduction
- Strategically, we need to now focus on ...
 - Accelerated development of resilient varieties essential
 - Developing cultural control strategies for weed mitigation
 - Better provision of tailored decision support services allowing for more precise and integrated pesticide use.



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