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Agri-Food Canada

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Canada

Herbicide resistance on Prince Edward Island

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Why should we care about resistance?

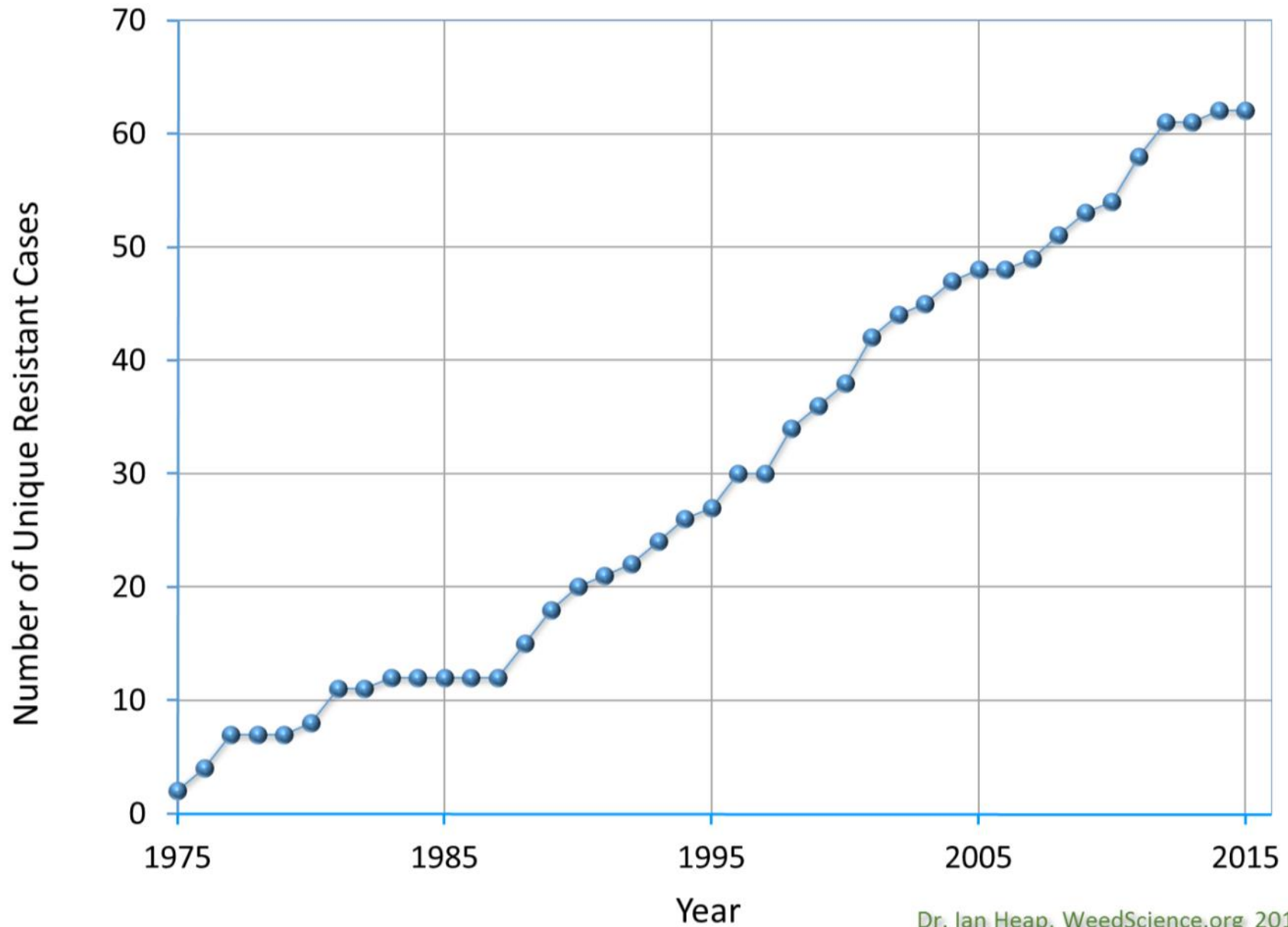
Increases the cost and complexity of weed management programs

Reduces viable herbicide options

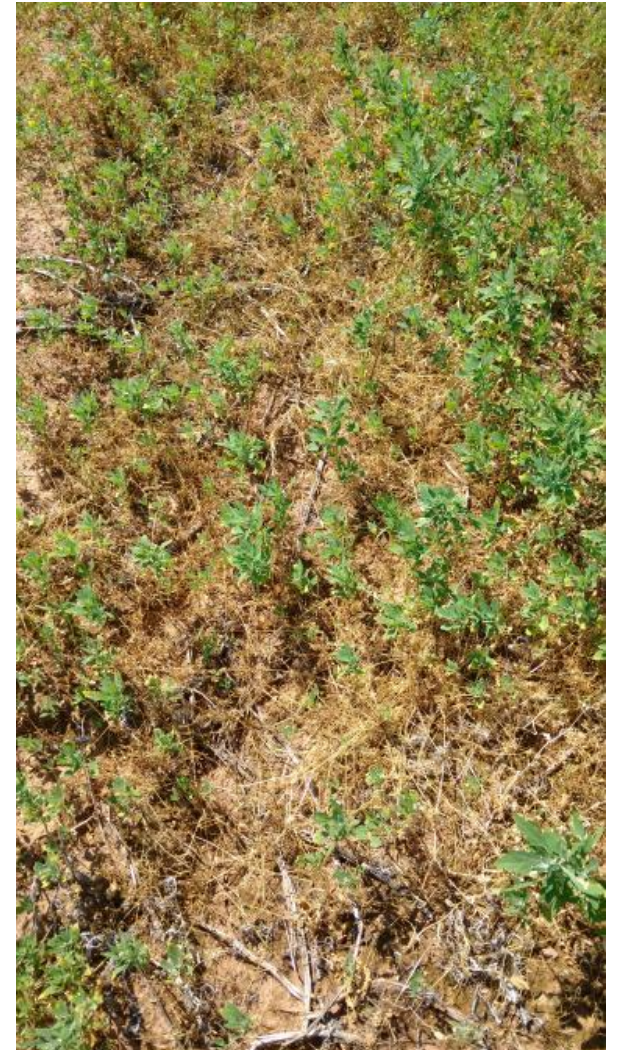
No new herbicide modes of action in pipeline

Resistance is increasing worldwide

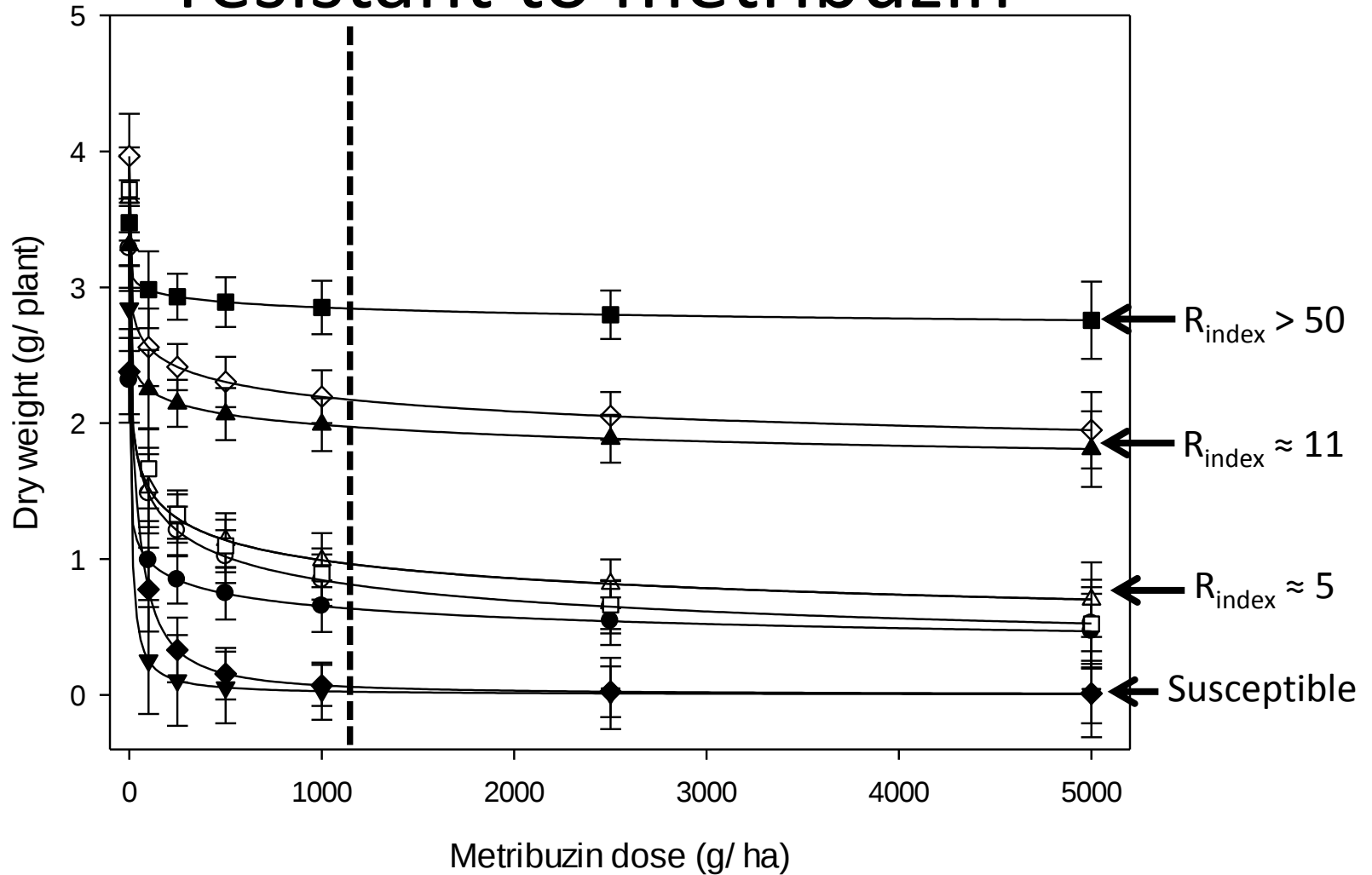
Incidence of herbicide resistance in Canada



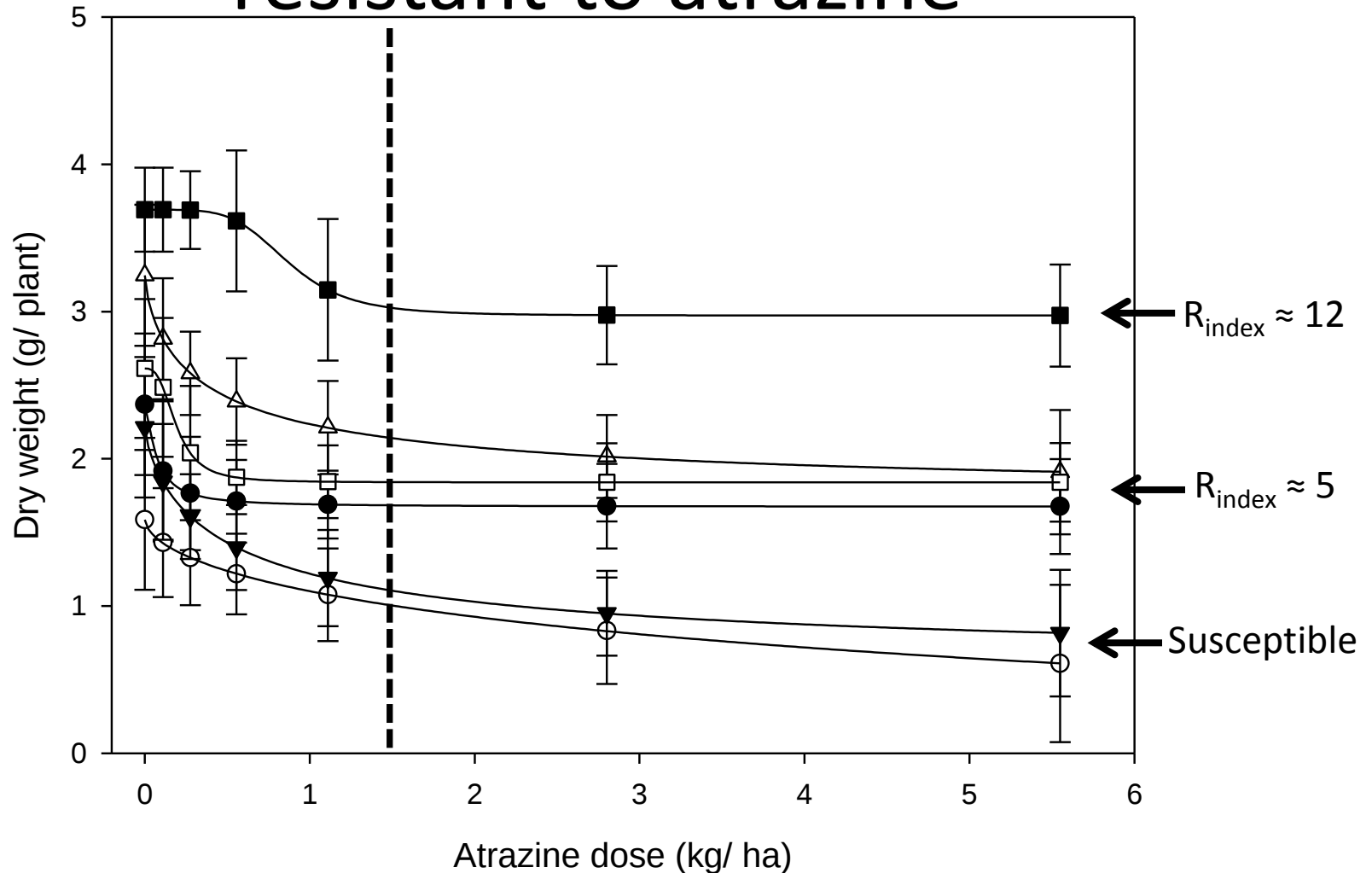
Lamb's quarters resistance to triazine herbicides detected in 1998



Lamb's quarter's populations are resistant to metribuzin



Lamb's quarter's populations are resistant to atrazine

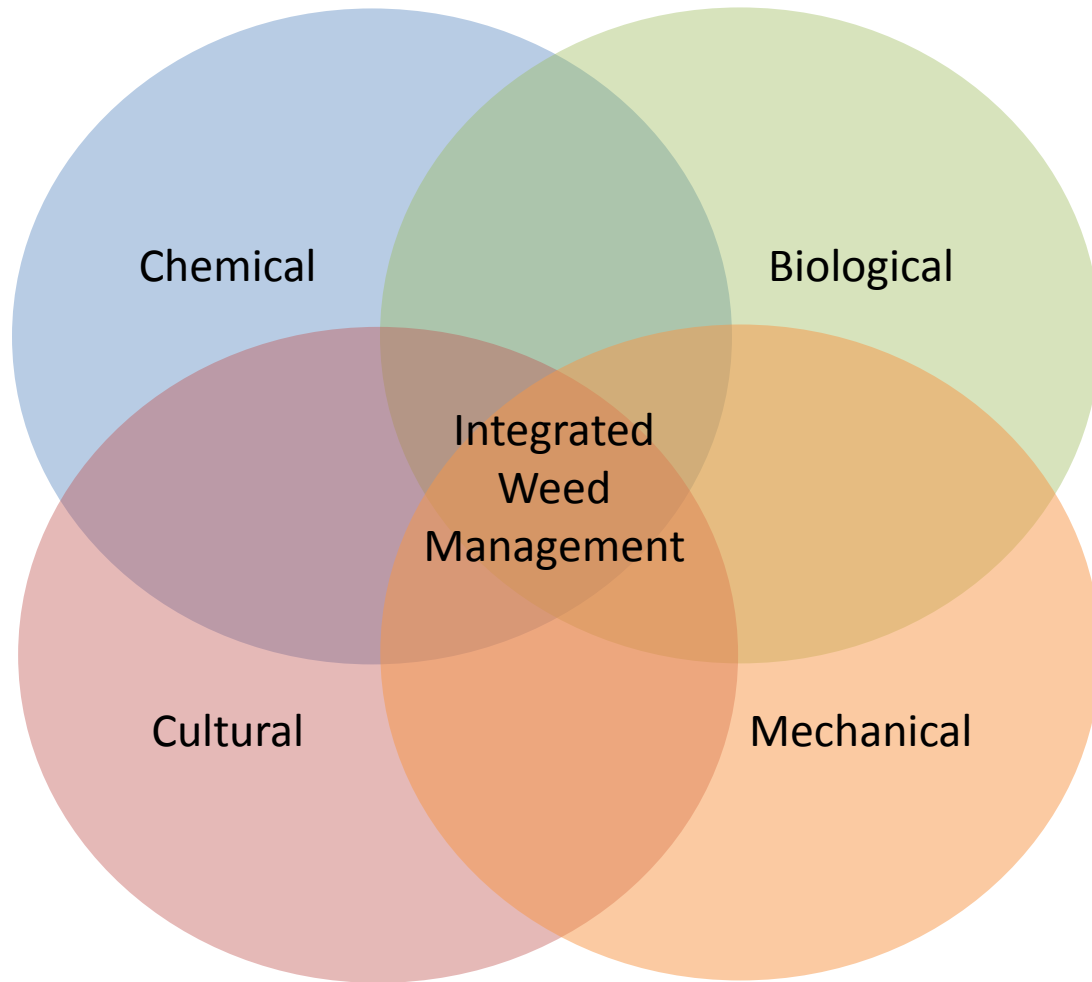


No resistance to group 6 (bromoxynil or bentazon) or 7 (linuron) herbicides was detected in 2002-2003

Currently screening populations for
resistance to group 5 (metribuzin),
7 (linuron) and 2 (rimsulfuron)
herbicides

How do we manage herbicide resistance and prevent its spread?

Integrated Weed Management

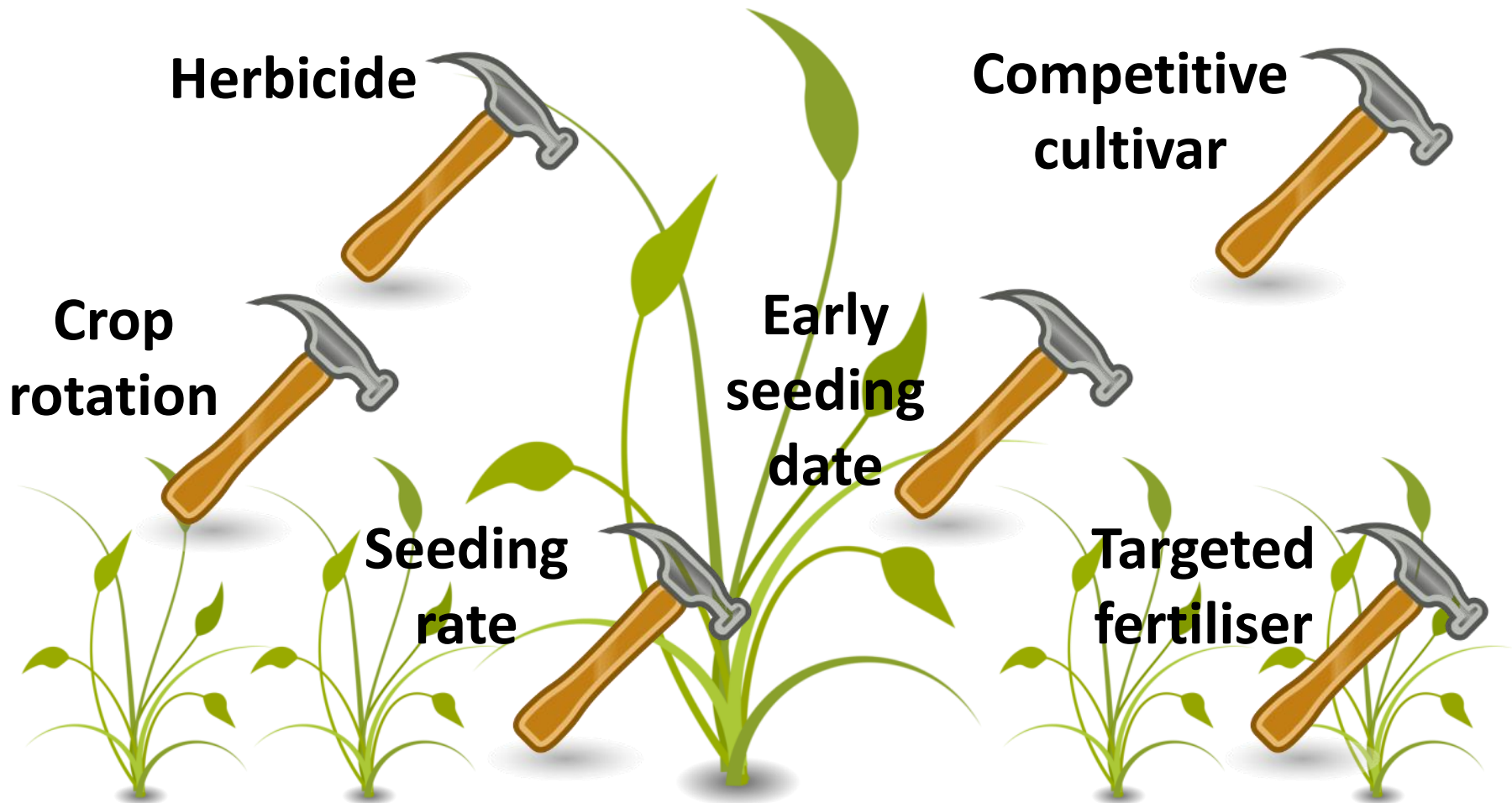


Integrated weed management is
herbicide resistance management!

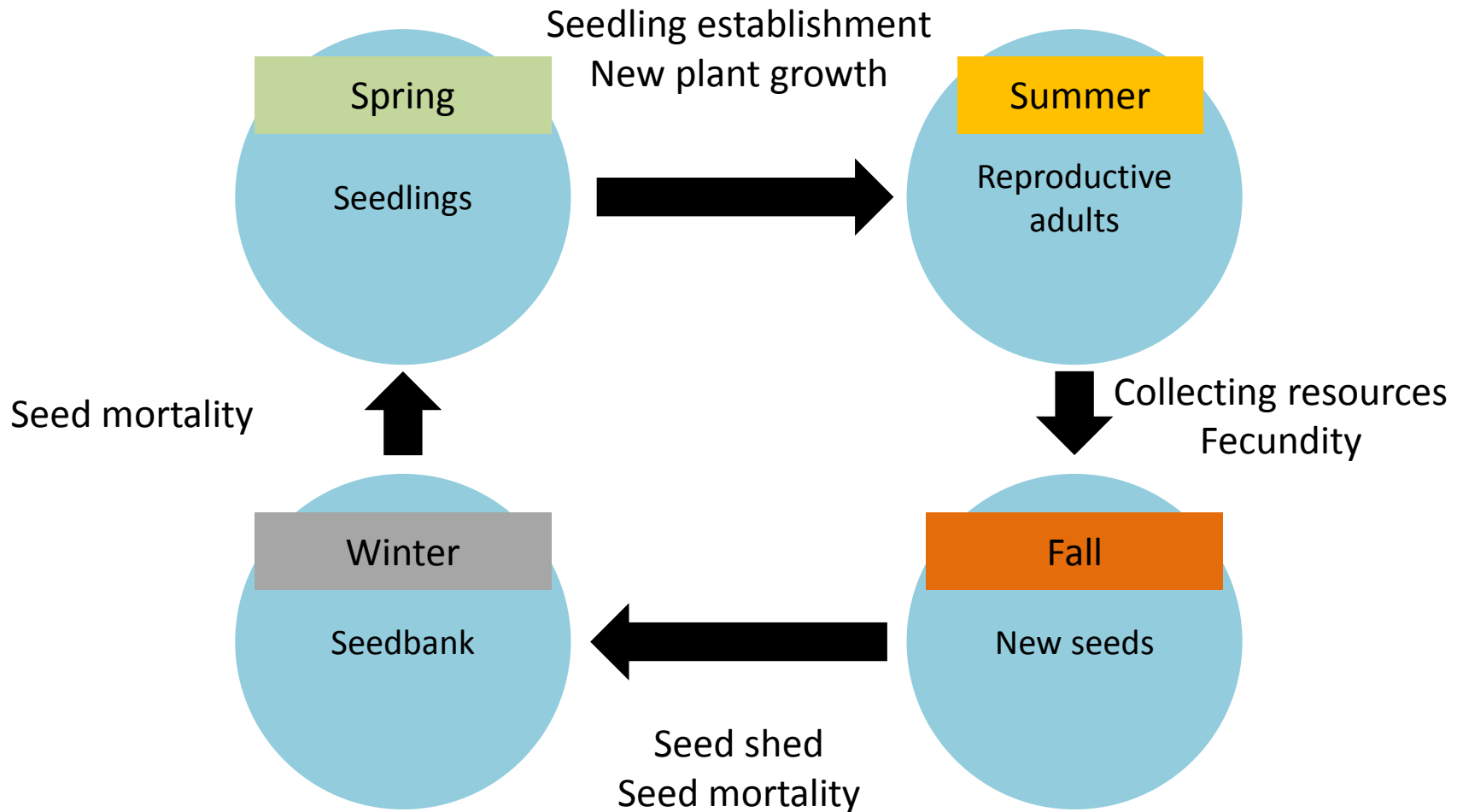
Use many “little hammers” instead of
one “large hammer”



Use many “little hammers” instead of one “large hammer”

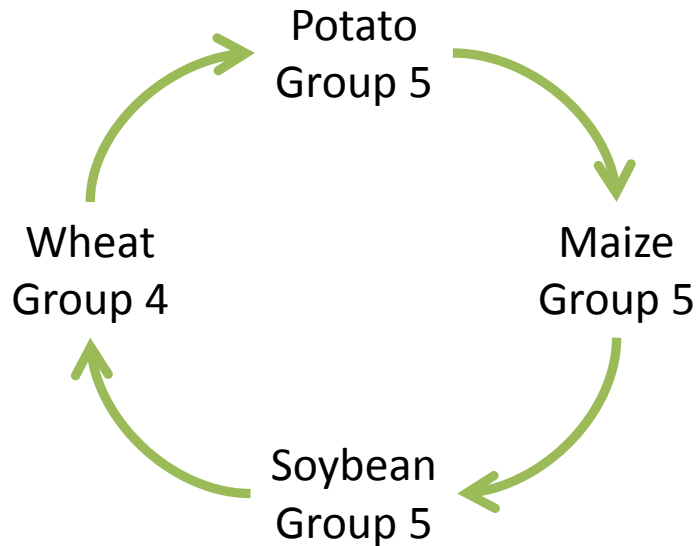


Use weed life cycle to your advantage

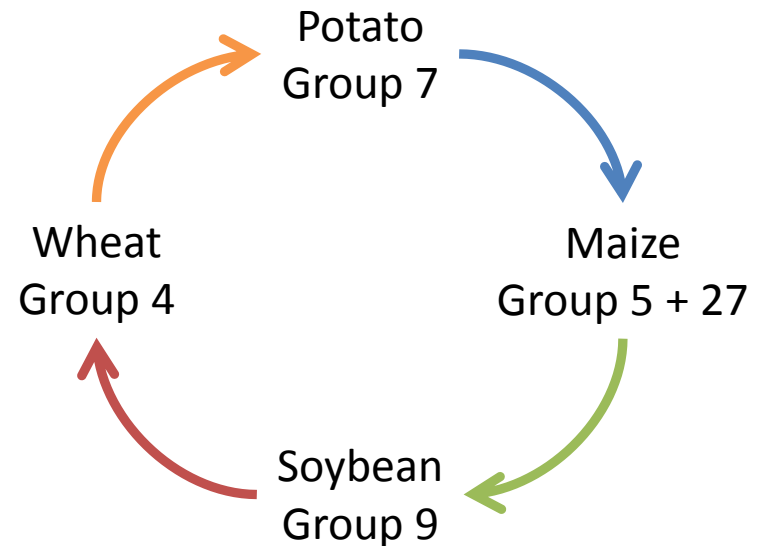


Practice crop and herbicide rotation

Crop Rotation



Herbicide Rotation



Managing triazine-resistant lamb's quarters in potato year

Focus on preventing weeds from setting seed

Use multiple modes of action with the
correct herbicide rate and the correct time

Use mechanical management where
appropriate

Managing triazine-resistant lamb's quarters in rotation years

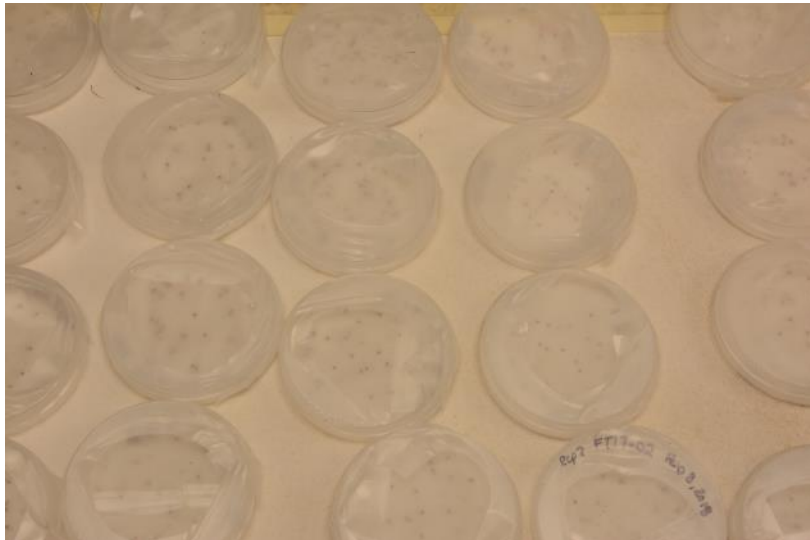
Use competitive cover crops to suppress lamb's quarters germination and seed shed

Use multiple modes of action with the correct herbicide rate and the correct time

Prevent new weed seed introductions

Current and ongoing research on triazine resistant lamb's quarters management

Can we manipulate the lamb's quarter's seed bank?



Which cover crops suppress lamb's quarter's germination and seed set?



What time or growth stage should we cultivate/ mow to reduce viable seed set?



What chemical control options are effective on lamb's quarters?



Maritime Weed Science Network

Coordinating research and extension activities
across the Maritime Provinces



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Questions?

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