

An introduction to Integrated Pest Management

The aims of the workshop

- Introduce and discuss the principles of an IPM approach.
- To provide practical examples of how you can implement IPM tactics.
- To get you thinking, discussing, sharing experience.



Why IPM?



A way to reduce our reliance on insecticides

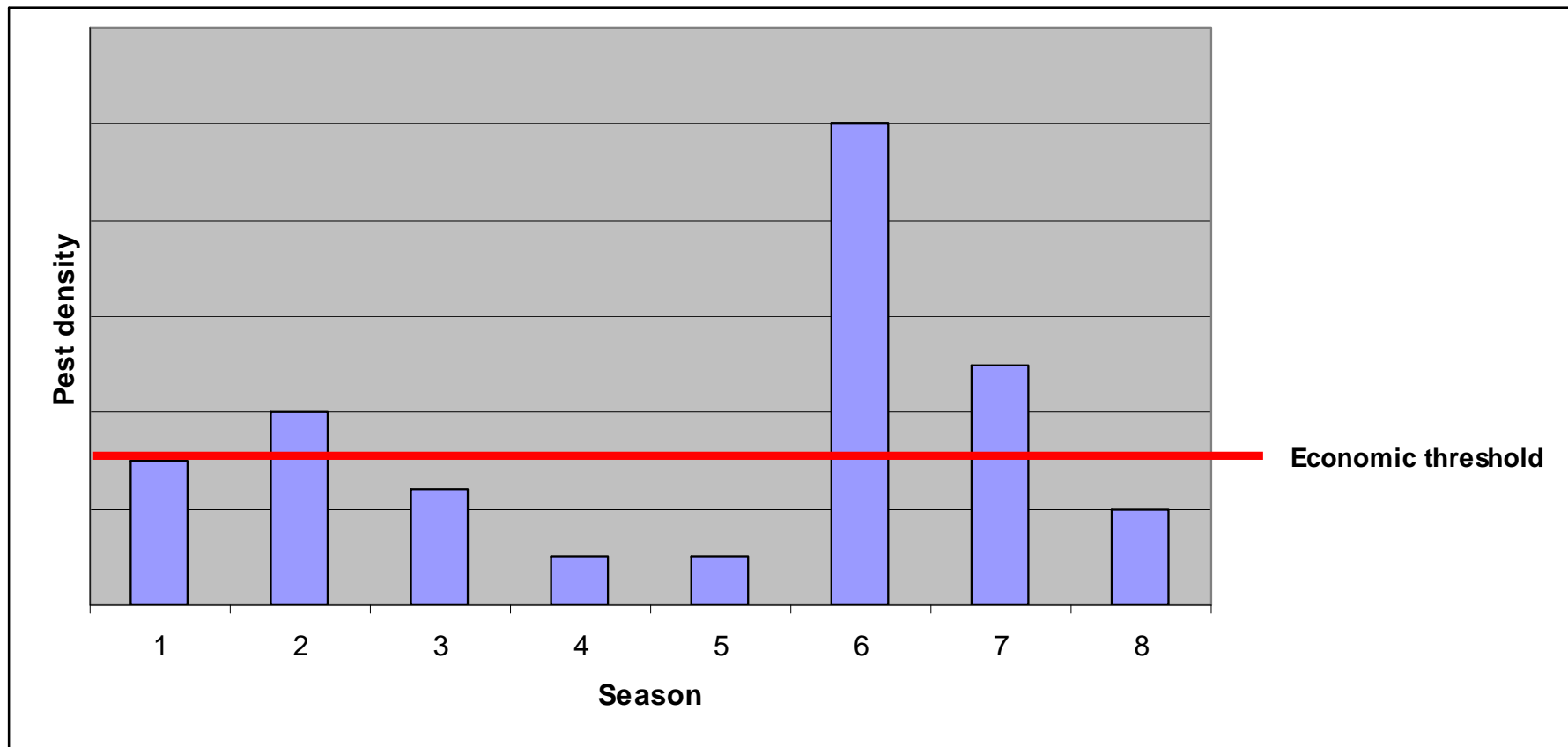
Why do we need to find ways to reduce our reliance on insecticides?

- Insecticide resistance
- Pest and secondary pest outbreaks
- Off target impacts (natural enemies, human, environment)
- Consumer demand

What are some of the barriers you face in implementing IPM?



“I tried to go soft, but the pest pressure was so high that I had to spray or I would have lost everything. I won’t be risking that again!”



A framework for IPM – assessing and managing risk

	IPM in practice
Know the signals	Paddock histories and weather data inform predictions of pest pressure (risk)
	Pest trapping and forecasts of outbreaks inform decisions (risk).
Informed decisions	An appropriate monitoring schedule underpins informed decisions (risk)
	Economic thresholds guide control decisions
Know the pest	Pest ID is fundamental to correctly targeting management tactics
	A knowledge of pest biology and ecology provide an understanding of how the pest, crop and management tactics interact (risk).
	An area Wide Management approach within your region may be critical for some pest species.

A framework for IPM

	IPM in practice
Cultural control	Cultural practices can suppress and/or disrupt pest populations (stubble management, rotations) risk
	Resistant varieties reduce the susceptibility of the crop
Biological control (Natural regulation)	Beneficials make a valuable contribution to reducing pest abundance
	Biopesticides (NPVs, metarhizium) have minimal off-target impacts.
Strategic pesticide choices	Use pesticides strategically and with beneficials / non-target insects in mind
	Diversify control options to manage the risk of resistance developing (risk)



Best bet strategies have been devised to get you started

Northern region – Canola best bet IPM strategy

	Canola aphids	Rutherglen bug (RGB)
Summer / autumn	<p><u>Assess risk</u> (virus)</p> <p>High risk where:</p> <ul style="list-style-type: none"> • Summer rainfall creates a <i>Brassica</i> green bridge • Warm conditions favour early aphid build-up and timing of flights <p>If high risk:</p> <ul style="list-style-type: none"> • Use an insecticide seed treatment to manage virus spread (e.g. BWYV) by green peach aphid <p>Manage <i>Brassica</i> weeds and volunteers (ideally area wide) 3-4 weeks before sowing</p> <p>Sow early to promote early flowering in spring before aphids peak</p>	<p>Monitor crops for RGB and other pests during establishment (note: see “establishment pest best bet strategy”).</p> <p>High risk if</p> <ul style="list-style-type: none"> • Warm conditions in late summer/autumn • Weeds drying off in or near crop and RGB moving (walking) into seedling crops <p>If spraying:</p> <ul style="list-style-type: none"> • Border spray infested areas of crop and nearby host weeds • Monitor for re-invasion and the need for repeat application <p>Remove summer/autumn weeds (especially fleabane, wireweed and capeweed) in or near crops 3-4 weeks before sowing.</p>
Winter	<p>Monitor crops for aphid colonisation from late winter when daily temperatures start to rise.</p> <p>High risk where</p> <ul style="list-style-type: none"> • Mild winter • Green peach aphid present on vegetative plants • Forecast is for warm and dry conditions that favour aphid development • No beneficial activity and/or aphid parasitism 	<p>Increased risk where:</p> <ul style="list-style-type: none"> • Abundant weed hosts over winter allowing build up of local populations

