

# Spring Webinar Series



Cereal disease control –  
How can we manage today's threats for  
future control?

## **Integrated Pest Management**

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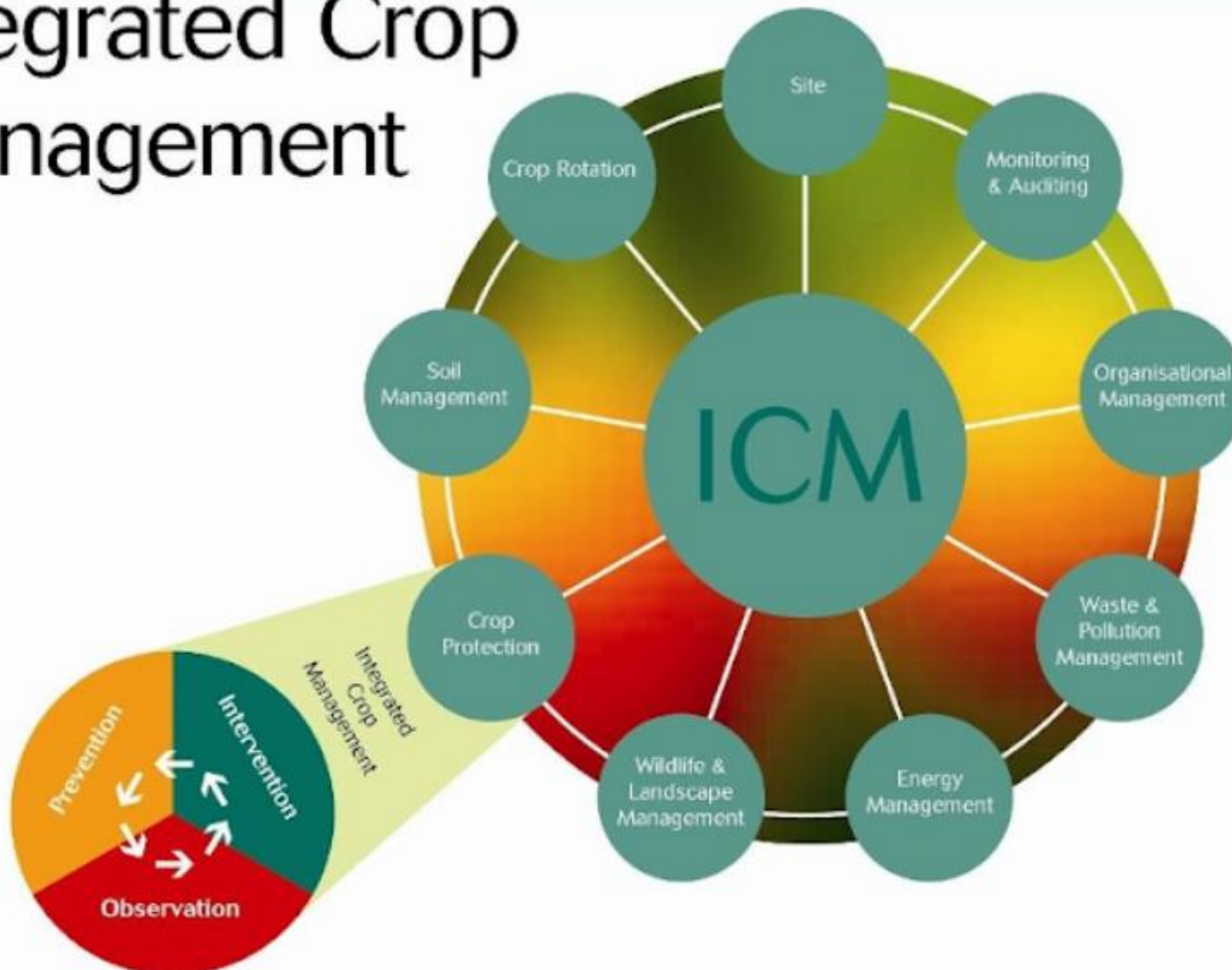
# Hierarchy of terms

- Integrated Farm Systems
  - IFS Whole farm system, many crops +/- livestock system(s)
- Integrated Crop Management - ICM
  - Subset of IFS
  - Relates to management system for a crop (or a crop rotation)
- Integrated Pest Management - IPM
  - Subset of ICM
  - Relates to management of pests (and diseases and weeds)

All are used interchangeably

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## Integrated Crop Management



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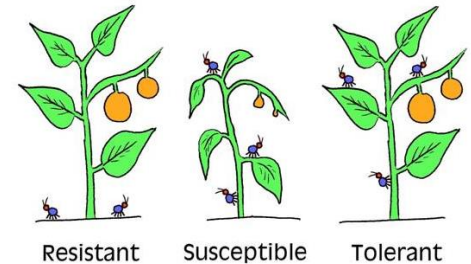
# Drivers for IPM uptake



# Is IPM/ICM new?

NO

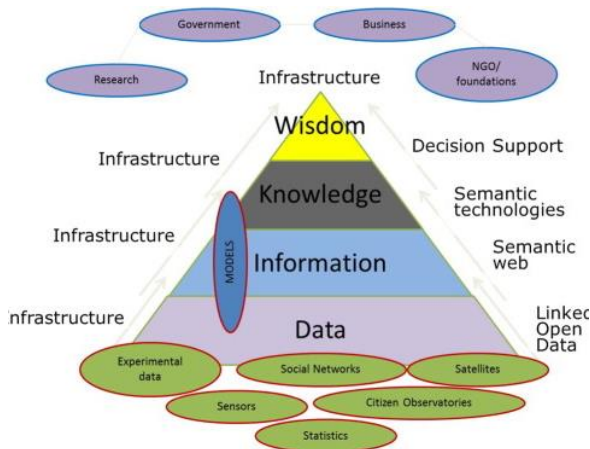
- Take-all and rotation
- Use of resistant varieties
- Use of decision support systems



- Strategies will change as new technology/knowledge becomes available.

# IPM/ICM in practice

- No single blueprint
  - (variability in climate, soils, prevailing markets)
- Establish principles or guidelines to assist grower and/or advisers decisions



- Requires big knowledge input

Who will have this knowledge-grower or adviser?

# Will growers have to make big changes to their practices?

NO

- All growers are practicing IPM/ICM to some degree already
  - Use of break crops
  - Reduced N on crops after ley
  - Rotation and use of barley/oats for take-all
  - Ear aphid control on wheat
  - Good trash burial with ploughing
  - Use of resistant varieties



# IPM Target: foliar diseases

- Recommended lists
  - Largely ignore yields...
  - Disease ratings all important
- History of variety on your farm
- Optimise planting date, seed rates, soil health – for best plant health & reduced disease
- For fungicides
  - Target plant growth stages as or more important than products

AGRONOMIC & QUALITY CHARACTERISTICS	RECOMMENDED						PROVISIONALLY RECOMMENDED			Variety Name
	CRIFTON	FRONTIER	DEFEND	PROFEND	BY TABERNA	MOLE	IVE BINA	SARETTE	SOLO	
Relative yield *	99	97	100	100	100	102	104	104	101	Yield relative to control varieties. Ideally yields over 100 are desirable
Shortness of straw	5	7	6	5	5	6	(6)	(6)	(6)	Both parameters are important for the crop to reach harvest without falling over
Resistance to lodging	6	5	6	5	7	7	(7)	(7)	(5)	
Straw breakdown	5	5	5	5	5	6	(6)	(5)	(5)	Can be important where large growers want to separate that harvest (1 point difference = 1.2days)
Easiness of ripening	6	7	6	6	5	7	(6)	(5)	(7)	
Resistance to:										The two most important diseases in barley. Ideally, both should have scores of 6 or above. Low scores will mean a higher input of fungicides.
Mildew	7	5	7	6	7	5	(6)	(6)	(6)	
Amylopectin	5	5	7	6	7	7	(7)	(7)	(6)	
Brown Rust	6	6	4	5	6	5	(6)	(5)	(7)	Very important quality factor for sale of grain. The optimal value is a hectolitre weight of 64 light *
Net Blotch	6	7	7	6	7	6	(6)	(6)	(7)	
Quality:										
1,000 gram wt. (g)	47.5	47.4	45.8	50.2	48.0	46.7	49.0	47.0	49.8	
Hectolitre wt. (kg/hl)	66.5	64.7	65.7	65.9	67.0	65.8	63.3	64.4	66.1	
Screenings% (>2.2 mm)	2.7	3.7	2.9	1.8	2.9	3.3	3.9	3.6	3.1	
Year First Listed	2010	2005	2007	2011	2012	2013	2014	2014	2014	