Seeds and Deeds

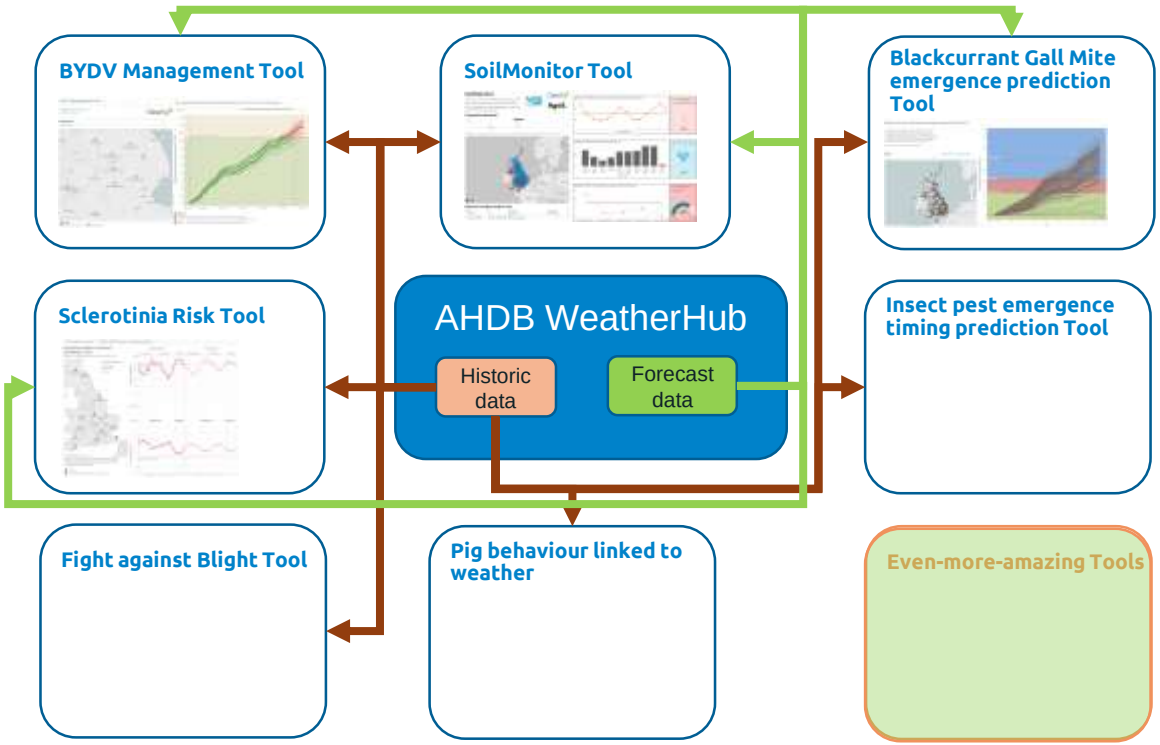
Simon Oxley 3 July 2019

CEREALS & OILSEEDS

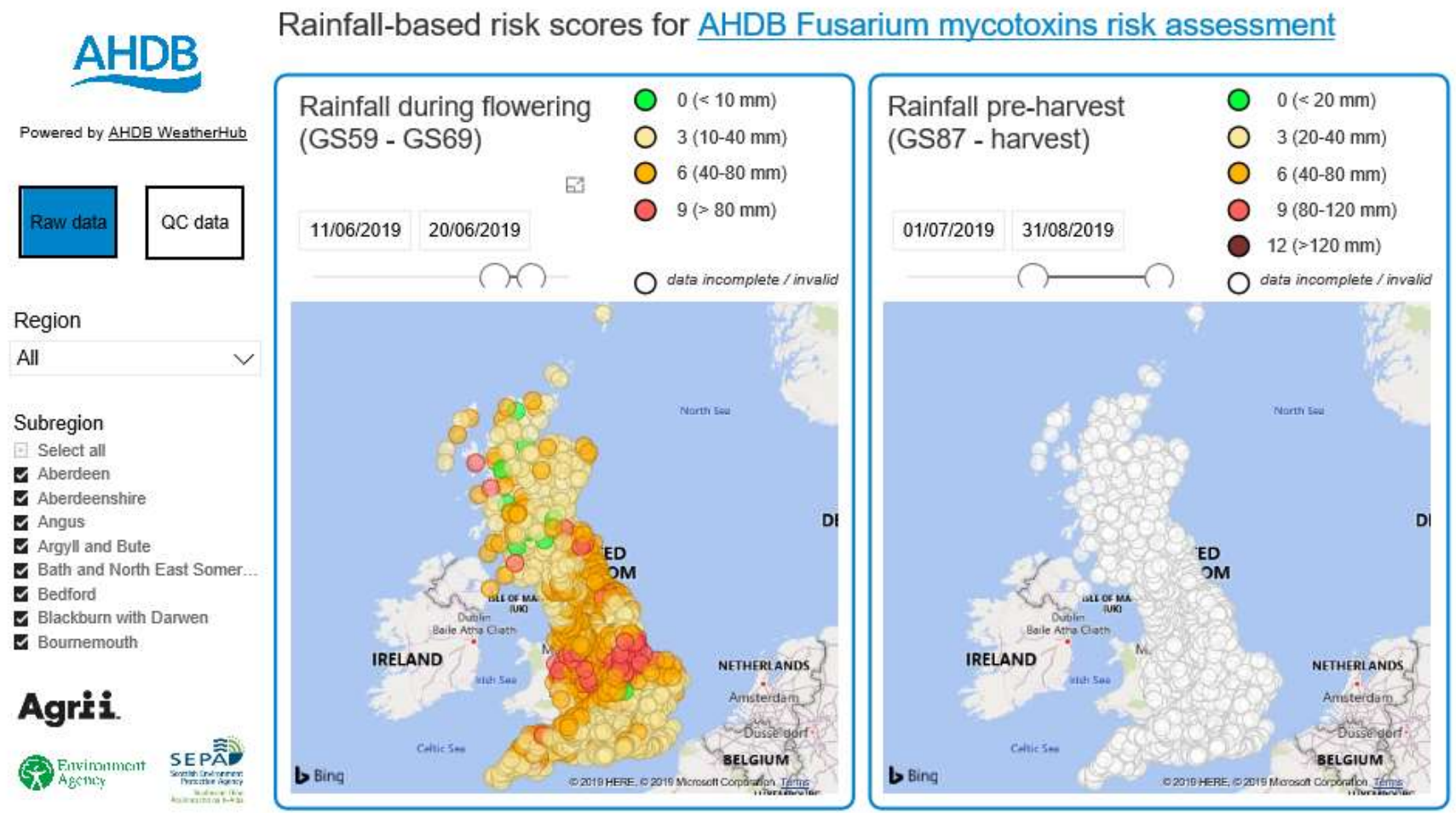
The Framework

Provides a focus of AHDB's role with data

Weather – integrating data



Fusarium risk based on rainfall



AHDB Recommended lists

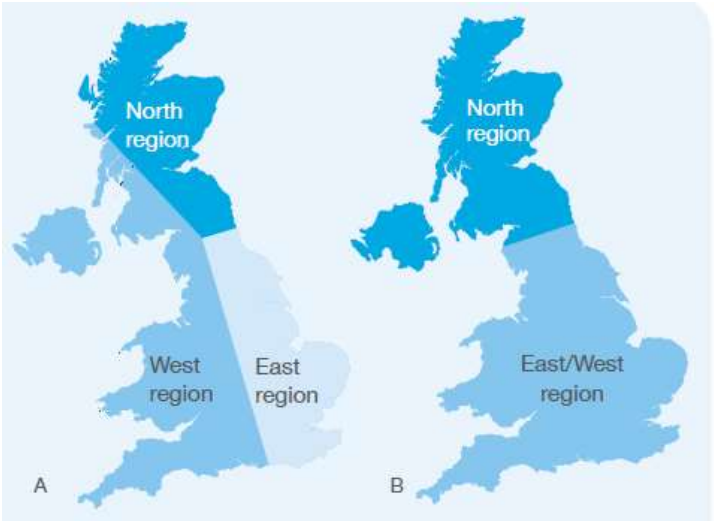
Winter wheat 2019/20

Yield, agronomy and disease resistance

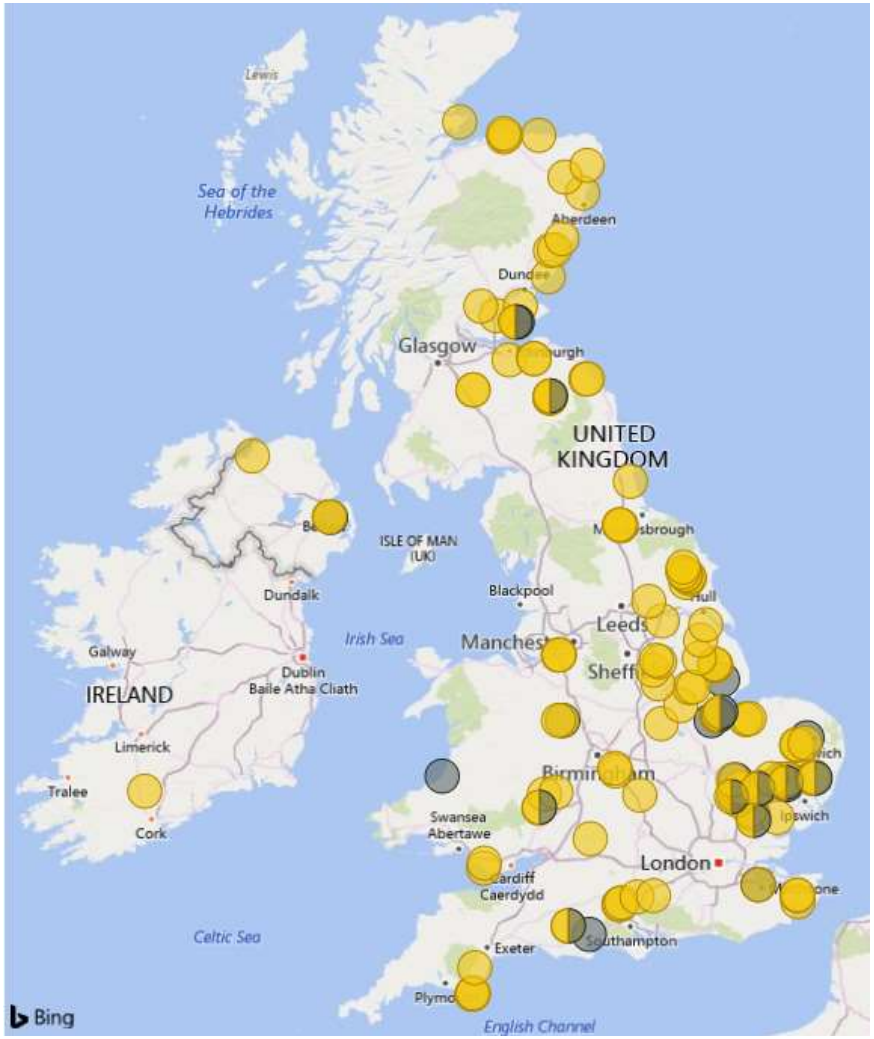
AHDB RECOMMENDED

	KWS Zyatt	Skyfall	KWS Trinity	RGT Illustrious	Crusoe	KWS Siskin	KWS Extase	KWS Lili	LG Detroit	KWS Firefly	KWS Barral	Elicit	KWS Basset	Zulu	LG Skyscraper	LG Spotlight	KWS Jackal	Elation	Bennington	LG Sundance	LG Motown	Leeds	Myriad	Revelation	Viscount	Average	LSD (5%
End-use group	nabim Group 1					nabim Group 2				nabim Group 3					Soft Group 4												
Scope of recommendation	UK	UK	UK	UK	UK	UK	UK	UK	E&W	UK	UK	UK	UK	UK	UK	UK	N	UK	E&W	UK	UK	N	N	UK	N		
		C	*			C	NEW		NEW	NEW				C	NEW	NEW							*				
Fungicide-treated grain yield (% treated control)																											
United Kingdom (11.2 t/ha)	101	99	98	97	97	102	101	100	100	102	101	101	99	98	106	104	102	102	102	101	100	99	98	97	97	2.0	
East region (11.2 t/ha)	100	99	98	97	96	102	101	100	100	103	101	101	99	98	106	103	103	103	102	101	100	100	98	98	97	2.3	
West region (11.3 t/ha)	101	99	97	98	97	102	102	100	102	103	100	100	99	97	106	105	101	102	103	101	100	98	97	96	96	2.6	
North region (11.2 t/ha)	99	98	98	94	93	100	[102]	103	[95]	[99]	105	102	99	100	[104]	[101]	104	103	99	102	100	101	100	98	101	3.1	
Untreated grain yield (% treated control)																											
United Kingdom (11.2 t/ha)	86	81	76	83	74	85	95	72	77	86	72	82	74	72	84	82	77	79	84	86	84	68	63	80	73	5.3	
Agronomic features																											
Resistance to lodging without PGR (1–9)	7	8	8	7	7	6	7	7	8	8	7	7	7	6	7	7	7	7	7	6	6	7	7	7	7	0.5	
Resistance to lodging with PGR (1–9)	8	8	8	8	8	7	8	8	7	8	8	8	8	7	7	8	7	8	8	7	6	8	7	8	8	0.5	
Height without PGR (cm)	83	82	81	88	81	83	89	81	84	81	82	84	84	88	90	91	85	81	90	86	83	85	88	85	80	1.7	
Ripening (days +/- JB Diego, -ve = earlier)	0	0	+1	+1	+1	+1	0	+2	+1	+1	+1	+1	+2	+1	0	+1	+1	+1	+2	+2	0	+2	+2	+3	+1	0.6	
Resistance to sprouting (1–9)	[5]	5	6	[6]	6	[5]	-	7	-	-	[6]	[5]	[6]	5	-	-	[5]	[6]	[5]	[4]	[6]	6	6	5	5	1.1	
Disease resistance																											
Mildew (1–9)	7	5	8	6	6	8	6	8	5	5	6	6	5	7	7	6	7	7	7	7	7	3	5	6	6	1.1	
Yellow rust (1–9)	8	5	9	9	9	9	9	7	9	9	9	9	8	5	8	8	9	9	6	9	9	6	4	9	7	0.7	
Brown rust (1–9)	6	8	7	6	3	5	7	4	5	8	5	7	5	7	5	6	5	6	7	6	7	7	6	8	9	0.9	
Septoria nodorum (1–9)	[6]	[6]	[6]	[6]	6	[7]	-	[6]	-	-	[5]	[6]	[6]	[6]	-	-	[5]	[6]	[7]	[7]	[6]	[6]	[5]	[6]	[6]	0.7	
Septoria tritici (1–9)	6.4	5.9	5.5	6.1	6.5	6.7	8.1	5.9	5.7	7.0	4.5	6.0	5.1	5.2	5.2	5.2	4.9	4.3	6.3	7.9	5.7	4.6	5.6	6.3	4.8	0.7	
Eyespot (1–9)	7@	6@	5	6@	5	4	[4]	5	[5]	[4]	4	4	5	4	[4]	[5]	4	4	4	3	4	4	4	8@	4	1.1	
Fusarium ear blight (1–9)	6	7	6	6	6	5	6	6	7	5	6	7	6	6	6	7	6	6	6	7	6	7	6	7	6	0.5	
Orange wheat blossom midge	-	R	-	-	-	-	-	-	R	R	R	R	R	R	R	R	R	R	-	R	R	R	R	-	R		

RL Sites and regions

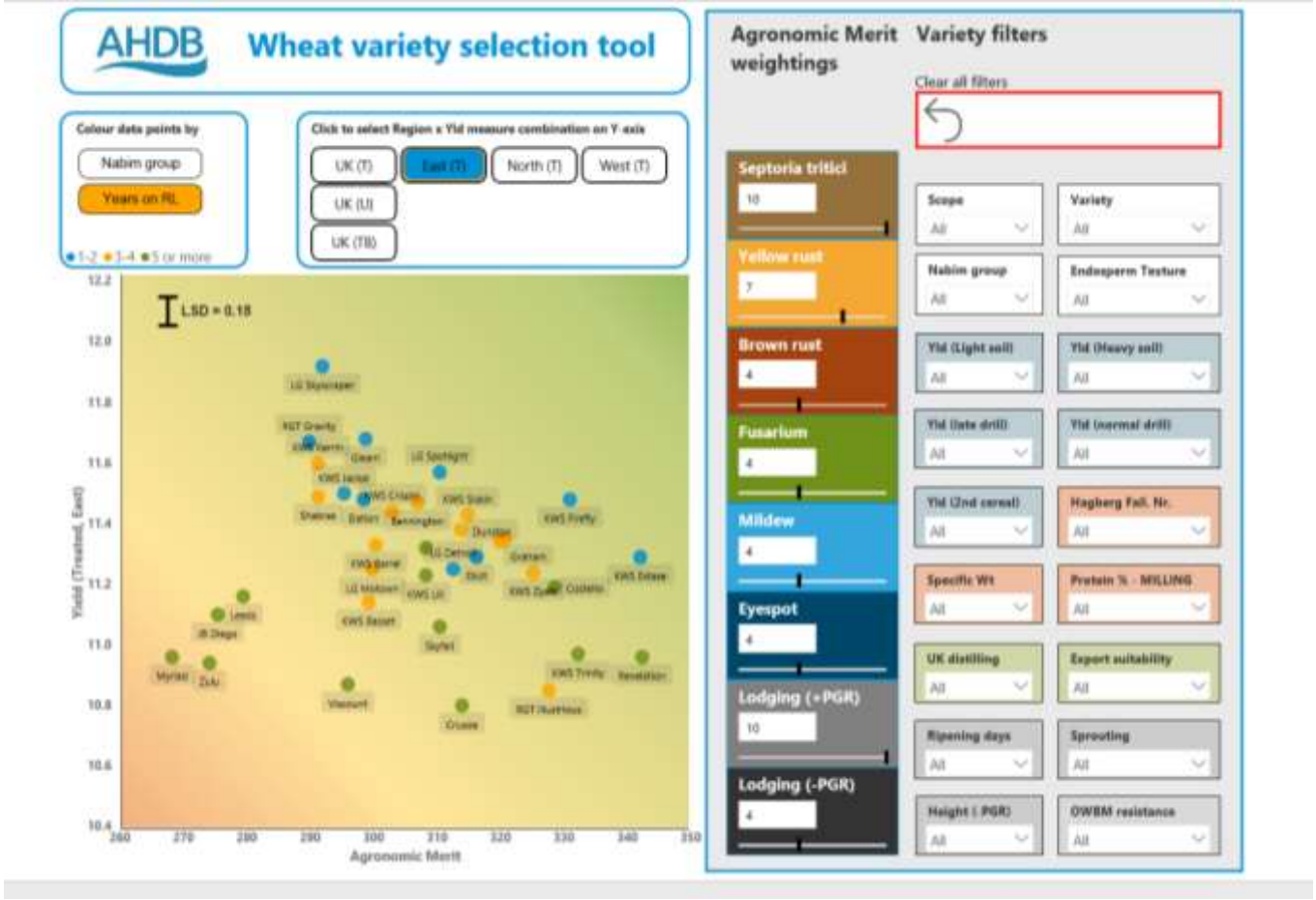


Trials cover different regions
Focus on major cropping areas
Option to provide regional split where data exists




Graham
Septoria tritici 6.9
Yellow rust 8
Yield 102
Yield (u) 88
SPWT 76.9
Lodge 8
Best as 1st wheat, early drilling on heavy land
105 yield in west
Gleam
Septoria tritici 6.4
Yellow rust 8
Yield 104
Yield (u) 85
SPWT 76.6
Lodge 7
Performs well on wide range of soils & rotation
Extase
Septoria tritici 8.1
Yellow rust 9
Yield 101
Yield (u) 95
SPWT 78.6
Lodge 8
Tall, vigorous autumn growth. Don't drill in early September


Costello
Septoria tritici 6.1
Yellow rust 8
Yield 100
Yield (u) 82
SPWT 80.9
Lodge 8
Consistent performer
good specific weight
Growers have
experience of variety
Theodore
Septoria tritici 7
Yellow rust 9
Yield 101
Yield (u) 92
SPWT 73.9
Lodge
(NL data)
Up for
recommendation
If recommended,
growers will have
little experience of
variety


AHDB
Wheat variety selection tool
Colour data points by
Nabim group
Years on RL
1-2 3-4 5 or more
Click to select Region x Yld measure combination on Y-axis
UK (T)
East (T)
North (T)
West (T)
UK (LI)
UK (TB)
LSD = 0.18
Yield (Treated, East)
Agronomic Merit
Agronomic Merit weightings
Variety filters
Clear all filters
Septoria tritici
Yellow rust
Brown rust
Fusarium
Mildew
Eyespot
Lodging (+PGR)
Lodging (-PGR)
Scope
Variety
Nabim group
Endosperm Texture
Yld (Light soil)
Yld (Heavy soil)
Yld (late drill)
Yld (normal drill)
Yld (2nd cereal)
Hagberg Fall. Nr.
Specific Wt
Protein % - MILLING
UK distilling
Export suitability
Ripening days
Sprouting
Height (PGR)
OWBM resistance


Small plot trials

RL trials – mother trials

- RL & NL standard protocols used
- Wide range of regional and agronomic situations evaluated
- Samples for quality including baking
- Robust statistical methodology used
- Genetic potential measured (best conventional control of pests, weeds & diseases)
- Impact of diseases on yield measured
- What would adding a farm practice protocol add to understanding of variety performance? Measure of trial operator performance?
- Size of trials would prohibit bespoke variety treatments

Monitor farms and Strategic farms – baby trials

- Farmers choose a few RL varieties present in mother trials relevant to their system for baby trials. They must include the designated control variety
- Farmers manage to own local requirements
- Common standard assessments done for all conventional & organic baby trials
- Limited data but perceived to be closer to on-farm practice
- Good opportunity for farmers to visit and share practice
- Coordinating results might show common patterns as opposed to what works in one season at one site

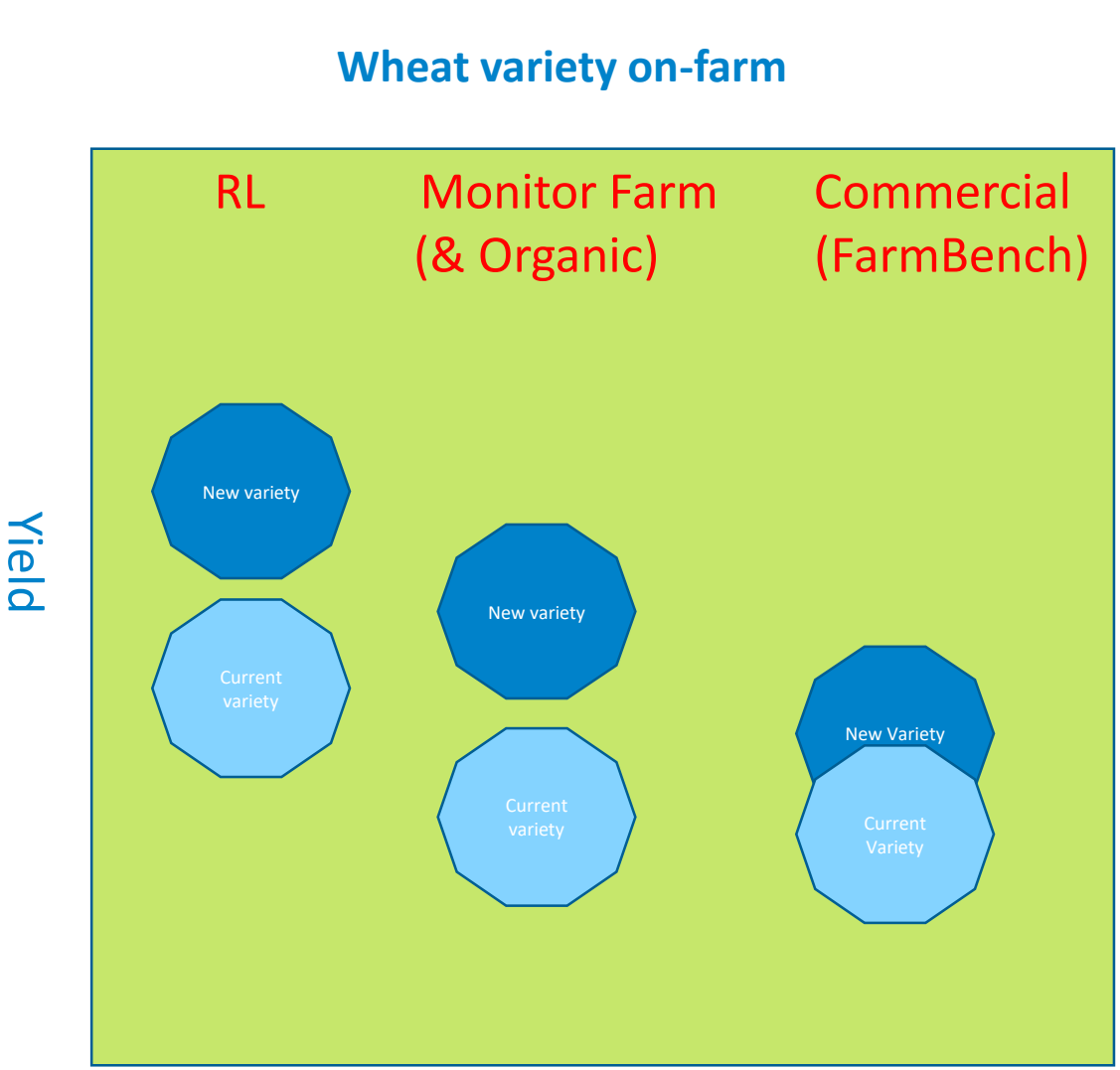
Commercial data

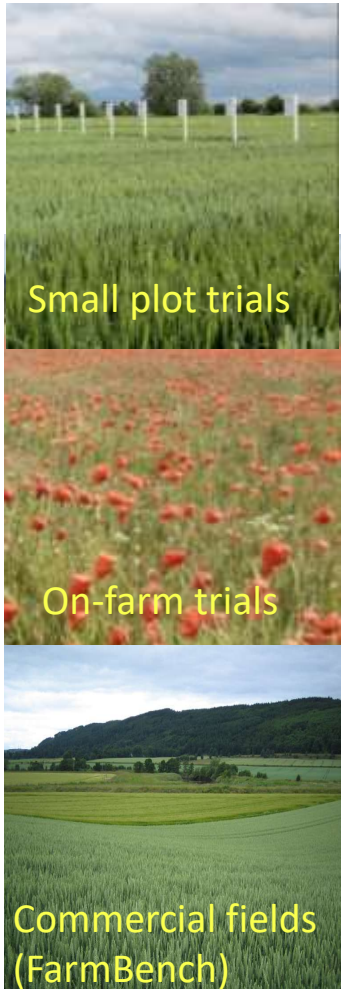
Data collected in Farmbench – requires additional permissions from grower to use

Varieties grown to current farm practice

Assessments limited

Variety - Comparing on-farm data





Thank you

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