



Agronomy of Scepter, Ninja plus others in the northern agricultural region, Western Australia

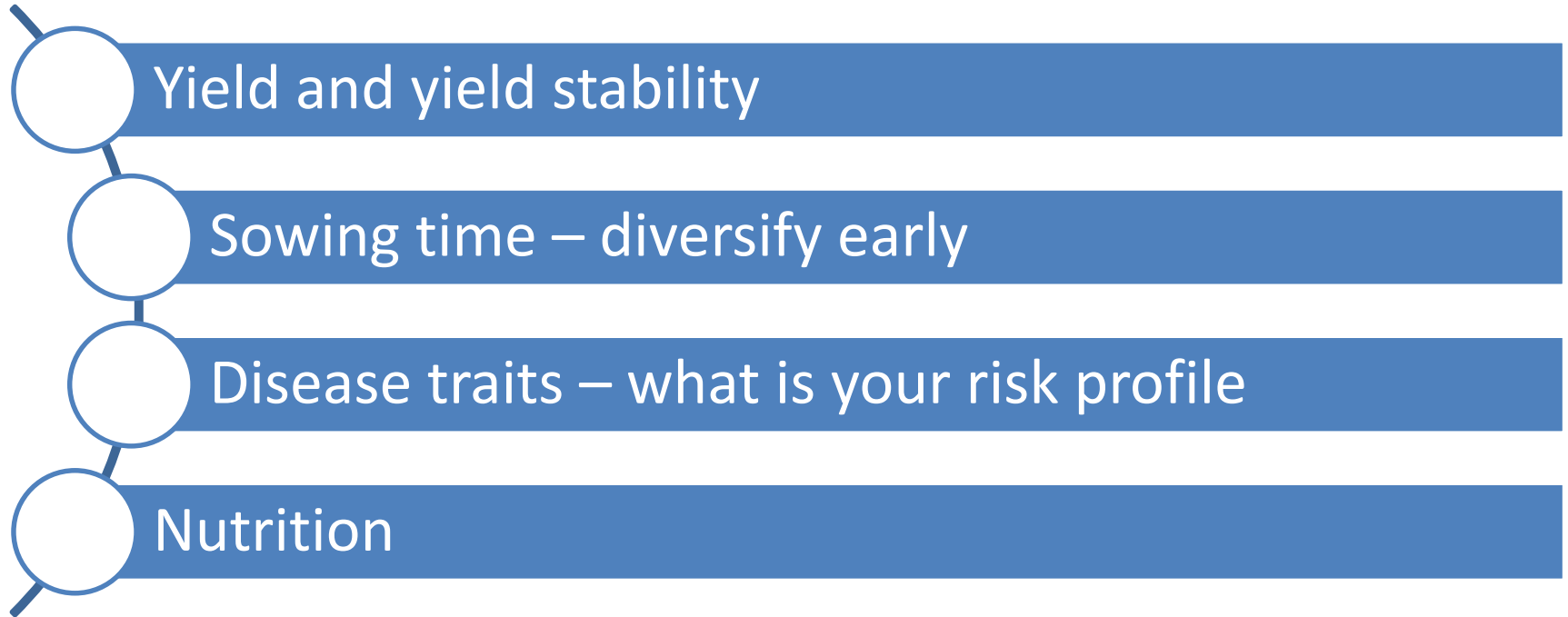
Christine Zaicou-Kunesch

Jeremy Curry, Bob French, Dion Nicol and Brenda Shackley

Tactical wheat agronomy for the west



Things to consider when choosing a variety



Set the scene

- Mace dominant
- Scepter emerging
- Mid- long maturity approx 20% of area

Variety	Planned sowing in 17/18 (% or WA)
Mace	54.5
Scepter	14.6
Calingiri	7.3
Zen	4.3
Magenta	4.0
Yitpi	2.5
Corack	1.8
LPB Trojan	1.8
LPB Cobra	1.7
Wyalkatchem	1.2

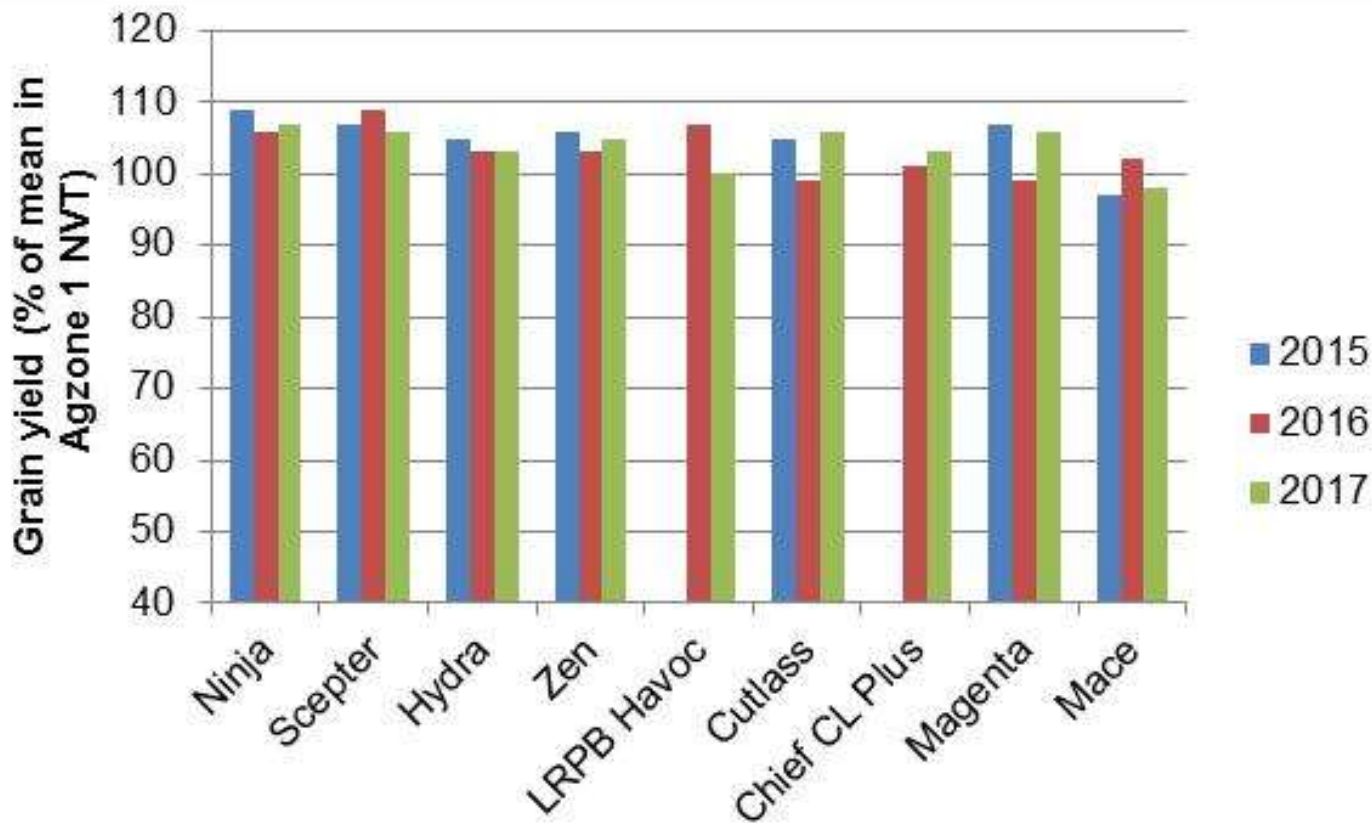
Source: CBH Group

Things to consider when choosing a variety



Yield: Scepter and Ninja ranked highly in NVT 2015-17

However there are other varieties of value to your farming system



Mean for
AgZone 1

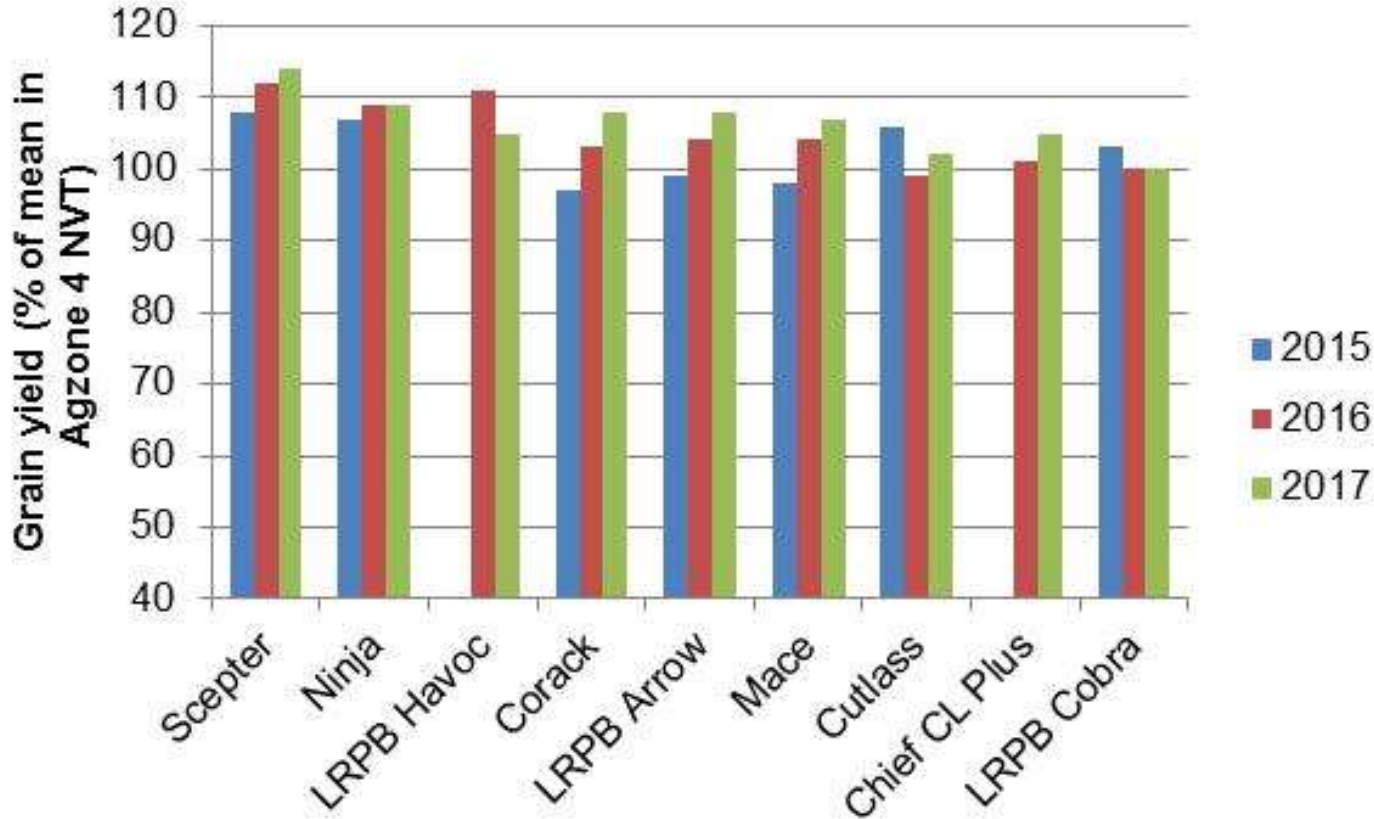
2.4 t/ha

4.1 t/ha

2.8 t/ha

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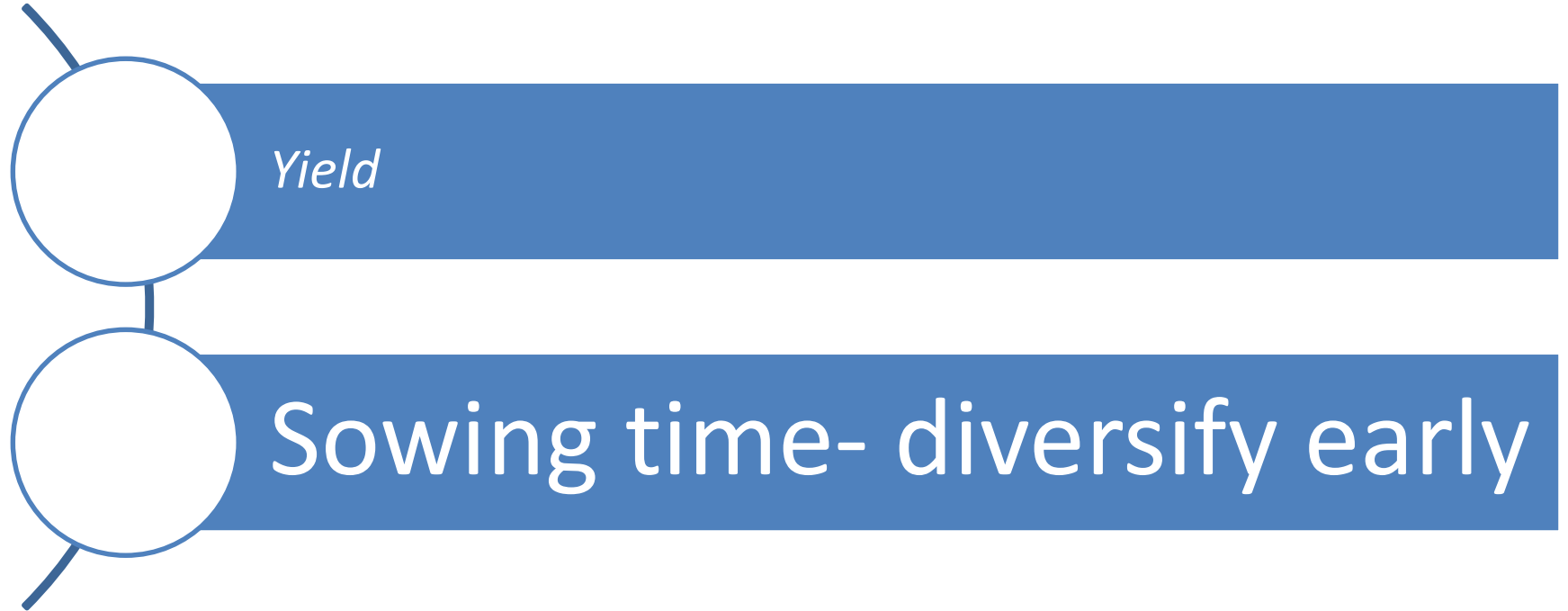
Mean for
AgZone 4

2.1 t/ha

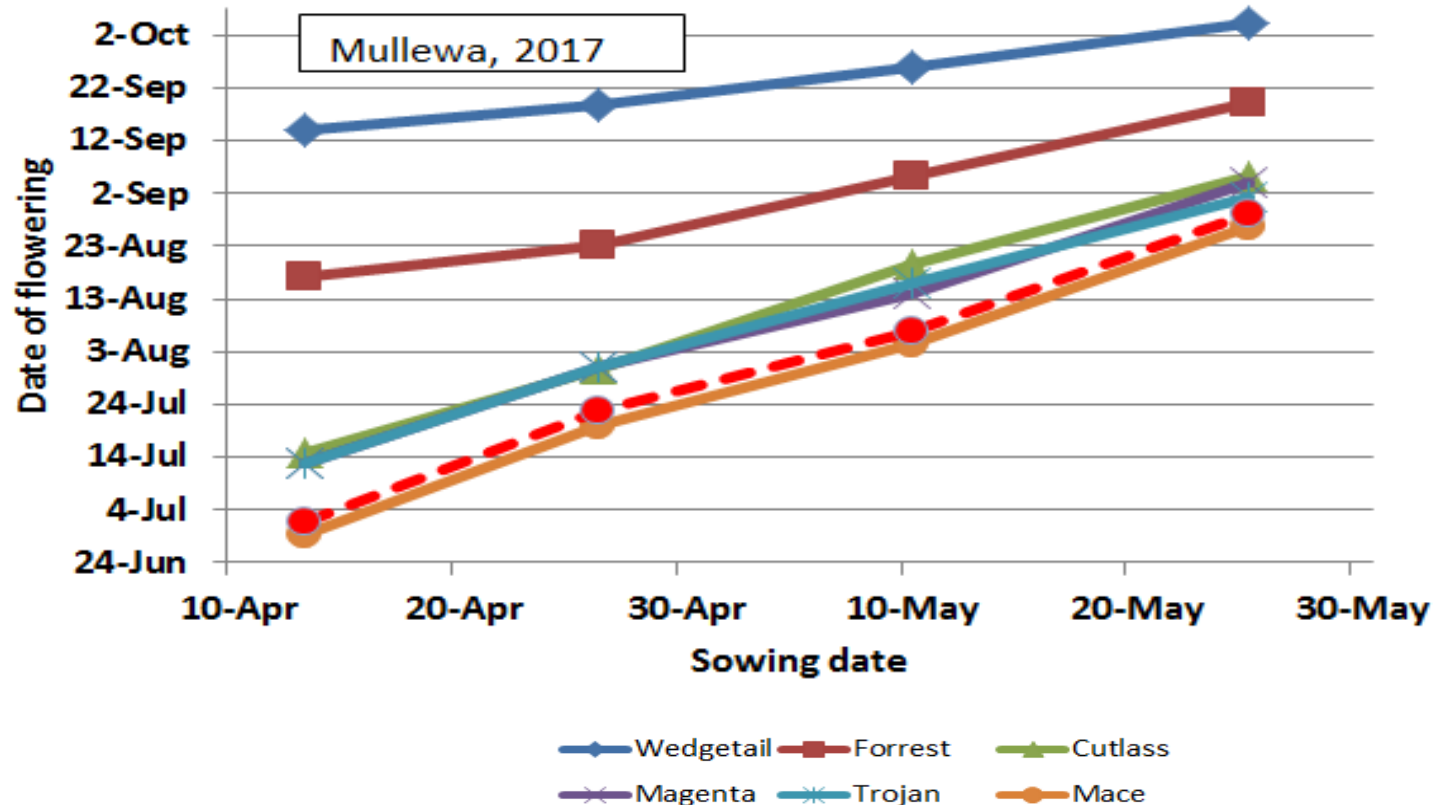
3.0 t/ha

2.2 t/ha

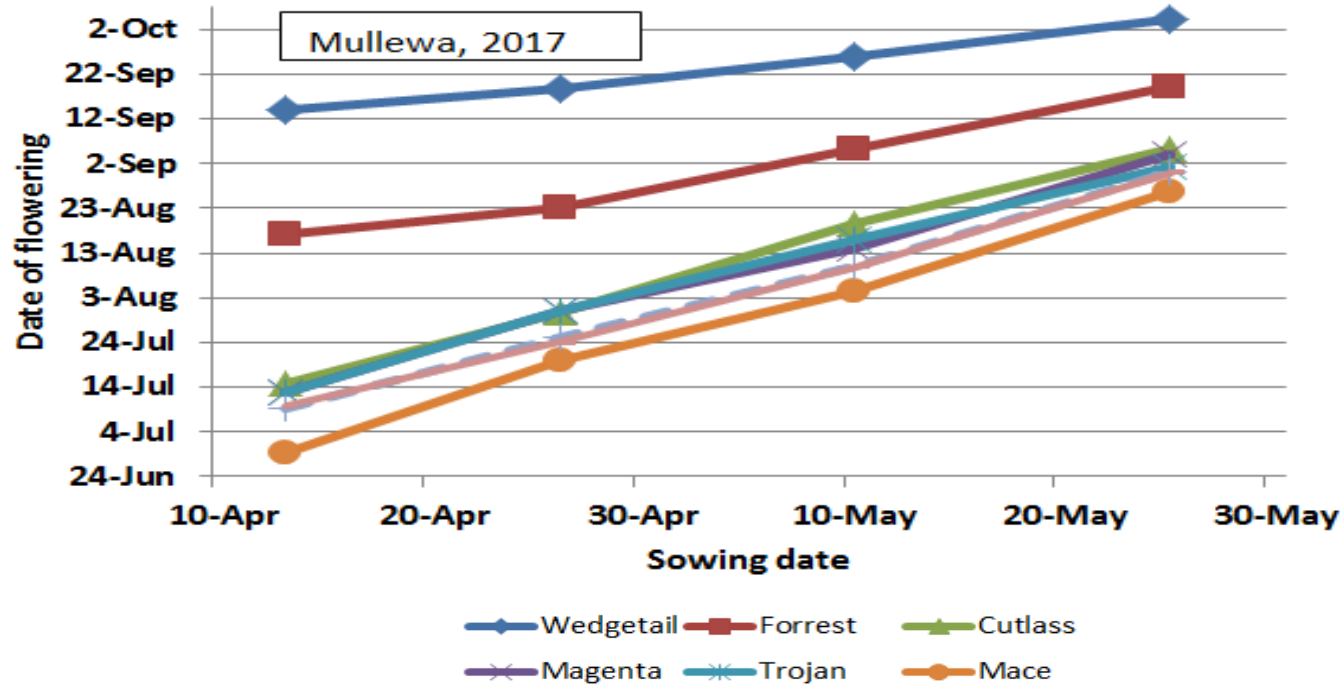
Things to consider when choosing a variety



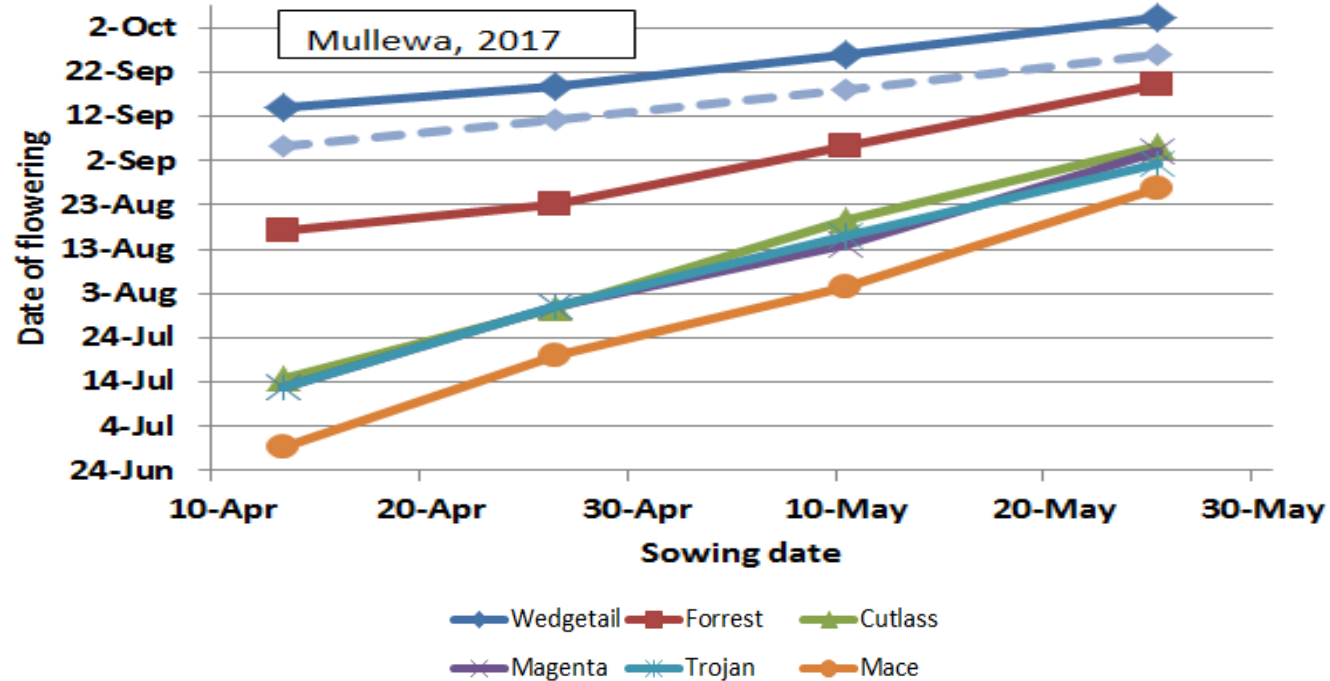
Scepter vs Mace – similar flowering time



Ninja and Zen – similar development



Longsword – a fast winter wheat ...FEED

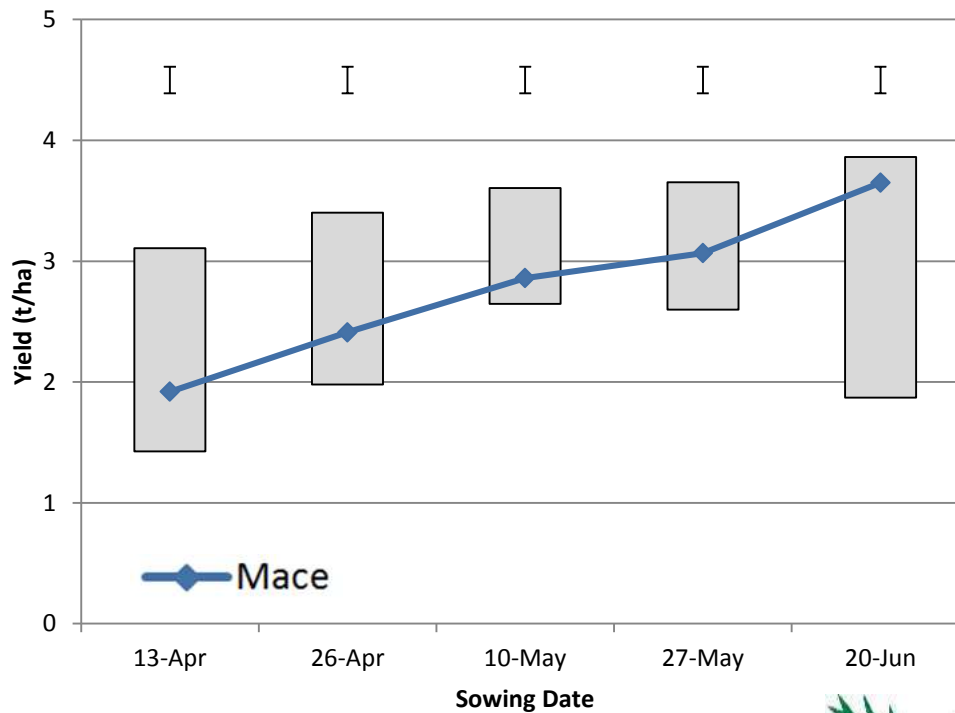
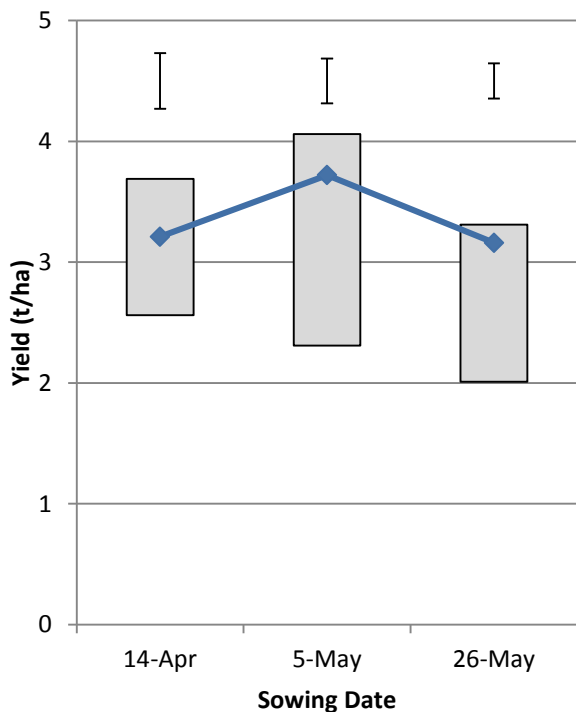




Mullewa sowing time response

2016

2017

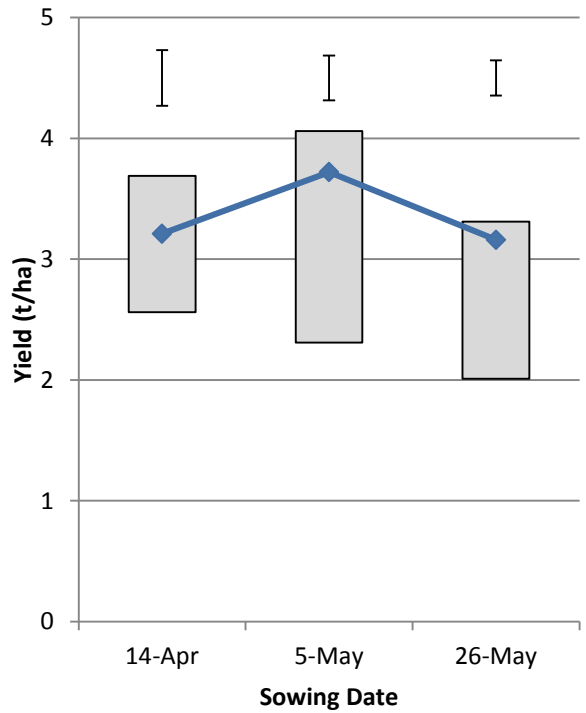


Error bar = LSD ($p < 0.05$) for within TOS.

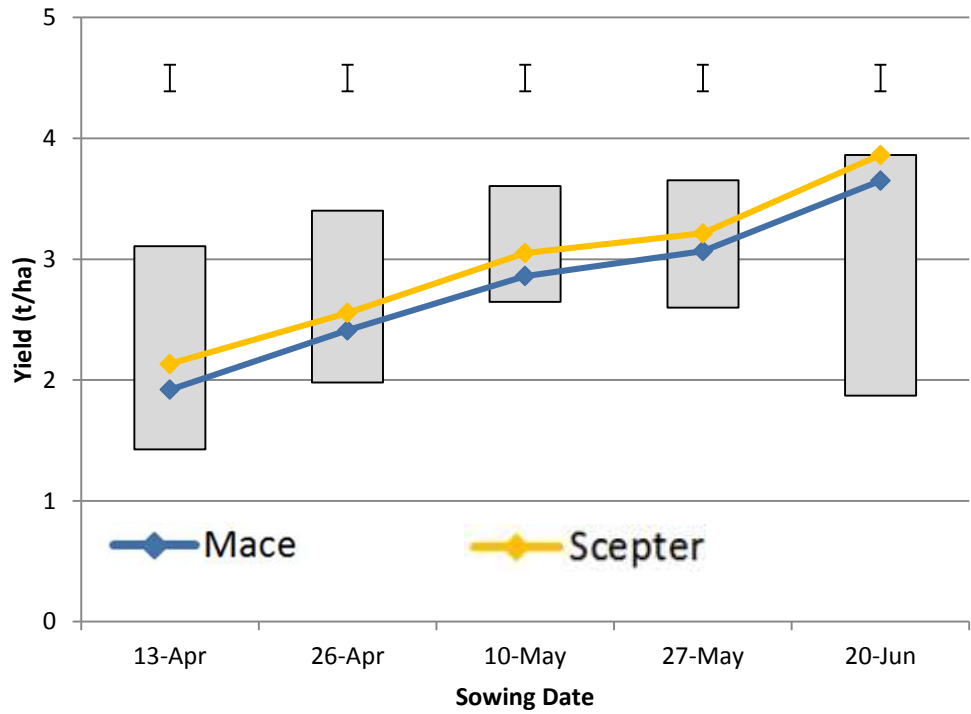
Source: B Shackley, J Curry, D Nicol, C Zaicou, DPIRD

Mullewa sowing time response

2016



2017

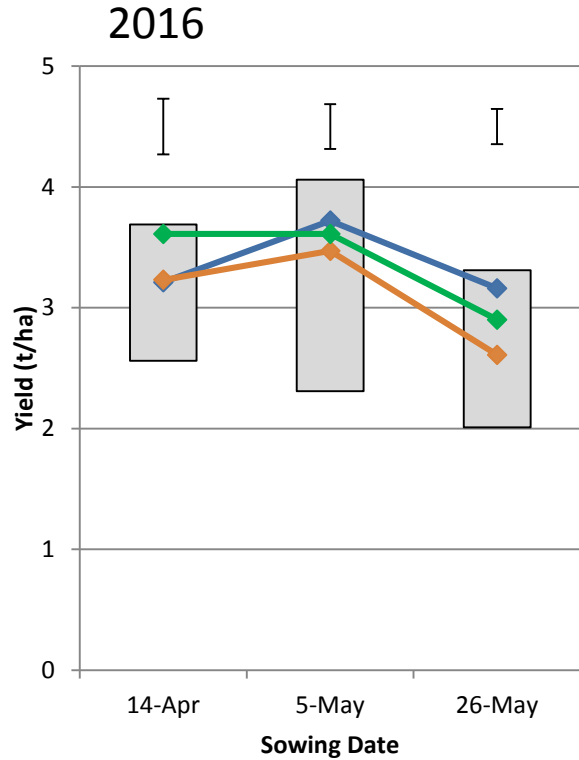


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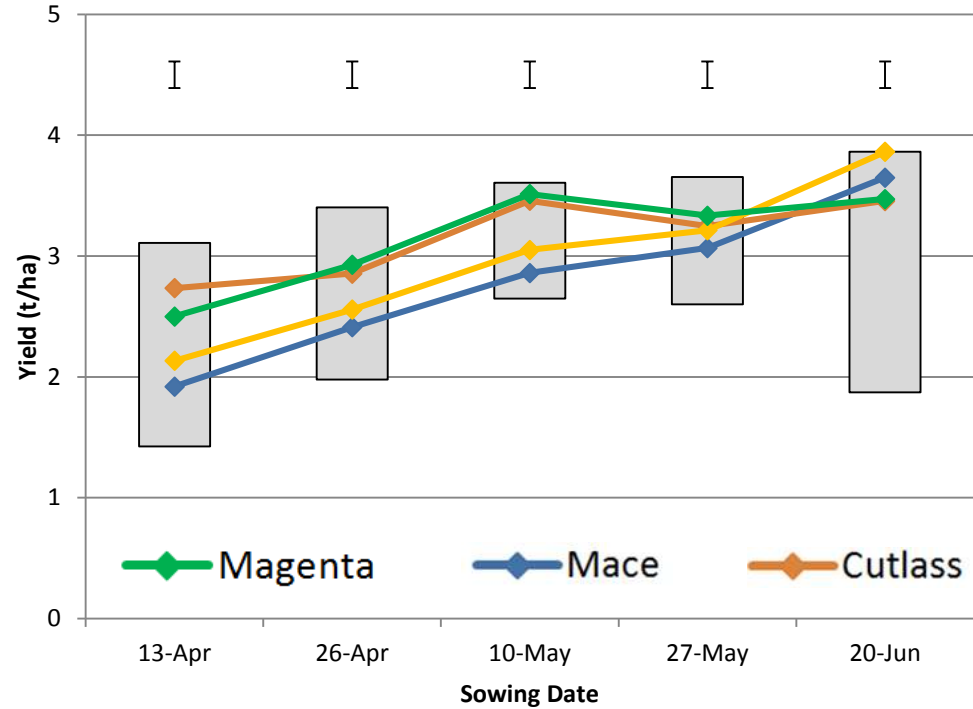
Source: B Shackley, J Curry, D Nicol, C Zaicou, DPIRD



Diversify early and sow long -Mullewa 2017



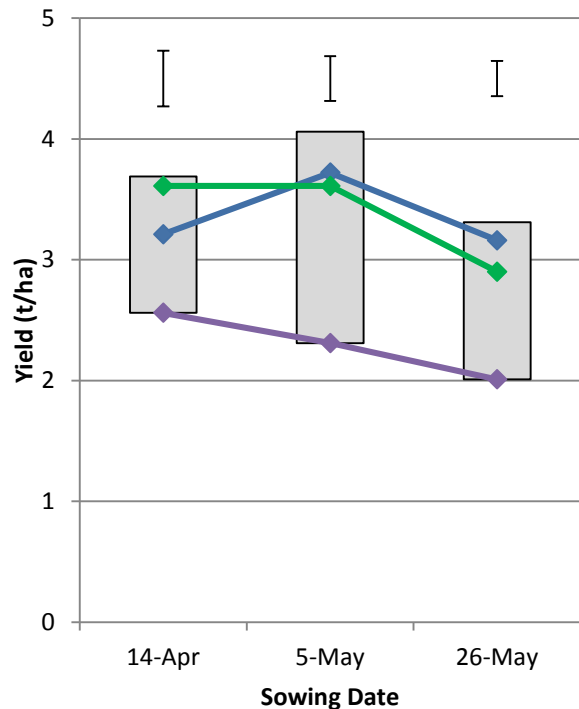
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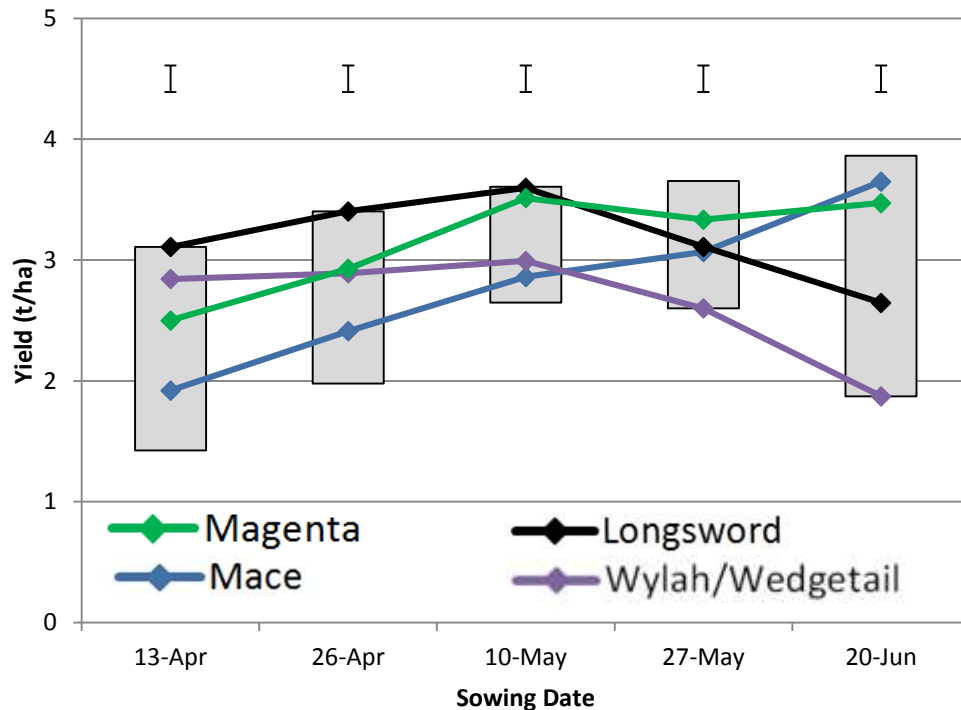
Source: B Shackley, J Curry, D Nicol, C Zaicou, DPIRD

Diversify early & sow long

2016



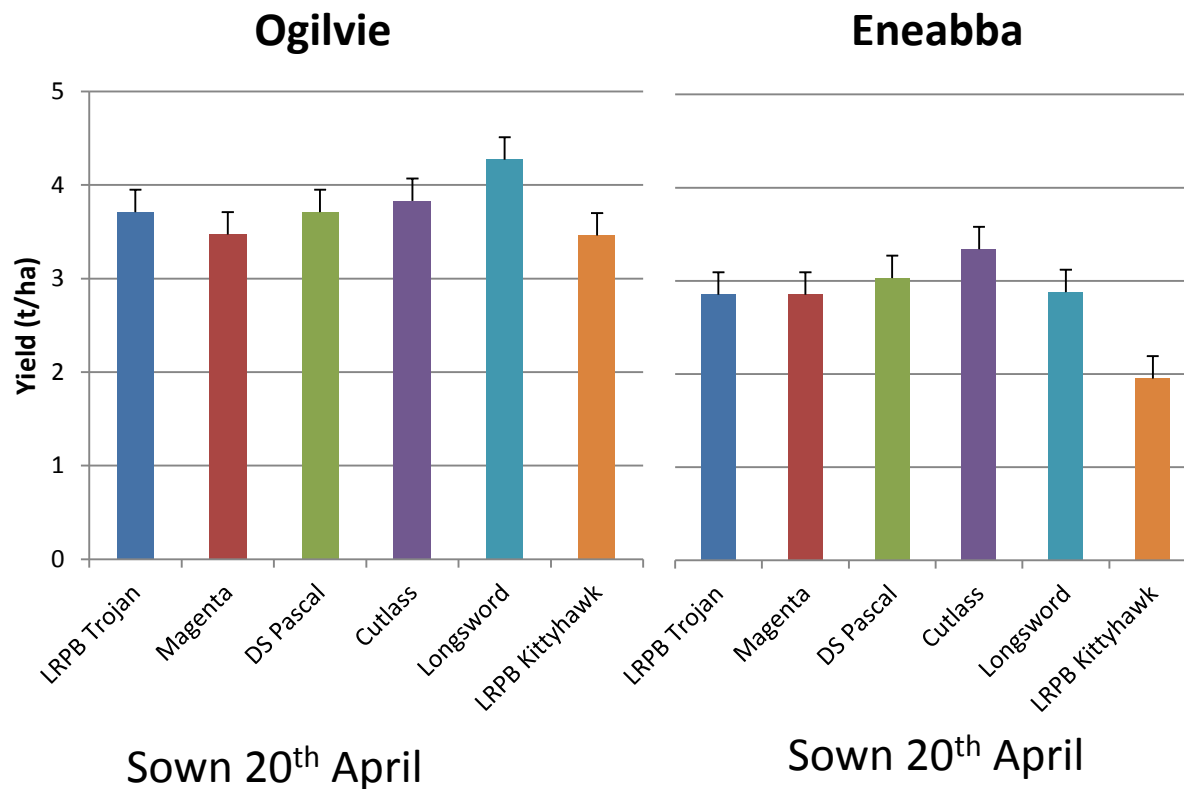
2017



Error bar = LSD ($p < 0.05$) for within TOS.

Source: B Shackley, J Curry, D Nicol, C Zaicou, DPIRD

WA early season NVT 2017



Sown 20th April

Sown 20th April

Diversify variety choice

There are typically more gains with variety diversification at early sowing than late.

- If sowing early, sow long, Cutlass or Magenta
- If you are concerned about 'bolting' a variety with a cold requirement is a better option eg Magenta for early sowing
- Use time of sowing and variety to minimise major constraint (e.g. frost, blackpoint).
- Ninja and Scepters will be choices for May sowing

Other crops may be a better option for very early sowing

Things to consider when choosing a variety



Scepter- note change with leaf rust and powdery mildew

	Scepter	Mace
S nodorum	MRMS	MS
Yellow Spot	MRMS	MRMS
Stem rusts	MR	MR
Stripe rust	MR	RMR
Leaf rust	MR>>>MS#	MS#
Powdery mildew	SVSp	MSS

Ninja- not a great disease package..better than Calingiri

	Ninja	Zen	Calingiri
S nodorum	MSSp	MRMS	MSS
Yellow Spot	MRMS	MRMS	MSS
Stem rusts	SVS	MSS	S
Stripe rust	SVS	MRMS	S
Leaf rust	MS#	MR#	MS#
Powdery mildew	VS	SVS	S

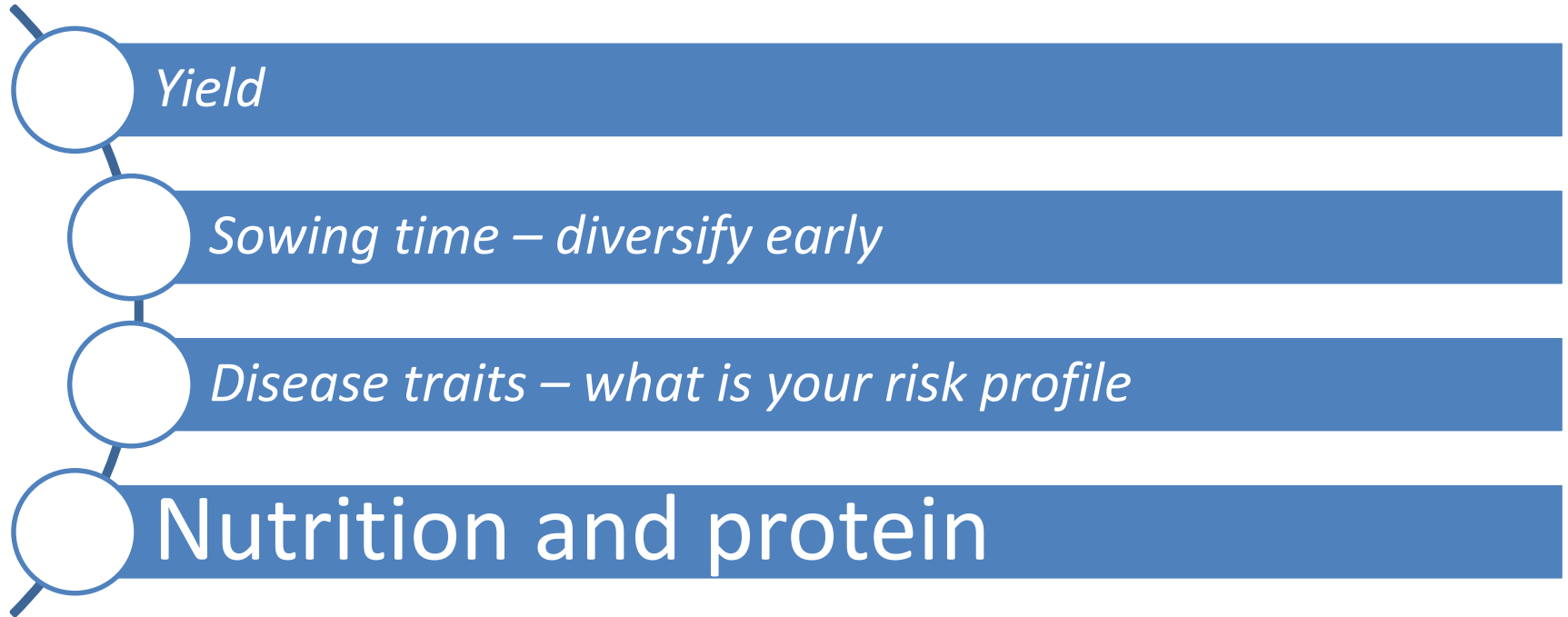
Longsword: good disease package, very early sowing option, FEED wheat atm

	Longsword	Cutlass	Magenta
S nodorum	MRMSp	MRMSp	MRMS
Yellow Spot	MRMSp	MSS	MRMS
Stem rusts	MR	R	RMR
Stripe rust	RMR	RMR	MS
Leaf rust	MR	RMR	R*
Powdery mildew	MRMS	Sp	MRMS

What is your risk factor? Factor in management

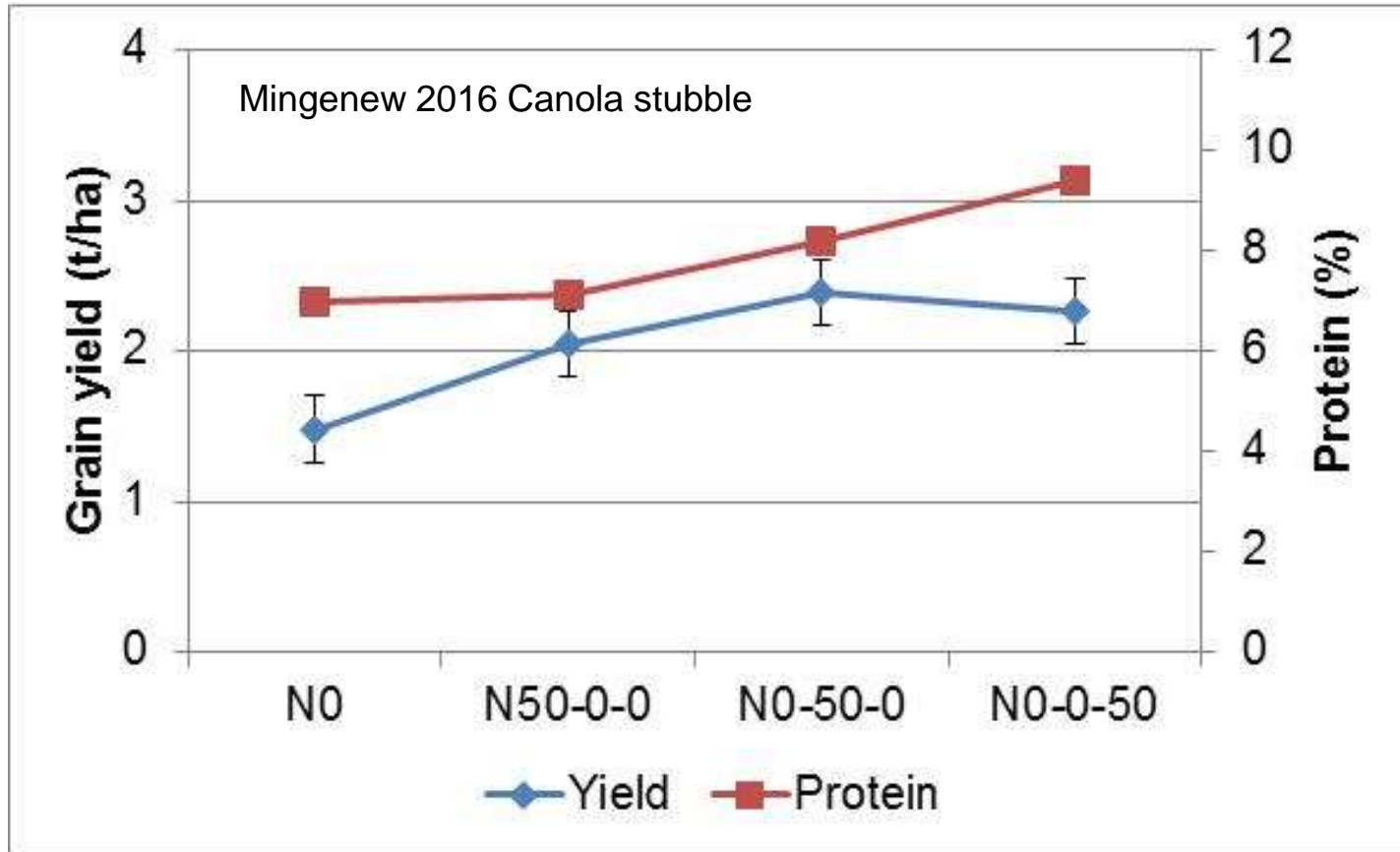
- Think RISK
 - Green bridge and your location
 - Previous rotation and stubble
- Consider your variety choice AND
- MONITOR and Management

Things to consider when choosing a variety



Protein and late N

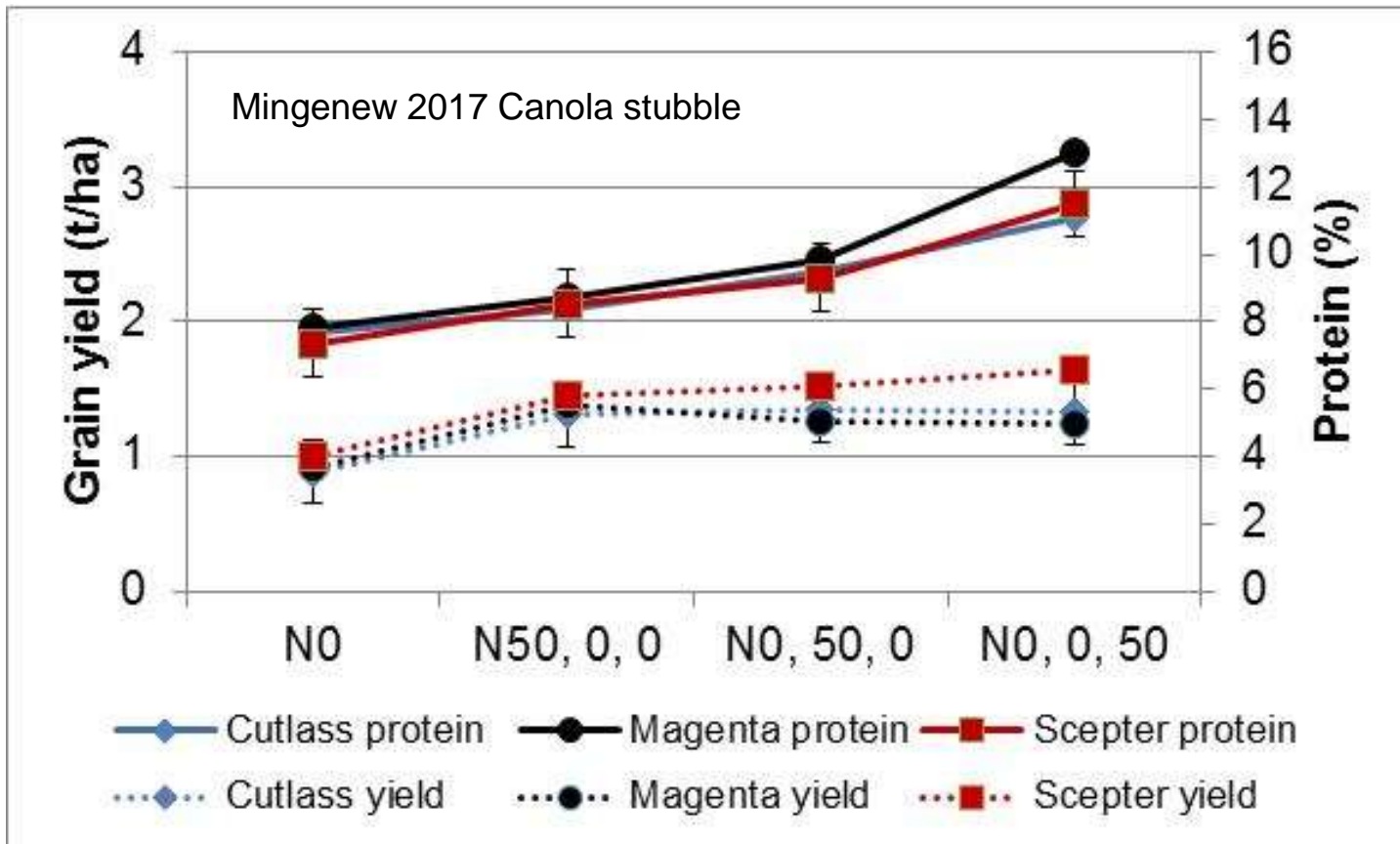
Late N will be of value
to manage protein





Protein and late N

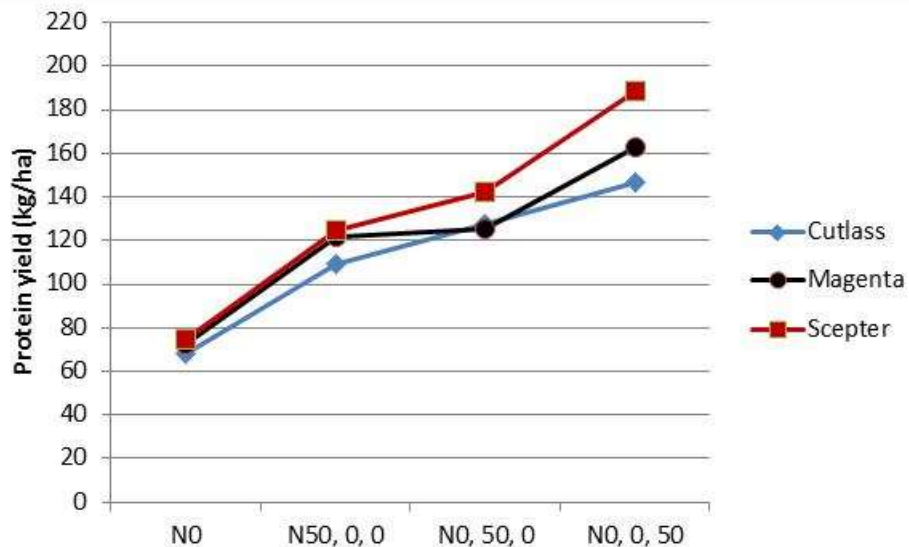
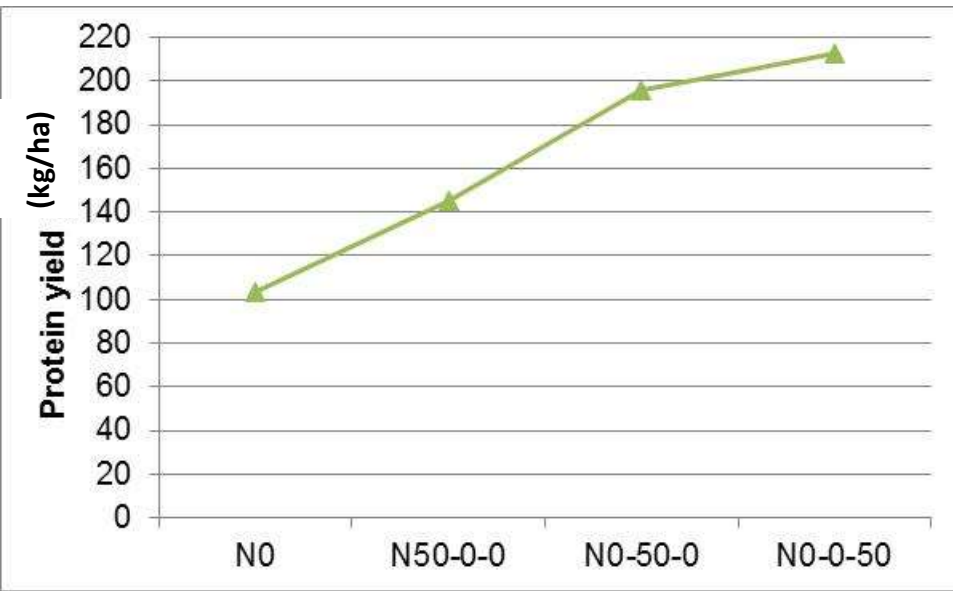
Late N will be of value to manage protein
Varieties will respond similarly



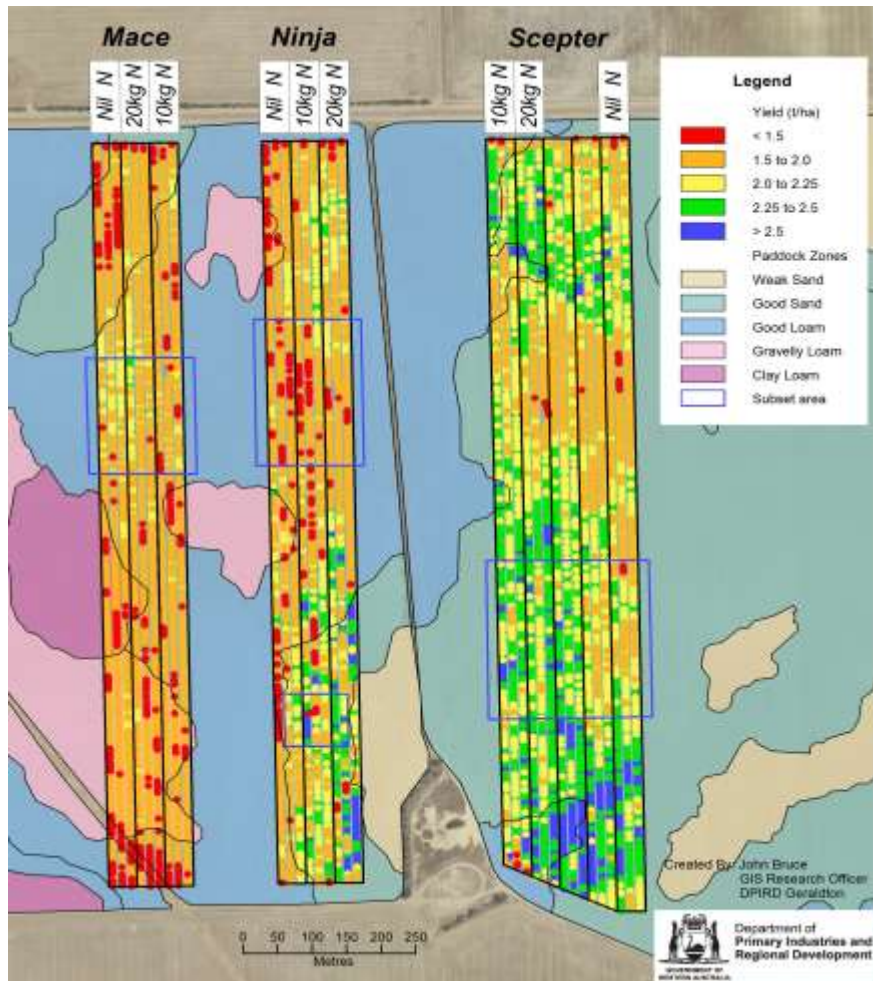
Protein yield

Varieties have performed similarly

Mingenew 2016 Canola stubble



Mingene 2017 Canola stubble



Demo strips for tactical N

Sown: 25/5/2017 Germination
not fantastic

Rotation: 2016 Canola, 2015
wheat, 2014 wheat

Fertiliser @ seeding:
90 kg/ha SOA pre seed, 45
kg/ha DAP extra,
25 kg/ha potash.
~27kg/ha N at seeding

**Top up nitrogen
on 10th August (weeks after
sowing)**

Source: B Cripps, Ogilvie

Rotation and Soil type

Rate N applied	Wheat t/ha	Protein (%)	Grade	Gross margins \$/ha
Scepter on lupin stubble	WEP22	Good sand		
0	2.16	11.7	AH	360
10	2.37	12.1	AH	392
20	2.36	12.0	AH	376
Mace on canola stubble	WEP20	Good loam		
0	2.03	11.0	APW	310
10	1.89	11.1	APW	263
20	2.01	11.8	AH	296

Demo strips and value of tactical N

N applied (kg/ha) to each zone	Wheat (t/ha)	Protein (%)	Gross margins \$/ha
Good loam			
0	1.72	10.3	329
10	1.77	11.1	325
20	1.85	11.4	335
Good sand			
0	2.13	9.8	437
10	2.17	9.9	431
20	2.43	10.4	489

Assumptions: Ninja ANW1 \$/t= \$266; Fixed costs = \$130; N as flexi cost including application at 10kg/ha = 16.30

Tactical N and protein

- Consider legumes in your system
- Shift more nitrogen to stem elongation to manage protein

Summary - Ninja

- Stable yields, better than Calingiri
- Early May sowings better yield option than Zen
- Manage protein window through site selection and top up nitrogen
- Disease profile not outstanding
 - Powdery mildew VS
- Black point MR – as good as Bonnie Rock

Summary- Scepter

- Stable yields over a range of sowing times in NVT but target for May sowings
- Seed size like little footballs, so manage seeding rate to target populations greater than 120-150 plants/m²
- Big head
- Lupin stubble better option and budget for tactical nitrogen for protein
- Disease
 - Powdery mildew SVS
 - Leaf rust – MS to 104 strain



TACTICAL WHEAT AGRONOMY FOR THE WEST

thank you to

- Rod Bowey, Bruce Haig and Melanie Kupsch (technical support)
- DPIRD research units
- NVT and related projects for additional information
- Growers and Grower groups



Department of
Primary Industries and
Regional Development

THANK YOU

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