

25. Quick Winter Feed Options with Forage Cereals - Filling Winter Feed Gaps

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KEY MESSAGES

- Winter feed options trial to value add to the MFMG day at Keith.
- Range of winter feed options evaluated under specific local conditions.

Trial Background

In 2017 a trial was sown at the Keith to value add to the MFMG field day. The trial evaluated a range of Heritage seed winter feed options under specific local conditions.

Trial Design

Trial was sown on 24 May. Options evaluated were: Mammoth forage oat / Vortex annual ryegrass, Dictator II forage barley / Vortex annual ryegrass and Interval rape / Vortex annual ryegrass. Seeding rates were Mammoth (60 kg/ha), Vortex (10 kg/ha), Dictator 2 (60kg/ha) and Interval (2 kg/ha). Forage dry matter (DM) and feed quality assessments were made at two timings – 8 August and 26 September.

Trial Results

Forage production and quality of the different forage options evaluated at Keith in early August (Table 1) and late September (Table 2). The mean DM yield in early August was 2.02 t/ha and

4.43 t/ha in late September. There were no significant differences in forage production (DM t/ha) between the three options at either timing.

Table 1: Forage production (DM t/ha) and quality from different forage options at Keith in early August.

Variety	Date Cut	t/ha DM removed	Dry Matter %	Moisture %	Crude Protein % DM	Acid Detergent Fibre % DM	Neutral Detergent Fibre % DM	Digestibility (DMD) % DM	Digestibility (DOMD) % DM	Est. Metabolisable Energy MJ/kg DM	Water Soluble Carbohydrates % DM	Fat % DM	Ash % DM
Dictator2/Vortex	8-Aug	2.11	92.4	7.6	21.7	18.3	42.3	82.4	76.6	12.5	-	4.0	13.2
Mammoth/Vortex	8-Aug	2.07	91.8	8.2	20.4	20.1	43.8	80.6	75.1	12.3	8.1	3.9	13.8
Vortex/Interval*	8-Aug	1.88	91.4	8.6	21.6	15.7	32.6	88.1	81.4	13.5	14.5	3.9	9.6

Mean (t/ha)	2.02
P Value	0.614
I.s.d.	NS

NS – No Significant difference

* Plus Poncho seed treatment

Table 2: Forage production (DM t/ha) and quality from different forage options at Keith in late September.

		t/ha DM removed	Dry Matter	Moisture	Crude Protein	Acid Detergent Fibre	Neutral Detergent Fibre	Digestibility (DMD)	Digestibility (DOMD)	Est. Metabolisable Energy	Water Soluble Carbohydrates	Fat	Ash
Variety	Date Cut	t/ha	%	%	% DM	% DM	% DM	% DM	% DM	MJ/kg DM	% DM	% DM	% DM
Dictator2/Vortex	26-Sep	4.80	85.3	14.7	9.6	28.9	54.5	68.2	64.6	10.1	17.2	2.9	10.6
Mammoth/Vortex	26-Sep	4.10	87.1	12.9	10.3	24.6	45.7	76.6	71.7	11.6	22.6	3.4	11.4
Vortex/Interval*	26-Sep	4.40	87.6	12.4	10.9	22.3	45.7	78.0	72.9	11.8	24.5	3.3	12.1

Mean (t/ha)	4.43
P Value	0.417
I.s.d.	NS

NS – No Significant difference

* Plus Poncho seed treatment

Quick Winter Feed Options with Forage Cereals

If you are in need of fast winter feed, forage cereals offer a number of benefits and opportunities:

- Fast establishment and quick to first grazing
- Multiple grazing and fast recovery
- Great opportunity for spring silage or hay production
- High yield potential from small, dedicated area.
- Take pressure from grazing autumn and winter pastures, allowing the farm to bounce back more strongly in spring.
- Aid to pasture renovation plans or as a winter crop between summer crops.

Ideal Sowing Times

	RECOMMENDED TIME OF SOWING					
	JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
Crackerjack 2 Triticale	Not Recommended	Not Recommended	Not Recommended	Recommended	Recommended	OK some situations
Dictator 2 Forage Barley	Not Recommended	OK some situations	OK some situations	Recommended	Recommended	Recommended
Mammoth Oats	OK some situations	Recommended	Recommended	Recommended	OK some situations	OK some situations

Recommended
 OK some situations
 Not Recommended

Figure 1: Recommended sowing times for Heritage Seeds forage cereals for Southern Australia.

Recommended Use Patterns

	Quick Feed (sown May)	Grass Weed Control	Silage Quality	Hay Quality	Hay or Silage Yield	Acid Soil Tol.	Waterlogging Tol.
Crackerjack 2 Triticale	*	****			****	****	
Dictator 2 Forage Barley	****	****				*	*
Mammoth Oats						****	
Ryecorn	****		*	*			
Annual / Italian Ryegrass		*	****	****	*		****
Dictator 2 & Annual Ryegrass		*					

■ Recommended
 ■ OK some situations
 ■ Not Recommended
 (****) best option (*) worst option

Figure 2: Recommended use patterns for late sown annual options.

Feed Quality

All forage cereals have similar feed characteristics whilst in vegetative, leafy growth. As the plant develops and the young ear begins to emerge, Oats retain the best ME and lower NDF. Oaten silage is best harvested around the boot stage, similarly triticale. Higher yields may be taken with later harvesting with some trade-off with fodder quality. For late harvesting with crop in milk-dough stage, Dictator 2 barley shines with good ME, low NDF and high protein levels. It is not generally advisable to take ryecorn for fodder as the feed quality is poor.

Table 3: Feed Test information. ME: Metabolisable Energy (MJ ME/kg DM); CP: Crude Protein (%); NDF: Neutral Detergent Fibre (%). Feed Test samples taken from Howlong Research Farm in 2015 & 2016

	Leafy Growth			Boost Stage			Milk-Dough (silage)			Add ARG/IRG (silage)		
	ME	CP	NDF	ME	CP	NDF	ME	CP	NDF	ME	CP	NDF
Mammoth Oats	13.0	32	39	10.8	10	48	9.3	13	57	10.1	18	52
Crackerjack 2 Triticale	12.5	32	39	9.1	17	57	8.7	8	55	9.4	15	54
Dictator 2 Barley	12.5	25	42	8.4	14	58	9.5	13	52	10.1	19	54
Southern Green Ryecorn	12.5	28	48	9.9	18	55	7.7	9	73		nt	

While forage cereals, such as forage barley is an excellent option for providing quick feed from a late sow (May), the addition of an annual ryegrass can have the added benefit of increasing feed quality for silage/hay or providing the option to continue grazing in spring without the risk of grazing out the cereal. In trials conducted at Howlong Research Farm in 2016 the addition of

Vortex annual ryegrass (15 kg/ha) increased ME at silage time by 0.6-0.8 MJ ME/kg DM. for our 3 different forage cereals (triticale, barley and oats) demonstrating how it can be a useful addition when high quality is required.

Table 4: Metabolisable Energy (MJ ME/kg DM) of barley, oats and triticale with the addition of Vortex annual ryegrass (15 kg/ha). Feed Tests taken from Howlong Research Farm in 2016.

	ME (MJ Me/kg DM)	
	Vortex -	Vortex +
Crackerjack 2 Triticale	8.7	9.4 (+ 0.7)
Dictator 2 Forage Barley	9.5	10.1 (+ 0.6)
Mammoth Oats	9.3	10.1 (+ 0.8)

MORE INFORMATION

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