

PERENNIAL



Alfalfa

The perennial alfalfa trial established well and had great growth in the third and fourth replication rows. The trial was mowed throughout the season for weed control and the alfalfa in the third and fourth replication rows regrew well over the whole season. This year harvest weights were not taken.

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Highlights

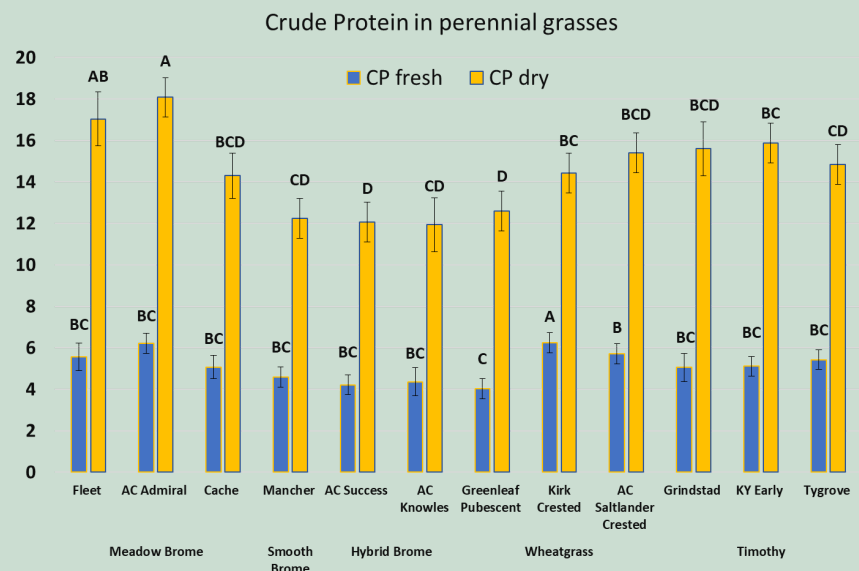
- 12 grass species grown
- Kirk Crested wheatgrass had the most ADF and NDF compared to Fleet and AC Admiral Meadow Brome.
- Protein content, TDN, Ca were greater in Kirk Crested Wheatgrass compared to Greenleaf Pubescent Wheatgrass
- Mixes of AC Admiral or Fleet Meadow Brome with Kirk Crested Wheatgrass will likely provide a good balanced feed for cattle with enough digestibility and nutrients every season

Grasses - Perennial Forage	
Variety	Seeding rate (lbs acre ⁻¹)
Fleet Meadow Brome	
AC Admiral Meadow Brome	14
Cache Meadow Brome	
Mancher Smooth Brome	
AC Success Hybrid Brome	
AC Knowles Hybrid Brome	12
Greenleaf Pubescent Wheatgrass	
Kirk Crested Wheatgrass	7
AC Saltlander Crested Wheatgrass	11
Nabucco Italian Rye Grass	
Killarney Orchard Grass	10
Blizzard Orchard Grass	
Courtney Tall Fescue	8
Grindstad Timothy	
KY Early Timothy	5
Tygrove Timothy	



Grasses

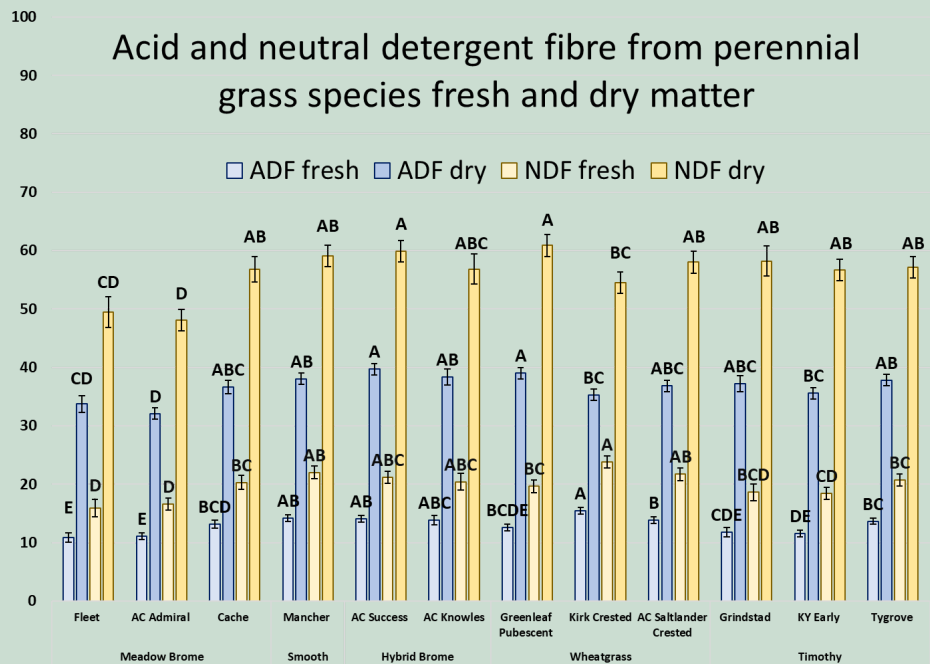
Crude Protein in as-fed biomass samples (P=0.03) were those from Kirk Crested Wheatgrass harvested plots compared to samples harvested in other grass varieties. In dry biomass crude protein (P=0.0008) AC Admiral Meadow Brome was greater compared to values from harvested samples of AC Success Hybrid Brome and Greenleaf Pubescent Wheatgrass.



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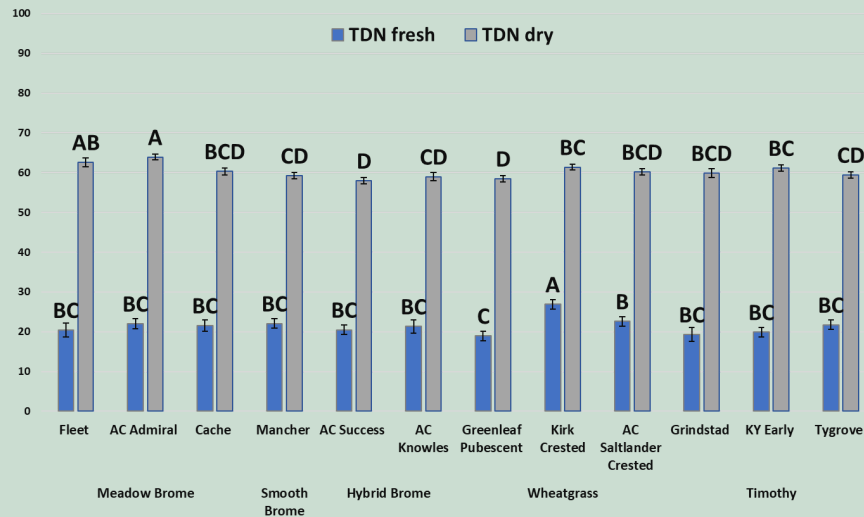
Grasses

In values as fed, acid ($P=0.001$) and neutral ($P=0.001$) detergent fibre was greater in Kirk Crested Wheatgrass compared to the other varieties. More digestibility will be found in Fleet and AC Admiral Meadow Brome varieties as ADF and NDF values were the lowest. In dry weights, the perennial grass varieties AC Success Hybrid Brome and Greenleaf Pubescent Wheatgrass had the greatest NDF ($P=0.0021$) and ADF ($P=0.0008$) values compared to Kirk Crested Wheatgrass, Fleet Meadow Brome, AC Admiral Meadow Brome.



In fresh biomass samples, perennial grass varieties that may provide more energy ($P=0.0142$) were Kirk Crested Wheatgrass, compared to the other perennial grass varieties.

Total digestible nutrients in perennial grasses

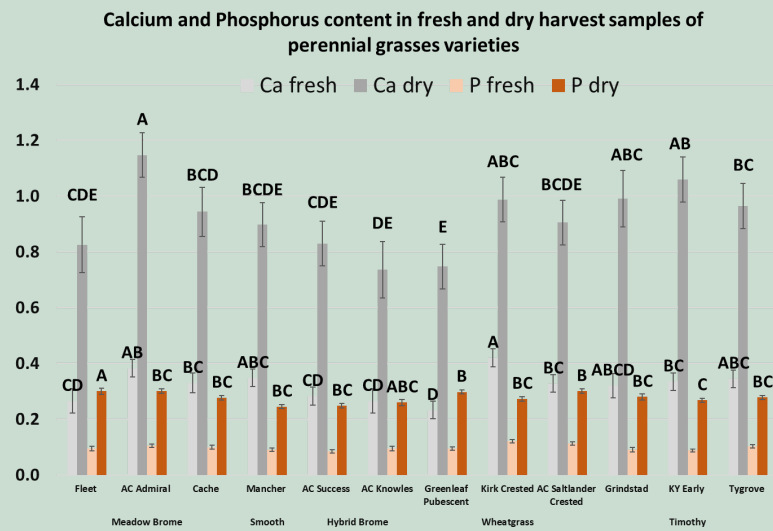


Total digestible nutrients in dry matter ($P=0.0008$) were greater in AC Admiral Meadow Brome compared to lower values seen in AC Success Hybrid Brome and Greenleaf Pubescent Wheatgrass.

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Grasses

Calcium and Phosphorus content in AC Admiral Meadow Brome was greater in dry biomass ($P=0.0028$ and $P<0.0001$ for Ca and P respectively), this differs from Calcium content in fresh biomass ($P=0.0091$) where Kirk Crested Wheatgrass had the greatest and Greenleaf Pubescent Wheatgrass had the lowest calcium content both in fresh and dry biomass samples. Dry samples of KY Early Timothy had less phosphorus content compared to those obtained from other varieties. Phosphorus values in as-fed biomass were the same among perennial grass varieties ($P=0.0966$).



In summary in as-fed values Kirk Crested Wheatgrass had more crude protein, more energy from digestible nutrients, more acid and neutral detergent fibre, as well as Ca content. In moisture devoid samples, AC Success Hybrid Brome and Greenleaf Pubescent Wheatgrass had less crude protein and less digestibility, and in turn lower TDN values. Moreover lower Ca and P values were also attributed to these varieties.



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Highlights

- 13 mixes grown
- For the second time as they failed to grow from last season
- Saline master had more emergent number of individuals than the other mixes

Alfalfa and grass mixes

This trial had to be re-seeded because no emergence was reported the previous growing season. Emergence data shows us that more individuals emerged in the plots sown with Salinemaster compared to the rest of the treatments. Legumemaster was not sown this year as it was unavailable. Although some emergence was reported, values were as low as those found in mixes of Fleet Meadow Brome and Spredor 5 Creeping Alfalfa, and mixes composed of AC Yellowhead Alfalfa, Lanigan Sainfoin and Veldt Cizer Milk Vetch with either Fleet Meadow Brome or AC Success Hybrid Brome. Emergence and subsequent biomass is expected to increase in coming growing seasons depending on the weather conditions.

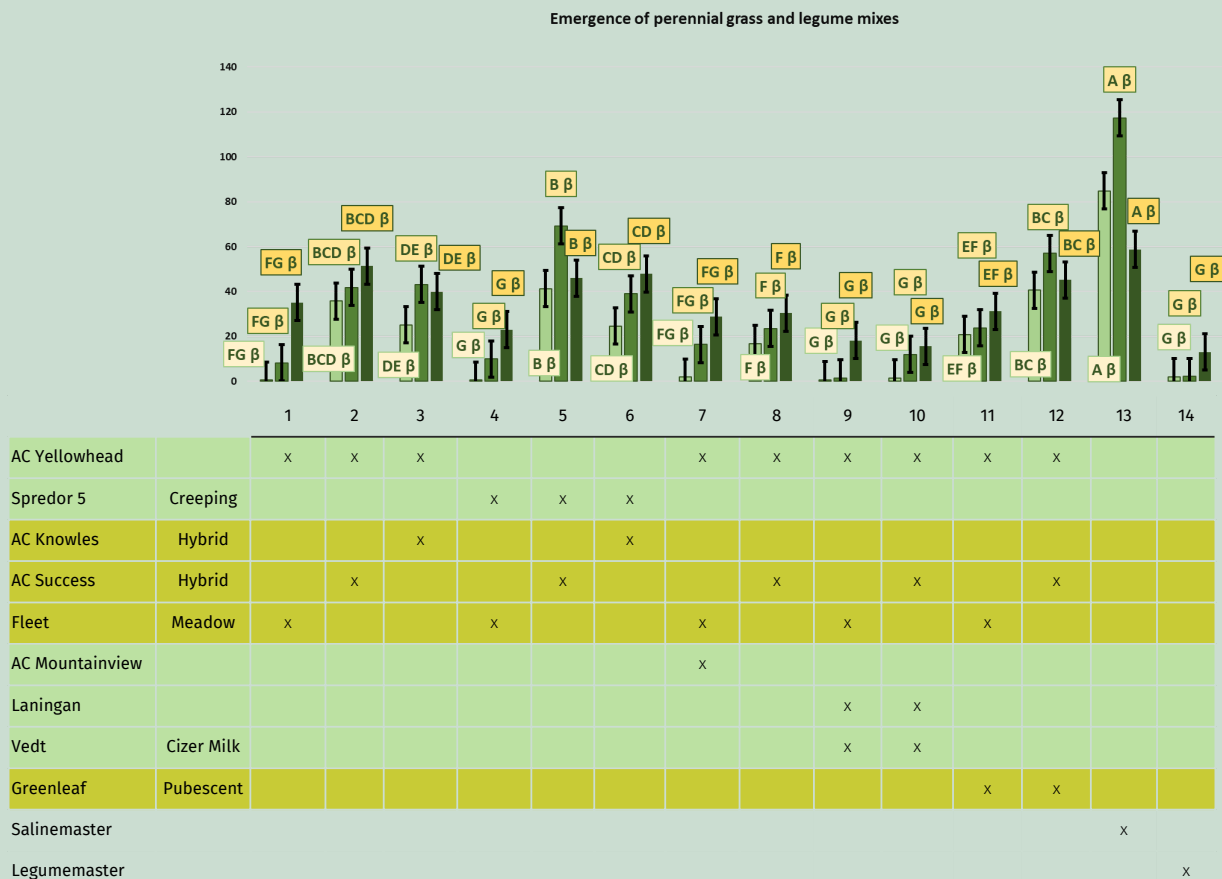
Mixes - Perennial Forage		
Mix	Variety	Seeding rate (lbs acre ⁻¹)
Mix 1	Fleet Meadow Brome	7
	AC Yellowhead	4
Mix 2	AC Success Hybrid Brome	6
	AC Yellowhead	4
Mix 3	AC Knowles Hybrid Br	6
	AC Yellowhead	4
Mix 4	Fleet Meadow Brome	7
	Spredor 5	4
Mix 5	AC Success Hybrid Brome	6
	Spredor 5	4
Mix 6	AC Knowles Hybrid Br	6
	Spredor 5	4
Mix 7	Fleet Meadow Brome	5
	AC Yellowhead Alfalfa	3
	AC Mountainview Sainfoin	10
	AC Success Hybrid Brome	4
Mix 8	AC Yellowhead Alfalfa	3
	AC Mountainview Sainfoin	10
	Fleet Meadow Brome	5
Mix 9	AC Yellowhead Alfalfa	2
	AC Mountainview Sainfoin	8
	Veldt Cizer Milk Vetch	4
	AC Success Hybrid Brome	5
Mix 10	AC Yellowhead Alfalfa	2
	AC Mountainview Sainfoin	8
	Veldt Cizer Milk Vetch	4
	Fleet Meadow	5
Mix 11	Greenleaf Pubescent WG	4
	AC Yellowhead Alfalfa	3
	AC Success Hybrid Brome	4
Mix 12	Greenleaf Pubescent WG	4
	AC Yellowhead Alfalfa	3
Mix 13	Salinemaster	11
Mix 14	Legumemaster	24



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Alfalfa and grass mixes

Different letters denote significance among treatments (latin) and emergence at 7, 14, 28 days(greek)

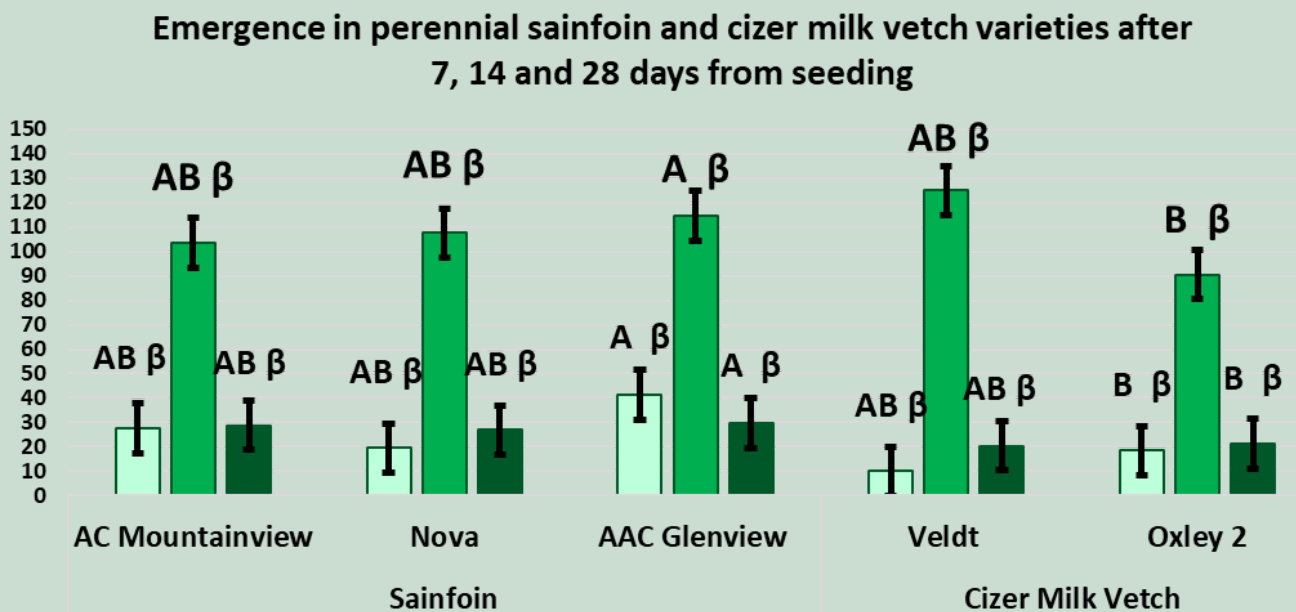


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Highlights

- Three varieties of sainfoin and two varieties of Cizer Milk veth were grown
- Emergence was greater in AAC Glenview compared to Oxley 2
- Emergence decreased after 14 days likely due to low precipitation events

Sainfoin Cizer Milk Vetch



Different letters denote significance among treatments (latin) and emergence at 7, 14, 28 days (greek)

The greatest number of individuals emerged were found in plots sown with AAC Glenview compared to Oxley 2 Cizer Milk Vetch which showed the lowest number of individuals. Emergence was greatest at 14 days and there was no difference in emergence numbers reported at seven or twenty-one days. It is possible less number of individuals at 21 days after seeding compared to 14 days after seeding was affected by low precipitation events.