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Agroalimentaire Canada

Forage Research Program at Beaverlodge Research Farm

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Who or what sparked your interest in working on forages?

- Post-doctoral opportunity under Dr. Bruce Coulman & Dr. Mike Schellenberg to work on forages
- Vast avenues for learning & action

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- Diverse functions: forage, beautification, soil improvement, erosion control, reclamation, revegetation, pharmaceuticals, carbon sequestration (high root:shoot ratio), weed competitor
- Diverse growth forms: grasses, legumes, non-legume dicots, annuals to perennials, herbs to trees
- Intriguing genetics: Diploids to multi-ploids, reproductive selfincompatibility, vernalization
- Crop diversification opportunities: Species composition, sequence and rotations
- Opportunity to adapt my interdisciplinary background on agronomy, crop physiology & agricultural economics

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What problem or opportunity does your research address?

Sharp decline in seed yield of perennial stands





Lack of cultivar options and low stability of yield

Boreal vs experimental mean seed yields for 16 years at Beaverlodge, AB



Agriculture et Agroalimentaire Canada Insect pests, diseases & weeds

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Why should farmers or producers be interested in your research?

The Peace Region Forage Seed Association (PRFSA) represents 1000 active members comprised of seed growers, seed processors and researchers

- We collaborate with the PRFSA, various applied research groups and other stakeholders for joint learning and action
 - AAFC and University researchers
 - Alberta Agriculture and Forestry
 - North Peace Applied Research Association
 - Smoky Applied Research & Demonstration Association
 - Peace Country Beef & Forage Association
 - Peace River Forage Association of BC

Our studies attempt to provide science-based locally adaptive solutions to the producers



Why should Canadians be interested in your research?

Contribute to AAFC Science Strategic Objectives

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Increase agricultural productivity Enhance environmental performance Economic prosperity Environmental sustainability

- Over \$162 million worth of Canadian forage seeds are exported to 34 countries
- Peace Region shares about 40% of Canadian forage seed production and export
- 39% of the land in Canada devoted to forage crops with economic value of over five billion.





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If funding was not a concern, what research project would you want to do?

Integrating genetic, agronomic and economic approach to developing resilient forage crops production systems



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Supplemental slides







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Forage species acronyms

PBF

PCF

PPC

RC

SF

TF

WY

- AC = Alsike Clover
- ALF = Alfalfa
- **BFT = Birdsfoot Trefoil**
- **BWG = Bluebunch Wheatgrass**
- CMV = Cicer Milkvetch
- **CRF** = **Creeping Red Fescue**
- **CWG = Crested Wheatgrass**
- FG = Fodder Galega
- **GBF** = Gallardia Blanket Flower
- HBG = Hybrid Bromegrass
- LBS = Little Blue-stem
- **MBG = Meadow Bromegrass**
- **NWG = Northern Wheatgrass**
- OG = Orchardgrass

- = Perennial Blue Flax
- = Purple Cone Flower
- = Purple Prairie Clover
- = Red Clover
- = Sainfoin
- SLG = Slender Wheatgrass
- SMG = Smooth Bromegrass
- SOG = Sideoats Grama
 - = Tall Fescue
- TIM = Timothy
- WPC = White Prairie Clover
- WWG = Western Wheatgrass
 - = Western Yarrow





Agriculture et Agroalimentaire Canada **On-going projects:**



	Project	SN	Experimental Activity	Species included
A	A-base	1	Crop rotation	AC, RC, CRF, MBG, Pea, Wheat, Canola
		2	Use of biologicals on forages (Chitosan study)	ALF, BFT, RC
		3	Symbiotic Rhizobia for minor legumes	BFT, AC, RC, SF, CMV
B	ADF- Sask	4	Integrated seed crop management of meadow bromegrass	MBG
		5	Legume-grass binary mixtures (Forage Galega study)	ALF, CMV, FG, SF, MBG, HBG, CWG
С	CAP – Beef		Native forbs & grass mixtures	TF, MBG, OG, TIM, SOG, WWG, LBS, BWG, WPC, PPC, WY, PBF, GBF, PCF
	Cluster	7	Orchardgrass GxE	OG
				Canada

		Project	S N	Experimental Activity	Species included		
		CAP – Ornamental	8	Creeping Red Fescue population improvement	CRF		
	D	Horticulture Cluster	9	Integrated seed crop management of creeping red fescue	CRF		
			10	Slender wheatgrass, birdsfoot trefoil, sainfoin & fodder Galega population improvement	SLG, BFT, FG		
			11	Integrated seed crop management of Timothy	ТІМ		
E	E	CAP – Agri-Science	12	Plant growth regulators on creeping red fescue cultivars	CRF		
			13	Plant growth regulators on three grass seed crops	CRF, MBG, TIM		
			14	Herbicide screening	CRF, MBG, SBG, TIM		
			15	Disease management	CRF		
			16	Cultivar testing	ALF, AC, RC, CRF, CWG, NWG		
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