Developing improved native and tame forage varieties for Western Canada

Project Title: Development of plant material (grasses, legumes) and mixtures for forage production in the Prairie region

Researchers: Michael Schellenberg, Ph.D. (Agriculture and Agri-Food Canada), Bruce Coulman Ph.D. and Eric Lamb Ph.D. (University of Saskatchewan) Hushton Block Ph.D., Mae Elsinger, Alan Iwaasa Ph.D., Yuxi Wang Ph.D., Don Thompson Ph.D., Yong-Bi Fu Ph.D., and Katherine Buckley Ph.D. (Agriculture and Agri-Food Canada)

Background

There is a critical shortage of forage researchers, in particular plant breeders in Canada, and several of the few remaining researchers are nearing retirement in the near future. A reliable and productive forage base is critically important to maintaining a sustainable and competitive beef industry in Canada. This challenge is becoming increasingly acute as high grain prices increasingly force forage onto marginal land. This project will build on perennial forage breeding research initiated under the first Beef Science Cluster (FRG.01.09).

Objectives

To provide industry with improved forage varieties.

What they will do

Both traditional selection techniques and advanced genomic tools will be used to develop improved tame and native forages using plant nurseries and plots established in Lethbridge, Swift Current, Saskatoon and Brandon. Seedling establishment, stand persistence, growth patterns, species composition, yields, and nutritional quality will be evaluated in grazing and animal trials in several environments (Swift Current, Saskatoon and Brandon). Promising varieties will be further evaluated in regional forage trials.
**Implications**

This program will provide Western Canada’s beef industry with a package of improved tame (hybrid brome, meadow brome, crested wheatgrass and alfalfa) and native forages (northern wheatgrass, blue bunch wheatgrass, prairie sand reed, nodding brome grass, purple and white prairie clovers, Canadian milkvetch, ascending milkvetch and slender milkvetch).

The training and mentorship of two PhD’s and one postdoc in forage breeding, genomics, and ecology/agronomics through this project will help to address some of the forage research capacity issues of concern.

**Proudly Funded By:**

The Beef Cattle Industry Science Cluster is funded by the Beef Cattle Research Council, a division of the Canadian Cattlemen’s Association, and Agriculture and Agri-Food Canada to advance research and technology transfer supporting the Canadian beef industry’s vision to be recognized as a preferred supplier of healthy, high quality beef, cattle and genetics.

**For More Information Contact:**
Beef Cattle Research Council
#180, 6815 - 8th St. NE
Calgary, AB T2E 7H7
Tel: (403) 275-8558 Fax: (403) 274-5686
info@beefresearch.ca

**For More Information Visit:**
www.beefresearch.ca