



## BC FORAGE COUNCIL FINAL REPORT

### New Crop Trials for Highway 16 Year 4 Report (December 31, 2011)

**FINAL REPORT SUMMARY:** These trials were completed early due to drought conditions and weed infestations. Many lessons were learned however, and these trials have been very beneficial to the producers and the seed retailers in the area. Many people stopped to view the plots and reviewed the results posted on the Farmwest website. This trial has reinforced the theory that trials must be placed on ground that is completely weed free for at least one complete year prior to planting.

The total final expense to December 31, 2011 for this project is \$24,608; total funding received to date is \$24,400. The BC Forage Council will be requesting \$208 from the committed BCIDF funding.

**Project Name:** New Crop Trials for Highway 16

**Project Time-line:** 2008 – seeding  
2009 – 2011 – harvesting for 3 years  
June 2012 – final report due

		Amount Received to date	
<b>Funding Support:</b>	BCIDF (Project # 271)	\$16,406	\$11,800
	NKDF	\$ 8,000	\$7,000
	Horn Fund	\$ 4,000	\$3,500
	Glen Dale	\$ 500	\$500
	Fort Fraser Livestock	\$ 1,000	\$1000
	Sinkut Mountain	\$ 400	\$400
	Cluculz Lake	\$ 200	\$200
	<b>TOTAL:</b>	<b>\$30,506</b>	<b>\$24,400</b>

**Project Description:** To test new forage crop varieties for 3 years (2008 – 2011) with the intention of increasing crop yield and profitability for Nechako and Francois Lake area farmers and ranchers.

**Project Goals:**

- To identify superior grass varieties which will increase yield or improve survivability of forage for hay, pasture and livestock industries.
- To identify superior non-bloat legumes in order to increase the yield and nutrition of livestock pasture.
- To identify superior alfalfa varieties that are able to compete in a grass mixture, producing superior quality hay.
- To identify grass varieties that will establish and produce seed in the quantity and quality necessary to establish forage seed production in the area.

## **Year 4 Report (January 2008 – December 31, 2011)**

### **Site Development**

- In 2008 plot site was identified adjacent to Highway 16 just west of Vanderhoof and seedbed was established. Seed was obtained via in-kind donation from various seed companies.

### **Alfalfa Blend Trial**

- In 2008, six varieties of alfalfa and a check variety (Tophand, 2065MS, AC Cariboo, Magnum Wet, Phabulous, Leader and Peace as the check) were seeded in mixtures with Kay orchardgrass and Carleton bromegrass, which are typical hay mixes for the region.
- Establishment of the plot was successful, and all blends made it through the winter.
- In 2009, the alfalfa/grass blend trial was harvested on July 17. Samples have been sub-sampled, dried, and weighed. This first year of data has been analyzed and is posted on Farmwest.com.
- In 2010, the alfalfa/grass blend trial was fertilized on April 19 and harvested on July 15. Samples have been sub-sampled, dried and weighed. The two-year data for the alfalfa/grass blends has been statistically analyzed and posted on the Farmwest website.
- Quack grass is growing into these blend trials. We will be monitoring the new growth this spring to determine if this plot is still viable.

### **Non-Bloat Legume Trial**

- In 2008 six varieties of non-bloat or reduced bloat legumes were seeded. AC Grazeland alfalfa (a reduced-bloat variety), sainfoin (3901 and 3902), Oxley Cicer milk vetch and AC Oxley II Cicer milk vetch and Bull birdsfoot trefoil were seeded.
- In 2009, the non-bloat legumes were harvested on July 17. Each sample has been sub-sampled, dried and weighed. This first year of data has been analyzed and posted on Farmwest.com.
- In 2010, invading quack grass destroyed the non-bloat legume portion of the trial. Sainfoin, milk vetch and trefoil had a much harder time than alfalfa and could not compete against quackgrass under the growing conditions. Depending on re-growth in the summer of 2011, we may attempt to spray this portion of the plot for quack grass.
- Lesson learned: The past three years have been difficult years to establish forage in the Hwy 16 area due to drought. In addition, specific to this site, excessive tillage (roto-tiller) and complete removal of crop residue over four consecutive years for the previous cereal trail has depleted the soil. After four years of harvesting and removing the crop residue, new sites should be established for trials.

### **New Grass Variety Trial**

- In 2008, two new grass varieties were seeded: AC Knowles bromegrass, and Crown Royale orchardgrass with Carlton bromegrass and Kay orchardgrass as the checks.
- In 2009, the four grass varieties were harvested on July 17. This first year of data has been analyzed and is posted on Farmwest.com.
- In 2010 the four grass varieties could not be harvested due to invading quack grass.
- Lesson learned: always use fresh land to establish new trials.

## Grass for Seed Production Trial

- In 2008, five grasses were seeded to assess the possibility for forage seed production in the region. Boreal red fescue, Oracle red fescue, Climax timothy, Carlton bromegrass and Kay orchardgrass were seeded.
- In 2009, this portion of the trial was unsuccessful and had to be ploughed under. The plot failed because of poor and uneven germination in 2008 and unfavorable growing conditions and an invasion of quack grass from the surrounding area in 2009. There was no way to remove the weed species without affecting the test species.
- This portion of the trial will not be continued as seeding in 2010 will only give one year of harvest data. It is felt that if a grass seed production trial is attempted again, the site would have to be fallowed extensively for a year or two prior to seeding.
- Although the initial decision in 2009 was to not re-seed, another attempt was made in 2010 because the plot had been worked up and left fallow in 2009. The 'grass for seed' varieties were reseeded in the spring of 2010, however, the crop failed to establish this summer due to another summer of extreme drought.

## Project Summary

These trials have been very beneficial to the producers and the seed retailers in the area. Many people have stopped by to view the plots and have also reviewed the results posted on the Farmwest website. The one major piece of information resulting from these trials was the identification of a new alfalfa to replace the 'standard' *Peace* which has been grown in this area for at least 30 years. *Peace* seed is no longer available as of this year and the plots clearly indicated the best suited varieties for this area. (Although a local retailer has indicated he may be able to obtain seed again.) Other grass and legume varieties in the trials showed that producers are currently using the best varieties or are able to select a variety that will provide better results.

This trial has reinforced the theory that trials must be placed on ground that is weed free and has been for a least one complete year prior to planting e.g. no quack grass, June grass, thistle and other volunteer species. These foreign species will soon compete with the trial varieties and make the trials unuseable. It seems producers want to 'get on with the trials' and not lose that year that is necessary to get that clean ground.

After consultation with local producers and funding groups, it was decided to discontinue these trials. Due to drought at seeding time and through the 2009 and 2010 seasons, and a weed infestation which resulted in a poor catch, the trials will not provide accurate data.

*The BCFC thanks the following organizations which supported this project: Beef Cattle Industry Development Fund, Nechako-Kitamaat Development Fund, CIDC Horn Fund, Fort Fraser Livestock Association, Sinkut Mountain Cattlemen's Association, Clucluz Lake Livestock Association, Glendale Agra Services (financial and in-kind contributions) and Art Wiens. The trial was located along Highway 16 near Fort Fraser, BC.*