Updates from the Field – BCFC Climate Change Adaptation Project

In early January, 2015, BCFC hired Dr. Catherine Tarasoff of Agrowest Consulting to implement the Climate Change Adaptation Project. The goal of the Project is to work with local farmers in the Nechako Region to test innovative forage practices that will allow local farmers to adapt to climate change. Each farmer agreed to house and maintain a weather station to link research results and to provide better weather monitoring in the Nechako Region. Additionally, the Project will also develop a farmer-friendly research manual for farmers interested in implementing any form of on-farm research anywhere in the Province.

An update on the Farmer Projects to date:
Catherine headed to Vanderhoof in late January, 2015 and recruited 4 local farmers to participate in the project. Each farmer had a unique research question – here is a quick snapshot of each project.

1. **To test kale as a winter feed source.** Last year, the farmer grew one variety of kale (late maturing). We found that the kale grew very well and kept its nutritional qualities till late in the season (December 17 – Relative Feed Value of 425). This year, the farmer is growing both an early and a late maturing variety to see if he can increase utilization by feeding early and late in the season. He will also measure yields to see if feeding 2 times in the season results in greater forage utilization rather than waiting till the end of the season.
2. **To test late season grasses as winter feed as well as the effect of passive fertilization.** Last year, the farmer seeded 5 species of grasses (crested wheatgrass, creeping red fescue, western wheatgrass, meadow brome and Russian wildrye) in an area where he winter fed his cows for the past 10 years (passive fertilization) versus an area where the cows did not feed. Last year was an establishment year and with most of the grasses the passive fertilization appears to have improved establishment rates. However, early monitoring this year indicates that western wheatgrass did not survive the winter conditions. Survival will be measured this summer. As well, the farmer will measure forage quality into the winter months as well as yields.
3. **To test forage quality, yield and maturity rates of 6 varieties of alfalfa.** Last year, the farmer seeded 6 varieties (Stealth, Hybrid 2410, WL 319 HQ, TopHand, Dalton, and Leader) in an irrigated field. In year 1, WL319 HQ had the best combination of establishment, protein and relative feed value. Because it was an establishment year, the germination was inconsistent. However, in Year 2, we have been able to better track maturity rates. We sampled forage quality of each of the varieties at each stage of maturation and the forage samples have been sent for analysis. We also have yield measurements taken at first cut.
4. **To determine optimal seeding rate and seed mix of alfalfa.** Last year, the farmer divided his field into half and seeded one half with 12 pds/acre of Vision versus 12 pds/acre of a 5 variety mix. On the other

half of the field he seeded 25 pds/acre Vision versus 25 pds/acre of the 5 variety mix. The higher seeding rate resulted in twice the germination rates and twice the establishment rates. As well, at both the low and high seeding rates, the 5 way blend resulted in better germination and establishment. This year, the farmer will measure yields and final establishment rates.

In October, 2015 BCFC held a Field Day in Vanderhoof (50 participants) to showcase the research to date. A second Field Day is planned for late August this year.

Catherine travelled to Vanderhoof this spring to meet with all the participating farmers and make Year 2 field plans. Which are being implemented currently.

Update on the Research Manual

Catherine produced one complete version of the research manual. The original version was edited by Ministry of Ag personnel, University of Northern BC researcher, and Federal Ag researcher. Catherine compiled the edits and produced a second version. The second version was used to direct a winter seminar in Vanderhoof with 8 participating farmers. Catherine gathered feedback from the participating farmers and will be generating a 3rd revision this fall.

Update on Weather Stations

The weather stations required quite a lot of monitoring and communication between Agrowest, the Data Manager, and Farm West to ensure that the stations were operating correctly and that the data was being downloaded and made available. The weather station data is now operational and is available for viewing on FarmWest.

Summary

The BCFC Climate Change Adaptation Project has been very well received in Vanderhoof and beyond! There has been a lot of excitement from farmers outside the Nechako Region and outside the Forage Industry. The opportunity for farmers to initiate and direct their own research is timely and of high priority for farmers. Catherine has received interest on the research manual - from cherry farmers to ranchers and everything in between! We are excited for Year 2 results and to unveil the Research Manual this winter (December)