

# On-Farm Turf and Forage Seed Research in the Peace River Region

C. Yoder<sup>1</sup>, V. Gauthier<sup>2</sup>, V.Yaremko<sup>2</sup> and T.Gauthier<sup>3</sup>

<sup>1</sup> Alberta Agriculture and Forestry, <sup>2</sup>SARDA Ag Research, <sup>3</sup> Peace Region Forage Seed Association

## Introduction

The Peace River Region of Alberta and BC is one of the main turf and forage seed growing areas in the world. Grass and legume seed crops fit well into annual cropping rotations. The majority of seed produced in the region is cleaned locally and exported out of Canada.



A levy is collected on turf and forage seed grown in the Peace River Region. Funding collected from the levy is managed by the Peace Region Forage Seed Association (PRFSA). Levy data reported in 2017 indicates the top five grass seed crops in terms of seed sold are creeping red fescue, timothy, brome grass, wheat grasses and perennial ryegrass. The main legume seed crops include alsike clover, alfalfa, red clover and sweet clover.

One of the main goals of the PRFSA is to allocate dollars towards turf and forage seed research. Much research has been and continues to be conducted at Agriculture and Agri-Food Canada (AAFC) Research Station at Beaverlodge. In recent years research capabilities to conduct turf and forage seed work have been expanded by SARDA Ag Research located in Falher. SARDA Ag Research is a producer run organization that conducts applied research and demonstration projects throughout most of the Peace River region. SARDA Ag Research has a Wintersteiger plot combine with a straight cut header. Through the efforts of PRFSA, Alberta Agriculture and Forestry (AAF) and AAFC funding was secured to purchase additional equipment for SARDA Ag Research to conduct grass and legume seed research trials on growers fields.



Figure 1. Straight cutting alsike clover using Wintersteiger combine equipped with sidecutters.



Figure 2. Straight cutting meadow brome grass growth regulator trials.



Figure 3. Swathing growth regulator trial on timothy using Zurn 550 Multifunctional Tool Carrier.



Figure 4. Combining timothy swaths with new pickup header on Wintersteiger combine.

## Methods and Results

In 2013 and 2018 PRFSA, AAFC and AAF submitted 5 year proposals to AAFC Canadian Agricultural Partnership AgriScience Program to conduct research trials on grass and legume seed crops. Equipment was required to conduct the trials. Funding was approved in both applications to purchase equipment necessary to complete the trials.

### Equipment purchased through the 2013 grant included:

- 1) Side cutters for Wintersteiger combine for use when straight cutting clovers and brome grasses (Figure 1 and 2).
- 2) Tabletop clipper and screens for cleaning samples.

### Equipment purchased through the 2018 grant included:

- 1) Zurn 550 High Clearance Multi-functional Tool Carrier with Swather Header (Figure 3). Additional attachments can be purchased as required eg. high clearance sprayer
- 2) Wintersteiger pick-up header for plot combine (Figure 4)

In 2018 AAF purchased a 3 m wide 1010 T Gandy granular applicator for applying fertilizer.

In 2019 SARDA Ag Research also purchased an AGM 224 Clipper with screens in order to clean seed samples more efficiently and also handle larger size samples (Figure 5). The amount of seed harvested from plots using the new equipment is substantially larger than in previous years.



Figure 5. ACM 224 Clipper with screens for cleaning grass and legume seed samples.



Figure 6. Areal view of herbicide and growth regulator trial on creeping red fescue prior to swathing.

## Conclusion

On-farm research work can now be conducted on almost any type of grass or legume seed crop grown in western Canada. The equipment provides opportunity to establish research trials on growers fields and also handle a larger number of trials. Plot size can also be increased. Harvested areas from treatments are also larger so yield data will be less variable than in the past. Building up grass and legume seed research capabilities within SARDA Ag Research will prove to be a large benefit to growers and seed companies not only in the Peace River Region but across western Canada.

## Acknowledgments

Thanks to Peace Region Forage Seed Association, Agriculture and Agri-Food Canada Canadian Agriculture Partnership AgriScience Program and SARDA Ag Research for helping to fund equipment purchases. Thanks to Francois Eudes for providing guidance in preparing grant applications. Thanks to Danny Limoge and Vic Gauthier for their input on purchasing the proper equipment.