

Date:
February, 2014

Seed Yield of Bromegrass Varieties Grown in the Peace

“The variety trials provide very useful information to forage seed growers so they can continue to be major players in national and international forage seed markets.”
Vic Wilms,
Montney, BC

Seed Companies with Entries:

Barenburg USA
BrettYoung
Crop Production Services
(Viterra)
Moore Seed Processors
Pickseed Canada
SeCan
Snow Brand Seeds

Contacts:

Rahman Azooz
(780) 354-5114

Talon Johnson
1 877 630 2198

Introduction

The Western Grass Seed Testing program has evolved from five to one sites on the prairies. In 2012, the testing program was re-designated as the Peace Region Grass Seed Testing Program since sites generating data were located at Beaverlodge, AB and Fort St. John, BC. The final data collection year for the Fort St John site was in 2013. Data will continue to be collected in Beaverlodge, AB. Seed yield data from this site continues to evaluate

seed production for submitted varieties destined for national and international grass seed markets. The goal of the variety trials are to evaluate the seed yield performance of forage grass varieties compared to the most commonly grown variety (referred to as the check) for the region.

The Peace Region Forage Seed Association identifies seed yield data as a research priority and have been involved in the program since 1999.



Photo above:
2011 seeded bromegrass variety trial at the Beaverlodge, AB testing site.
Photo taken July 3, 2013.

Treatments & Methods

Bromegrass field plot trials were established at Beaverlodge, AB and Fort St John, BC. The field trials were conducted under the Peace Region Forage Seed Testing program. All varieties in the trials were voluntarily submitted. The trials were organized using random complete block design with four replicates. Each plot measured 1.2 m x 6.0 m in size seeded on 30 cm row spacings (i.e., 4 rows per plot). Plots highlighted in this factsheet were seeded at Beaverlodge on June 3, 2010, and at Fort St. John on May 16, 2010. Yield was collected from the center two rows of each plot.



The Seed Head

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Results and discussion

Fort St. John: There was no significant difference in total seed yield between AC Admiral, AC Armada, BAR BcF1FRRL and the meadow brome check, Fleet (Fig. 1). There was, however, a significant difference in total seed yield between AC Knowles (hybrid brome) and Fleet (Fig.1). Total seed yield for AC Rocket was significantly higher than AC Knowles and BAR BiF1GRL but not Carlton (Fig. 2).

Beaverlodge: There was no significant difference in total seed yield between Fleet and AC Armada (Fig. 3). Total seed yield was highest for Carlton, the smooth brome check (Fig. 4). There was no significant difference in total seed yield between Carlton, AC Knowles and AC Rocket (Fig. 4).

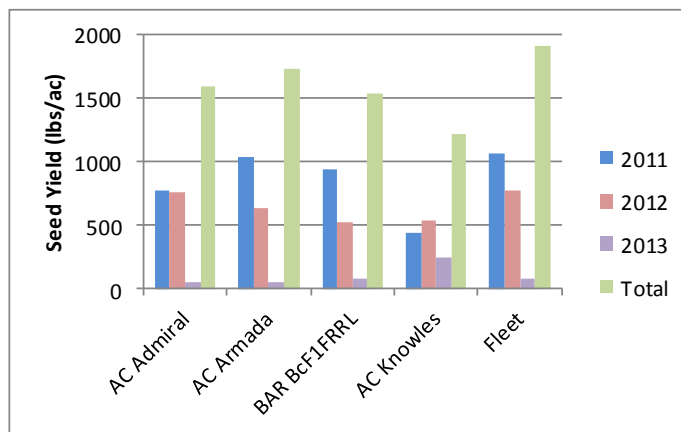


Fig 1. Seed yield for meadow brome at Fort St John, BC

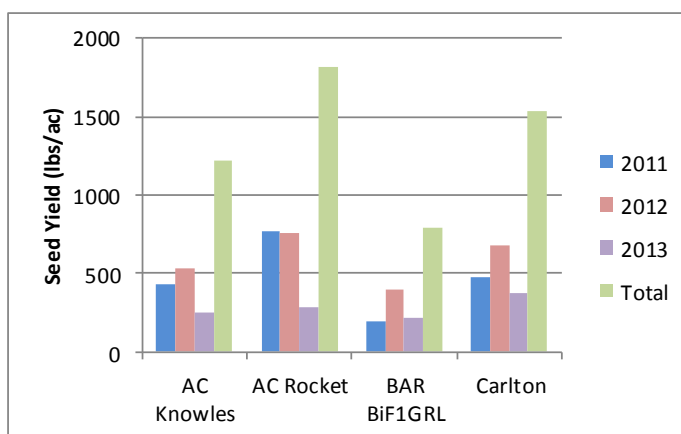


Fig 2. Seed yield for smooth brome at Fort St John, BC

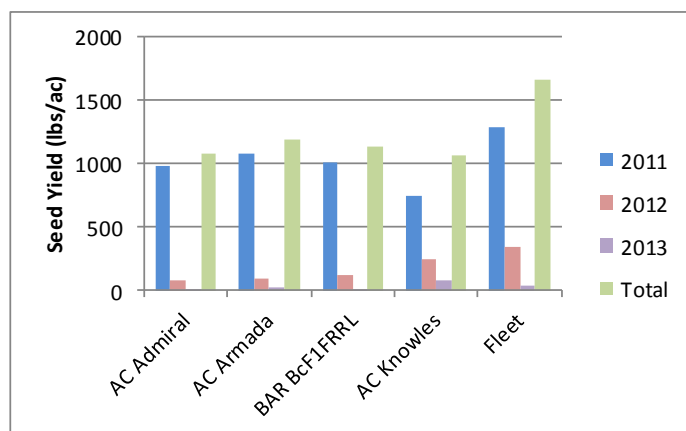


Fig 3. Seed yield for meadow brome at Beaverlodge, AB

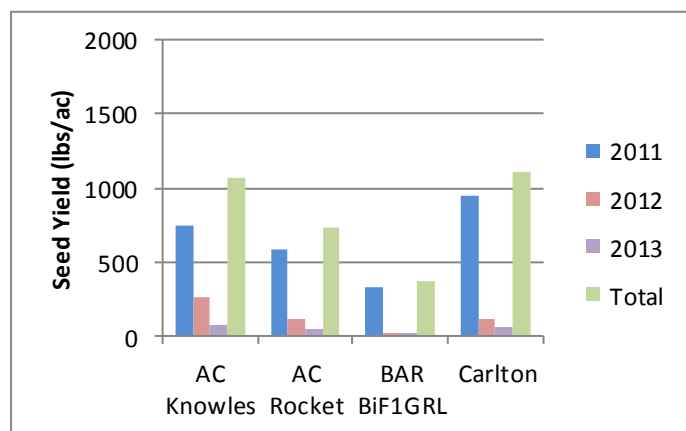


Fig 4. Seed yield for smooth brome at Beaverlodge, AB

Summary

In terms of meadow brome at the Fort St John site there were no significant differences in total seed yield between the meadow brome check variety, Fleet, and all other meadow brome test varieties at both data collection sites. Overall, though, Fleet was the highest yielding in both places. With the smooth brome varieties, there were no significant differences in total seed yield between Carlton, AC Knowles and AC Rocket at both sites, although AC Rocket did perform remarkably better in 2012 and 2013 at the Fort St John site compared to Beaverlodge. BAR BiF1GRL performed significantly poorer than Carlton. AC Knowles, the hybrid brome, seed yield performance was not significantly different than Fleet or Carlton at either site.

Compiled & Circulated by: Rahman Azooz and Talon Johnson in February 2014.

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