

Date:
March 2015

2012 ReVeg AllStars ? ~Keepers or Traders in 2014~

“ I am really curious how species we initially picked as Allstars held up over the years of this project.”
~Bill Wilson
Project Lead

Forage Species Seeded in Research Plots

- Anik Alfalfa
- Creeping Red Fescue
- Fowl Bluegrass
- Meadow Bromegrass
- Sheep Fescue
- Slender Wheatgrass
- Smooth Bromegrass
- Timothy

www.peaceforagetool.ca
Appropriate species selection,
seed mix calculator,
seed sourcing

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Introduction

As the Re-vegetation Project winds down, we look back and try to pull some key take home points from all the research and demonstrations that were completed.

In 2012, the PRFA's Reveg Project identified several **AllStar** species that sprouted from the soil in the greatest numbers, including Anik alfalfa, meadow bromegrass and smooth bromegrass. An honorable mention also went to **Bronze Star** contender, slender wheatgrass, an excellent choice for native plant vegetation.

At this point, two questions were outstanding: 1. Would these **AllStars** hold onto their stardom, or lose their status due to lack of continued performance? 2. Would plants like fowl bluegrass and timothy that were shaping up to be “real duds” in year 1, based on their inability to get seedlings out of the ground, make a comeback?



Anik alfalfa regrowth May 2014



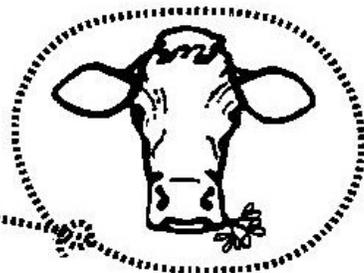
“Team Awesome” included Murray Clark, Carmen Schneider, Bill Wilson, Jenn Critcher & Julie Robinson during Encana tour .

To answer these two questions, emergence and % ground cover data from 3 sites was monitored over 3 years, and is summarized in a chart on page 2. A table on page 3 highlights some key traits of the competitors. This factsheet shows results of photo monitoring, featuring one **AllStar** recipient at the top of each page.



Meadow bromegrass regrowth May 2014

Peace River Forage Association
of British Columbia



Photos of **Gold Star** recipient **meadow brome**grass' performance over 3 seasons

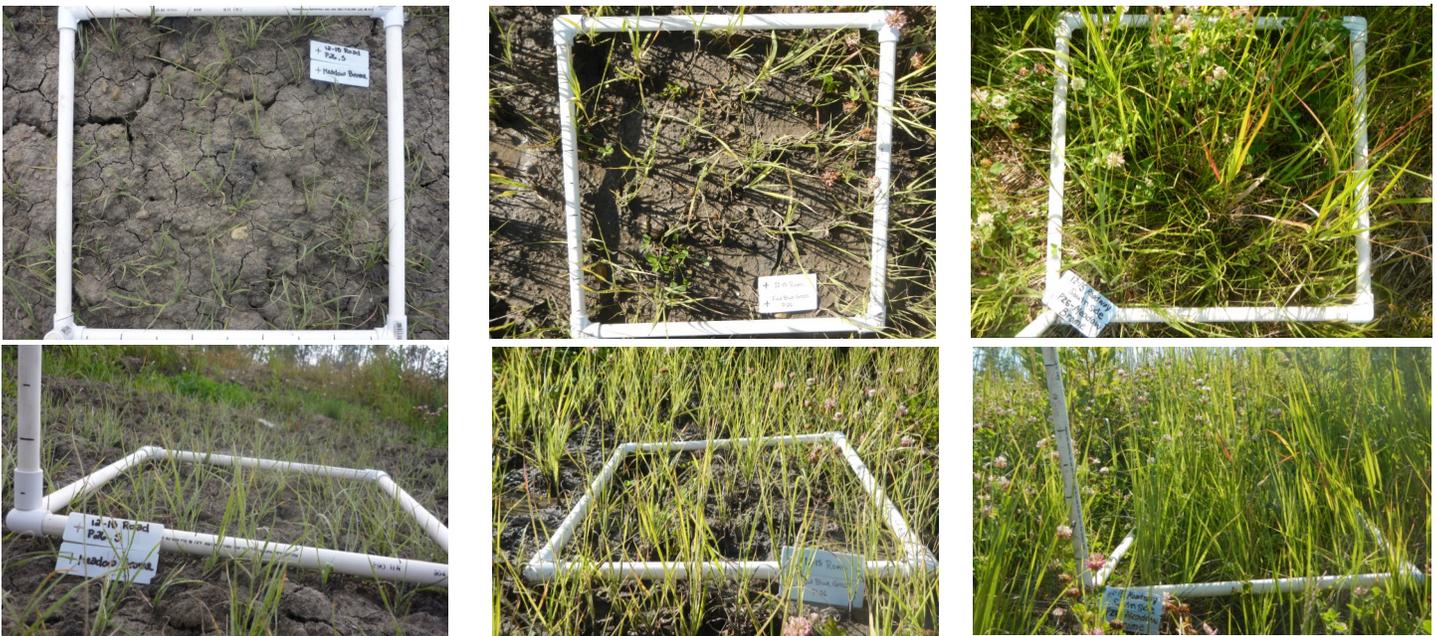
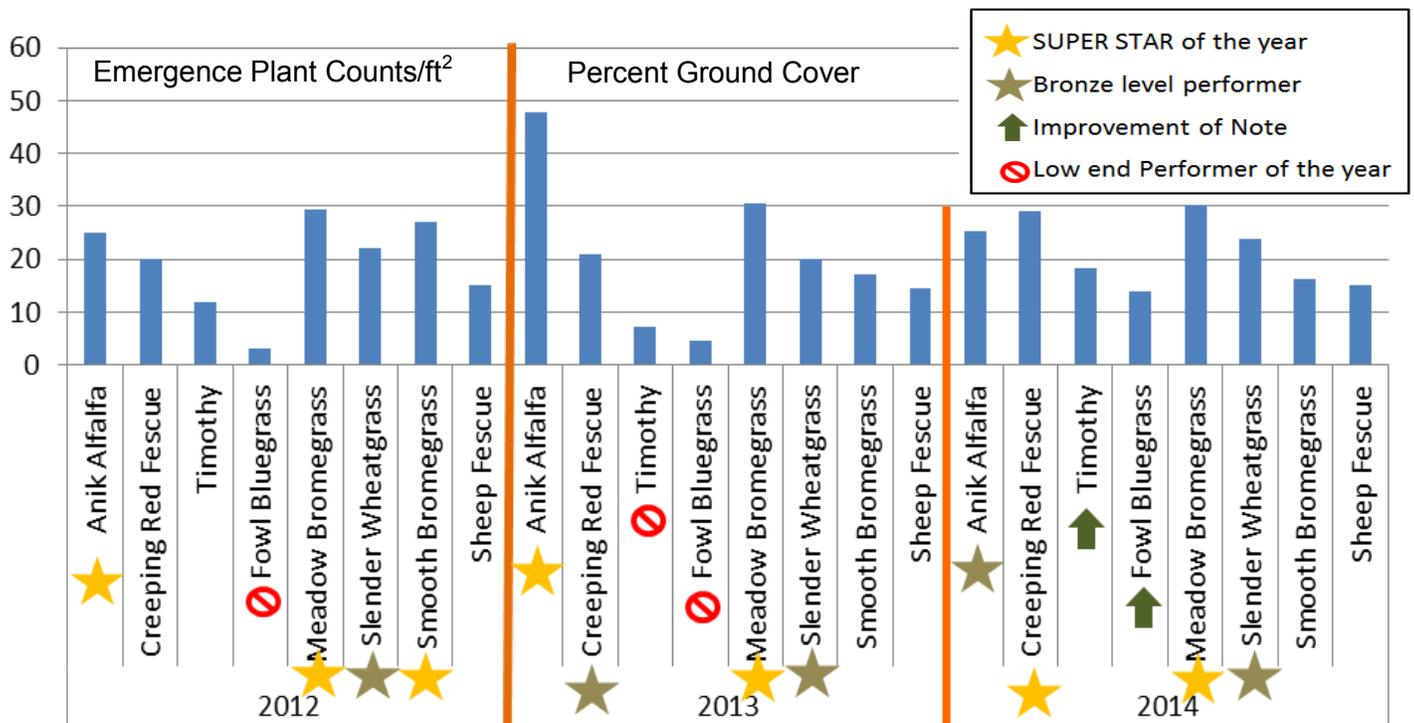


Photo pairs of **meadow brome**grass from left to right were taken August 13, 2012, July 30, 2013, July 22, 2014. Frame is 1/4 m².

So What Happened?

In year 2 (2013 the year of the rains!) there was a reordering of the 8 species in terms of percent cover. But **Anik** alfalfa was still in top place, emerging as the **AllStar for 2013** averaging 25% ground cover over 3 sites and providing the best option for ground cover. Meanwhile timothy and fowl bluegrass lagged behind with an average of less than 8% ground cover.

Some of these results were to be expected due to the nature of how these plants grow. For example, some of the **fine leaf** fescues are expected to have a lower percent cover than other plants even if the fescues outnumber other species. **Bunchgrasses** like timothy, sheep fescue, and slender wheatgrass are also expected to have lower ground cover than **sod forming plants** like brome grasses or creeping red fescue as highlighted in table 1 (see next page).



Note: For most species: data is from 3 sites; except timothy and sheep fescue: data from 2 sites & smooth brome: data from 1 site.

Photos of **Gold Star** recipient **Anik alfalfa's** performance over 3 seasons

Photo pairs of **Anik alfalfa** from left to right were taken August 13, 2012, July 30, 2013, July 22, 2014. Frame is $\frac{1}{4}$ m².

Key Traits & Ideal Uses for AllStar Species Competitors

The type of root, crown and leaf all contribute to species competing in adverse drought or flooding conditions. Key traits lead to ideal uses for each species as shown in Table 1 below.

Source: Dobb A., S. Burton. 2013. Rangeland Seeding Manual for British Columbia. BC Min of Agriculture.

Table 1: Competitor Species & Some Key Traits For Successful Competition

Species	How It Grows	Drought Tolerance	Flood Tolerance	Ideal Uses
Anik alfalfa	Taproot widely branching in this variety, deep set crown, broad leaf	High	Moderate	Hay, bloat issues may arise from grazing
Fowl bluegrass	Tufted bunchgrass with fibrous roots, may form weak sod, fine leaf	Low	Low	Native plan reclamation, native pasture, present in moist areas
Meadow brome	Fibrous roots and spreads by short rhizomes, sod forming, wide leaf	High	Low	Grazing, impressive regrowth
Smooth brome	Roots are deep and fibrous, once established it grows using creeping rhizomes, sod forming, wide leaf	High	High	Hay, erosion control, minimal in-season regrowth
Creeping red fescue	Fibrous roots and spreads by short rhizomes, sod forming, fine leaf	Moderate	Moderate	Grazing, especially valuable as stockpile grazing
Sheep fescue	Bunchgrass , fibrous roots and short rhizomes, fine leaf	Moderate	Low	Erosion control
Timothy	Bunchgrass , roots are wide, spreading, shallow and fibrous, wide leaf	Low	High	Hay, early season grazing
Slender wheatgrass	Bunchgrass , fibrous roots and short rhizomes, wide leaf	Moderate	Moderate	Reclamation, native pasture, high seedling vigour

This Forage Fact is 1 of 16 produced by the Re-Vegetation of Disturbed Areas by Oil & Gas Activities Project.

Photos of **Bronze Star** recipient **creeping red fescue's** performance over 3 seasons



Photo pairs of **creeping red fescue** from left to right taken Aug 15, 2012, July 30, 2013, July 22, 2014. Frame is 1/4 m².

Related Fact Sheets

- #77 Emerging Re-vegetation Superstars
- #75 Re-vegetation of Oil & Gas Disturbance
- #74 Creeping Red Fescue and Reed Canarygrass
- #73 Slender and Crested Wheatgrasses
- #72 Alfalfa and Creamy Peavine
- #71 Timothy and Hybrid Bromegrass
- #70 Meadow and Smooth Bromegrass

Who's An Outstanding Performer? and Who Are We Trading?

2012 (# Plants Emerging)	2013 (% Ground Cover)	2014 (% Ground Cover)
1 st Meadow bromegrass	1 st Anik alfalfa	1 st Meadow bromegrass
2 nd Smooth bromegrass	2 nd Meadow bromegrass	2 nd Creeping red fescue
3 rd Anik alfalfa	3 rd Creeping red fescue	3 rd Anik alfalfa
4 th Slender wheatgrass	4 th Slender wheat grass	4 th Slender wheatgrass

TRADED Fowl Bluegrass

Summary

If we are graziers, we would focus on species like meadow bromegrass and creeping red fescue, depending on what the priorities are, and based on the above table (3 years ratings compiled from 3 sites). These species establish quickly and cover the ground, protecting it from surface water erosion. These performers also hold their nutritional value into the fall/ winter and regrow well when grazed during the growing season. However neither of these species is very compatible with a hay or hay/ pasture system, as a lot of their growth can be very low to the ground. If our focus is hay production, the Anik alfalfa and meadow bromegrass come out ahead and seem to be fastest to establish.

Compiled by: Julie Robinson & Bill Wilson in March 2015.

With Contributions from: Murray Clark, Carmen Schneider, Lori Vickers & Sandra Burton
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