



# CLIMATE CHANGE ADAPTATION PROGRAM

## A Guide to On-Farm Demonstration Research

### Case Study 3

Funding for this project has been provided by the Governments of Canada and British Columbia through Growing Forward 2, a federal-provincial-territorial initiative. The program is delivered by the Investment Agriculture Foundation of BC.

Opinions expressed in this document are those of the author and not necessarily those of the Governments of Canada and British Columbia or the Investment Agriculture Foundation of BC. The Governments of Canada and British Columbia, and the Investment Agriculture Foundation of BC, and their directors, agents, employees, or contractors will not be liable for any claims, damages, or losses of any kind whatsoever arising out of the use of, or reliance upon, this information.

DELIVERED BY

FUNDING PROVIDED BY





CASE STUDY 3 *from:*

# A Guide to On-Farm Demonstration Research

How to Plan, Prepare, and Conduct  
Your Own On-Farm Trials





No part of this publication may be added to, deleted, reproduced, or transmitted in any form or by any other means whatsoever, without the prior written permission of the BC Forage Council. While every effort has been made to ensure that the information contained in this publication is correct, the author and the publisher accept no responsibility or liability in errors, outcomes, omissions, or misrepresentation's, expressed or implied, contained herein or in any subsequent written or oral communications. Permission, questions and book orders should be directed to [bcfc@bcforagecouncil.com](mailto:bcfc@bcforagecouncil.com)

**Disclaimer:**

The Governments of Canada and British Columbia are committed to working with industry partners. Opinions expressed in this document are those of the authors and not necessarily those of Agriculture and Agri-Food Canada, the BC Ministry of Agriculture or the Investment Agriculture Foundation.

**Acknowledgments:**

Funding for this project has been provided in part by the Nechako-Kitimat Development Fund Society and the Omineca Beetle Action Coalition. Funding has also been provided in part by the Governments of Canada and British Columbia through the Investment Agriculture Foundation of BC under *Growing Forward 2*, a federal-provincial-territorial initiative. The program is delivered by the BC Agriculture & Food Climate Action Initiative.



## CASE STUDY

# Detailed Measurements Show What Your Eyes Can't See

For farmer Wayne Ray, on-farm variety and seeding rate research proves well worth the effort.



***“When I looked at my fields, I thought they all looked about the same. But when I threw out my test hoops and actually measured what was inside, I saw there were huge differences”***

– Wayne Ray

The changing climate means weather is predictably unpredictable on Fort Fraser beef producer Wayne Ray's farm. In spring and summer, it's no longer raining at the same time of year or in the same gentle, frequent way it used to. In 2015, he decided to test whether a mixed (five-way) alfalfa blend might fare better than a straight variety in these challenging conditions. And, since he'd heard countless different opinions on optimal seeding rate, he also decided to test whether a heavier seeding rate would prove beneficial or a waste of hard-earned money.

“Our climate has changed quite a bit over the years. It's harder to establish crops and harder to get good production,” says Ray. “I thought a blend might help. When you plant a blend, the varieties all have different characteristics so they don't compete with each other as much. And, a blend means you've got a better chance that one or two of the varieties will excel in whatever conditions get thrown at you.”

## CASE STUDY, *continued*

### DETAILED MEASUREMENTS SHOW WHAT YOUR EYES CAN'T SEE

In late June of 2015, Ray divided a 50 acre field into wide strips. He seeded two strips to a five variety mix (30% TH2, 30% Haygrazer, 15% Rugged 5T, 15% Response WT, and 10% Runner) and two strips to Vision, each at 12 lbs/ac and 25 lbs/ac.

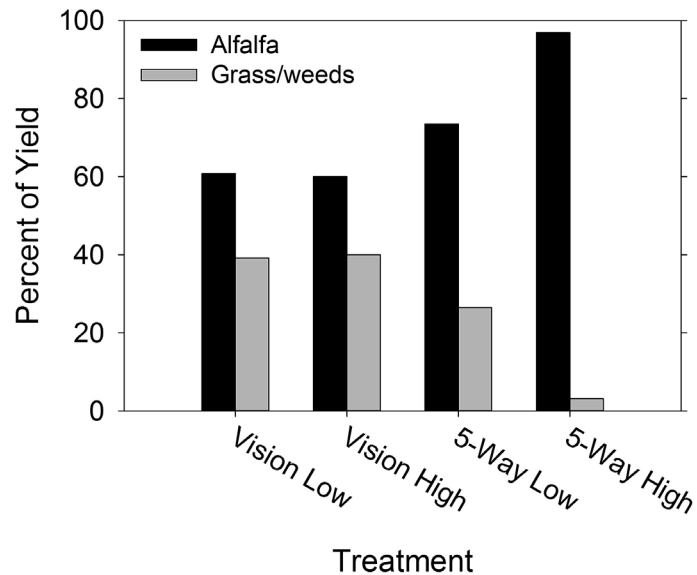
In the first month after planting, the strips seeded with the blend weathered drought and grasshoppers better than the strips seeded to Vision. It also boasted better germination rates. By mid-September, however, the areas planted to Vision caught up to their five-variety counterparts.

In late July one year after seeding, Ray measured yield from all four strips. The blend outperformed Vision in yield and boasted lower proportions of grass/weeds.

Compared to the strips seeded at a low rate, both the Vision and blend strips seeded at a higher rate produced an extra ton of hay per acre in 2016. Assuming hay is worth \$200/ton and the cost of seed is \$4.00/lb, seeding at the higher rate offered additional value of \$150/ac.

"You need to look at your results with a researcher's mindset," says Ray. "When I looked at my fields, I thought they all looked about the same. But when I threw out my test hoops and actually measured what was inside, I saw there were huge differences. Do it right: take soil samples, track results, keep monitoring over multiple years. The results are worth the effort."

Percent of wet yield of alfalfa versus grass/weeds of single variety versus a 5-way blend at two seeding rates



Yields of single variety of alfalfa versus a 5-way blend at two seeding rates

