CLIMATE CHANGE ADAPTATION PROGRAM

A Guide to On-Farm Demonstration Research

Case Study 3

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A Guide to On-Farm Demonstration Research

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

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.

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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 though 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."