



Annual legumes finally offer their impressive benefits to western Canadian producers too



Annual legumes offer outstanding nitrogen fixation, important soil health enhancement, and high quality feed when planted exclusively or in combination with other forage crops. Unfortunately, their intolerance to cold, excessive moisture and high or low soil pH make them too sensitive

We're excited to be part of offering Canadian producers new options to improve the health and productivity of their forage fields."

Annual legumes are a great fit in multiple applications. Impressive nitrogen fixers, they are an excellent green manure with a particularly good fit on organic

"Our mission statement – novel solutions for growing concerns – sums up what we do," says Jerry Hall, Grassland Oregon's cofounder and research director. "We don't just sell you what we have, we make sure we actually have what you need. When we release products, we want to show a

more temperate climates (primarily Egypt), have cold tolerance to a maximum of -7C. Risk is an obvious concern: in western Canada's often changeable and sometimes extreme weather conditions, frost can occur well into the season and a killing cold can come far too early for a non-hardy annual.

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for most western Canadian growing conditions. Until now. Lethbridge, Alberta based Performance Seeds now offers Albertan and Saskatchewan producers four high performance, hardy, western Canadian-suitable annual legumes: Frosty berseem clover and Fixation balansa clover, both released last year, and Kentucky Pride crimson clover and Purple Bounty hairy vetch, both of which will be released later this spring. Together, the four varieties offer an option for almost every growing condition and forage priority.

"These new varieties represent very big steps forward," says Performance Seed's director of business development, Vern Turchyn. "Performance Seeds is quickly becoming known as western Canada's forage innovator.

operations. They can also be forage or swath grazed independently or in combination with crops as diverse as alfalfa, triticale, radish, turnip, even corn. They work well as a high-yielding interim crop between forage rotations, a competitive (and early returning) cover crop when establishing perennial forage, and a yield-boosting addition to tired fields or low-productivity areas within fields. Annual legumes' deep roots break through hardpan and fix nitrogen throughout a wide rooting zone, bumping up soil health and structure following any crop, especially annual cereal crops.

Performance Seed is the exclusive western Canadian dealer for all three of the new, hardy clovers, all bred by forage genetics leader, Grassland Oregon.

substantial, measurable difference over what is already available in the market."

Which annual legume might best suit your operation? Here's a quick guide:

Frosty Berseem Clover

Best in class for cold tolerance amongst berseem clovers

Berseem clovers are similar in structure and growth to alfalfa, making them an excellent grazing and hay production quality and yield booster. A 2010 study showed that the synergistic relationship of an 80/20 alfalfa/berseem clover mix not only increased crude protein and water soluble carbohydrates in hay fields, it increased total hay yields by more than 30%. As important, they are entirely non-bloating.

Older berseem varieties, typically imported from

Luckily, Frosty berseem overcomes that challenge.

"What we've been able to do with Frosty is increase cold tolerance right down to 5F (-15C) with no snow cover, and colder with cover. That opens up the opportunity to frost seed or drill into frozen ground," says Hall. "The beauty of that is you can get your plants actively growing and setting roots several weeks earlier than you would have otherwise, maximizing growth, beating weed competition and shifting your work load."

Additionally, Frosty's cold tolerance allows for more fall growth in spring-planted stands even after significant frost.

Frosty berseem tolerates a greater range of pH than many berseem clovers, growing successfully in soil pHs of 5.2-7.8.

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Fixation Balansa Clover

Best in class for excessive moisture tolerance, pH survivability & nitrogen fixation

While all clovers fix nitrogen, Fixation balansa clover towers above the rest for total capture.

In a University of Illinois study, an industry standard clover produced 5162 lbs/ac of green biomass. Kentucky Pride crimson clover more than tripled that production to an impressive 18,421 lbs/acre. Fixation blew away all of the competition with a whopping 96,154 lbs/ac.

"When it first gets going, growers say: 'What did I plant?!' It's tiny for the first portion of its lifecycle

because it's putting down roots to facilitate future growth. We have a photo that shows a single inch of growth on top and 32 inches of root below. In one study, 18 inches of root grew in 45 days," says Risa DeMasi, Grassland Oregon's cofounder. "Once those roots get established, it can grow as much as a foot in a week."

Fixation balansa clover is an excellent green cover, weed suppression tool, and soil structure improvement. It offers good cold hardiness and can tolerate the widest range of soil pH (from 4.5 to 8.5). Additionally, it is very cost effective to grow, both due to its particularly small

seed size and its prolific seed production.

Kentucky Pride Crimson Clover

Fastest out of the ground, latest maturing, excellent cold hardiness.

Kentucky Pride crimson clover is an excellent forage grazing and swath grazing option that promotes soil health. Compared to other crimsons, it offers significantly better saturated soil tolerance and fixes measurably more nitrogen. And, it can handle cold: in a study conducted at the University of Southern Illinois' Ewing Demonstration Centre, Kentucky Pride boasted 36%

better winter survivability than the industry standard (Dixie Crimson).

Kentucky Pride flowers about two weeks later than its competitors. It gains above-ground biomass more quickly and ultimately produces significantly more green biomass, making it a top forage and pollinator-mix option. Because it matures late, it retains palatability longer for forage grazing.

Purple Bounty Hairy Vetch

Early maturing, heavy biomass, excellent nitrogen fixation

Purple Bounty grows slowly in fall, develops additional root mass through the winter, and then takes off in the spring. The crop is an excellent nitrogen fixer, fixing up to half a subsequent crop's nitrogen requirement. And, its two-week earlier than average flowering time means growers enjoy increased flexibility for subsequent plantings.

Regardless of which new annual legume you try, start the seed well. Remember that a tiny clover seed can only manage to break out of a skiff of dirt.

"One of the only complaints I've heard about our annual clovers is that nothing comes up and in every instance, it has been a planting depth issue," says Hall. "If you blend tiny clover seeds with big seeds

like triticale and then plant an inch and a half deep, the clover isn't going to have the energy reserves to get up out of the soil."

Instead, he recommends planting like-sized seeds: clover with turnips or radish, for example. Alternatively, broadcast the clover prior (or while) drilling larger seeds.

All Performance Seed products come pre-inoculated, coated and – because they come with an industry leading warranty – ready to perform. Performance Seed offers state of the art mixing facilities, and is happy to provide a free 'test drive' bag of a different variety with any purchase.

Try out a new forage legume: it just might surprise you.

"It took me 30 years to convince my dad to let me plant some new forage options on his farm," says DeMasi. "He finally let me seed 100 acres of Fixation balansa clover. That first year was so wet, which can drown many forages. But, balansa can handle it: it just takes off and grows and grows. Not too long later, he called me and said, 'You better get your boots on. I need to show you something!' He was so excited about how the cattle were responding to the crop. That's what we hear from all kinds of customers: excitement." ■



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- High Quality Pasture Mixes
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