



For Immediate Release

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Cold Tolerant Berseem Clover Provides Frost Seeding Option

Frosty Berseem Clover can survive temperatures as low as 5 degrees Fahrenheit

Extended growing seasons, higher yields, increased establishment rates and convenience are just a few of the benefits farmers and ranchers can take advantage of when implementing frost seeding into their hay and pasture systems, says Jerry Hall, director of research for [Grassland Oregon](#).

"Frost seeding is the broadcasting of seed onto the frozen surface of the soil. Ideally, it is done at a time when there is either no snow or a minimal amount. The freezing and thawing cycle of the soil surface will allow for the seed to work into the top .25 inches of soil," Hall explains. "Seeds will then germinate and begin growing as soon as weather conditions become favorable - allowing producers to gain a couple of weeks of growth versus waiting for the soil to firm up enough to drill the seed in."

Recently, [Grassland Oregon was awarded a patent](#) for [Frosty Berseem Clover](#) - making it the first cold tolerant berseem clover suitable for frost seeding in the United States and Canada, surviving in trials with temperatures as low as 5 degrees Fahrenheit and zero snow cover.

Hay and pasture improvement

According to [research in Saudi Arabia](#), the synergistic relationship between berseem clover and alfalfa significantly improves quality and yield of forage when seeded at a mixture ratio of 80 percent alfalfa to 20 percent berseem clover, making it a desirable species for hay producers. However, prior to Frosty Berseem Clover being available, the most cold tolerant berseem clover on the market could only withstand temperatures as low as 25 degrees Fahrenheit.

"Frosty Berseem Clover is excellent for frost seeding into declining alfalfa fields as it is not affected by alfalfa's allelopathy. It also blends nicely with alfalfa due to its similar quality and appearance," explains Hall. "One thing to note is that when utilizing Frosty Berseem Clover, it is imperative that the cutting height be raised so that it is above the lowest leaf on the plant, typically 2-3 inches in height. While alfalfa stores its energy in the root, berseem clover stores its energy in the base of the plant. Cutting too low can impact the ability of berseem clover to recover and regrow."

In [hay production trials by Pennsylvania State University](#), Frosty Berseem Clover, which can fix 150 pounds of nitrogen per acre, produced more than 4 tons of dry matter per acre in a two-cut system. In a separate trial by Mississippi State University, the cold tolerant clover was found to have a crude protein content of 20.5 percent and be non-bloating for livestock.

"While Frosty Berseem Clover has proven to be a diverse variety for producers, frost seeding it can be very beneficial when it comes to improving a field or pasture with existing plants," explains Hall. "The new seed can start growing at the same time as the existing plants, putting the new seedling on a more even field when it comes to acquiring nutrients and water in the soil - making all the difference in the world in successful establishment."

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IMAGES: High resolution images can be downloaded by [clicking here](#).



PHOTO CAPTION:

As soil thaws, it allows seed broadcasted onto frozen ground to work into the top .25 inches of its surface for a more competitive establishment in pastures and fields with existing plants. Frosty Berseem Clover is the first berseem clover on the market that allows producers to take advantage of both berseem clover and frost seeding benefits by surviving in temperatures as low as 5 degrees Fahrenheit with no snow cover.



PHOTO CAPTION:

Similar physical attributes, feeding value and a yield increasing synergistic relationship makes Frosty Berseem Clover a good variety to use in alfalfa production. Along with complementing hay quality, Frosty Berseem Clover also has a crude protein content of 20.5 percent and is non-bloating to livestock.

About Frosty Berseem Clover

Patent number: US 9,706,742 B2 was issued on July 18, 2017 for Frosty Berseem Clover (GO-BER-10). The patent includes invention of GO-BER-10, methods of production, and any seeds, plant parts or lines derived from the clover variety GO-BER-10. GO-BER-10 is the only patented cold tolerant berseem clover variety available on the market. Full patent information can be found by [clicking here](#).

About Grassland Oregon

Grassland Oregon, Inc. is a leader in the development and marketing of science-based cover crop, turf, and forage seeds. With research locations across North America and exclusive global partnerships, Grassland Oregon is at the forefront in the development of products that deliver novel solutions for growing concerns.

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