

BENEFITS OF ALFALFA SEED COATING



WHAT YOU'LL LEARN

- Alfalfa seed coating can help increase seedling survival rates, resulting in an equal or higher number of seedlings per acre with the same pounds per acre of product.
- Strong alfalfa stand establishment is not the result of how many seeds are planted per acre, but is determined by the number of successfully established seeds that become harvestable plants.

Establishing a stand

A successful, high yield potential alfalfa crop begins with 20 to 30 healthy seedlings per square foot. Obtaining that kind of stand can be influenced by a number of items, including: site selection, land preparation, a firm seedbed, proper planting depth, product choice, planting date, planting depth, seeding rate, planter calibration, pest control, seed inoculation, environment, and other factors.¹ Selecting alfalfa seed coated with the right combination of fungicide, growth promoter, *Sinorhizobium meliloti* bacteria, and a protective seed coating can help ensure early-season vigor, improved stand, enhanced root system development, healthier seedlings, and longer stand life.³

What is in a seed coating?

Monsanto's alfalfa seed coating consists of: 1) a seed treatment that can promote early-season vigor, 2) *Rhizobium meliloti* bacteria to promote nitrogen-fixing nodule development, 3) fungicide to help fight early-season diseases such as phytophthora, pythium, and downy mildew, and 4) a lime-based coating with sulfur and molybdenum. The coating provides an ideal environment that can improve moisture absorption, germination percentage and nodulation. Monsanto's alfalfa seed coating increases the weight of the seed by 34%.

The 34% seed coating decreases seed mortality, resulting in higher seedling survival rates (up to 100% higher than unprotected seed)⁴, and equal or higher number of seedlings per acre with the same pounds per acre of product. The result is more healthy seedlings per acre and higher yield potential from the thicker, healthier stands. The target for strong alfalfa stand establishment is not the actual number of seeds planted per acre, but is determined by the number of successfully established seedlings that become harvestable plants.

Seeding rate and planter calibration

University and commercial research shows that coated seed should be planted at the same pounds/acre rate as uncoated seed. Planting 34% coated seed can result in approximately 30% fewer seeds planted per acre. However, because of the benefits provided



Figure 1. A healthy alfalfa stand requires 20 to 30 healthy seedlings per square foot.

by the seed coating, final seedling stands should be equal to or higher than with uncoated seed. Research also shows that seedling survival rate should be higher with coated seed.⁴

Because 34% coated seed weighs more than uncoated seed, the seed will flow through planting equipment at a different rate than uncoated seed. Some research trials have shown that coated seed actually flows approximately 30% faster than uncoated seed.² Alfalfa growers should carefully calibrate planters for the specific seed they are planting to help ensure they are planting the desired number of pounds/acre. Always refer to the manufacturer's manual before performing any maintenance.

Summary

Alfalfa seed coating: 1) promotes early-season vigor, 2) increases seedling survival rates and stands, 3) includes seed treatment to help manage early-season diseases, and 4) can result in fewer seeds planted, but provides benefits that uncoated seed may not provide.

Sources:

¹Redfern, D., Huhnke, R., Armstrong, J., and Arnall, B. Alfalfa stand establishment. <http://pods.dasnr.okstate.edu>.

²Leep, R., Deyoung, J., and Min, D. Coated alfalfa seed, is it worth it? Forage.msu.edu.

³Optimize® Gold with LCO Promoter Technology™. <http://www.wlresearch.com>.

⁴Benefits of alfalfa seed coating. <http://www.wlresearch.com>.

Web sources verified 08/27/2015.

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For additional resources on this topic, contact your local seed representative or visit your seed brand website.

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