

Seed Coating Helps Improve Stand Establishment & Can Increase Seed Efficiency

Randy Welch, National Alfalfa Agronomist - Croplan Genetics

It is not about how many seeds you plant; it is about how many seeds become harvestable plants. Even though it is only the first few weeks of an alfalfa stand's life, nothing is more critical to the productivity of a stand than the first 30-60 days after seeding. "Once germination occurs, the seedling must survive, emerge, and establish before it can grow into a healthy, persistent, and harvestable alfalfa plant," explains Randy Welch, Winfield Solutions National Alfalfa Agronomist. "Unfortunately a significant percentage of seedlings can die under most field conditions. That's where seed coating and treatments can mean the difference between stand success and failure."

An excellent seed coating option for producers is GroZone® plus ADVANCED COATING® ZN 34% (CV). This uniform and dust-free seed treatment provides an ideal micro-environment for stimulating germination and vigorous growth in young seedlings. This aids in producing stronger and healthier seedlings for high yielding alfalfa stands. The seed coating helps pull moisture from the soil, promoting faster and even stand establishment. This coating, which is available on conventional or Genuity® Roundup Ready® alfalfa, consists of four important components. In total, these stand protection components represent 34% by weight:

- **Apron XL® fungicide**, helps protect seedlings from soil pathogens during establishment.
- **Nitragin® Gold**, contains a rich concentration of high performance nitrogen fixing rhizobium bacteria.
- **Zinc and Manganese micronutrients**, as a package, zinc increases alfalfa plant cell division, and manganese increases nitrogen metabolism and carbohydrate utilization.
- **AgriSolutions™ Ascend® plant growth promoter**, maximizes plant growth and seedling development. Ascend® contains three hormone-mimicking compounds. These compounds are kinetin, a cytokinin plant hormone well known for its growth-promoting and anti-aging effects in plants; gibberellic acid, which endorses internodal growth and builds wider leaves for better sunlight absorption; and indole butyric acid, which stimulates roots to develop after germination occurs.

Figure 1. Field comparison of alfalfa stand establishment using **GroZone® plus ADVANCED COATING® ZN 34% (CV)** VERSUS **standard treated seed (AN, Apron XL® fungicide and Nitragin® Gold)**. Adjacent fields were observed on grower's farm and stands were established on less than optimum, high pH, salty soil.



Using coated seed is one element of producing a quality stand. The other is to practice the right planting and soil management techniques:

- First, it is important to have a soil test performed to ensure pH levels are on target. Alfalfa requires a neutral soil pH for high production.
- Review the soil test to ensure the necessary macro- and micronutrients are present to fuel alfalfa growth.
- Plant into a firm seedbed to control seed depth – avoid “fluffy” seedbeds.
- Planting rates do not need to be adjusted for coated seed. GroZone® plus ADVANCED COATING® ZN 34% (CV) helps improve stand establishment and seed efficiency.
- Seed-to-soil contact is crucial. Water must leave the soil particle and enter the seed coat before the tiny seed can germinate.
- Weed and insect pressure can result in stand, yield, and forage quality loss. Identify and control these yield robbing factors as soon as possible.

Welch says, “Knowing as many variables as possible will help the agronomist recommend the best seed products and crop protection product combinations for your alfalfa fields.” There aren't many experts out there who specialize in alfalfa, but fortunately your local AgriSolutions™ expert agronomist or CROPLAN GENETICS® Seed & Agronomy Advisor have you covered. For the expertise needed to help you make crop management decisions that maximize your yield and reduce your risk, turn to your local seed specialist and check out your local Answer Plot® location as a third-party source to help sort out the information and find the answers for your toughest field. Click on “Ask the Expert” on the AnswerPlot.com site for specific answers to your questions.

Soil Type	Ideal Planting Depth (in.)
Clay	¼-½
Loam	¼-½
Sand	½-1

Alfalfa Management Guide, D. Undersander, et. al., p. 12. ©2011

**Results may vary and are dependent on many factors including weather, application and management; therefore, results to be obtained, including but not limited to yields, financial performance, or profits, cannot be predicted or guaranteed by Winfield Solutions, LLC.*