To Coat or Not to Coat: That Is the Question

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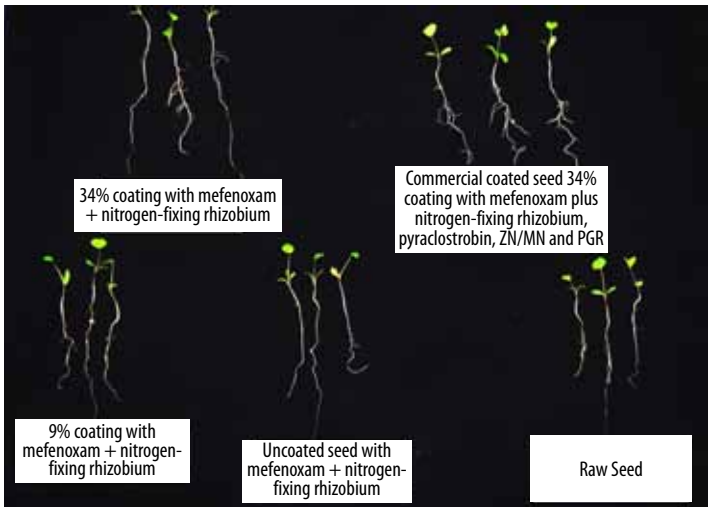
Debates about uncoated, light-coated (9%), and heavy-coated (34%) alfalfa seed are common among seed sellers and farmers. But research provides plenty of evidence that coated seed[1] offers substantial benefits for an alfalfa crop. Here are five reasons why:



1. **Coated seed results in better stands.** Coated seed changes the pure live seed (PLS) paradigm with a higher seed-to-seedling success rate than uncoated seed. Therefore, fewer seeds produce a similar stand.
   Purdue University research showed coated seed produced as many seedlings per square foot as uncoated seed (29.5 and 30, respectively) when 21.8 lbs of alfalfa seed was planted per acre (uncoated = 78 PLS/ft^2 and coated = 56 PLS/ft^2). Similar results when planted at 14.5 lbs/ac.[2]
2. **Coated seed offers better seed-to-soil contact.** Less than ideal seedbeds can result in poor seed-to-soil contact. Coated seed offers better moisture absorption and transfer to the seed for germination. The coating material attracts water better than the seed itself. Research results verified coated seed had about a 12% better germination rate than uncoated seed from the same seed lot.[3]


Top – uncoated; middle – 9% coated; bottom – 34% coated.

3. **Coated seed provides greater protection against early-season pests.** To verify, two sets of three seed treatments (uncoated, 9% coated, and 34% coated) were sampled and chemically analyzed for the fungicide active ingredient mefenoxam. In both cases, the rate of fungicide per seed was highest on the 34% coated seed and lowest on the uncoated seed. This makes sense, given that dose recommendations for alfalfa are based on weight, not seeds per pound.[4]
4. **Alfalfa seedlings from coated seed have more vigor when disease is present.** Testing under multi-race *Aphanomyces* root rot pressure indicated 70% more resistance when seeds were treated with the fungicide active ingredient and coated compared with treated seed alone.
   The commercial 34% plus coating provided an additional 12% increase in *Aphanomyces* resistance over the standard 34% coated.
5. **Coating helps keep products in close contact with the seed.** Coating enhances the protective effect of the single fungicide active ingredient and suggests inoculants, additional fungicides, plant growth regulators and micronutrients are also more effective on coated seeds.

In the end, there are tangible benefits. Coated seed increases seed efficiency by turning more seeds into healthy plants. In general, farmers plant more seed than needed for a productive stand. A common rate is 15 lbs/ac and some as high as 25 lbs. For example, a 15 lb/ac seeding rate at 200,000 seeds per pound (34% coating) is about 45 seeds per square foot. The goal is to have 15-20 established plants by fall of seeding year. Even at 15 lbs/ac, there are more than double the seeds needed to establish a productive stand.

The debate about coated alfalfa seed may continue. Those who objectively consider and evaluate the positive aspects will see the benefits of the technology.

[1]Any mention of coated seed refers to 34% coating unless otherwise stated.
[2]Alfalfa and Red Clover Stand Establishment. Forage Management Day at Feldun-Purdue Agricultural Center, Aug. 9, 2018.
[3]Study by WinField United Innovation Center, River Falls, WI, 2018.
[4]Study by Forage Genetics International, West Salem, WI, 2018.

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Important: Before use, always read and follow label instructions. Crop performance is dependent on several factors beyond the control of WinField United, including without limitation soil type, pest pressures, agronomic practices and weather conditions. Growers are encouraged to consider data from multiple locations over multiple years and be mindful of how such agronomic conditions could impact results.