

Apex Seed Coating

- Uniform Stands
- Improved Seedling Emergence and Survival
- High Concentration of Rhizobia Bacteria Ensures Nodulation
- Potential for Highest Yields

What is Apex Seed Coating?

Apex is a package of benefits in the form of minerals and carefully selected strains of *rhizobia* bacteria, specifically designed for legume seed, and in the form of a virtually dust-free coating. Over many years of exhaustive testing at University and industry trials, it has shown a consistent ability to convert more legume seeds to viable seedlings, *enhancing* the value of the seed sold to the farmer.

What types of seed are available with Apex seed coating?

Virtually any legume seed can benefit from Apex, although the greatest percentage of seed coated with Apex has been alfalfa and clover.

What importance is *rhizobia* bacteria?

By definition, legumes are those plants that utilize *rhizobia* bacteria to supply their own nitrogen to their roots. *Rhizobia* form colonies in the roots called nodules that usually look like tiny clusters of grapes among the roots. The *rhizobia* benefit from the plant, but in return, secrete a very pure form of water-soluble nitrogen that is readily available to the plant.

Each crop requires a specific strain of *rhizobia* to truly benefit from this symbiotic process. *Rhizobia* that is very effective on beans, for instance will not work very well on alfalfa. This is where Apex comes in. In the process, carefully selected strains of the most powerful *rhizobia* specific to each crop are included in the coating at very rich concentrations. The effect can be very dramatic. An alfalfa field with plants well nodulated with the right strain of *rhizobia* has been shown to produce up to 200 pounds of nitrogen per acre in a season. There are two major benefits from this: first, the nitrogen is free, and second, there are no contaminating salts as byproducts of fertilization that come from chemical fertilizers. Ground water pollution from excess nitrogen is also nonexistent.

How do I plant Apex coated seed?

Plant as you would with raw, uncoated seed. There is only one difference from what you may now be doing. Apex is designed to pull water from the soil, and hold it around the seed until there is enough moisture to ensure a healthy seedling. This is a guard against false germination, which occurs when a seed may first get enough moisture to germinate, but if dry conditions follow, the developing seedling will dehydrate and die. If you leave Apex coated seed in the seed drill overnight, it may absorb too much moisture from the dew. This will activate the polymer that helps keep the coating dust free, and when it dries later in the morning, it may cake the seed in your seed drill. We recommend that the seed drill be empty at the end of the day, or, if it contains seed, the drill should be tarped.

What changes do I need to make in my planter settings?

The changes in planting rate between raw and coated seed vary greatly from one brand of planter to another, but we have found that the planting rate will generally increase very slightly when using Apex coated seed. We recommend you leave the rate adjustment where it would be if you were planting raw, uncoated seed, and monitor the rate it is planting. Adjust the rate if you note a change from what you have seen with uncoated seed.

In what field conditions does Apex perform best?

Historically, Apex has shown its best performance when field conditions are less than ideal. The more ideal the conditions, the more Apex coated seed and raw, uncoated seed perform the same. As conditions worsen, such as when the seed is planted too deep or too shallow, or weather conditions are too cold, too hot, too wet, or too dry, we have consistently seen Apex coated seed outperform raw seed, even when that seed is inoculated with *rhizobia* by other means.

What planting rate do I use for seed coated with Apex?

So long as you plant alfalfa or clover seed at recommended rates per acre, plant Apex at the same rate as you would with uncoated seed. Exhaustive studies have shown that although there are less seeds in a bag, Apex coating can convert a significantly higher percentage of seeds to plants. That's why we say that a grower should consider how many *plants* are in a bag of seed, not how many seeds.