

What is New in Seed Coatings

Bill Talley, Summit Seed Coatings

Seed Coatings started many centuries ago when the Chinese wrapped their rice seed in a mud ball when planting their rice fields. The ball would keep the seed from floating to the top when they flooded their fields. Seed treatment of Alfalfa first began with preinoculation of the seed to make it more convenient to plant. The farmer did not have to go through the process of inoculating the seed himself, and this was a great improvement at the time. In 1975 Ramsey Seed in California acquired technology from a New Zealand company to begin coating seed with a buildup of lime and polymers meant to improve the adhesion of inoculant, protect the seed, and aid in stand establishment.

Celpril Industries bought this technology and started marketing coatings on a national basis to the major seed companies. Growth was fast in the early years but production and quality issues were not always the greatest and had some negative effects on seed coating production and usage. The manufacturing process was refined a few years later and coatings have seen steady increases in their usage and acceptance. In today's nationwide market, 80% or better of all alfalfa seed is coated. This growth comes from the development of new coating technology along with seed company and consumer demand.

Value added has been a consistent topic in promoting new products. Who would have thought we would be paying the prices we are today for corn and soybean seed? Top stacked GMO alfalfa seed can be worth as much as \$600.00 per bag, which is a significant increase from the previous rate of \$150.00. We are paying these higher prices because of performance, which leads to higher profits for the farmer. Seed coating companies take this same approach to marketing and promoting products. We believe that adding value is the key to supplying the best product to the consumer. We continually screen products observing how they work, and if they add a benefit to either yield or stand establishment. If a product meets this criteria, we then begin introducing it to the seed companies as an available option to add to their coating. Many of the products we examine never make it through the full screening and testing stage. Seed companies usually prefer 1-3 years of field trials before making the addition. One may be assured that any new coating products have been fully vetted before being marketed.

Some of the new insecticides and fungicides being offered include BASF Stamina and Syngenta Cruiser. Stamina controls some damping-off diseases and two races of aphamomyces. Cruiser is for insect control during establishment. Both are active ingredients and required a lengthy process to obtain EPA approval.

The other group of new additives currently on the market are not active ingredients and do not require EPA registration. These are Micro-Nutrients, Macro-Nutrients, Hydration Polymers, Rhizobia Facilitators, Mycorrhiza, Gibberellic Acid, Vitamins, Seaweed Extracts and many more. Many of these additives and combinations of these additives are being marketed now and will be discussed further in the presentation.

Apart from the active regulated ingredients, are the OMRI listed seed coatings. We have seen dramatic growth in this area as the popularity of organic production continues to increase. There are several products in this area, with our most popular being the Apex Hydro Green also marketed as Surestand Hydro Green. This coating contains a hydration enhancing component and a mycorrhizal fungi along with rhizobia bacteria.

Seed coatings continue to expand and we are continually testing new products to bring to the market. The major seed and chemical companies have invested heavily in buying technology companies and are committing serious research dollars in this area. New and improved seed coating enhancements are on the horizon.