



where discovery and opportunity connect

Novel Supplement to Seed Coatings to Increase Yield

The Technology:

Dr. Canaday at the University of Tennessee has developed novel supplemental seed-coating treatments, comprised of natural salts, which have shown to both increase soybean and snap bean yields as well as prevent yield loss due to seedling diseases in snap beans.

Field tests were conducted on snap beans and soybeans at the University of Tennessee's West Tennessee Research and Education Center ("WTREC") in 2013 and 2014, respectively. The field tests involved applying the novel seed-coating supplements to soybeans and snap beans and evaluating their effects on seedling diseases, plant growth, and yield. In addition, because the field testing area has been used annually for snap bean and/or soybean production since 2002, it was naturally infested with several soil-borne plant pathogens (e.g., *Pythium* spp., *Rhizoctonia solani*, *Macrophomina phaseolina*, and *Fusarium* spp.).

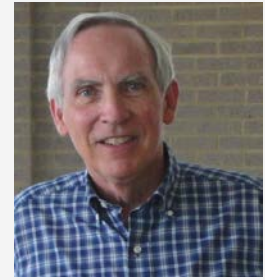
The field tests compared the results with and without the addition of UT's novel seed treatment supplements, which are easily applied with standard

treatments. The test results demonstrated that the novel seed treatment supplements led to an increase in overall quality (e.g., plant height) and yield for both crops, with snap bean yield increasing by over 50% and soybean yield increasing by over 10% compared to the standard treatments. At the same time, the comparison also indicated a decrease in snap bean yield loss due to seedling diseases, as compared to standard seed treatments.

Benefits:

- Potential to increase yield in agronomic crops.
- Potential to control yield loss due to seedling disease in soybean, snap bean, and other agronomic crops
- High ease of application and integration.

THE INVENTOR



Craig Canaday, Ph.D.

Dr. Craig Canaday is a member of the Department of Entomology and Plant Pathology at The University of Tennessee's WTREC, Jackson, TN. He has evaluated the effects of various seed treatments and cultural practices on seedling diseases of snap bean and soybean since 2001.

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