



SEEDS

Importance of Seed Treatment & Plantability

Seed treatment is important as seed treatments offer specific and targeted benefits to the plant. Seed treatments protect the seed and seedling against pests and diseases for optimum plant establishment in the first stage of the plant's development. Therefore it is important to ensure that the seed treatment is on the seed in the correct amount for optimum efficacy. To apply the product correctly, the following is required:

- 1. Clean and good quality seed.*
- 2. Seed that is well conditioned and treated with proven recipes.*
- 3. Correct seed treatment application equipment and skill to apply the product.*

To test that products and combinations of products are compatible we take the treated seed through a series of tests to ensure the recipe of product combinations are compatible and do not negatively impact plantability to ensure good plant stand and good efficacy in the field. Therefore we endeavor to limit dust. To measure dust formation we use the Heubach method. Through a mechanical seed abrasion test in a tumbling container the dust is collected onto a filter and can be quantified by weight comparison. Dust levels vary based on choice of seed treatment, treatment methods and seed type. High-performance liquid chromatography and ultra-performance liquid chromatography are also used to determine the active ingredient loading on the seed to ensure a quality treatment.

Indeed there are practical implications if the products are not applied correctly as this can affect your plantability when planting the seeds in the field. When seed is treated the seed loses some ability to flow through equipment and therefore we add coatings to the seed to ensure flowability and plantability is not impaired and also to reduce dust formation. Coatings are key in seed treatment stewardship, ensuring the quality of seed treatment and to support the plantability of the seed in the drilling machine.

Poor plantability is a factor that can negatively impact your plant stand which can impact on yield and ultimately negatively affect your income. Therefore we do plantability and flowability tests in parallel with the Heubach test mentioned. We need to know the indication of how the seed will react especially in a drilling machine after being treated and then we can adjust and advise accordingly.

Therefore it is important to manage the product application process as well as the planting process in order to get the best from your seed treatment. An important focus for us at Bayer SeedGrowth is well designed and tested seed film coatings, which will improve plantability and limit dust creation, helping the active ingredients to work effectively in the right quantity. Products like **Peridiam® EV26001** (Reg No. L 8669 Act No. 36 of 1947) is registered for the use on maize in South Africa. Bayer SeedGrowth is also continually working on developing new film coatings to ensure the latest innovations are included on your seed to optimize your planting process.

Photo 1

Heubach tests - Comparison between Peridiam® treatment (top) and without Peridiam® (bottom).



Photo 2

Comparison without **Peridiam®** (Left) and with **Peridiam®** (Right), shaken in bottles.



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