

PEV / AS

REPORT ON TESTING DAY



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Location: Laboratory, Cimbria Heid GmbH, Heid-Werkstraße 4, 2000 Stockerau, Austria

Aquaholder is a product designed for hydrostimulation seed treatment, where the active substance is a superabsorbent polymer. During a testing day, the Aquaholder seed coating product called BIOSAFE suspension was tested using a rotary coater CC50 and a drying device JCD 625. The testing involved PEWAS personnel, including Mr. Viktor Geling, Dr. Lukáš Petra, and Dr. Halyna Bodnár Yankovych.



Five batches of maize seeds were prepared, with varying parameters to achieve the best possible seed coating:

- \ Time of suspension dosing
- \ Time of mixing seeds with the suspension
- \ Amount of added finishing powder
- \ Time of mixing powder with suspension-coated seeds
- \ Temperature of drying the coated seeds.

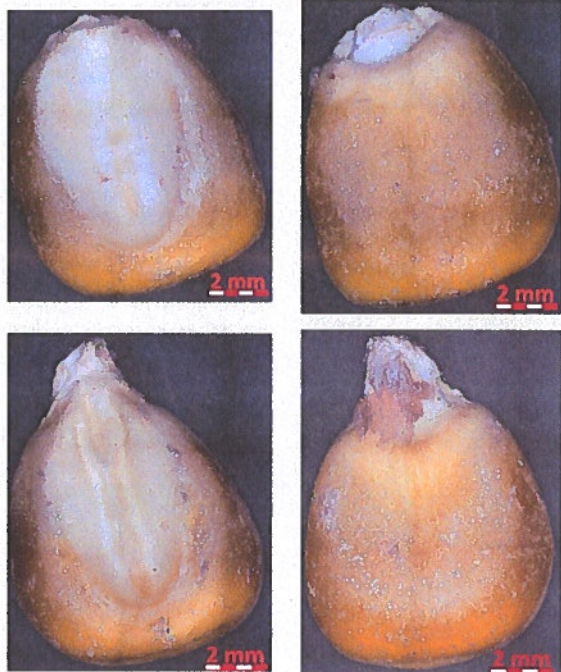
After each batch, a quick test was conducted by placing the coated seeds in a container, adding deionized water, and observing the formation of hydrogel around the seeds, confirming the presence of the active substance in the coating. Further analysis in PEWAS laboratories led to the following conclusions:

- \ The coating quality achieved at the CC50 was comparable to PEWAS standards.
- \ The amount of superabsorbent polymer in the coating was slightly lower due to longer dosing and mixing times.
- \ The seeds were completely dried in the JCD 625 dryer, considered the best result.
- \ The dried seeds were sticky, making the addition of finishing powder an absolute necessity.
- \ Effective drying of coated seeds can reduce the amount of finishing powder required.

The overall testing was successful, and the setup present at CIMBRIA's laboratory was the best tested so far.

The coated seeds were examined using optical microscopy, which verifies the formation of solid particles upon drying the suspension.

**AQUAHOLDER coated seeds
without finishing powder**



**AQUAHOLDER coated seeds
with finishing powder**



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