

Date: June 28th 2022

Location: Testing center Hoopman equipment & engineering b.v., Dinxperlosestraatweg 145, 7122 JP AALTEN (NL)

Subject:

Report on testing day - the application of the Aquaholder seed coating product was carried out.



Aquaholder is an innovative superabsorbent seed coating product containing super absorbing polymer as an active substance. More information on www.aquaholder.com

Testing took place on integrated rotary coating and drying device **IRCD350**.



The following persons participated in the testing:

- For Hoopman equipment & engineering b.v. - Mr. Jan Eenink, Mr. Jan Willem Hoopman
- For Pewas: Mr. Marian Valentin, Mr. Lukas Petra, Mr. Viktor Gelingier

During the test day, totally 50 batches of spring barley seeds, treated with a common seed applied fungicide, were made. The first batches no. 1-24 were targeted at setting up the process.

Subsequently, the most suitable coating process was selected:

- Dosage method: peristaltic pump
- Mode: variable but fully automatic/repeatable settings during first 1-24 batches.

Resulting in following 'standard application settings' but with different dryer settings (basically air temperature and air volume).

- Time of suspension dosage: 7 seconds
- Time of mixing the seed with the suspension: 10 seconds
- Drying intensity: 50%
- Drying air temperature: ranged from 25 - 38 °C
- 26 consecutive batches were performed in this mode.

After each type of tested process, the control sample of seeds was taken, sprinkled with distilled water and the presence of the active substance was optically checked by the formation of a hydrogel around the seeds. All control samples showed the formation of a hydrogel and thus, it is possible to assume a successful binding of the active substance to the seed.



For a more accurate determination of the amount of the absorbent on the seed, selected samples were sent to the Pewas company for detailed analysis.



Conclusion:

From an application point of view, no remarkable problems were observed in the application of the Aquaholder on seed during testing. The mixing of the product, the passage of the product through the pump, the process of applying of the product on the seed, the drying process, the clogging of the coating and drying equipment with product residues were within the norm and did not show any process abnormalities preventing further tests on industrial scale equipment.

All in all a perfect and effective day for Pewas and Hoopman e&e, demonstrating easy handling while application of Aquaholder.

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for Hoopman equipment & engineering b.v.

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