SUSTAINABLE STORAGE OF GRAINS
BY IMPLEMENTING A NOVEL PROTECTANT
AND A VERSATILE APPLICATION TECHNOLOGY

D3.3 Test Cases & Demo Trials
June 2026
novIGRain

Report on mobile prototype of the new application technology	
Lead beneficiary:	**SOJAM**
Main authors:	**Arnaud Poyelle and Dominique Tournel**
Issued Date:	**14/06/2026**
Due date:	**30/06/2026**

Version	Date	Contributors	Reviewers
1		Arnaud Poyelle and Dominique Tournel (SOJAM)	Frederic Verwilghen (MAX)

Dissemination Level	
X	PU = Public
	PP = Restricted to other programme participants (including the EC)
	RE = Restricted to a group specified by the consortium (including the EC)
	CO = Confidential, only for members of the consortium (including the EC)

This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.

1 Content ..... **Error! Bookmark not defined.**
2 Report on Test Cases 3
3 Report on Demo Trials ..... **Error! Bookmark not defined.**

This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.

1. Content

During the last period, we carried out three necessary and useful trials to finalize the project.

One took place from March 1 to 4, 2026, at Babolna, HUNGARIA, where we conducted additional treatments at various doses to obtain product approval. These trials were essential in order to try different application dosages for the registration of the product.

Then, on March 31, we held a demo tour at ILVO, BELGIUM, to visually demonstrate the misting technique.

Finally, on April 16, 2026, we returned to Balbona to demonstrate the reliability and precision of SOJAM's fogging equipment to potential future customers.

2. Report on Test Cases

Field Work on March 2nd and 3rd, 2026, at Babolna

Verification of the Prototype's Proper Operation

We checked the dosing of each of the two pumps by checking the flow rate; the metrological error was less than 2%.

Then, we checked the speed of the handling system, which is 16 metric tons per hour.

We applied the following formulation with right dosage in order to adjust the pumps' flow rate: desired flow rate for treatment at 4 liters per 100 metric tons = 0.04, multiplied by the handling rate (0.04 × 16), giving us a target dosing rate of 0.64 L/h.

We then carried out two days of treatment on different batches (see table).

This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.

Biodiesel test for Homologation

	weight bigbag (Kg)	Applied dose Liter / 100T	Treatment timing (s)	Application rate (ml)
Day 1				
Test 1	1060	0,08	224	6
Test 2	1030	0,64	224	41
Test 3	1050	0,08	224	6
Test 4	1060	0,16	228	10
Test 5	1020	0,32	219	22
Test 6	1030	0,64	231	45
Day 2 (Dilution-based dosing)				
Test 7	1000	0,64/0,01	214	39
Test 8	1070	0,64/0,04	237	45
Test 9	1020	0,64/0,1	220	43
Test 10	1020	0,64/0,2	217	42
Test 11	1020	0,64/0,25	219	43
Test 12	990	0,64/0,5	207	41

This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.



This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.

Démo Tour ILVO : March, 31st 2026



This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.



After a day of discussions with the various project partners, a demonstration of the misting process was conducted at ILVO.

The accuracy of the dosage was also verified by weighing during the presentation.

This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.

3. Report on Demo Trials : April, 16th 2026



This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.

The day began with a presentation on WP1 and WP2 modules to an audience of about twenty participants. A demonstration of batch processing was conducted outdoors on the cells, followed by questions-and-answers session on SOJAM's nebulization equipment.

Conclusion :

Material equipment is ready to be installed and used in real conditions, as soon as the product will be registered.

This project has received funding from the European Union's Horizon 2020 research and innovation programme, under grant agreement No 101000663.