**General comments and recommendation for the project:**

The project partners presented their results of the MARS project. The consortium demonstrated that their approach consisting of the following modules is working:

Hardware: both the driving platform as well as the seeding unit. Two robots have been shown performing a combined seeding task on the field under real world conditions.

Software and UX: The consortium presented the results of their software integration using smartsoft and their cloud-connection. The UX interface is nice and enabled the demonstration of the overall system.

Both, software and hardware were operational and the overall results are very promising. I congratulate the consortium to their work and really hope the partners will continue this project.

I highly recommend do enable a simulation mode for guests / journalists so they can “play” with the seeding units in a virtual world testing the capabilities of the system.

Issues and recommendations (especially for a follow up project):

* The number of seeds germinated has not been validated quantitatively. In a follow-up project, such a test must be used as KPI to validate the seeding unit.
* The number of successful seed placements is not known. To the reviewer, it was not clear how successful the “seed loading” of the seeding unit is. Especially since it was not possible to detect if a seed was missed. A system to detect a successful deployment of a seeding unit (a seed that has not been destroyed by the seeding unit) is mandatory in future to know if multiple seeding rounds are necessary.
* The maximal mission time has not been validated with experiments or by computation of the power needed vs battery capacity. To quantitatively evaluate the advantages with respect to conventional systems, such number should be included in future.
* Safety: Even though the robots are driving at slow speed, special care has to be taken for safety: the consortium should check actual regulations and check how to adapt the robot to have it safe (usable in mixed environments with humans / animals). A bumper, for example, could already be sufficient
* Charging the battery: The MARS robots have an open space in the back enabling the manual change of the lead batteries. However, I am not sure if an automatic system could change the batteries. Moreover, I was not able to detect charging pads or similar contact for automatic charging of the batteries. I highly recommend to the consortium to take this into account, since the effectiveness of a swarm-based solution is highly dependent on the energy charging backend.
* The path generation and path following should take the actual speed into account. For example: the robot should slow down to take a sharper curve and not drive a big slope at full speed.
* Virtual GPS-Fence: I highly recommend implementing a virtual GPS fence software feature. This module should run locally on the robot and check if the robot is moving out of this working zone (given the current pose and speed) to enable safe breaking and assure the robot will never leave the current working zone.