

January 2022

Hello friends,

2022 began with great optimism regarding the future of the Model Farm. In my last email, I updated you with the list of new research programs based on the various platforms, and now I would like to update you on another move of significance for us: the management of the Volcani Institute has decided to establish a number of new research centers, including a center for Sustainable Agriculture. The Model Farm is an important link within the new center, which means that we can expect a common denominator with a lot of scientific activity at Volcani, new connections, and the potential for investment in missing infrastructure. I received an official appointment to manage the new center, and the whole process is in the initial stages of establishing a steering committee and reorganization.

After this news, it is worth reminding ourselves of the uniqueness of the Model Farm in comparison to a research center. The Model Farm is designed to study, demonstrate, and assimilate Sustainable Agriculture practices. In other words, the model farm was certainly established not only for research. We will continue to work together (with our friends from the various units of the Ministry of Agriculture and other partners from research institutions and the public and private sectors) to emphasize the relationship with farmers and other interested parties. I would like to take this opportunity to update you that on **March 3**, we will be hosting a visit to the Model Farm, featuring a diverse program tailored for farmers, environmental activists, and other individuals from various fields interested in learning more about sustainable agriculture. Ronen Kfir is handling all coordination. If someone is interested in visiting or knows someone who is very interested, please contact Ronen Kfir (ronenk@volcani.agri.gov.il). We have almost reached the maximum number of participants, but we can accommodate a few more interested parties as the number of spots is limited.

I would also like to share with you a very special activity with high school students: Here is what Shlomi Aharon sent me: **As part of the research conducted in the Model Farm, a collaboration was created between two PhD students, Simon Futterman and Shlomi Aharon, and students from the ORT Yokneam Highschool, who are expanding the science engineering-generalized technology track. The program is an innovative track, combining multidisciplinary studies and interdisciplinary studies in science and engineering while integrating electronics and algorithms at the 5-unit level. In addition, the program includes a Senior Project at a 5-unit level, in which the students apply at the end of eleventh grade and during twelfth grade perform an engineering-scientific project. The project is carried out by the students under the guidance of Shlomi and Simon. The project is centered around the development of a system for identifying a "breakthrough plant" in a mixture of service crops (grains compared to legumes) as a reflector of the nourishment state of the soil. The students will experience extracting spatial and spectral information from drone images. Advanced classification methods based on machine learning, understanding biological processes occurring in legumes and grains in the soil. Finally, a thesis will be written, with the aim of involving the students in the scientific publication process as well.** Attached are several photographs from the students' fruitful visit.

We are working on disseminating knowledge to the international audience as well. In this context, we will renew our efforts to enrich the website in English (and even Arabic). As part of the effort, work was commissioned to prepare English subtitles for the webinar we had about a year ago following the movie Kiss-The-Ground. Remember? A three-hour **Webinar** that included a critical discussion of the film's content - and will soon be available with English subtitles to the entire international community.

A final topic for today on the subject of dissemination of knowledge - the Nahalal Stream rehabilitation project:

First, for those who do not yet know – on Agma's website you can find regular updates from the rehabilitation project: <https://nahalal.agma.org.il/>

Recently, a new **Blog** about treating invasive species and planting trees was launched. Credit to Lior Kamhagi from Agma for writing the content based on interviews with the project partners.

I would like to conclude with two updates on the scientific topics:

1. **Dates have been set for the scientific teams' meetings.**

This time, the teams will meet according to platform division, where on each platform, the new research programs will be presented, and a discussion will be held about the implications of the programs for ongoing activity, and vice versa. Required coordination, etc.

The dates set for the time being are:

14.2 – Field crops (basic treatments + precision plot)

22.2 – Nahalal Stream and the buffer zone

28.2 – Field crops-fodder, Precision dairy farming, waste recycling
(Discussion on the orchard platform will be determined later)

It is still unclear how the Coronavirus will affect these dates because the idea was to meet live. One way or another, if any of you have not been invited to these discussions and are interested in participating, please write to me.

2. **There are many initiatives being discussed around the EU call for proposals focused on soil health.**

Please keep me updated on any submission intended to be based on one of Model Farm's platforms.

Sincerely,

Yael



Simon Futterman (a doctoral student whose research is carried out as part of basic treatments in the Model Farm) guides high school students as part of a Senior Project.



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A high school student taking part in a Senior Project.