



# Israel, Germany fight against climate change

## Agriculture cooperation project between countries includes data collection using drones, AI

• By HAGAY HACOHEN

A special Israeli-German scientific discussion was held on Monday under the theme of "Agricultural Innovation and Adaptation to Climate Change." The two worlds of science and diplomacy were joined thanks to the included guests, among them head of the Helmholtz Israel Office Andrea Frahm, director of the Volcani Center Prof. Eli Feinerman, German Agriculture Minister Julia Kloeckner, Agriculture Minister Alon Schuster, German Ambassador to Israel Dr. Susanne Wasum-Rainer and Ambassador to Germany Jeremy Issacharoff. The panel also included top-ranking scientists in their respective fields from both nations.

Moderating the panel was Hagit Schwimmer from the Israeli Innovation Authority, who expressed her joy at this event due to her past involvement with the EU Green Deal and Partnership for Research and Innovation in the Mediterranean (PRIMA).

Kloeckner noted that the agreement means both countries could work "more efficiently" and said both societies already enjoy an agriculture sector that is at the forefront of innovation in digitalization. She expressed her wish that technological advancement would not only help protect animal welfare

but also "save us money."

Schuster then presented the audience with a video on Farm Space, a German agriculture project which uses drones, cameras and AI to photograph, from the air, the shape of leaves and from that offer data on the precise conditions of the crops being cultivated in the field.

Prof. Vinnie Altstein from the Volcani Institute told *The Jerusalem Post* that the agreement will cement work relations between Volcani and the two centers in the Helmholtz Association of German Research Centers. This would allow both German and Israeli post-doc students and scientists to conduct shared research in both countries.

She added that Germany experienced drought in the last four years and Israel has extensive experience with agriculture in arid conditions.

She also noted that German labs enjoy generous state support and so are able to carry out research with equipment "we just don't have here."

SCHUSTER CALLED on both societies to see agriculture "in a holistic way from farm to fork" and called on "using less chemicals, improving packaging systems" and using eco-friendly methods.

Wasum-Rainer said that this is the year when the EU and the world "are facing the greatest challenge in our lifetime" due to COVID-19.

"We should be aware that there are bigger challenges ahead of us for which there will be no vaccine," such as global warming and climate change, she said.

Wasum-Rainer said that the EU began as a cooperative effort among nations in coal usage.

"Coal used to be a growth engine," she said. "No longer."

Wasum-Rainer said that the EU Green Deal offers various challenges to the agriculture sector, as it must provide soci-



'A SWITCH to a plant-based diet, including protein-rich plant-based foods, is essential not just for public health but also to prevent further damage to the ecosystem,' said Prof. Otmar D. Wiestler. (Amir Cohen/Reuters)

eties with healthy food during the uncertain conditions of climate change. She said that both Israel and Germany hold leading positions in innovation and expressed her support for even more cooperation in the future.

Issacharoff said that "marvelous things can be done" as Israelis and Germans can "complement each other" and that "together... we can achieve amazing goals."

Prof. Abed Gera, the ministry's acting chief scientist, said, "We believe COVID-19 emphasized how important it is to have systems that function under all conditions and supply food for all citizens."

He said the pandemic is only one example of how vulnerable our food production systems are to other factors as well, such as wide-ranging fires and droughts.

"The crisis had put us [all] on the path of sustainability," Gera said.

Prof. Otmar D. Wiestler, pres-

ident of the Helmholtz Association, expressed his happiness at building another floor, so to speak, on the decades of excellent scientific relations between Israel and Germany that has been going on since the 1970s.

Wiestler said that in recent years the association has set up three labs in Israel as well as an office two years ago in Tel Aviv. "For us, Israel is a very special partner in innovation," he said.

Wiestler focused in his speech on the interplay between humans and their environment and called future research in that vein "exciting."

He told the *Post* that agriculture is but the latest field Israel and Germany are cooperating on, after decades of successful mutual work in energy and information technology, among other areas.

Formerly the head of the German Cancer Research Center in Heidelberg (DKFZ), Wiestler said that there is a strong relationship between food consumption and health.

"Western-style diet, which includes meat consumption, is linked to several types of cancer, such as colon cancer," he said. "A switch to a plant-based diet, including protein-rich plant-based foods, is essential not just for public health but also to prevent further damage to the ecosystem, since the meat industry releases a great deal of carbon dioxide to the air."

One futuristic technology the EU is now debating is gene therapy – replacing one faulty gene in a plant to produce a better result, at least from a human point of view.

While those who support it point to it being like hitting the fast-forward button on the age-old process of selective breeding that humanity had been doing for thousands of years, Brussels is still debating it.

Wiestler expressed his hope that the Monday panel will be the beginning of many future workshops where German and Israeli scientists will be able to meet, share ideas and work together on soil research and digital farming in the shared future ahead.

Feinerman presented the history of his institute, which was founded roughly a century ago in 1921. It is the largest and oldest agriculture institute in the country.

He announced that the center is about to expand and include a mariculture (sea-agriculture) facility in Eilat in the near future. Feinerman explained that Israel has a diversity of soils and land conditions, which makes it ideal for study and innovation that can "help the whole world." This means "billions of people," he said.

The scope of research being done in Israel, Feinerman said, is "from [outer] space, to the tip of the root."

