

TECH & INNOVATION

'WE ARE NOT BUILDING THE FUTURE OF THE NEGEV ALONE'

The Negev innovations Australia helped build

JESSICA ABELSOHN

BIODEGRADABLE pots that turn into fertiliser. Solar panels that talk to grapevines. A greenhouse where robots do the harvesting. These are not Silicon Valley moonshots. They are real technologies being developed and tested in one of the most unforgiving landscapes on earth, Israel's southern desert.

And Australian Jewish donors helped make them possible.

Ramat HaNegev, Israel's largest regional council by land area, covers nearly a quarter of the country yet is home to barely 10,000 people. Its 20 villages, kibbutzim, moshavim and farms sit in the same stretch of Negev where David Ben Gurion retired to Kibbutz Sde Boker, convinced the Negev would shape Israel's future. Decades on, a new generation is proving him right, not only in ideology, but with agri-tech.

Ramat HaNegev Regional Council mayor Eran Doron and the council's director of resource development Hadass Nisan will visit Australia next week to meet JNF Australia supporters and share what their investment has built, chief among them the Alexander Tatar Gross International Desert Agro-Tech Innovation Centre.

"Our mission has never been to make the desert less of a desert," Doron said. "It is to build thriving communities where people choose to live, raise their families, innovate, and create the future."

The Australia-supported Innovation Centre sits at the heart

of that ambition, developing and testing technologies for food security, climate resilience and sustainable desert agriculture under real Negev conditions alongside local growers.

Nisan said the centre reflects what Israel does best.

"Our goal is not only to adapt to desert conditions, but to transform them into an opportunity," she said. "In many ways, it reflects what Israel has always done best, taking local challenges and turning them into global innovation."

The results are already tangible. Bio Plasmar, a graduate of the centre's Scale-Up program, has developed biodegradable planting pots that protect seedlings from pests, retain water and nutrients, and decompose naturally into fertiliser. Field trials are underway and the technology has potential to significantly cut water, fertiliser and pesticide use.

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Hadass Nisan

Ramat HaNegev Regional Council
director of resource development

Another pilot combines agriculture with solar energy generation, an approach known as agrivoltaics. Companies Agrilight and Seymor are developing intelligent solar panels that respond to vine physiology while sensors monitor crop conditions in real time, optimising both grape yields and renewable energy output. A pilot vineyard is already operating in Ramat HaNegev. The council is also exploring a partnership with an American company developing AI-powered vertical fodder production that could serve dairy farms across the Negev and the Gaza Envelope while cutting water consumption.



Kibbutz Merhav Am in the Negev.

Photos: supplied

The centre's newest addition, the Future Greenhouse, was established with significant Australian support. It is positioning Ramat HaNegev at the forefront of agricultural robotics, enabling research into autonomous systems for spraying, pollination, harvesting and precision crop management under fully controlled climate conditions.

"What makes the centre unique is that innovation doesn't stop in the laboratory," Nisan said. "New technologies are tested under real desert conditions, together with local farmers, creating practical solutions that can ultimately benefit communities far beyond the Negev."

For Australian supporters, the relevance is not abstract. Australia faces its own challenges with arid land management, water scarcity and climate-resilient farming. Doron said the most important lesson from Ramat HaNegev is not technological but attitudinal.

"The desert teaches us to see opportunity where others see limitations," he said. "Limited water, extreme temperatures, and harsh conditions push us to innovate, collaborate, and develop smarter solutions. What begins as a local challenge often becomes an innovation with global relevance."

The region's resilience has been



A road through the Negev desert.

tested beyond agriculture. Since October 7, 2023, Ramat HaNegev has housed thousands of evacuees from the Gaza Envelope and northern Israel, including the entire community of Kibbutz Holit, which JNF Australia is also helping rebuild. Historic cabins at Sde Boker, beside Ben Gurion's desert home, were transformed into co-working hubs with JNF Australia support, originally for evacuees to keep working and now serving residents across the region.

The experience underscored what Doron said is a direct link between agriculture and security in the Negev.

"Many of our farms and agricultural communities are located along

Israel's borders. When agriculture remains strong, the land remains active, communities remain rooted, and the borders remain alive."

Nisan, who served as an Israeli emissary at Bialik College in Melbourne early in her career, said Australia's role extends well beyond funding.

"Their attention to detail, their questions, and their willingness to think alongside us help sharpen the project and often give us greater room for creativity, ambition and courage," she said.

"Every delegation that visits Ramat HaNegev, especially those that came after October 7, reminds us that we are not building the future of the Negev alone."



Ramat HaNegev Regional Council
mayor Eran Doron.

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