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**Volcani Center, Agricultural  
Research Organization (ARO),  
Israel**



**Aerial view of Volcani campus**



## Volcani Center: A World Leader in Agriculture

Volcani Center is the heart of Agricultural Research Organization (ARO), the largest agricultural institute in Israel, which provides **70% of all Israel's agricultural research**. It has pioneered sophisticated breeding techniques to make fruits and field crops **heat-tolerant, naturally pest resistant, or able to grow on limited water supplies**.

### History:

In 1921, the Agricultural Experiment Station was established under the leadership of Yitzhak Volcani. Its goal was to foment agriculture in Israel. When Volcani died in 1951, the institution was renamed "Volcani Center" in his honor. In 1971, the institution became part of ARO under the auspices of the Ministry of Agriculture and Rural Development. ARO also operates 4 research stations in other parts of the country, including 2 regional campuses linked to Volcani, one in Neve Ya'ar and the other in Gilat.

### Organization:

Located in Beit Dagan, near Tel Aviv, Volcani Center has 6 institutes: (i) Plant Sciences, (ii) Animal Sciences, (iii) Plant Protection, (iv) Soil, Water, and Environmental Sciences, (v) Post-Harvest and Food Sciences, and (vi) Agricultural Engineering. Israel's Gene Bank of Agricultural Crops is also located on the Volcani Center campus.

### Research:

Due to the country's limited water resources and arid climate, research has focused on:

- (i) Agriculture under arid conditions and on marginal soils,
- (ii) Irrigation using recycled wastewater and saline water,
- (iii) Crop cultivation in protected environments,
- (iv) Freshwater aquaculture under conditions of water shortage,
- (v) Minimization of produce losses through pest control and post-harvest storage methods, and
- (vi) Breeding and development of new strains of crops and domestic animals better suited to adverse conditions.

### Education:

The Volcani Center has developed collaboration with Israeli universities to train masters and doctoral students in applied agricultural research methodology and practice. It also hosts visiting scientists and post-doctoral fellows from Israel and abroad. Countries from Asia – especially India and China -, Africa, and Europe have benefited from this knowledge exchange.

### A Few Examples of Innovation:

- Fruits such as the "Or" Tangerine - exported to Europe and famous for being resistant to diseases, very tasty, seedless, and easy to peel -, and Cherry Tomatoes.
- Custom-made solutions to help every farmer get the right amount of water, fertilizer and pesticide to where it is needed – no more, no less. This translates to more crop per drop, produced in a sustainable manner that is friendly to the planet.
- World leader in producing more milk per cow, a result that has come from breeding techniques, milk monitoring, and improved feed and nutrition.
- Colored nets to reduce evaporation rate, filter sun rays, and improve crop productivity and shelf life of agricultural products.
- Peppermint oil to preserve potatoes and apples in storage, replacing chemicals.