

Israel's Orbia Netafim introduces Mega-PULSAR® to protect orchards from extreme heatwaves

03 September 2025 | News

New full-coverage sprinkler system complements Orbia Netafim's extreme weather mitigation solutions to offer year-round crop defense from weather-related risks



New full-coverage sprinkler system complements Orbia Netafim's extreme weather mitigation solutions to offer year-round crop defense from weather-related risks

Orbia Advance Corporation's S.A.B. de C.V. Precision Agriculture business, Netafim, the global leader in precision irrigation solutions, is introducing **Mega-PULSAR**, a unique full-coverage pulsing sprinkler technology developed to protect orchards from intensifying heatwaves and severe heat stress. This rollout marks the latest addition to Orbia Netafim's portfolio of extreme weather mitigation solutions and is specifically tailored to help growers of high-value subtropical crops, such as avocado, mango, lychee and more by addressing the growing threat of extreme heatwaves and water scarcity.

As heatwaves intensify and become more frequent, especially during fruit set stage and pre-harvest periods when fruit yield and quality are most vulnerable, crops require innovative solutions to retain moisture and supplement traditional irrigation methods. Mega-PULSAR distributes uniform pulses of low-volume water throughout the orchard canopy, forming a localized microclimate that reduces temperature and elevates humidity to shield crops from heat stress.

Mega-PULSAR's combination of wide spacing installation, high uniformity, and minimal water usage makes it unique in the industry. The system supports a range of flow rates and spacing configurations, to enable growers to customize deployments to match an orchard's specific size and topography. Its modular design simplifies installation, reduces the number of units needed per hectare, and lowers ongoing maintenance and labor costs for upkeep and installation. These advantages make Mega-PULSAR a compelling solution for high-value produce growers seeking to both reduce overhead costs and future-proof their operations against climate variability.

Building on Orbia Netafim's array of sustainable agricultural solutions, Mega-PULSAR extends that innovation to deliver full-area protection from extreme heat events with high water-use efficiency. At the heart of this innovation is the company's proprietary pulsation mechanism that distributes water in a "light rain" pattern. This mimics natural rainfall, allowing for both direct cooling, where droplets lower the temperature of tree surfaces, and evaporative cooling, where the surrounding air temperature is decreased as water evaporates. The result is a more resilient orchard environment that safeguards both fruit yield and quality.

Orit Katzir, Global Product Manager at Orbia Precision Agriculture (Netafim) said, "Mega-PULSAR compliments evolving needs of growers, offering a scalable and efficient way to protect orchards from every angle and at every phase of orchard growth. This innovation follows our ongoing mission over the past 60 years to help farmers grow more with less, even in the face of unprecedented challenges."

Initial installations of Mega-PULSAR began in Spring 2025, with early results pointing to significant improvements in increasing relative humidity and lowering temperature across orchards, validating its promise as a transformative tool for orchard heat mitigation.