ALMINA

WALNUT

Evaluation Report on the Effects of Almina, a Product Developed by Minitalya Tarim, on Walnut Plants in Denizli Province

The product was applied in an orchard of 30 decares with 12-year-old walnut trees of the Chandler variety. After 5 foliar applications with a period of 3-4 weeks in the trial area, the effects of Almina use and the differences created were examined.

In April 2021, treatment and control plots were determined in the orchard in accordance with the standard trial pattern, located side by side. All maintenance and applications throughout the orchard were identical and the only difference between the control plot and the treatment plot was the Almina applications.

- Foliar applications of Almina in the orchard were started at the beginning of April at a dose of 1.5 kg /100 l during pre-flowering, fruit setting, fruit growth and ripening stages.

When the air temperature rises above 36°C, the plant enters into heat stress with the effect of direct sun rays and stops photosynthesis. As a result of increase in the temperature of the walnut fruit, first yellow and then dark brown / black spots may form, these burns cause shrinkage and blackening in the fruit, and the heat collected on the tree causes stress on the tree, causing up to 50% yield loss and affecting the market value of the fruit.

The particle film coating created by **Almina** treatment created a temperature difference of about 7-8 degrees on the fruit surface and **a protective effect against sunburn and provided resistance to heat stress in the plant**.

The difference in temperature created by Almina treatment causes an **increase in the amount of photosynthesis** in 24 hours by delaying the entry of the plant into heat stress and accelerating its recovery from stress. Therefore, **a positive difference was observed in shoot and fruit development** compared to the control plot.

It was observed that the walnuts from the plot where Almina was applied were larger in size and had **higher internal fullness**.

Thanks to its silicon content, **Almina** strengthens the cell walls of plants and thus makes them more resistant to various diseases and pests. This results in healthier trees and higher yields.

Almina increases the resistance of plants, including walnut trees, to drought. It improves the water use efficiency of trees by helping to regulate water uptake and reducing transpiration. This makes Almina-treated walnut trees more resilient in areas with limited water resources or during dry periods.