



Almina

Apple



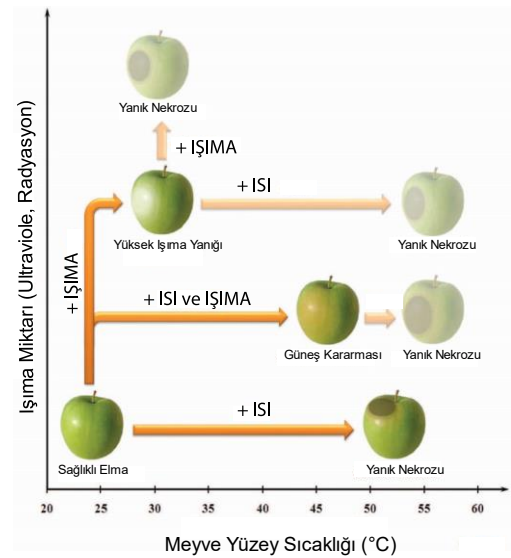
Evaluation Report of Trial of the Product Named Almina Established on Yahyalı, Kayseri by Minitalya Tarım (01.02.2023)

The effects of the use of Almina from soil and leaves and the differences in Grannysmith apples in the apple orchard with 368 trees per Decare in Yahyalı district of Kayseri province were investigated.

In April 2022, the application and control plots, located side by side in the garden, were determined.

- All maintenance and applications throughout the garden are the same, and the only difference between the control plot and the application plot is the Almina applications.
- Almina application was made from the drip system of 2 kg/da in 8 repetitions in 2-week periods starting from March in the garden.
- In this study, starting in April, Almina was applied from leaves at a dose of 1.5 kg / 100 lt during the awakening-before-flowering-fruit set-fruit growth-maturation stages.
- In this study, the hardness and tonnage values of the harvested products were examined in the Fruit Master warehouse by harvesting separately from the application and control plots in the second week of September.

After the application, a difference of about 7-8 degrees was detected in the temperature measurements made on the fruit surface. This temperature difference is very important. As a result of the high nighttime temperatures in apples, relatively smaller fruits appear because the necessary carbohydrates are spent by transpiration. In case of a decrease in humidity, as the loss of water lost by sweating will increase in parallel with the increase in temperature, growth and development decrease. There is shrinkage, thickening and inability to fully develop color in fruits. During sunny hours, plants get heat stress at 37.5 degrees and stop photosynthesis. This temperature difference created by the application of Almina causes an increase in the amount of photosynthesis in 24 hours by delaying the plant's entry into heat stress and accelerating its exit. Therefore, a positive difference was observed in green parts and fruit development compared to the control plot.



Applied from the soil, Almina releases the minerals in the soil that cannot be taken up and stores them in the form that the plant can take. Almina Loosens and ventilates the soil and keeps it moist thanks to its superior water retention. It significantly supports plant root development, ensures the formation and fringing of new capillary roots, prepares them to take nutrients and encourages them.

In regions with high temperatures, orchards should be irrigated more carefully. By keeping the soil moisture in apples at an appropriate level when the fruits start to grow and approach maturity, 20-40% increase in fruit size can be achieved compared to the unfavourable situation.

Analysis Parameters	Unit	Control	Almina	Difference
Stored Fruit Hardness	%	6.5	8.1	%24.62
Commercial Yield (Kg/da)	Kg	5186	6020	%16

In the examinations made, it has been proven that Almina application increases the cation exchange capacity in the soil, liberates the nutrients and minerals that are bound and cannot be taken, and enables the plant to take it. Apart from this, it has been observed that thanks to its porous structure, it loosens and ventilates the soil with water/air circulation and benefits the development of the plant with its rich content.

List of Benefits as a summary:

- Increase in shoot growth
- Darkening of leaf color
- Thickening and enlargement of leaves
- Minimizing sunburns
- Increase in apple caliber and quality
- Improvement in apple color (dark green)
- Increase in storage hardness

