



Almina

Grape



Evaluation Report of Trial of the Product Named Almina
Established in Alaşehir district of Manisa by Minitalya Tarım (01.02.2023)

The effects of Almina (Granule) soil conditioner product were tested in the study carried out in Sultaniye grape in Alaşehir district of Manisa.

On March 26, 2022, application and control plots, located side by side in the form of 10-decare plots in a 20-decare vineyard, were determined.

- **25 kg /da DAP and 40 kg Potassium Sulphate** in the control plot,
- **25 kg/da DAP, 40 kg Potassium Sulphate and 16 kg/da Almina (drip system)**

were applied from the soil. Apart from these, there is no difference between the drip and foliar feeding products in the control and application plots. The only variable in the treatment and control plots is the Almina product.

Almina drip application: mixer in working condition, at doses of 2 kg/da from the fertilizer tank. It was given as a total of 16 kg in 8 irrigations in 15-day periods.

Almina application made from leaves was applied at doses of 1.5 kg/100 liters after the first application of 3 kg/100 lt. Since the application did not have a mixing problem with the product, it was integrated into the spraying program and made a total of 5 times with minimum labour.

In the examinations and evaluations made by us in the process until the harvest, the applied parcel took the process ahead of the control part in terms of height, root, leaf development, stem thickness and cluster structure throughout the entire development process. It provided a homogeneous development in fruits.

Amount of product obtained in accordance with commercial sale at harvest:

Analysis Parameters	Unit	Control	Almina	Difference
Yield (suitable for commercial sale)	Kg/da	3260	3830	%17.48

It has been observed that the application of Almina made from leaves gives the plant resistance to biotic and abiotic stress conditions. It has been proven that the Almina application made from the soil releases 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 the high water absorption capacity gained by the porous structure, loosens and ventilates the soil with water/air circulation and benefits the development of the plant with its rich content.

The findings on the effects of the Almina product in the examinations carried out until the harvest;



Almina leaf application coating image

- Due to the amorphous silicon contained in Almina; It has been stated that it increases the leaf chlorophyll content and plant metabolism, increases the tolerance of the plant against environmental stresses such as cold, heat, sunburn, and drought, increases the mechanical endurance of the plants by strengthening the nutritional imbalance and cell walls in plants, and increases the yield and quality. It has also been determined that silicon stimulates the activity of endurance-related components (compounds such as chitinase, peroxidase, polyphenol oxidases, flavonoid phytoalexins).

- Promoted photosynthesis by increasing root and plant biomass (especially under stressful growing conditions such as drought, soil salinity, pests and disease): resulting in greater carbon capture with increased plant biomass.

The findings after the soil applications are as follows:

It has improved soil health at chemical, physical and biological levels. It increases the water holding capacity of the soil.

By increasing the cation exchange capacity (CEC) in the soil by 300%, Almina accelerated the transport of NPK and trace elements from the soil to the plant and provided the availability of locked nutrients. As a result, the increase in energy with healthy photosynthesis caused an increase in vegetative development. It made a difference in root stem and leaf development and provided a healthy and resistant structure against disease.

It has been determined that since the alginic acid contained in Almina has a high degree of polymerization, it prevents phosphorus from precipitating in the soil with calcium, iron and other nutritional elements and passing into the form that cannot be taken. In addition, it binds to phosphorus-bearing minerals, causing an increase in the available phosphorus concentration in the soil solution.

It has optimized the retention and release of water and nutrients to the critical root zone.

It increased plant resistance against salt stress by preventing sodium absorption.

It caused a significant increase in cluster length.



Development Process



Maturation Process



Application site visit of Uzbekistan delegation

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