



# Almina

## Cotton



### Evaluation Report of Trial of the Product Named Almina

Established in Reyhanlı district of Hatay by Minitalya Tarım (01.02.2023)

The differences and effects were tested by planting with ST 468 coded cotton seed of MAY company using Almina Soil Conditioner in granule form in Hatay Reyhanlı.

On May 4, 2022, the application and control plots located side by side in the field were determined.

- **15-15-15 at 40 kg/da** in the control plot,
- **40 kg/da 15-15-15 and 15 kg/da Almina (Granule) in the application plot,**  
were applied from the soil.

In this study, besides soil fertilizer, as top fertilizer, starting from the 68th day (11 July);

- CAN (26% N) fertilizer in the control plot,
- CAN (26% N) fertilizer and 1.5 kg/da Almina (Powder) in the application plot  
were applied as foliar once every 3 weeks.



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 capacity. It significantly supports plant root development, ensures the formation and fringing of new capillary roots, prepares them to take nutrients and encourages them.

On the other hand, foliar applied Almina provides protection of the plant against Biotic and Abiotic stress conditions.

As it is known, the cotton plant grows best at 32 °C and temperatures above 35 °C harm plant growth. If the 45 °C limit is exceeded, the cocoon formation decreases to almost 0 in the early period. Especially during the flowering period, high temperature affects fertilization and reduces the yield.

If the cotton plant is not protected against abiotic stress conditions, dry matter production is low at low temperatures, and accumulation of it is low at high temperatures due to excessive respiration.

#### **Results of the observations made during the plant development process;**

- Leaf color is darker than the control plot,
- Better branching and leaf width
- When irrigation is delayed, the plant tolerates drought and water stress better,
- Thanks to the protective film layer created by the Almina leaf application on the plant in scorching temperatures, the plant is resistant to heat stress with a difference of 6-7 °C.
- Cocoons shaken off were reduced by 50-60% and the plant held more bolls,
- Unseed Cotton was obtained from the control plot at 538 kg/da and from the application plot at 612 kg/da.



The differences between the application and control plots are shared in the table below:

Parameters (Average of 10 Plants)	Control	Almina	Difference
Number of Cocoons	13,52	15,28	% 13,01
Number of Fruit Branches	11,30	12,20	% 7,96
Plant Length	96,41 cm	105,28 cm	% 9,20
Cotton Mass Yield	538 Kg/da	612 Kg/da	% 13,75
Cotton Gin Yield	% 43,28	% 43,84	% 1,29
<b>Fiber Yield</b>	<b>232,84 Kg/da</b>	<b>268,30 Kg/da</b>	<b>% 15,22</b>



Color and development difference image from Antalya Aksu application

In addition to these changes, up to 15% enlargement in the leaf palm size of the plant, up to 10% growth in the root zone and obvious darkening in the leaf color were detected. This indicates plants that are both more resistant to biotic/abiotic stresses and have a higher photosynthetic capacity.

## Economic Comparison

**COTTON (UNWOUND):** In Adana Commodity Exchange, 44-yield Unwound Cotton was priced at 14-15 TL/Kg on 26 December 2022. Almina, which creates a difference of 1036 TL from 7,532 TL to 8,568 TL per decare if it is calculated over the base price of 14 TL, created a **cost of 280 TL per decare and an additional profit of 756 TL per decare.**

**COTTON (PRESSED):** Pressed Cotton in Adana Commodity Exchange is priced between 34 TL and 37 TL/Kg. Almina, which creates a difference of 1205.64 TL from 7,916.56 TL to 9122.20 TL from 9122.20 TL per decare if it is calculated over the base price of 34 TL, has created a **cost of 280 TL per decare and an additional profit of 925.64 TL per decare.**