



## *CanKat* SOLUBORON 10 EC FERTILIZER

CanKat Soluboron 10 fertilizer is fully water soluble form and produced to be applied to plants safely from leaves. CanKat Soluboron 10 contains at least 10% Boron (32% B<sub>2</sub>O<sub>3</sub>). Since nitrogen plays an important role in absorption of boron applied from leaves and with calcium, boron has essential functions in plants metabolism, the fertilizer also contains both nitrogen and calcium.

### Guaranteed Content (w/w), Minimum

Total Boron trioxide (B<sub>2</sub>O<sub>3</sub>) : 32%  
Water Soluble Boron (B) 10%

Total Calcium oxide (CaO) : 10%  
Water Soluble Calcium (Ca) : 7%

Total Nitrogen (N) : 10%  
Nitrate Nitrogen (NO<sub>3</sub>-N) : 10%

### Importance of Boron for Plants

Boron is one of the essential nutrients for the growth and development of plants. Boron deficiency condition causes damages to the formation, structural stability and functional integrity of cell walls. Up to 90% of boron in plants is located on cell walls as a structural element and contributes to maintenance of the stability of biological membranes. With these functions, boron plays decisive roles in plant growth, yield and nutrient uptake. Boron, as a cell wall element is associated with the pectin substance, provides a substantial strength and stability to cell walls. Thanks to these functions, boron plays a protective role against the penetration and infection of pathogens into plant tissues and appears to be a substantial nutrient increasing the resistance of plants to diseases. One of the most particular functions of boron in plants is its role in pollination, fertilization and fruit setting. Therefore, in most cases, vegetative growth is not affected in plants by boron deficiency, while generative growth and fruit formation are affected seriously. Among plant mineral nutrients, boron shows the lowest phloem mobility and the deficiency symptoms occur in young leaves and shoots. For this reason, controlled foliar boron fertilization on leaves has great importance, especially during the periods of flowering and fruit/seed formation to ensure high yields. Boron deficiency problem can even occur in plants despite of sufficiently high amounts of boron in soils or in fully-expanded leaves which is usually common under conditions where the humidity is high and the transpiration is low. Boron requirements of plants varies considerably from species to species depending on the composition of the cell wall and the amount of pectin.

### Boron Deficiency Symptoms in Plants

Since boron is an immobile nutrient in most plants, its deficiency first appears in young leaves. Chlorosis and yellow-red color formation in leaves, small and formless leaves, cracking in leaf stem, body and leaf veins, growth regressions, shortening between internodes and growing ends occur. Since boron deficiency primarily cause damage to growing points, the growth of plants slows down. Leaves, shoots and thin branches form a brittle structure that breaks easily. If the deficiency is severe, the growing points die and the growth stops. Flower and fruit formation is prevented. It causes fruit deformations, fungal infections inside and outside fruit, underdeveloped fruit formation, shell cracking, and glue on the fruit stem. It also causes brown stains inside fruit, anhydrous, thick shells.

**Note:** Consult CanKat Fertilizer specialists for proper and balanced fertilizer use.



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## Boron In Leaf

After the completion of boron fertilizer applications by soil, as a result of environmental factors like climate and irrigation or soil properties like pH or texture, boron cannot be taken by plants or be washed away from the soil. In such cases, in order to eliminate boron deficiencies that may occur in plants:

- 🔥 In cases where there is no possibility to apply boron fertilizer from the soil due to reasons such as the end of irrigation period and insufficient raining,
- 🔥 In case of application from the soil, if there are factors that prevent the uptake of the given element,
- 🔥 In order to see the expected effect in a short time and to eliminate the boron deficiency rapidly, foliar boron fertilization is needed.

The level of sufficiency of Boron element in the leaves of plants varies according to the plants in agriculture, but for some plants these values are given below.

The best decision to give a nutrient element to the plant from leaves should be given as a result of Leaf Analysis. If a leaf analysis cannot be performed, 550-750 gr / 100 liter dose is recommended from fully water soluble CanKat Soluboron 10 fertilizer and it is recommended to apply at least 3 times with 15-20 days intervals. For foliar fertilizer applications, the maximum concentration in the application solution should not exceed 0.1B%.

## Sufficiency Levels of the Boron Element in the Leaves of Some Plants

	Deficient	Sufficient	Excessive
Wheat	<6	6-10	>10
Sugar Beet	<30	30-200	>200
Corn	<5	5-25	>25
Cotton	<20	20-60	>60
Apple	<25	25-50	>50
Walnut	<35	35-100	>100
Potato	<40	40-70	>70
Tomato	<25	25-75	>75

## Manufacturer



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## Boron Deficiency Symptoms in Certain Plants

