Boron is one of the most essential elements necessary for plants. Crops that grow in boron-deficient soil cannot reach their maximum yield, quantity, and durability. Meristem tissues are the building blocks of plants in which growth and development occur. These tissues should receive a certain level of boron (see dosage table) by means of the plant roots in order to continue their development. Without receiving adequate boron, meristem tissue can expand but it cannot be separated into structural units that provide the speciality of tissues. When the addition of boron ceases, the growth ceases too. Boron deficiency causes bad quality in plants instead of advantageous growth. Bad quality comes from the internal deformity of the tissue and appears as a cavity or smearable dots in pulp of crops. While fruits grow quickly and roots of pulp plants develop quickly underground, much more meristem tissue is required in order to provide this advantage. However, if there is an inadequate amount of boron to develop meristem, soft and rotten points will develop in fruits or underground roots.
Boron products are used commonly in agriculture for the following applications:

1) Fertilizer : micronutrients, directly or in a low concentration mixture
2) Herbicide : control of undesired plants and weeds, applied in high concentration
3) Pesticide : control of insects/pests, applied in high concentration
4) Wood Preservation : high concentration application
5) Flame Retardant

A plant’s boron requirements differ according to how the plant is formed. For some plants, more boron is required to achieve maximum growth.

- Boron deficiency in grain causes irregular and inadequate development of seeds and particles.
- Boron is effective in developing the blossoms and fruits of all plants. In many plants with boron deficiency, few flowers are observed and the flowers that do grow have irregular pollination. Boron deficiency causes plant bulbs to rot when irregularly pollinated and causes deep cavities in peanuts.

In leafed plants such as vegetables and fruits, boron is applied:

- By adding to dichlorodiphenyltrichloroethanes
- With herbicides in nitrogenous solutions
- With irrigation water

**NECESSARY INFORMATION**

**ETIDOT-67**

**EC FERTILIZER**

**SODIUM BORATE**

<table>
<thead>
<tr>
<th>Fruit</th>
<th>1st app : Before blooming, apply in 70 g/acre dosage</th>
<th>2nd app: After flowering, applied in same dosage and on the same way</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive, Apple, Pear, Walnut</td>
<td>1st app : Before blooming, apply in 100 g/acre dosage</td>
<td>2nd app: After flowering, applied in same dosage and on the same way</td>
</tr>
<tr>
<td>Citrus Fruits</td>
<td>1st app : Apply 10 days after blooming, apply in 50 g/acre dosage</td>
<td>2nd app: After flowering, applied in same dosage and on the same way</td>
</tr>
<tr>
<td>Vineyard</td>
<td>1st app : Before the harvest, apply 100 g/acre dosage</td>
<td>2nd app: After harvesting, applied in same dosage and on the same way</td>
</tr>
<tr>
<td>Plum, Apricot, Cherry, Peach</td>
<td>1st app : Before blooming, apply in 100 g/acre dosage</td>
<td>2nd app: After flowering, applied in same dosage and on the same way</td>
</tr>
<tr>
<td>Strawberry</td>
<td>1st app : Before blooming, apply in 70 g/acre dosage</td>
<td>2nd app: After flowering, applied in same dosage and on the same way</td>
</tr>
<tr>
<td>Tomato</td>
<td>1st app : Before blooming, apply in 100 g/acre dosage</td>
<td>2nd app: After blooming, applied in same dosage and on the same way</td>
</tr>
<tr>
<td>Cucumber, Lettuce</td>
<td>1st app : Before blooming, apply in 70 g/acre dosage</td>
<td>2nd app: After blooming, applied in same dosage and on the same way</td>
</tr>
</tbody>
</table>

**USAGE, DOSAGE AND TIME:**

“Do not exceed the appropriate dosage. Just use where necessary.”

**FOR AGRICULTURAL USE**

**ETIDOT-67**

**Guaranteed content : w/w**

Water-Soluble Boron 18% 20.6%

1. **Potato**
   - 1st app: After blooming, apply in 200 g/decare dosage
   - 2nd app: 15-20 days after first application, apply in same dosage and on the same way

2. **Wheat**
   - 1st app: Before flowering, apply in 300 g/decare dosage
   - 2nd app: After flowering, apply in same dosage and on the same way

3. **Corn**
   - 1st app: After the seed is 6-8 inches long, apply in 300 g/decare dosage
   - 2nd app: 20 days after first application, apply in the same dosage and on the same way

4. **Sugarcane**
   - 1st app: Before flowering, apply in 100 g/decare dosage
   - 2nd app: After flowering, apply in same dosage and on the same way

5. **Carrot, Sugar Beet**
   - 1st app: Before or after flowering, apply in 500 g/decare dosage
   - 2nd app: After flowering, apply in same dosage and on the same way

6. **Cabbage**
   - 1st app: When the plant is 15 cm in height, apply 300 g/decare dosage
   - 2nd app: 20 days after the first application, apply in same dosage and on the same way

7. **Onion**
   - When the plant is 2-3 leaves, apply in 500 g/decare dosage

**IMPORTANT INFORMATION**

1. Dosage values on the left side of the page assume that the amount of boron present in the soil is zero. Soil analysis should be done prior to application.
2. Basic application dosage should be determined by expert analysis on the boron content of the soil, plant type, climate, and the kind of soil.
3. If the dosage given on the left side of the page is exceeded, the boron will have a toxic effect and can damage the plant.
4. Should be kept away from animals.
5. The product should be preserved in its package and should not be left in a humid environment. Product will absorb moisture if it comes in contact with the air.

**ETIDOT-67**

**CHEMICAL FEATURES**

Na₂B₉O₄·4H₂O

| Content Unit Value |
|-------------------|-----------------|
| B₂O₃ % | 67.00 min. |
| Na₂O % | 14.00 min. |
| Purity % | 99.90 min. |

**SIEVE ANALYSIS**

| Size (mm) Unit Value |
|---------------------|-----------------|
| -0.090 % | 50.00 min. |