

ACTIMICRO

This fertilizer is a chemical mixture of essential trace elements needed by plants. Deficiencies of Boron, Copper, Iron, Manganese, Molybdenum and Zinc, ingredients of this mixture, cause problems in plant growth since all of these minerals are vital for growth of plants. Importance of these elements is indicated below:

1. IRON (Fe):

Benefits of iron for plant growth:

- It has an active role in conversion of chlorophyll.
- It has a positive effect on chloroplastic protein production.
- It acts as both an enzyme and co-enzyme.

Signs of iron deficiency:

- Symptoms of deficiency are first noticed in young leaves.
- Iron deficiency is often seen in soils with high lime content or when fertilizers with high pH values or high phosphorus content are used.
- Typically, chlorosis (yellow) is seen between veins of young leaves; veins stay green. When the level of deficiency is severe, the veins and leaves turn respectively, yellow and white.

2. MANGANESE (Mn):

Benefits and signs of deficiency of manganese:

- Together with iron, manganese elevates production of chloroplast. Deficiency of manganese causes deformation of chloroplast and yellow spots in leaves.
- It has a positive effect on chloroplastic protein production.
- It acts as both an enzyme and co-enzyme.
- It is necessary for electron transfer of enzymes.

3. MOLYBDENUM (Mo):

Benefits of molybdenum for plant growth:

- It prevents accumulation of nitrate with an enzymatic reaction by reducing nitrate to ammonium and helps nitrogen fixation.
- It aids production of ascorbic acid.
- It has positive effects on phosphorus metabolism. When it is deficient, organic phosphorus is converted into inorganic phosphorus.

Signs of molybdenum deficiency:

- Deficiency of molybdenum is very similar to deficiency of nitrogen and first old leaves demonstrate such a deficiency.
- As a difference, when compared with nitrogen deficiency, edges of leaves dry and curl in a very short time and yellowness is seen between veins.
- Leaves get smaller in size and deformations start.
- Flowers lose their colorfulness and the plant has a small and dry appearance. Cauliflowers cannot form offshoots.

- The plant becomes more vulnerable against diseases.

4. ZINC (Zn):

Benefits of zinc for plant growth:

- It is required for chlorophyll production.
- It aids transportation of carbohydrates and sugar.
- It is necessary for hormonal activities and is a structural element for auxin.
- It aids absorption of water.

Signs of zinc deficiency:

- Yellow spots are seen in offshoots and drying is observed when deficiency is severe.
- The plant gets shorter and narrowing occurs between nodes.
- Deformations and shortening of leaves are seen and in certain plants boat shaped leaves are observed.
- Rosettes and flagella are seen in offshoots of fruit trees.
- Small swellings are seen in roots and capillary roots are accumulated at the end points of roots.

5. COPPER (Cu):

Benefits of copper for plant growth:

- It is necessary for production of chlorophyll. It regulates intake of carbon dioxide and is important for photosynthesis.
- It is present in structure of many enzymes. It is important for production of proteins.
- It is a respiratory catalyst.
- It enables balancing of water motion throughout the plant.
- It helps formation of cell wall.
- It is necessary for formation of normal flowers and seed production.

Signs of copper deficiency:

- New leaves get a yellowish color or whitening or a grey-green appearance. When deficiency is severe, drying is seen.
- Drying in offshoots and dying is observed when deficiency is severe, starting with yellowness seen at the ends of offshoots.
- Plants get shorter, bushy and number of offshoots decrease.
- Deformation and loss of color are seen in flowers. Number of flowers is decreased and either there are no flowers or they fall down.
- Fruits crack and become ripe and fall down before their time.
- Root formation decreases. Development of roots is hindered.

6. BORON (B):

Benefits of boron for plant growth:

- It helps transportation and positioning of calcium.
- It is necessary for formation of seeds, fruit health, pollen health and pollination.
- It helps production of hormones (especially of auxins).

- It has a positive effect on cell reproduction.

Signs of boron deficiency:

- Initial symptoms are seen in young leaves. They get a yellowish color and are deformed.
- Most important sign is dying of growth centers; and then development of the plant stops.
- Fruits get smaller and deformations occur.
- Significant cracking is seen in fruits.
- Flowering rate decreases and they may fall down and number of pollens decreases.
- Young offshoots are shorter and gum leaks occur.
- Veins of leaves get coarser and leaves fall down before time. Fruit seeds get coarser.
- Leaves get darker colors and thicker and median vein gets coarser. Leaves and the trunk become dry and fragile.

ActiMicro is a high quality chemical leave fertilizer containing the trace elements, whose deficiencies shall cause the above given problems and whose beneficial properties are given above. It has an exceptional difference from its competitive products with high levels of Molybdenum.

Ingredients of ActiMicro:

Boron(B)	1.0%	
Copper (Cu)	1.5%	Chelated with EDTA
Iron (Fe)	4.0%	Chelated with EDTA
Manganese (Mn)	3.5%	Chelated with EDTA
Molybdenum (Mo)	0.6%	
Zinc (Zn)	4.0%	Chelated with EDTA

- ActiMicro can be absorbed easily and completely by plants.
- It has a protective and therapeutic effect against deficiencies of trace elements of plants.
- It has a micro-granular structure and therefore is soluble in water and shall not cause dust.
- It does not contain chlorine. When there is a deficiency of nutrients due to lack of trace elements, it treats the condition and/or it prevents occurrence or re-occurrence of such conditions.

Suggestions for use:

Bananas	Fertilizing via leaves 50-75 grams/100 liters
	Drip watering 150-250 grams/minutes
Citrus	Drip watering 150-250 grams/minutes
	Fertilizing via leaves 100-150 grams/100 liters
Vineyards	Fertilizing via leaves 50-75 grams/100 liters
	Drip watering 100-250 grams/minutes
Ornamental plants	Fertilizing via leaves 50-75 grams/100 liters
	Drip watering 100-250 grams/minutes
Vegetables (greenhouse,	Fertilizing via leaves 75-100 grams/100 liters

open field)	Drip watering 150-250 grams/minutes
Field grown plants	Fertilizing via leaves 150-225 grams/100 liters

- It can be applied directly to soil as a solution or may be applied by injections, drip watering, normal watering or fertilizing via leaves.
- Suggestions are given as examples. It is recommended that selection of fertilizing type should be made based on the soil and leave analyses and only after consulting a specialist agricultural engineer of Toros Tarım.
- It should be applied via soil for delicate plants such as ornamental plants.
- It is recommended that for getting better results, use of this fertilizer should not be delayed until signs of deficiencies of trace elements are observed.