

PRODUCT ORIGIN AND APPLICATION

Mineral eco-friendly fertilizer **Bio-Silicium** made in Russian Federation.

BIO-SILICIUM - preparation rich in silicium and trace elements in convenient form, provided for presuming seed and plants treatment, top-dressing of plants during vegetation period in order to force plants growing and increase productivity of samples, quality of products and outlook of decorative flowers and plants, their resistance to unpleasant environment.

BIO-SILICIUM is required for better consumption of nitrogen, phosphorus, potassium by plants. It stimulates processes of growing, accelerates the beginning of buttonhole and maturation phases, which is closely connected with increase of energy for metabolic processes and the synthesis of sugar. Its accumulation in conducting waterworks causes improvement of mechanical robustness of tissues. Silicium is essential for normal growth and development of above-ground organs and assemblage of rootlets of plants.

Optimization of silicium nutrition of plants leads to increase of photosynthetic activity. Silicium, as well as phosphorus, is the basis of macroergic compounds, which stipulates higher efficacy of bioenergetics of silicium-filled plants. Beside molecular effects, silicon affects mechanical robustness of tissues, which prevents plants from lodging. Silicium stimulates essential reaction of plants on different stresses. This element contributes to resistance of plants (especially rice) to physiological diseases, that occur under integrated effect of pesticides , hydrogen sulfide, anaerobiosis and causative agents of actinomycosis and tuberculosis.

When applying the preparation, seed sprouting is observed, as well as shortening of vegetative cycle, substantial growth of crop yield, quality of products, storage time and resistance of plants to unpleasant environment, which is especially important for zones of risky crop raising. The preparation is capable of returning to life those plants that were damaged during periods of frost, when applied in advance.

IBIO-SILICIUM does not contain any pathogen microgerms.

BIO-SILICIUM- eco-friendly product, based on ultra-pure silicium. Yield of vegetables can be increased by 100-200%, of corn – by 100-150%, of potato –by 30-50%, of fruit and berry crops – by 30-40%, of annual and perennial grasses – by 25-30%. Appearance of the products grown becomes more attractive and storage life gets longer.

Recommendations for application

Processing by the preparation may be accomplished in two ways: everyday seed processing (mordanting) and application directly to plants, with the help of regular sprayer, using classic ways.

A convenient way of mordanting of seeds commercially is together with agrochemistry used at an enterprise. The preparation is neutral to other water-soluble preparations. The amount of preparation needed for loading to the mordanting sprayer depends on the efficiency of its mechanism and consumption rate per 1 hectares. It is calculated by experiment before start of working. The solution of preparation for mordanting and sprayer do not differ. The only difference is in final concentration. First you should put small amount of preparation to a tall capacity (in order to prevent its spread on clothes, since it does not go off well), and mix it with the help of automatic mixer with a small amount of water, e.g. 2kg in 5 l. After that, during the mixing, you should add some more water, until you dissolve enough of preparation

After that you should add calculated amount of water, mix it and leave for 2 to 12 hours. After that it can be used directly on plants or seeds.

Top-dressing of plants should be held by spraying or pouring the water solution of preparation. The most effective way is to combine spraying and pouring.

For making good solution, the preparation should be mixed with water very well.

The preparation is to be included to accepted for the applied location technology of planting cultures by adding to the solution in capacity for mordanting seeds and/or to the used solution for spreading of toxic chemicals or solutions of fertilizers.

Agrotechnical events that requires using of «BIO-SILICIUM», should be executed during specific time, that matches recommended developments phase of the plants.

For preparing good solution, the calculated amount of the preparation should be put in the capacity with mordanter, filled with water to 1/3, with agitator on. After the solution becomes even, the amount of the solution is to be raised to the required by the capacity volume.

Ready-made solution is to be made right before the processing and is to be used within 2-4 hours after being done.

It is recommended to be included to one of the processing by agro chemicals or fertilizers that are provided by technology during the current development period

For example, for grains it is combined with processing by herbicides or the extra root top seeding by fertilizers.

!!! After preparing, the solution should be used within 24 hours. After that time active silicium loses its active properties while it releases gas, warmth and settling.

Application regulations for «BIO-SILICIUM»

Plant type	Seed dressing (Amount of «BIO-SILICIUM» and water per 1 tone of seeds)	Spraying at vegetation period. Amount of «BIO-SILICIUM» and water per 1 hectare.	The usage at different phases
Potatoes	150 gr in 10 liters of water / 1 tone of seeds	50-75 gr / 200 – 500 liters / 1 ha	1. Presowing 2. Foliar feeding: 1st – at the start of growing phase, when the height of plants reaches 10-15 cm 2nd – at bud-formation period – initial blossom
Cereals: wheat, barley, rye, oats	300 gr in 10 liters of water / 1 tone of seeds	75 gr / 200 – 500 liters / 1 ha	1. Presowing 2. Foliar feeding: - tillering phase - booting phase leaf-tube formation - In the phase of milky ripeness to improve the quality of the grain
Corn, wild corn	500 gk in 50 liters of water / 1 tone of seeds	100 gr / 200 – 400 liters / 1 ha	1. Presowing 2. Foliar feeding: - Phase of 2-3 leaves - right before initial blossom / Phase of formation of cob
Flax	200 gr in 10 liters of water / 1 tone of seeds	100 gr / 200 – 400 liters / 1 ha	1. Presowing 2. Foliar feeding: - During early grown phase at herringbone phase.

leguminous plants (pea, Austrian winter pea, lupine, etc.)	200 gr in 10 liters of water / 1 tone of seeds	50-100 gr / 200 – 400 liters / 1 ha	1. Presowing 2. Foliar feeding: 1 st at phase of 6-8 leaves, 2 nd – at phase of budding – before initial blossom
Colza (spring, winter), runchweed, coleseed.	200 gr in 10 liters of water / 1 tone of seeds	100 gr / 200 – 400 liters / 1 ha	1. Presowing 2. Foliar feeding: 1 st – phase of tuft formation, 2 nd - at stem formation 3 rd – at phase of bud-formation
Sugar beet, mangel, red beet, carrot	75 gr in 10 liters of water / 1 tone of seeds	50-100 gr / 200 – 400 liters / 1 ha	1. Presowing 2. Foliar feeding: - at phase of 6-8 leaves - during root-crop formation (8-10 leaves, beginning of closing leaves in a row)
Tomatoes, eggplant, paprika, cucumber	50 gr in 10 liters of water / 1 kg	50-100 gr / 300 – 400 liters / 1 ha	1. Presowing after plant relocation 2. Foliar feeding: - at phase of bud-formation period - at period of intense fructification
Cabbage, cauliflower, onions, garlic	50 gr in 10 liters of water / 1 tone of seeds	50-100 gr / 300 – 400 liters / 1 ha	1. First processing is to be executed during first phase of growing – after appearance of green leaves. 2. At the beginning of bearing formation
Sunflower	150 gr in 10 liters of water / 1 tone of seeds	100 gr / 300 – 400 liters / 1 ha	Foliar feeding 1-3 times: - phase of 4-6 leaves, - at the start of bud-formation period - at phase of initial blossom
Rice	300-400 gr in 10 liters of water / 1 tone of seeds	150-200 gr / 300 – 400 liters / 1 ha	Presowing Foliar feeding: - Phase of Panicle - at leaf-tube formation

Grapes		50-100 gr / 1000 liters / 1 ha	<p>1) First processing is during early spring on green cone. (helps to survive at cold weather)</p> <p>2) at the start of bud-formation period</p> <p>3) at period of intense fructification</p>
Horticultural Crops, berry plants and bushes.		50-100 gr / 300 – 500 liters / 1 ha	<p>1) First processing is during early spring on green cone. (helps to survive at cold weather)</p> <p>2) at the start of bud-formation period</p> <p>3) at period of intense fructification</p> <p>4) It is recommended to use watering on the roots once per month.</p>
Ornamental bushes		50 gr / 300 – 600 liters / 1 ha	<p>1) First processing is during early spring on green cone.</p> <p>2) Then with intervals once every 30 days, till the end of vegetation period.</p>
Flowers (annual plants, perennial plants)		50 gr / 300 liters / 1 ha	<p>Foliar feeding:</p> <ul style="list-style-type: none"> - First processing is during early spring on green cone (for perennial plants) or at the height of 7-10 cm, or after first green coming-up (for annual plants), - Then with intervals once every 30 days - Right before blossom

The preparation must be applied in strictly recommended doses and with following all common technologies of planting cultures for the location

«BIO-SILICIUM» - does not bring any changes in the schedule of fertilizing or applying pesticides.

Without fertilizing, increase of yield from "BIO-SILCIUM" is minimal, as it affects plants' metabolism at first.