

## SAPROPEL. POTASSIUM HUMATE. ORGANO-MINERAL FERTILIZERS "BLAGO"

**SAPROPEL** is a product of bottom sediments in freshwater reservoirs, formed as a result of biotransformation of dead vegetation, animal organisms, microbial remains and soil particles under conditions of absence of oxygen. Sapropel gets accumulated exclusively in relict, closed lakes. In rivers and small ponds there is no sapropel to be found, only silt which is considerably inferior to sapropel in the matter of efficiency. The absence of oxygen and minor temperature fluctuations create special conditions for bottom sediments, under which all living and dead cells of macro- and microorganisms undergo a slow decomposition into constituent components - amino acids and low molecular weight peptides, nucleotides, and other highly active biological substances.

**The sapropel contains:** *organic compounds: humic acids (humic, fulvic and hmatomelanic acids), amino acids (threonine, methionine, lysine, cystine, etc.), B vitamins (B1, B2, B3, B6, B12), E, C, D, P, PP carotenoids, folic acid; enzymes: catalyzing oxidative reactions (catalase and peroxidase) and hydrolysis reactions (amylase and urease); biologically active substances: growth stimulants, lipids, proteins, carbohydrates, mono- and polysaccharides, pectins, melanoidins, phytohormones; micronutrients: N, P, K, Ca, Mg, Fe, S, Si, Se, B, Mn, Zn, Cu, Mo, Co, Ni, J, Br.*

**Sapropel** is the only soil-forming fertilizer that feeds plants and restores soil fertility.

**SAPROPEL-BASED POTASSIUM HUMATE** is a sapropel extract, a pure natural plant growth and development stimulant, it is also called, "*the black nature nectar gifted by the Gods*", and has a saturated dark brown – closer to black – color. The acquired *sapropel humic extract is a "biomatrix" which includes all the basic structural and nutrient elements of the "living matter" of sapropel.* Potassium Humate has a high biological activity due to the content of humic, fulvic and hematomelanic acids, amino acids (lysine, threonine, cystine, methionine), as well as due to the presence of potassium and phosphorus. Biological activity of humic and fulvic acids contained in potassium humate obtained from lacustrine sapropel is 3 times higher than that of humic fertilizers based on peat, brown coal, lignin and other organic materials.

**Potassium humate** provides an increase in the percentage of seed germination capacity, provides increased potato tuber sprouting, improved seedling survival and better sapling rooting. When using **humates**, active development of the root system of plants can be observed, moisture absorption and root nutrition get increased. **Potassium humate** acts as a complex, granting plants

strength, increasing resistance to diseases, droughts and frosts, causing an acceleration of metabolism, strengthening photosynthesis and increasing the biomass.

**Potassium humate** is widely used in plant growing inside greenhouses and on the open ground, for cultivation of all crops – flowers, vegetables, fruits, berries, herbs. **Potassium humate** improves the quality and yield output of crops, and restores soil fertility. **The use of potassium humate** can reduce the cost of production, increase the crop yield and ultimately pump up the profits.

### **Advantages of Potassium Humate over similar fertilizers:**

- sapropel-based **potassium humate** is the most complex and valuable of analogues produced;
- **potassium humate** is high in humic acid – up to 80%;
- all components of the solution (humic acids, fulvic acids, micronutrients) exist in the mobile form, which makes 100% assimilation by plants possible;
- **potassium humate** does not contain any preservatives;
- shelf life of the solution is not limited;
- **potassium humate** has low consumption rates per 1 ha;
- **potassium humate** provides high economic returns to agricultural production.

**"BLAGO" BRAND FERTILIZERS** include a number of innovational complex highly-efficient high-analysis eco-friendly liquid organo-mineral sapropel-based (relict natural lacustrine raw material) fertilizers. **"BLAGO" brand fertilizers** are extracts of the **Potassium Humate** lacustrine sapropel rich with macronutrients (**N-P-K**) in chelate form. The effect of **"BLAGO"** fertilizer is aimed both at growth and development of plants, and at restoration and improvement of soil. **"BLAGO"** is a rapid-action efficient multifunctional fertilizer.

**"BLAGO" brand organo-mineral fertilizers (OMF)** are used in agricultural production as stimulants for development and growth of plants. **"BLAGO"** brand OMFs increase crop yield outputs (from 20% to 80%), increase resistances to pests and diseases, unfavorable climate conditions (frosts, drought), and reduce the inhibitory effect of various pesticides on soil and plants. They allow to significantly reduce (up to 30%) the rate of application of other mineral fertilizers.