

Fructol® Bio: Foliar Nutrition for the organic agriculture

Since many years is our product Fructol®, one of the most important products and most advanced products in the range of BMS Micro-Nutrients. Fructol® is a very complete and well balanced product that optimizes the nutrition of the crop and plays therefore a key role in the foliar nutritional programs of BMS Micro-Nutrients.

Organic farming is gaining year after year more importance in Europe and in the world at large. For the organic agriculture BMS Micro-Nutrients developed a product, Fructol® Bio, that resembles as much as possible to formulation of the classical Fructol®, respecting the restrictions for the application of fertilizers, imposed by the legislation on organic agriculture.

The heart of the product, the mixture of chelated micro-nutrients is in both products Fructol® the same but the part of the mayor elements is substituted in Fructol® Bio, by seaweed extract, adding this way mainly nitrogen and potassium to the product.



Composition

EC FERTILISER: Mixture of micro-nutrients (Boron (B), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Zinc (Zn))

Declared content: Micro-nutrients expressed as percentage by weight: Water-soluble boron (B): 0,5 % (= 6 g B/L) chelated with poliols, Water-soluble iron (Fe): 0,8 % chelated by DTPA and EDTA (= 10 g Fe/L), Water-soluble manganese (Mn): 0,8 % chelated by EDTA (= 10 g Mn/L), Water-soluble molybdenum (Mo): 0,08 % (= 1 g Mo/L), Water-soluble zinc (Zn): 0,8 % chelated by EDTA (= 10 g Zn/L) and **150 g seaweed extract/L.**

Fructol® Bio



BALANCED FOLIAR FERTILIZATION

The effects

Fructol® Bio stimulates and regulates the plant development.

The micro-nutrients in the product, control and stimulate all the essential enzymatic functions in the plant. Deficiencies, even light ones, can disturb seriously the photosynthesis, the respiration, the cell division, the bloom, the formation of reserves,... The mixture of the micro-nutrients in **Fructol® Bio**, supply the crop with sufficient amounts of these elements in order to avoid growth interruptions, and assuring a continuous growth. **Fructol® Bio** improves the yield as well in quantity as in quality and will also improve the prococity of the yield.

The seaweed extract in **Fructol® Bio**, is rich in amino acids, vitamins, betains, antioxidants, carbohydrates and other growth regulators (cytokines, auxins). All these components are beneficial for plant development, root formation, the absorption and translocation of nutrients, and contribute to the biotic and abiotic stress management of the plant. Apart of these direct influences on the growth, the seaweed extracts also have important secondary effects on growth. First of all it is demonstrated that high concentrations of cytokines have a repellent effect on insects. Secondly it is also known that plants are able to produce certain components that protect them against pests and fungal infections. The application of seaweed extracts will stimulate the production of these components and thus “vaccinate” the plant increasing its «Systemic Acquired Resistance (SAR)».

The seaweed extract in the **Fructol® Bio**, also supplies the plant with nutrients, nitrogen in organic form, (amino acids), and above all potash.



RESULTS

Trials

Fructol® Bio has been tested in vineyards, as well in France as in Italy. The results of these trials were consistent and homogeneous. The 4 tested varieties Cabernet Franc, Muscat, Pinot Grigio and Cabernet Sauvignon reacted positively on the foliar applications of **Fructol® Bio**. Not only the total production increased but there was also a positive influence on various quality parameters such as:

- More homogeneous bunches and berries.
- Bigger and better formed grapes increasing this way the total yield considerably with an average of 7 % (between 2 and 17 %).
- With similar or better oenological values: in the majority of the treatments we obtained higher concentrations of sugars, alcohol and above all also polyphenols.

	Sugars (kg/ha)	Alcohol (%)	Polyphenols (mg/L)
Muscat	Control: 2179 Fructol® Bio: 2753	Control: 10,40 Fructol® Bio: 12,98	Control: 69 Fructol® Bio: 130
Pinot Grigio	Control: 2928 Fructol® Bio: 3046	Control: 12,61 Fructol® Bio: 12,81	Control: 33 Fructol® Bio: 37
Cabernet Sauvignon (1)	Control: 1563 Fructol® Bio: 2245	Control: 13,14 Fructol® Bio: 13,32	Control: 102 Fructol® Bio: 159

(1): comparison between Fructol® Bio and other foliar treatments (Control)

Cabernet Franc



Control

Fructol® Bio



Control

Fructol® Bio





Recomendations



Fructol® Bio is a liquid product easy to use, and specially developed for foliar applications.

Fructol® Bio can be used on all crops as a key product in the Foliar Nutritional Programs. In case the crop is suffering from a specific deficiency of one (or several) of the micro-nutrients, it is necessary to complement the treatment of Fructol® Bio with one or various products of our Chelal range in order to supply the corresponding nutrient(s) to the plant. Most of the products of the Chelal range containing only micro-nutrients are conform with the legislation on organic agriculture and can therefore be used to treat these deficiencies if it would be necessary. (Please consult our list of registered products).

Application dosage

Fructol® Bio: 3-4 applications of x 3-4 L/ha

