

Organic soil improver - the basis for healthy crops

Biovin is based on the organic remains of the grape pressing process (grape must). The humification of the grape must creates a product with organic plant nutrients and a great number of beneficial micro-organisms, including the important nitrogen-fixating bacteria (actinomycetes) and SAR (Systemic Aguired Resistance) microbes. They improve resistance and tolerance for abiotic stress.





At least 45 researches have been run since 1974, all scienti fically coordinated by several different government and university research stations and facilities. The outcomes always indicate that Biovin promotes the uptake of mineral fertilizers and prevents nitrate leaching. The nitrates are converted into ammonium nitrogen for the plants. The use of Biovin achieves major savings in the use of manure and/or fertilizer and can reduce leaching.



### **PRODUCT BENEFITS**

- Contains essential bacteria and fungi
- Beneficial effect on ecosystem in the pot Great diversity in trace elements tina soil
- Positive effect on plant growth
- · Positive effect on harvest quality
- · Easy to mix
- · Guaranteed free of weeds
- Prevents high nitrate levels in plants and in the soil

### **USE IN COMBINATION WITH OTHER (PHC) PRODUCTS**

Biovin can be used in combination with all PHC fertilizers, PHC bacterial products and PHC mycorrhiza products. The use of Biovin Liquid amplifies the effect of Biovin. This creates an active soil and root environment, shedding a completely new light on the use of fertilizer, fungicides and biocides.

### Lawns (sport fields, golf courses)

Mix Biovin with topdressing sand. Apply in March and September. Spread 10 kg/100 m<sup>2</sup> and let it withdraw with water.

### Container cultivation

Mix Biovin with potting soil combined with MiniPlug or VA Cocktail (mycorrhiza)

Spread 10 kg of Biovin per 100m<sup>2</sup> and VA Cocktail mycorrhiza spores or Pt spores. Prepare the seed bed using a rotating cultivator and seed or plant it.

### Planting trees/shrubs

Mix 100 grams - 1 kg of Biovin through the soil for the plant hole.

### Packaging, transport & storage

Biovin is supplied in 20 kg bags (40 bags a pallet = 800 kilo), and in 600 kg BigBags. Store dry, frost free and out of direct sunlight. Wet material can clog machinery. Shelf life: 2 years minimum.



We Grow Soil.

### Health and safety information

Not intended for ingestion. Wash hands after use. Wear protection clothing and respiratory protection (fitted with a P3 dust filter) when loading/using this product. In case of an accident or if you feel unwell, consult a doctor. KEEP OUT OF REACH OF CHILDREN.

### **Product licences**

Biovin is an organic biostimulant and is approved for use in organic farming in accordance with EU Regulation 834/2007 and NOP. Belgium exemption: EM018.T, Humified grape must. Approved input by Soil Association. Check current listings also on inputs.bio, inputs.eu.

### **INGREDIENTS**

Humified grape must 100 %

### **DOSAGE**

| Container cultivation | 3 kg per m |
|-----------------------|------------|
| Vegetables & fruit    | 600 kg/ha  |
| Greens                | 80-100 g/m |
| Field application     | 400 kg/ha  |
| Row application       | 200 kg/ha  |

### **ADDITIONAL INFORMATION**

Different doses may apply for the recovery of fields in poor (bio) condition. Consult your product representative for tailor made advice.

# CHEMICAL ANALYSIS

| <b>Properties</b> pH   | <b>Value</b><br>7.31 |
|------------------------|----------------------|
| Density                | 0.77 kg/l            |
| Dry matter             | >70 %                |
| Organic matter         | >45 %                |
| Ash                    | 9.7 %                |
| Caloric value (energy) | 10 000 mi/ka         |

| Chemical analysis           | % of weight |
|-----------------------------|-------------|
| total nitrogen (N)          | 1.7         |
| nitrate nitrogen (NO3-N)    | <0.1        |
| ammonium nitrogen (NH4-N)   | <0.1        |
| organically bound nitrogen  | 1.7         |
| total phosphate (P2O5)      | 0.5         |
| total potassium (K2O)       | 2.1         |
| Calcium oxide (CaO)         | 1.32        |
| Magnesium                   | 0.32        |
| Sodium                      | 0.01        |
| insoluble hydrochloric acid | 3.38        |

| Sulphate (SO3)       | 0.35  |
|----------------------|-------|
| Carbon dioxide (CO2) | 0.28  |
| Carbon (C)           | 38.80 |
| C/N ratio            | 16.51 |

| Trace elements  | ppm     |
|-----------------|---------|
| Copper (Cu)     | 27.00   |
| Manganese (Mn)  | 50.00   |
| Iron (Fe)       | 1420.00 |
| Zinc (Zn)       | 29.00   |
| Cobalt (Co)     | 0.40    |
| Molybdenum (Mo) | 2.88    |
| Lead (Pb)       | 1.20    |
| Cadmium (Cd)    | 0.20    |
| Chromium (Cr)   | 13.30   |
| Nickel (Ni)     | 8.50    |
| Arsenic (As)    | 0.00    |
|                 |         |

### GROWTH FACTORS

| Humin (formed in the process) | 66.7 %        |
|-------------------------------|---------------|
| Thiamine                      | 22.75 µg/100g |
| Pyridoxal                     | 45.59 µg/100g |

| Nicotinamide           | 99.52 µg/100g  |
|------------------------|----------------|
| Nicotinic acid (total) | 115.57 µg/100g |
| Zeatin (cytokinin)     | 160.00 µg/100g |

## MICROBIOLOGICAL CONTENT PER GRAM

### Aspergillus niger Myceliophtora thermophila Paecilomyces varioti Thermomyces lanuginosus

| Streptomyces IXIO°/g |
|----------------------|
| S. griseoruber       |
| S. rimosus           |
| S. thermoflavus      |
| S. actuosus          |
| S. atroolivaceus     |

| Bacteria 1x10 <sup>8</sup> /g |
|-------------------------------|
| Bacillus sp.                  |
| Pseudomonas sp.               |
| Arthrobacter sp.              |
| Cellulomonas sp.              |
| Nitrosomonas sp.              |
|                               |

As with all organic materials, the analysis may vary as much as 15%.

### WARRANTY

Plant Health Cure sells the product Biovin\*. Follow the instructions on the packaging closely for use. We cannot guarantee suitability of the product outside the originally intended application. Plant Health Cure is only obliged to replace products that do not meet the specifications. Suggestions for use and information about results after use of the product - obtained from the manufacturer - can be considered reliable. As Plant Health Care cannot control the conditions of use, the buyer/user is responsible for all results, including injury or damage resulting from the use of this product alone or in combination with other materials. Keep out of reach of children.

The most recent version of the data sheet is always available on www.phc.eu/en.