

**Mairol.green & Mairol.red** –  
the complete plant nutrition  
for any stage of vegetation

**Mairol**<sup>®</sup>

Wellness for plants



# The complete solution



For almost 90 years, high-quality fertilizers are the main focus of Mair. The company was founded in the former "Olga Drugstore" in Heidenheim, Germany.

Highest quality standards are ensured by Mair's modern production and logistics facilities in Gussenstadt near Heidenheim, Germany.

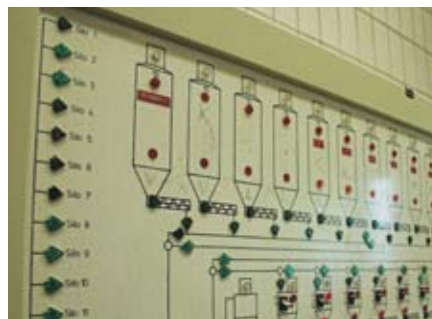
Plants absorb nutrients both via the root system and through the foliage. Fertilizers are absorbed by the roots if applied directly to the soil. If dissolved in water and sprayed to the plants, the mineral nutrients of the fertilizer are immediately absorbed by the foliage from where they penetrate the entire plant system and are transported to those parts of the plant where they are actually needed.

The quick absorption of all primary plant nutrients, trace elements and stimulating substances immediately counteracts existing deficiencies which it is often difficult to determine scientifically. Such deficiencies are more effectively controlled via the foliage than through the soil and the root system because inadequate soil condition, root damage and other adverse factors may affect or delay the desired normal and speedy absorption of plant nutrients.

Insufficient nutrition via the soil or damage to plants resulting from diseases, drought or other detrimental influences from outside are quickly compensated by foliar application and healthy growth is restored. Nutritional imbalance which favours crop disease is reliably controlled by foliar fertilization.



Foliar application is the most convenient and established method of supplying all crops rapidly with plant nutrients; it does not, however, completely replace the conventional fertilization via the soil, especially when young plants are concerned which do not offer a sufficiently large leaf surface to permit absorption of a foliar spray. Therefore, foliar application should rather be regarded as an extremely effective and most handy supplementary measure of fertilization to ensure rapid nutrition with the complete range of plant food elements.



# Mairol.green & Mairol.red

As ideal fertilizers, **Mairol.green** and **Mairol.red** combine the most beneficial chemical composition with the most effective physical properties.

Foliar application with **Mairol.green** and **Mairol.red** promotes healthy and vigorous plant growth which offers resistance against diseases and adverse climatic influences. It accelerates complete recovery of the vegetative balance of such plants which have suffered from heavy pests or other devastating damages.

The foliar fertilizers **Mairol.green** and **Mairol.red** represent a quick-acting and reliable remedy even against serious deficiency symptoms; they regulate the nutritional requirements and biological functions and drastically favour harmonious development of all plants.

Systematic and repeated application is essential in order to enhance healthy plant balance and to fight deficiencies which are likely to reoccur when foliar fertilization is discontinued. A well fed plant is the best insurance against deficiency and crop disease. Yields are increased, the number of harvests can be raised e. g. from twice a year to three times a year, crop quality is improved and maturity is accelerated to a remarkable extent. Various field trials have proved the high efficiency and are available on request.

**Mairol.green** and **Mairol.red** are crystallized foliar fertilizers, completely and quickly soluble in water. Because of their different chemical composition they fill the nutrient requirements of all plants at every stage of growth. Combinations of **Mairol.green** and **Mairol.red** permit

perfect adjustment of the nutrient supply in accordance with crop requirements and local conditions.

In view of its harmonious composition and its relatively high nitrogen content, **Mairol.green** is primarily designed to promote healthy, vigorous plant growth at the early stage of vegetation. Between the late period of plant growth and the early stage of flower and fruit development, when the first bloom buds become visible, a combination of equal parts of **Mairol.green** and **Mairol.red** should be applied to encourage flower and fruit formation. As soon as the plants have reached a more advanced stage and commence to produce flowers and fruits, use **Mairol.red** which contains little nitrogen but much phosphoric acid and still more potash thus stimulating an early maturity and increased yields of exceptional quality and properties.

This procedure ensures the development of strong and healthy plants during the entire period of cultivation followed by an accelerated and abundant harvest.



Early stage of  
vegetation

Advanced stage with  
flowers and fruits

<b>Mairol. green</b>	<b>Mairol. green plus Mairol.red</b>	<b>Mairol.red</b>
14 N	10 N	6 N
12 P	16 P	20 P
14 K	22 K	30 K



# Mairol.green & Mairol.red in detail

## Analysis

Apart from different percentages of the principal plant nutrients **Mairol.green** and **Mairol.red** contain the following plant food elements and stimulating substances.

### Basic composition

		Mairol. green	Mairol. red
Nitrogen	N	14 %	6 %
Phosphoric Acid	P <sub>2</sub> O <sub>5</sub>	12 %	20 %
Potash (Chloride Free)	K <sub>2</sub> O	14 %	30 %
Magnesium Oxide	MgO	1 %	3 %

### Trace Elements

B	0.060%	Boric Acid
Co	0.002%	Cobalt Sulphate
Cu	0.020%	Copper EDTA Chelate
Fe	0.110%	Iron EDTA Chelate
Mn	0.090%	Manganese Sulphate
Mo	0.005%	Molybdenum
Zn	0.007%	Zink Sulphate

### Vitamins and Growth Hormones

Thiamin (B1), Riboflavine (B2), Pyridoxol(pyridoxine-B6), Nicotinamide, Naphthaleneacetic, Biotin (H), Aneurine, Lactoflavine

### Phytohormones

Concentrate completely and quickly water-soluble

Potassium is available in the chloride-free form of Sulphate of Potash (K<sub>2</sub>SO<sub>4</sub>) and Magnesium in the form of Magnesium Sulphate (MgSO<sub>4</sub>); Sulphur is available in the form of Sulphates.

## Dosage and application

The most effective rate of application does not only depend on the nutrient requirements of each crop but also on the local climatic and soil conditions. Based on individual circumstances and practical experience, variations of the dosage may, therefore, become necessary to suit the plants best and to ensure optimum results.

As a general rule, an average dosage of 0.3 % is recommended which corresponds to 3 g per litre of water. With sensitive plants, especially with young plants, commence with 0.1 to 0.2 % (1 to 2 g per litre of water) and increase to 0.3 % if circumstances permit. With less sensitive plants, such as the more robust varieties of vegetables and adult shrubs and trees, the initial dosage should be 0.3 % which may be increased to 0.5 or 0.6 % (5 to 6 g per litre of water) again in conformity with local experience and prevailing conditions.

The above dosages refer to repeated applications at intervals of 8 to 14 days by way of any suitable medium, such as watering cans, agricultural spraying machines, overhead and drip irrigation. For daily treatments and also for application by way of atomizing and for the use in greenhouses (especially under glass) reduce the concentration to about 3 g per 10 litres of water. In all instances, treatments should take place at such times of the day when air humidity is high, preferably in the early morning.

For liquid fertilization via the foliage, high volume applications give best results. The actual volume can range from 500 to 1500 litres of water per hectare. When normal methods of application are used the average volume thus amounts to about 1000 litres of water per hectare.

For aerial ULV (Ultra Low Volume) applications the volume must be reduced considerably resulting in an increased concentration of plant nutrients in the fertilizer solution. Experiments should first be made to determine the lowest possible volume which permits aerial application without clogging of the spray nozzles. As a general hint, a solution of 30 g foliar fertilizer per litre of water is recommended when aerial ULV applications are to be made.

The foliar fertilizers **Mairol.green** and **Mairol.red**, as well as any desired mixtures of the two, are likewise suitable for agriculture and horticulture and can be used with equal success on all crops. They are specially manufactured to fill the complete nutrient requirements of all highly productive plants. **Mairol.green** and **Mairol.red** are ideal for the fertilization of "cash crops" such as vegetables and fruits where high yields of superior quality are essential.



## Economy and compatibility

Foliar application represents a relatively cheap method of fertilization. With an average rate of application of 0.3 % and an average volume of 1000 litres of water per hectare, the concentration actually corresponds to only 3 kilos of nutrient salt per hectare.

As foliar fertilizers are compatible with the usual commercial pesticides and can thus be applied in combination with crop protection measures, the extra expenses are reduced to an absolute minimum and the benefit far exceeds the cost.

Mixtures with common pesticides should be stirred well and applied right after mixing. Further information and more specific recommendations will be available on request.

## Special applications

### Wheat and barley

For abundant formation and vigorous development of plants and grain seeds, with heavy weight and excellent quality, we recommend using the following spraying program.

1. Apply **Mairol.green** at the rate of 4 kg/hectare at tillering stage (i. e. after 25-30 days from planting date).
2. Add three applications of **Mairol.red** at the rate of 4 kg/hectare per application according to the following schedule:

- First application: about the end of tillering stage and beginning of stem extension (i. e. after 45-50 days of planting).
- Second application: after 15 days of first application.
- Third application: after 10-50 days from the second application.

### Vegetables

Carrots, potatoes, tomatoes, eggplants, peppers, squash, watermelons, melons, or cucumbers on open fields or in greenhouses:

- A. During the early stage of plant growth up to flowering: apply **Mairol.green** at a rate of 250-350 g/100 litres of water at 10-12 days intervals.
- B. As soon as the plants have reached a more developed stage and commence to produce flowers or fruits apply **Mairol.red** at a rate of 350-500 g/100 litres of water at 10-15 days intervals.

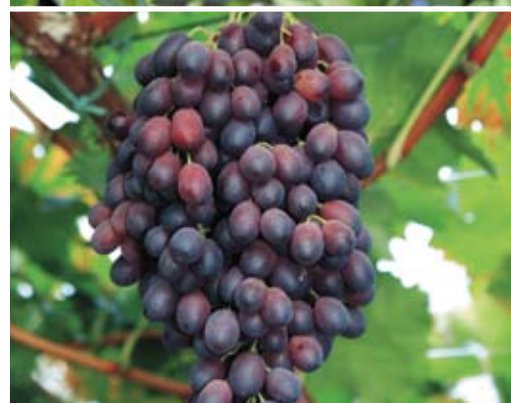
### Orchards

For grapes, citrus etc. apply **Mairol.green** at the rate of 300-500 g/100 litres of water up to end of budding, then apply **Mairol.red** at same rate when the plants have reached a more developed stage and commence to produce flowers or fruits at intervals of 10-15 days.

### Rice

The combined application of **Mairol.green** and **Mairol.red** at the rate of 500 g/100 litres and at 8 intervals of 10 days will significantly increase both the weight per grain and the total yield – especially in the shooting period.

For further applications and additional information please contact us.





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