

## Mineral Line

## Bio Line

## Our Product

| Our Mission | p. 26 |
| :--- | :--- |
| Bio Line | p. 27 |
| BioGrow | p. 29 |
| BioBloom | p. 30 |
| BioEnhancer | p. 31 |

## How to use

| BioGrow, BioBloom and BioEnhancer | p. 32 |
| :--- | :--- |
| Dosing Graphics Indoor \& Outdoor | p. 33-34 |

Dosing Graphics Indoor \& Outdoor
p. 33-34

## How to use

Introduction / Example of schedule p. 13

Soil feeding schedule - Professional grower

| Soil - Short Flowering | p. 14 |
| :--- | :--- |
| Soil - Hybrids | p. 15 |
| Soil - Long Flowering | p. 16 |

Coco feeding schedule - Professional grower

| Coco - Short Flowering | p. 17 |
| :--- | :--- |
| Coco - Hybrids | p. 18 |
| Coco - Long Flowering | p. 19 |

Rockwool feeding schedule - Commercial grower

| Rockwool commercial schedule | p. 20-21 |
| :--- | :--- |
| The "Keep it Simple" feeding schedule | p. 22-23 |

p. 20-21
p. 22-23

## Our Mission

## Mineral Line

Green House Feeding's objective is to provide cultivators globally with the highest quality plant nutrients enabling them to achieve unprecedented results by allowing plants to develop to their full genetic potential.

Not only creating highly efficient products but also simplifying the application of nutrients.

Our mineral products are created in powder form which ensures they are easier to use, store, transport and have a longer shelf life than liquid plant nutrients.

The main ingredients used to formulate our nutrients are sourced in Germany and Switzerland. These countries have some of the highest quality standards worldwide.

Our products do not contain PGR's, impurities and have the lowest possible concentrations of heavy metals.

Using only the highest quality minerals allows us to provide the purest, most efficient, highly concentrated nutrients in powder form while being able to guarantee $100 \%$ solubility.

Our mineral plant nutrients retain their EC \& pH -value for at least one week after mixing.
Highly concentrated stock solutions can even be kept for several months.

All our products are in compliance with CE regulations 889/2008 and 2003/2003.

Powder Feeding Line



## Additive Feeding Line



## Booster PK+

N-P-K: 0-30-27


## Grow

Designed specifically for the vegetative growth-stage of all plants. Its formula provides optimum development throughout the growth-stage to obtain greener, stronger and more resistant plants. The grow formula is ideal for the production of mother plants and cuttings. It can also be used very effectively as foliar feeding.
he fast assimilation of nutrients and the high Nitrogen content provides plants with a more robust and branched structure as well as thicker leaves.

Thicker leaves accumulate more nutrient reserves, stimulating rapid rooting of cuttings.

Maximum Solubility: $160 \mathrm{~g} / \mathrm{L}$ water
Recommended amount for stock solution: $30 \mathrm{~g} / \mathrm{L}$ water

## GUARANTEED ANALYSIS



GUARAEED ANALYSIS

$$
\begin{aligned}
& \begin{array}{lll}
\text { 24\% } & \text { [N] Total Nitrogen } \\
\text { 13\% }
\end{array} \\
& \begin{array}{ll}
13 \% & \text { Nitrate Nitrogen } \\
11 \% & \text { Ammonical itrogen }
\end{array} \\
& { }_{6 \%}\left[\mathrm{P}_{2} \mathrm{O}_{5}\right)^{\text {Ammonical Noltrogen }} \text { Soluble Phosphorus Pentoxide } \\
& \left.12 \%\left[K_{2}^{2}\right]^{2}\right] \text { Soluble Potash Oxide } \\
& \text { 2\% [MgO] Soluble Magnesium Oxice } \\
& 0,02 \% \text { IBI Soluble Boron } \\
& 0,04 \% \text { ICul Soluble Copper (as chelate from EDTA } \\
& 0,1 \% \text { IFel Soluble Iron (as chelate from EDTA) } \\
& 0,05 \% \text { [Mn] Soluble Manganese (as chelate from EDTA) } \\
& 0,01 \% \text { [Zn] Soluble Zinc as }
\end{aligned}
$$



GUARANTEED ANALYSIS


## short Flowering

Plants with a short flowering time of 8 weeks or less need higher amounts of instantly available potassium, in the early stages, to produce more and heavier fruits and flowers in a shorter period of time

## Maximum Solubility: 160g/L water

Recommended amount for stock solution: $30 \mathrm{~g} / \mathrm{L}$ water


## SID Yo KNOW?

Nitrogen plays a pivotal role in many critical plant functions such as photosynthesis and protein production. During the vegetative stage, plants require more nitrogen than during the flowering stage.
lants utilize nitrogen in the form of nitrate nitrogen and ammoniacal nitrogen, both forms of nitrogen are present in a form that can immediately be taken up by the plant. Lack of nitrogen results in stunted growth, yellowing of leaves and loss of proteins.

Potassium is needed in large amounts and plays a major role in the plants metabolism. It regulates the $\mathrm{CO}_{2}$ uptake, is essential for the production of the energy source for hotosynthesis and helps regulate the nutrient and water uptake.
Lack of Potassium results in stunted growth, less water circulation, uneven ripening of fruits and makes the plant more subject to environmental stress.


## Hybrids

The Hybrids feeding contains less ammoniacal nitrogen and higher amounts of magnesium which is beneficial for Hybrid varieties with a flowering time of 8-10 weeks and plants grown in hydroponic systems. The higher amount of magnesium and sulfate stimulates the production of essential oils, terpenes and flavonoids.

Maximum Solubility: $160 \mathrm{~g} / \mathrm{L}$ water
Recommended amount for stock solution: $30 \mathrm{~g} / \mathrm{L}$ wate


GUARANTEED ANALYSIS

$$
\begin{aligned}
& \text { 15\% [N] Total Nitrogen } \\
& \begin{array}{cc}
\text { 10\% } & \text { Nitrate Nitrogen } \\
5 \% & \text { Ammonical Nitrogen }
\end{array} \\
& 7 \%\left[\mathrm{LP}_{2} \mathrm{O}_{5}\right] \text { Soluble Phosphorus Pentoxide } \\
& \text { 25\% [K20] Soluble Potash Oxide } \\
& \begin{array}{ccc}
6 \% \\
0,03 \% & \text { [MgO] } & \text { Soluble Magnesium } \\
\text { [B] } & \text { Soluble Boron }
\end{array} \\
& \begin{array}{lll}
0,03 \% & \text { [B] Soluble Boron } \\
0,002 \% & \text { [Cul Soluble Copper (as chelate from EDTA) }
\end{array} \\
& 0,0,12 \% \text { IFe] Soluble lron (as chelate from EDTA) } \\
& \begin{array}{lll}
0,12 \% & \text { [Fe] Soluble Iron (as chelate from EDTA) } \\
0,05 \% & \text { IMn] Soluble Manganese (as chelate from EDT }
\end{array} \\
& \begin{array}{lll}
0,05 \% & {[\mathrm{Mn]}} & \text { Soluble Manganese (as chelate from EDT } \\
0,005 \% & {[\mathrm{Mol} \text { Soluble Molybdenum }}
\end{array} \\
& 0,01 \% \text { [Zn] Soluble Zinc (as chelate from EDTA) }
\end{aligned}
$$



## long Flowering

The balanced NPK ratio provides enough nitrogen throughout the whole stage of flowering and the high amounts of phosphorous allow the plants to develop a strong and healthy root system, especially for plants with a long flowering time more than 10 weeks.

Maximum Solubility: 160g/L water
Recommended amount for stock solution: $30 \mathrm{~g} / \mathrm{L}$ water


GUARANTEED ANALYSIS
[N1 Total Nitrogen
$\begin{array}{cc}10 \% & \text { Nitrate Nitrogen } \\ 8 \% & \text { Ammonical Nitrogen }\end{array}$
$12 \%\left[\mathrm{P}_{2} \mathrm{O}_{5}\right]$ Soluble Phosphorus Pentoxide
$18 \%$ [K
2\% [Mgol Soluble Magnesium Oxica
0,02\% IBI Soluble Boron
0,04\% ICul Soluble Copper ( as chelate from EDTA
$0,1 \%$ IFel Soluble Iron (as chelate from EDTA)
$0,05 \%$ [Mn] Soluble Manganese (as chelate from EDTA)
$0.01 \%$ [Zn] Soluble Zinc las ch

Boron, being one of trace elements is only needed in tiny amounts, but it is essential for plant functions such as the formation of pollen tubes, balancing the amounts of sugar and starch inside the plant and helping to transport potassium ions inside the cell membranes. Boron is not mobile in plants because it bonds to sugar molecules.


## Booster PK+

This additive is especially formulated to provide adequate amounts of Phosphorus, Potassium, Magnesium and micronutrients to increase the resin production and the formation and density of flowers.

The combination of Green House Powder Feeding, Calcium and Booster creates very professional, plant-specific line of nutrients for healthy and productive plants.

We added extra magnesium and trace elements to our Booster PK+ to avoid that they limit the uptake of phosphorus and potassium if the ratios are not balanced.

Plants can only perform to their full genetic potential if all elements are sufficiently available.

## Maximum Solubility: $250 \mathrm{~g} / \mathrm{L}$ water

Recommended amount for stock solution: $30 \mathrm{~g} / \mathrm{L}$ water


## GUARANTEED ANALYSIS

$30 \%\left[\mathrm{P}_{2} \mathrm{O}_{5}\right]$ Water Soluble Phosphorus Pentoxide
27\% $1 K_{2} \mathrm{Ol}$ Water Soluble Potassium Oxide
$8,2 \%$ [MgOI Water Soluble Magnesium Oxide
$0,03 \%$ [B] Water Soluble Boron
$0,002 \%$ ICuI Water Souble Copper (as chelate from EDTA
$0,12 \%$ IFel Water Soluble Iron (as chelate from EDTA)
$0,05 \%$ [Mn] Water Soluble Manganese (as chelate from EDTA)
0,005\% IMol Water Soluble Molybdenum
$0,01 \%$ [Zn] Soluble Zinc (as cheate from EDTA)



## DID YO

 KNOW?Balanced plant nutrition is essential to achieve high yields. If one of the essential plant nutrients is deficient, plant growth is limited to the amount of the lowest available nutrient, even when all other essential nutrients are abundant. Furthermore, even if the least used nutrient is not present, the plant will not be able to take in all the other available nutrients, indicating that the elements used in trace amounts are as essential as the macro-nutrients.

The 'Liebig barrel' is used to demonstrate this principle.

The availability of the most abundant nutrient in the soil is only as good as the availability of the least abundant nutrient in the soil.


Our Booster contains not only Phosphorus ( P ) and Potassium ( K ) but also extra Magnesium ( Mg ) and trace elements to ensure the nutrient content balanced and there is no lack of any element that might limit the uptake of others.


## Calcium ${ }_{\text {(creseasaed }}$

This additive should be used in situations in which the amount of calcium present in the water is below the recommended values.

Our Calcium is chelated by EDTA - This product is very stable and does not interact with other elements.

Calcium is essential for growing a healthy crop. It strengthens the cell walls and structure of the plant.

Our chelated Calcium prevents and corrects deficiencies which are caused due to a lack of/or imbalance in the assimilation of Calcium.

Maximum Solubility: 300g/L water
Recommended amount for stock solution: $90 \mathrm{~g} / \mathrm{L}$ water


$$
\begin{aligned}
& 0+\operatorname{og}_{800000}^{080}= \\
& \text { calcium } \\
& \text { EDTA } \\
& \text { calcium }
\end{aligned}
$$

INDICATION FOR THE USE OF CALCIUM
R/O and very soft > Recommended Values
Soft > 50-80\% of recommended values
Soft $>50-80 \%$ of recommended values
Moderately Hard $>10-50 \%$ of recommended values Hard Water > No Calcium required

## How to use/Example table

## INTRODUCTION

The life cycle of a plant can be divided in two main stages, the vegetative growth period and the flowering period.

Both stages can be subclassified into different stages with different needs.

## VEGETATIVE GROWTH PHASE:

1.) Seedling stage $(<15 \mathrm{~cm})$
2.) Young plant \& rooted cuttings $(15-25 \mathrm{~cm})$
3.) Maturing plant $(25-35 \mathrm{~cm})$
4.) Mature plant ( $>35 \mathrm{~cm}$ )

## FLOWERING PHASE:

1.) Pre-flowering / Transition to flowering (week 1-3)
2.) Flower formation and growth (week 3-6)
3.) Ripening of flowers (week 7+)

*Hanna TDS (500ppm $=1,0 \mathrm{mS} / \mathrm{cm}$ )

Most of the micronutrients (inorganic metals) can be chelated, which allows them to remain available for the plant, even if the environmental conditions are not ideal. EDTA is the most common and stable form of chelation.
Nitrogen is a part of the EDTA molecule, but this nitrogen is not available for the plant.


## R/O System

If you use $\mathrm{R} / \mathrm{O}$ water, it is necessary to supplement with calcium.
*Please check your R/O system regularly (maintenance)

- The values in the following tables are calculated using water with EC 0.0
-The pH value may decrease depending on water quality and temperatures - When adding Calcium the PH values may increase depending on water quality and temperatures - Do not use CalMag with our mineral line. Calcium Nitrate is partly incompatible with Monopotassium Phosphate and Magnesium Sulfate and may result in formation of gypsum, clogging pipes or creating deficiencies

Our mineral plant nutrients do not contain calcium, which means that if you use very soft water, rainwater or osmotic water, calcium needs to be added - Keep the nutrient solution between 18-22 degrees Celsius - Control the EC of the runoff and flush if it's higher than EC 2.5

- For best results maintain a pH value between:
> Soil: 6.0-6.5
> Hydro/Coco: 5.8-6.2
> Rockwool: 5.5-6.0
Feeding Schedule | Professional Grower

Feeding Schedule | Professional Grower

Feeding Schedule｜Professional Grower

| 0 | 689 | 6LL | 678 | 688 | 606 | 658 | to8 | t6L | t08 | 68 L | 6SL | 6SL | tzL | $\angle 89$ | 609 | 2Ts | （ udd ）［12707 S Sal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0 \cdot 0$ | ${ }^{\prime}$＇I | 9 ＇ | L＇I | 8.1 | $8 \cdot \mathrm{I}$ | L＇I | L＇I | $9 \cdot \tau$ | $9 \cdot \mathrm{I}$ | $9 \cdot \tau$ | s＇I | s＇I | ${ }^{\prime}$＇t | $t \cdot \tau$ | て＇I | $0 \cdot \mathrm{I}$ |  |
| 0 | $09 \tau$ | 002 | 002 | 092 | 092 | 092 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | $09 \tau$ | 00 T | un！jevo（mdd）sal |
| $0 \cdot 0$ | $\varepsilon \cdot 0$ | t＇0 | to | s\％ | s\％ | s 0 | ${ }^{\circ} \mathrm{O}$ | $\mathrm{t}^{\circ} \mathrm{O}$ | $\mathrm{t}^{\circ} \mathrm{O}$ | t＇0 | ャo | ャ＇0 | ャ＇0 | ${ }^{\circ} \mathrm{O}$ | $\varepsilon{ }^{\circ}$ | 2＇0 |  |
| HSn7 | $8^{\prime} 0$ | ${ }_{0}{ }^{\circ} \mathrm{L}$ | ${ }_{0}{ }^{\circ} \mathrm{L}$ | $\varepsilon^{\prime} \tau$ | $\varepsilon^{\prime} \tau$ | $\varepsilon^{\prime} \tau$ | ${ }^{\circ} \mathrm{T}$ | ${ }^{0}$＇T | ${ }^{0}$＇t | ${ }^{\circ} \mathrm{T}$ | ${ }^{\circ} \mathrm{T}$ | ${ }_{0}{ }^{\circ} \mathrm{L}$ | 0＇t | ${ }^{\circ} \mathrm{T}$ | $8^{\prime} 0$ | $\mathrm{s}^{\prime} 0$ | $(7 / 8)$ un！je］ |
| 0 | osz | 008 | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | 008 | osz | szz | sLI | Ost | $00 \tau$ |  |  |  |  |  |  | （udd）Sal |
| 0.0 | s．0 | 90 | $\stackrel{0}{0}$ | $\sim^{\circ} \mathrm{O}$ | 90 | so | t＇0 | $\varepsilon^{\prime} 0$ | $\varepsilon^{\circ}$ | 2＇0 |  |  |  |  |  |  | （ $\mathrm{m} / \mathrm{sw} \mathrm{s}^{\text {）}}$ ） |
| HSn7 | $\mathrm{s}^{\prime} 0$ | $9^{\prime} 0$ | $\iota^{\prime} 0$ | $\iota^{\prime} 0$ | $9{ }^{\prime} 0$ | ${ }^{\prime}$ | $\dagger^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $z^{\prime} 0$ |  |  |  |  |  |  | $(7 / 8)+1$ d 1275008 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| 0.0 | 082 | 082 | 082 | 082 | 6 6 ¢ | $6 \pm \varepsilon$ | 6 \％${ }^{\circ}$ | 6T\％ | tst | 68 b | 6ss | 65s | tzs | L8t | $6{ }^{6}$ | 2T0 | （ （md））Sal |
| HSnle | ヶ0 | ${ }^{\circ}$ | ¢0 | \％0 | ${ }_{5}$ | ${ }_{5}$ | 80 | 80 | 60 | 4 | ${ }^{17}$ | ${ }^{1}$ | 40 | 10 | 90 | 90 | （7／9）Suluemolysuol／Mod9 |
| $\begin{gathered} \text { sır } \\ \text { syəo. } \end{gathered}$ | $\begin{gathered} \text { sı } \\ \text { syə. } \end{gathered}$ | $\left.\begin{array}{\|c\|c\|} \hline \text { sұәa } \end{array} \right\rvert\,$ | $\begin{array}{\|c\|c\|} \text { syəo } \end{array}$ | $\stackrel{6}{\text { syəam }}$ | $\begin{gathered} 8 \\ \text { syəam } \end{gathered}$ | syəә, | $\begin{gathered} 9 \\ \text { syәa. } \end{gathered}$ | $\begin{array}{\|c\|c\|} \hline \text { syəom } \end{array}$ | $\stackrel{\dagger}{\text { syəa }}$ | $\begin{gathered} \text { syəәM } \end{gathered}$ | $\underset{\text { syәәм }}{\substack{2 \\ \hline}}$ | $\underset{\text { syəәм }}{\substack{\mathfrak{T}}}$ |  |  |  |  | 8u」əMO＿\＆uo |
| ชu！əмоㅣㅓ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## coco

| 0 | 082 | 6 \％ | 888 | ${ }^{6}$ To | 687 | 688 | 165 | ${ }^{665}$ | ${ }^{295}$ | 295 | 188 | 600 | （ udal ） Sal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0^{\circ} 0$ | 9.0 | $\stackrel{\circ}{0}$ | $8{ }^{\circ}$ | $8{ }^{\circ}$ | ${ }^{\circ} \mathrm{T}$ | ${ }^{0} \mathrm{~T}$ | $\chi^{\prime} \mathrm{T}$ | でT | ז＇ | ז＇ | ${ }^{\circ} \mathrm{T}$ | 6.0 |  |
| 713 | $\nabla^{\circ}$ | $\mathrm{s}^{\circ}$ | 90 | 90 | $4^{\prime \prime}$ | $4^{\prime \prime}$ | $8^{80}$ | $8^{\circ}$ | 40 | 40 | 40 | 90 |  |
| รท％${ }^{6}$ | sที่ํ | sиวّм | งทจ9 | รทจํ | งヶั． | sที่ | sทə $^{2}$ | รทจอก |  |  |  |  | Surrmothious |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## HSN7 <br>  <br> 

Feeding Schedule｜Professional Grower

Feeding Schedule｜Professional Grower

| 0 | ${ }^{689}$ | 64 | 678 | 688 | ${ }^{606}$ | 658 | tb8 | b6L | 008 | ${ }^{68}$ | 654 | 654 | ＋94 | ${ }^{\text {r92 }}$ | $\stackrel{49}{9}$ | $6{ }^{6}$ | （mad）｜eat Sal |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 00 | ${ }^{\circ}$ | $9 \tau$ | $\stackrel{\text { ct }}{ }$ | $8{ }^{\text {8 }}$ | ${ }_{8 \tau}$ | ${ }^{\text {¢ }}$ | ${ }_{\text {¢ }}$ | 9 | 9 | 9 | st | st | st | st | ${ }_{\text {¢ }}$ | ${ }_{\text {rit }}$ | ［ W／／swleico |
| 0 | ${ }^{\text {or }}$ | 002 | 002 | 09 | 092 | 098 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | 002 | orr | ${ }^{\text {our }}$ | unplef（udul Sal |
| 0 | $\varepsilon_{0}$ | $\stackrel{\square}{0}$ | to | so | so | ${ }^{\text {so }}$ | to | $\stackrel{0}{8}$ | O |  | ${ }^{\text {a }}$ | Tr | \％ | \％o | ${ }^{\text {¢ }}$ | ${ }^{2}$ | unple（u）／5ul） |
|  |  |  | OT | \＆ |  |  |  |  |  |  |  |  |  |  |  | ${ }_{\text {so }}$ | （1／8）unjpe） |
| 0 | 088 | ${ }^{008}$ | ${ }_{668}$ | 688 | Oeg | 038 | szz | st | ost | oor |  |  |  |  |  |  | （udd）sal |
|  |  |  |  | $\stackrel{0}{0}$ | 90 |  | \％o | ${ }^{\text {c }}$ | ${ }^{\text {¢ }}$ |  |  |  |  |  |  |  | （ $\mathrm{u} / 5 \mathrm{sw}$ ） 3 |
| Snn | so | $\square^{\circ}$ | 40 | ${ }^{2}$ | 90 | so | ${ }^{8}$ | ${ }_{80}$ | ${ }^{80}$ | ${ }^{2} 0$ |  |  |  |  |  |  |  |
| 0 | 088 | 088 | 082 | 082 | 66 | 668 | ${ }_{6} 6$ | ${ }_{6} 6$ | vsp | 688 | ${ }^{655}$ | 655 | ${ }^{295}$ | ${ }^{295}$ | 析 | ${ }_{600}^{60}$ | （mad） 501 |
| ${ }_{0} 0$ | ${ }_{90}$ | 9 | 90 | 90 | \％ | \％ | ${ }_{80}$ | ${ }_{80}$ | ${ }^{6} 0$ | ${ }^{\circ}$ |  |  |  | ${ }_{\text {ri }}$ | ${ }_{0}$ | ${ }^{60}$ |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ตฺอ\％ | stom | stom | ง⿴囗十 | ห1ə9 | หทom |  | งงจํ | งทร์ | sทbem | งทฒm | งทəm ${ }^{\text {² }}$ | งทom ${ }^{\text {²m }}$ |  | （ex | ， |  |  |
| －autiomold |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

## Feeding Schedule｜Commercial Grower

## Rockwool

VEGETATIVE：
Grow 30g／L＋Calcium 45g／L
DOSAGE FOR INJECTORS：
1．90\％＝Ratio 1：53＝EC 1．2mS／cm＝19ml／L
$2.22 \%=$ Ratio $1: 45=\mathrm{EC}: 1.4 \mathrm{mS} / \mathrm{cm}=22,2 \mathrm{ml} / \mathrm{L}$

## FLOWER：

Hybrids $15 \mathrm{~g} / \mathrm{L}+$ Booster $7.5 \mathrm{~g} / \mathrm{L}+$ Calcium 25．86g／L
DOSAGE FOR INJECTORS：
$3.85 \%=$ Ratio 1：26 $=\mathrm{EC}: 1.5 \mathrm{mS} / \mathrm{cm}=38.5 \mathrm{ml} / \mathrm{L}$

We recommend to flush if the run off EC is higher than 2.0 in flowering and 1.8 in growth．The stock solution is mixed at 25 degrees Celsius When mixing several nutrients together we advise to let the solution sit for 24 hours and to either shake it several times or run a circulation pump ／air stone to ensure no precipitation occurs．


## reakuoor

| 0 | LعL | L\＆L | L\＆L | L\＆L | L\＆L | L\＆L | L\＆L | L\＆L | L\＆L | 669 | 669 | †て9 | 685 | （mdd）［ełot SO1 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $0 \cdot 0$ | S＇I | S＇I | S＇I | S＇t | S． | S＇t | S＇I | S＇t | S＇I | ¢ ${ }^{\text {I }}$ | $\dagger^{\text {T }}$ | て＇I | て＇I |  |
| 0 | LعI | LعI | LعI | LعI | LعI | LعI | Lع | LعI | Lع | L\＆ | LعI | L\＆ | 0ヵt | un！${ }^{\text {mej（mdd）SOI }}$ |
| $0 \cdot 0$ | $\varepsilon \%$ | ع＇0 | ع＇0 | ع＇0 | ع＇0 | $\varepsilon{ }^{\circ}$ | ع＇0 | $\varepsilon{ }^{\circ}$ | ع＇0 | $\varepsilon \cdot 0$ | ع＇0 | $\varepsilon{ }^{\circ}$ | ع＇0 |  |
| HSn7 | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $0^{\prime} \tau$ | $6^{\prime} 0$ | $8^{\prime \prime}$ | $\iota^{\prime} 0$ | （7／8）un！วข） |
| 0 | 0sz | Osz | Osz | Osz |  | Osz | osz |  | Osz |  |  |  |  | （mdd）SOL |
| 0.0 | s．0 | s．0 | s．0 | s\％ | s．0 | s．0 | s\％ | s．0 | s．0 |  |  |  |  | （mo／sm） 3 g |
| HSn7 | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ | $\varepsilon^{\prime} 0$ |  |  |  |  | （7／8）＋＋／d defsoog |
| 0 | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | $6 \pm \varepsilon$ | 299 | 299 | L8t | 6 片 | （mdd）Sal |
| $0 \cdot 0$ | $\iota^{\circ} 0$ | $\stackrel{\circ}{0}$ | $\stackrel{0}{0}$ | $\iota^{\circ} 0$ | $\iota^{\circ} 0$ | $L^{\circ} 0$ | $\stackrel{0}{0}$ | $\stackrel{0}{0}$ | $\iota^{\circ} 0$ | I＇t | I＇t | 0＇t | 6.0 | （mo／sw） $\mathrm{J}^{\text {a }}$ |
| HSก7 | 9＇0 | 9＇0 | 9＇0 | 9＇0 | 9＇0 | 9＇0 | 9＇0 | 9＇0 | 9＇0 | $L^{\prime} 0$ | $4^{\prime} 0$ | 90 | $9 \%$ | （7／8）sp！qq／Н／модө |
| $\begin{gathered} \text { oI } \\ \text { syәəM } \end{gathered}$ | $\stackrel{6}{\text { syə̈м }}$ | $\begin{gathered} 8 \\ \text { syәәм } \end{gathered}$ | syəəдм | $\stackrel{9}{\text { syәәм }}$ | $\underset{\text { sядəм }}{\mathbf{S}}$ |  | $\begin{gathered} \varepsilon \\ \text { syวəM } \end{gathered}$ | $\underset{\text { syəəм }}{2}$ | $\underset{\text { syәəм }}{\substack{\text { T}}}$ | $\begin{array}{\|c\|} \hline \text { (usges) } \\ \text { suyeld } \\ \text { anneew } \end{array}$ |  |  | $\begin{array}{\|c} \left(\begin{array}{c} \text { (uحsLD) } \\ \text { ssu! } \end{array}\right. \end{array}$ | spJ．${ }^{\text {S }}$ |
| 8и！ıамоㅚ |  |  |  |  |  |  |  |  |  | su！M0． |  |  |  |  |

## Feeding Schedule | Keep It Simple!

## Keep it simple!

This schedule can be used without monitoring the pH and EC values, just following these instructions. We do recommend to always measure those values for best results. The hardness of the (tap) water needs to be taken into consideration as well

When using hard water and nutrient rich soil, one product (Short Flowering, Hybrids or Long Flowering) can be used from start till finish, which makes our feeding line very cost efficient.

It is possible to use a combination of our base nutrients and Booster PK+
If a range of values is mentioned (e.g. $5-7 \mathrm{~g} / 10 \mathrm{~L}$ ), it means that the first value is used to start with and should be increased every week until the final value is reached.

## VEGETATIVE GROWTH

## SEEDLINGS:

Metric: $2.5 \mathrm{~g} / 10 \mathrm{~L}$ water
Imperial: $0.09 \mathrm{oz} / 2.5$ US gallons water
Metric/Imperial: $2.5 \mathrm{~g} / 2.5$ US gallons water

## YOUNG PLANTS AND ROOTED CUTTINGS:

Metric: $5 \mathrm{~g} / 10 \mathrm{~L}$ water
Imperial: $0.18 \mathrm{oz} / 2.5$ US gallons water
Metric/Imperial: 5g/2.5 US gallons water

## MATURE PLANTS (3+ WEEKS):

Metric: 5-7g/ 10L water
Imperial: 0.18-0.25 oz/2.5 US gallons water
Metric/Imperial: $5-7 \mathrm{~g} / 2.5$ US gallons wate

FLOWERING STAGE

## MINERAL FEEDING

Metric: 7-10g/ 10L water
Imperial: $0.25-0.35 \mathrm{oz} / 2.5$ US gallons water
Metric/Imperial: 7-10g/2.5 US gallons water

MINERAL FEEDING + BOOSTER PK+

## Base Nutrients

Metric: 3-7g/ 10L wate
Imperial: 0.10-0.25 oz/2.5 US gallons water Metric/Imperial: $3-7 \mathrm{~g} / 2.5$ US gallons water

## Booster PK +

Metric: 2-5g/ 10L water
Imperial: 0.07-0.17 oz/2.5 US gallons water Metric/Imperial: $2-5 \mathrm{~g} / 2.5$ US gallons water

## USEFUL CONVERSIONS

|  | Grow, SFL, Hybrids, LFL | Booster | Calcium |
| :--- | :---: | :---: | :---: |
| Dosing spoon approx.: | 10 g | 13 g | 8 g |
| Table spoon approx.: | 4 g | 5 g | 3 g |

## Notes



## Our Mission

Bio Feeding is our nutrient line, developed to be used for organic farming.

Bio Feeding products are a $100 \%$ biological blend of natural-minerals and organic nutrients, which provide all essential macro- and micro nutrients and promote the microbial life in the soil, helping to establish a healthy soil-food-web.

We decided to create powdered products, because a finer product creates a bigger surface that comes in contact with the soil microbial life, resulting in more efficient nutrient uptake compared to tablets or pellets.

The organic raw materials used in our Bio Feeding products are sourced in Germany and Switzerland and are all Non-GMO (Not Genetically Modified Organism).

Beneficial microbes that occur naturally in the raw ingredients (e.g. malt germCm, canola meal \& vinasse) help to decompose the organic matter converting it into a mineral form and releasing nutrients that are readily available for the plant.

The microbial activity of the soil is improvedby supplying components that can form humus.*

The raw ingredients used by theмСмеlves are not always the best plant nutrition.

It is the combination of specific ingredients that creates a highly effective fertilizer.
*This process depends on the conditions of the soil (e.g. humidity, temperature, pH -value, microbial activity, organic matter content, etc.).

## Certification

All Bio Feeding products are Control Union Certified for use in organic agriculture Control Union Certifications, which is part of the Control Union World Group, is monitoring products that are used in organic agriculture (Organic Input Products). Organic input products can not contain any synthetic nutrients, chemical pesticides or other non-natural ingredients.
The use of the certification is subject to strict rules and only permitted with authorization of Control Union.
Our BioGrow and BioEnhancer are OMRI listed. OMRI supports organic integrity by developing clear information and guidance about materials, so that producers know which products are appropriate for organic operations. OMRI is a nonprofit organization that provides an independent review of products, such as fertilizers, pest controls, livestock health care products, and numerous other inputs that are intended for use in certified organic production and processing.

## Bio Line

## Powder Feeding Line





## BioGrow



Provided by Green House Bio Feeding

BioGrow is an "all-in-ONE"blend of carefully selected natural materials, formulated specifically for the vegetative growth stage of fast growing plants.
Essential nutrients are provided for superior growth, both readily available for the plant and slowly releasing to supply all nutrients over a period of 8 weeks.

During vegetative growth, plants require higher amounts of Nitrogen. Nitrogen makes the cells divide and multiply, which is the reason that plants need higher amounts of it during the vegetative growth stage when leaf and root development is at its peak.

Nitrogen is considered a mobile nutrient inside the plant, which means that the plant can transport it to where it is needed. This mobility is the reason that the first signs of a Nitrogen deficiency occur in older leaves.
The plant takes available Nitrogen from older cells, in order to grow new ones.


GUARANTEED ANALYSIS
20\% [C] Organic Carbon
$7 \%$ INJ Total Nitrogen
7\% [N] Organic Nitrogen
$2 \% ~\left[P_{2} \mathrm{O}_{5} I\right.$ Phosphorus pentoxide soluble in wate
$4 \%$ [KO] Potassium oxide soluble in wate
4\% [K $\mathrm{K}_{2} \mathrm{O}$ Potassium oxide soluble in wate
8\% [CaOl Calcium oxide
$4 \%$ IMgOI Magnesium oxiter
$9 \% \quad\left[\mathrm{SO}_{3}\right]$ Sufur trioxide
$34 \% \quad$ Organic Matter from bone meal, malt germ, horn meal, feather meal, vinasses apeseed cake meal.

Soil Food Web

Mycelium can appear on top of the substrate. It improves microbia life inside the substrate and will not harm humans, animals or plants. Fungi is the main agent of the decomposition of organic matter such as simple sugars, amino acids, etc. It solubilizes minerals that are not initially available to plants.

0.281 b
1.11 b

| .281 b |
| :--- |
| $1.1 \mid \mathrm{b}$ |
| 2.21 b |

5


## BioBloom

BioBloom is an "all-in-ONE"blend of carefully selected natural materials, formulated specifically for the flowering and fruit production.
Essential nutrients are provided for excellent flower and fruit production, both readily available for the plant and slowly releasing to supply all nutrients over a period of 8 weeks.
BioBloom is a unique product, supplying adequate amounts of macro- and micronutrients in the most efficient way. Our extensive R\&D and scientific research allowed us to create a product that provides high amounts of phosphorus in a natural form.
hosphorus is providing the energy to the plant to sustain growth.
Signs of a Phosphorus deficiency are stunted growth and bluish green leaves. As with Nitrogen, symptoms first appear in older leaves indicating that Phosphorus is also mobile in plants and can be moved to where it is needed the most.


GUARANTEED ANALYSIS
$\begin{array}{cc}\text { 18\% } & \text { [CI Organic Carbon } \\ 4 \% & \text { NI }\end{array}$
4\% IN] Total Nitrogen
${ }_{9 \%}^{4 \%}$ [N] Organic Nitrogen
$9 \%\left[P_{2} \mathrm{O}_{5}\right] \begin{aligned} & \text { Phosphorus pentoxide soluble in water } \\ & \text { and neutral ammonium citre }\end{aligned}$
$9 \%\left[K_{2} \mathrm{O}\right]$ Potassium oxide soluble in water
8\% [CaO] Calcium oxide
4\% [MgO) Magnesium oxide
$18 \% \quad$ [SO $_{3}$ S Sulfur trixide
31\% Organic Matter from bone meal, feather meal, vinasses, rapeseed cake meal.

[^0] are not initially available to plants.

## BioEnhancer

BioEnhancer can be used as a multi purpose tool for every organic cultivator Its main purpose is to enhance the uptake of nutrients and to act as a soil conditioner but it can also be used very effective for rooting of cuttings, germination of seeds and as a foliar spray to stimulate plant growth.

## Humic and Fulvic Acids

Humic and Fulvic Acids are sourced from leonardite, which acts as a soil conditioner, biocatalyst and bio stimulant. They also help chelate nutrient compounds, thus enhance the uptake of nutrients by the plant. Especially iron uptake is potentiated, which results in higher chlorophyll and sugar production and improves flavor and nutritional values

## Seaweed extract

Seaweed extract (kelp) contains 62 trace elements, amino acids and natural phytohormones. It works as a soil conditioner, promotes stronger and vigorous development of roots and improves the germination rate of seeds. Additionally it enhances the uptake of nutrients and water, conditioning plants to better handle stress.

## Trichoderma Harzianum

Trichoderma Harzianum improves root development and nutrient uptake by keeping roots healthy, as well as, free of various disease causing fungal pathogens.

## Bacillus Amyloliquefaciens

This bacterium is used for the biocontrol of pathogens in the substrate and on leaves. It controls a great diversity of pathogens by competing for nutrients and space.
It also solubilises Nitrogen and Phosphorus by decomposing organic matter.


GUARANTEED ANALYSIS

## 75\% Humic Acid $3 \%$ Fuvic Acid <br> ${ }^{3 \%}$ Fulvic Acid

10\% Seaweed extract from Ascophyllum nodosum

9,3 pH
Carbohydrates: Agginic acid, Mannitol, Fucoidans
Carbohydrates: Agginic acid, Mannitol, Fucoidans soleucine, Leucine, Lysine, Methionine, Phenylalanine, Proline, Tyrosine, Vaine, Tryptophan.


## How to use

## BioGrow - BioBloom

BioGrow and BioBloom need to be mixed into the substrate or applied as top dressing. It can be used in soil, coco or similar substrates.
The nutrients will be released constantly during a period of 8 weeks.

## Dosage BioGrow

Vegetative growth: $3-5 \mathrm{~g} / \mathrm{L}$ substrate
Mother plants: $3-5 \mathrm{~g} / \mathrm{L}$ substrate every two months (as top dressing)
If the growth period is less than 8 weeks or the substrate is pre-fertilized, doses should be decreased Use half dosage for seedlings and young plants ( $2-3$ weeks old).
If the growth period is longer, a second application is required (as top dressing).

## Dosage BioBloom

8 weeks flowering period: $1^{\text {st }}$ week $=3-5 \mathrm{~g} / \mathrm{L}$ substrate 10 weeks flowering period: $1^{\text {st }}$ week $=3-5 \mathrm{~g} / \mathrm{L}$ substrate $3^{\text {rd }}$ week $=1-2 \mathrm{~g} /$ L substrate
12 weeks flowering period: $1^{\text {st }}$ week $=3-5 \mathrm{~g} / \mathrm{L}$ substrate $5^{\text {th }}$ week $=1-2 \mathrm{~g} /$ L substrate

Dosage recommendations can be decreased for light feeder plants and pre-fertilized soi or increased for heavy feeders.

## BioEnhancer

Mix BioEnhancer with water and apply to the plants when watering, once every two weeks.
Can be used during the whole cycle (vegetative growth and flowering)
Use the Enhancer after transplant for better root development.
Use within 24 hours after mixing

## Dosage BioEnhancer

Adding the Enhancer to water will increase the pH -value to around 8.5 .
When using as foliar spray or as a drench on soil it is not necessary to adjust the pH down. When using as a drench for coco, we recommend to adjust the pH before adding Enhancer to 5.0.

## Media Drench:

$0.5-1 \mathrm{~g}$ per Litre water every two weeks.

## Rooting cuttings:

Soak/drench the medium with $0.25-1 \mathrm{~g}$ per Litre water before placing the cutting.
Germinating seeds:
Soak the seeds in a solution with 0.5-1g per Litre water for 8-12 hours.


## Foliar application:

Mix 3-5g with 10 Litres water and apply once every two weeks during vegetative stage. For mother plants, apply 24 hours before taking new cuttings.



Notes



[^0]:    yycelium can appear on top of the substrate
    It improves microbial life inside the substrate and will not harm humans, matter such as simple sugars, amino acids, etc. It solubilizes minerals that

