
EHG
Easy Hydro Grow
For Soil & Hydroponics
www.easyhydrogrow.co.za
GROW WITH US
EHG
GROW
EHG
BLOOM
EHG
MICRO
EHG
COCOMICRO
EHG
RIPENER

WHAT IS HYDROPONICS?

Hydroponics or Hydro-culture, is the practice of growing plants using only water with a growing medium and nutrients. There is no soil involved. If plants receive the water and nutrients they need at their roots, they can grow exceedingly well without soil. Hydroponic food crops can feed the world by producing more and better quality plants than soil based farming can produce.

In the home environment we can grow our favourite plants, or any plant for that matter, at any time of year. With the latest hydroponic systems along with specialised horticultural lighting, hydroponics at home becomes easy and effective.

WHAT YOUR PLANTS NEED

As hydroponic plants are dependent on the nutrient solution it must provide everything the plants require. Oxygen, carbon and hydrogen are absorbed from the atmosphere but the macro nutrients nitrogen (N), phosphorus (P), potassium (K), calcium (Ca), sulphur (S) and magnesium (Mg) are drawn from the nutrient solution. The micro nutrients (or trace minerals) iron (Fe), boron (B), manganese (Mn), zinc (Zn), copper (Cu), molybdenum (Mo) must also be provided in the correct quantities.

The nutrient solution must provide both macro and micro nutrients in the correct amounts for fast, productive plant growth.

Leafy green plants (not being grown for flowers or fruits) or flowering plants in their pre-flowering phase require different levels of the primary and secondary macro nutrients compared with plants in flower or fruit and a good hydroponic nutrient must cater for the different stages of plant growth.

WHY EHG?

EASY HYDRO GROW

is South Africa's first multi-part liquid hydroponic nutrient and we remain the industry leader. Our formulations are ideal for local conditions and our results far surpass those of overpriced imported products.

Our MICRO, GROW, BLOOM and RIPENER are made from the purest mineral salts so they are rapidly absorbed by your plants. Multi-part liquid hydroponic fertilizer formulations like EHG have become the preferred choice worldwide. They are extremely easy to use, easy to measure and mix instantly.

EHG is the perfect choice for aeroponic, bubbleponic, nutrient film, flood and drain and top fed hydro systems. It is also excellent for soil which is recommended for inexperienced growers. By following the simple nutrient guide, the perfect nutrient ratios are provided for every stage of your plant's growth. For growers using COCO COIR, COCO MICRO is the only COCO specific nutrient manufactured in South Africa.

Our nutrients are completely non-toxic and safe to use.

OUR PRODUCTS

MICRO

CONTAINS: CALCIUM, NITROGEN, POTASSIUM & ESSENTIAL MICRONUTRIENTS

GROW

CONTAINS: NITROGEN, POTASSIUM, MAGNESIUM & PHOSPHOROUS

USING EHG AT THE RECOMMENDED TOTAL OF 30 ML PER 10 LITERS WILL RAISE EC BY APPROXIMATELY 1.2 FOR HIGHER EC's ADJUST ACCORDINGLY OR USE AN EC METER.

BLOOM

CONTAINS: LOWER NITROGEN THAN GROW & HIGHER MAGNESIUM & PHOSPHOROUS

RIPENER

CONTAINS: NO NITROGEN & HIGHER MAGNESIUM THAN BLOOM

COCOMICRO & COCOPONICS

Using COCO COIR is rapidly growing in popularity worldwide and it has become the most widely used medium in commercial hydroponic cultivation. It is light, holds large amounts of both water and air and comes in various grades which drain at different rates for particular hydroponic systems. It is inexpensive, reusable and completely environmentally friendly, emanating from a sustainable resource, the husk of the coconut. It is so popular that growing with COCO has been given its own name, Cocoponics.

COCO COIR is not completely inert and tends to absorb calcium and magnesium ions and release potassium. EHG's COCO MICRO is specifically formulated for use with COCO COIR. It has increased levels of calcium and magnesium and reduced levels of potassium to cater for the natural reactivity of the COCO medium. If your hydroponic mix contains 50% or more COCO COIR you should not be growing without COCO MICRO.

It is simple to use and replaces ordinary MICRO in the standard formulations. GROW, BLOOM and RIPENER are then used exactly as one would with ordinary MICRO. (If you are using bore water, which invariably contains high levels of calcium and magnesium, use ordinary MICRO.)

THE STANDARD NUTRIENT GUIDE

AND MEDICAL CANNABIS

While EHG is a general hydroponic nutrient excellent for most crops, it is perfect for cannabis. The standard nutrient table (printed below, on the label of the MICRO bottle and on our website) assumes 18 hours of light, 6 hours of darkness vegetative period and 12 hours of light/ darkness flowering period.

Week	1	2	3		1	2	3		4	5	6	7	8	
mls per 10 litres	18 H				12 H									
Grow	2.5	2.5	7	FLUSH	20	20	0	FLUSH	0	0	0	Ph Balanced Water Only		
Micro	2.5	2.5	7		10	10	10		10	10	10			
Bloom	2.5	2.5	7		0	0	20		20	20	20			

Equal parts of MICRO, GROW and BLOOM are used at increasing strengths in the first stages of vegetative growth. This ensures a balanced spread of essential nutrients. While phosphorus is mainly required for flowering, it is important in the early stages for root development.

Once the lights have switched to 12 hours on and 12 hours off, it takes several days for the plants to convert to flowering mode. In the first two weeks most cannabis strains will “stretch” and during this period less phosphorus is required and more nitrogen and potassium to build a strong structure for bud development. Only MICRO and GROW are fed during this period. After two weeks budding is very much evident and less nitrogen and high levels of potassium and phosphorus are needed. Only MICRO and BLOOM are fed at this stage. For further information and tips on growing, see the down-loadable nutrient guide on our website.

RIPENER is an optional finishing agent similar to BLOOM but with no nitrogen and higher levels of magnesium. Magnesium is needed in increased quantities by many strains towards the end of the flowering period and some growers prefer to reduce nitrogen substantially to promote ripening. RIPENER may be substituted in increasing quantities for BLOOM toward the end of the feed period and can be fed on its own in the second to last week before harvest. (No nutrients at all should be fed in the final week.) The nutrient

guide assumes an eight week flowering period and a six week feed period. For longer flowering strains simply extend the feed period accordingly.

Other flowering and fruiting crops likewise follow the standard feeding process of equal parts MICRO, GROW and BLOOM at the early stages of growth. Most crops will auto-flower when they have reached the right age and size. For large plants switch to MICRO and GROW only when the roots are well established. At the first sign of flower buds, switch to MICRO and BLOOM only. (For smaller plants the MICRO/ GROW only step can be omitted.)

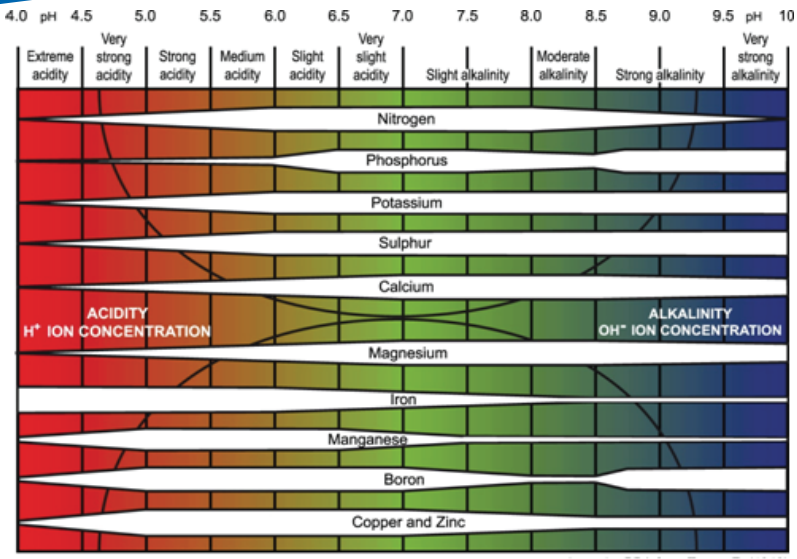
Vegetable greens and herbs which are not being grown for flower or seed don't need the flowering feed stage. Simply follow the normal program with equal parts GROW, MICRO and BLOOM until your plants are growing strongly and have a well-established root system. Switch to MICRO and GROW only and maintain the correct Ph and EC for the life of the plant

Nutrient table for non-flowering vegetable greens and herbs

Week	1	2	3		4	5	6		
mls per 10 litres	EARLY GROWTH			F	MATURE GROWTH			F	
Grow	2.5	2.5	7	L U S H	20	20	20	L U S H	Ph balanced water only 1 - 2 weeks from harvest
Micro	2.5	2.5	7		10	10	10		
Bloom	2.5	2.5	7		0	0	0		

Root crops should remain on equal parts MICRO, GROW and BLOOM throughout their life cycle. (Flush as indicated every 3 weeks and prior to harvest) Maintain Ph and EC at the recommended levels.

PH MANAGEMENT



The effect of Ph on nutrient availability

As can be seen from the table above various macro and micro nutrients become more readily available to plants at different Ph levels. (The higher the Ph value, the greater the concentration of OH- ions and the more alkaline the nutrient solution. At a lower Ph value there is a higher concentration of H+ ions and the solution is more acid.)

The correct Ph value at which various plants prefer to be grown is determined by the elements which are most important to their growth. It is therefore very important to keep your nutrient solution in the correct range, particularly when growing hydroponically. Growing in soil is more forgiving but generally better results will be achieved when plants are fed at the correct target Ph.

In recirculating hydroponic systems (ie. where the nutrient solution is fed back to the reservoir) the Ph will change and must be maintained at proper levels. As the plants absorb either positively or negatively charged ions from the nutrient solution they balance their internal chemistry by releasing either an H+ or an OH- ion to compensate. Thus the Ph level of the nutrient solution will change constantly depending on what nutrients are being taken up by the plant at any particular time. (Buffering is never completely effective and there is no substitute for proper Ph control.)

EHG Ph up and Ph down are cost effective solutions to keeping your Ph at the required levels. They are concentrated solutions and more effective than most other Ph control products on the market. Add relatively small amounts at a time to bring your reservoir to the required level. With practice you will have a fairly good idea of how much Ph up or down is required.

Using EHG nutrients as per the nutrient guide will generally drop water from a neutral Ph of 7 to a Ph of around 6 which is ideal for many plants.

PH AND EC VALUES FOR COMMON HYDROPONIC CROPS

Flowering and Fruiting Plants

Flowering herbs

PLANTS	Ph	EC
Cannabis	**5.6 – 6.4**	**1.4 – 2.4**
Lavender	**6.4 – 6.8**	**1.0 – 1.4**

PH AND EC VALUES FOR COMMON HYDROPONIC CROPS

Vegetables

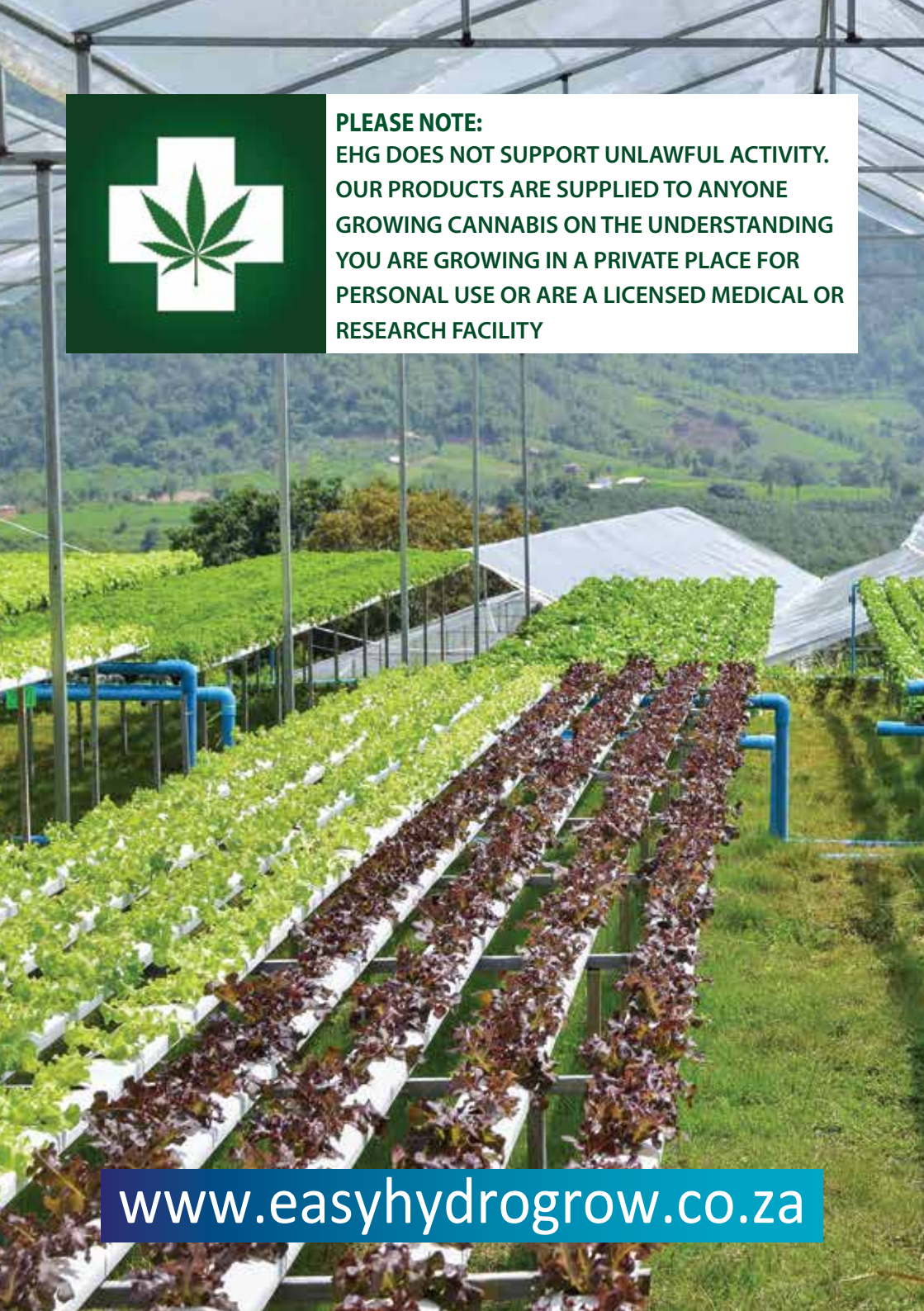
PLANTS	Ph	EC
Artichoke	6.5 – 7.5	0.8 – 1.8
Bean (common)	6.0	2 – 4
Broad Bean	6.0 – 6.5	1.8 – 2.2
Broccoli	6.0 – 6.5	2.8 – 3.5
Capsicum	6.0 – 6.5	1.8 – 2.2
Cauliflower	6.0 – 7.0	0.5 – 2.0
Cucumber	5.8 – 6.0	1.7 – 2.5
Eggplant	5.5 – 6.5	2.5 – 3.5
Marrow	6.0	1.8 – 2.4
Okra	6.5	2.0 – 2.4
Pea	6.0 – 7.0	0.8 – 1.8
Peas (sugar)	6.0 – 6.8	
Pepino	6.0 – 6.5	2.0 – 5.0
Peppers	5.8 – 6.3	2.0 – 3.0
Bell peppers	6.0 – 6.5	2.0 – 2.5
Hot peppers	6.0 – 6.5	3.0 – 3.5
Pumpkin	5.5 – 7.5	1.8 – 2.4
Sweet corn	6.0	1.6 – 2.4
Sweet potato	5.5 – 6.0	2.0 – 2.5
Squash (summer)	5.0 – 6.5	
Squash (winter)	5.0 – 6.5	
Tomato	5.5 – 6.5	2.0 – 5.0
Zucchini	6.0	1.8 – 2.4

Flowers

Plants	pH	EC
African Violets	6.0 – 7.0	1.2 – 1.5
Anthurium	5.0 – 6.0	1.6 – 2.0
Aster	6.0 – 6.5	1.8 – 2.4
Begonia	6.5	1.4 – 2.4
Bromeliads	5.0 – 7.5	0.8 – 1.2
Canna	6.0	1.8 – 2.4
Carnation	6.0	2.0 – 3.5
Chrysanthemum	6.0 – 6.2	1.8 – 2.5
Cymbidiums	5.5	0.6 – 1.0
Dahlia	6.0 – 7.0	1.5 – 2.0
Dieffenbachia	5.0	1.8 – 2.0
Dracaena	5.0 – 6.0	1.8 – 2.4
Ferns	6.0	1.6 – 2.0
Ficus	5.5 – 6.0	1.6 – 2.4
Freesia	6.5	1.0 – 2.0
Impatiens	5.5 – 6.5	1.8 – 2.0
Gerbera	5.0 – 6.5	2.0 – 2.5
Gladiolus	5.5 – 6.5	2.0 – 2.4
Monstera	5.0 – 6.0	1.8 – 2.4
Palms	6.0 – 7.5	1.6 – 2.0
Roses	5.5 – 6.0	1.5 – 2.5

Fruit

Plants	pH	EC
Banana	5.5 – 6.5	1.8 – 2.2
Black Currant	6.0	1.4 – 1.8
Blueberry	4.0 – 5.0	1.8 – 2.0
Melon	5.5 – 6.0	2.0 – 2.5
Passionfruit	6.5	1.6 – 2.4
Paw-Paw	6.5	2.0 – 2.4
Pineapple	5.5 – 6.0	2.0 – 2.4
Red Currant	6.0	1.4 – 1.8
Strawberries	5.5 – 6.5	1.8 – 2.2
Watermelon	5.8	1.5 – 2.4



PLEASE NOTE:

EHG DOES NOT SUPPORT UNLAWFUL ACTIVITY. OUR PRODUCTS ARE SUPPLIED TO ANYONE GROWING CANNABIS ON THE UNDERSTANDING YOU ARE GROWING IN A PRIVATE PLACE FOR PERSONAL USE OR ARE A LICENSED MEDICAL OR RESEARCH FACILITY

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