# FEED CHART

## Gold Range NUTRIENT

<table>
<thead>
<tr>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
</tr>
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<tbody>
<tr>
<td>STD AGR</td>
<td>STD AGR</td>
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<td>1.1</td>
</tr>
<tr>
<td>Centifarad CF</td>
<td>8</td>
<td>10</td>
<td>11</td>
</tr>
<tr>
<td>Parts Per Million PPM</td>
<td>400</td>
<td>500</td>
<td>550</td>
</tr>
<tr>
<td>Gold Range NUTRIENT A ml</td>
<td>19.3</td>
<td>3.4</td>
<td>4.2</td>
</tr>
<tr>
<td>Gold Range NUTRIENT B ml</td>
<td>19.3</td>
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<td>4.2</td>
</tr>
<tr>
<td>Gold Range ADD 27 ml</td>
<td>11.4</td>
<td>11.4</td>
<td>11.4</td>
</tr>
<tr>
<td>Gold Range ZONE ml</td>
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<td>1</td>
</tr>
<tr>
<td>Gold Range SILICA ml</td>
<td>2</td>
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STD = standard strength, AGR = aggressive strength.

## Gold Range ONE

<table>
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<tr>
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<th>Week 4</th>
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<tbody>
<tr>
<td>STD AGR</td>
<td>STD AGR</td>
<td>STD AGR</td>
<td>STD AGR</td>
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<tr>
<td>Electrical Conductivity EC</td>
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<td>1.1</td>
</tr>
<tr>
<td>Centifarad CF</td>
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<td>10</td>
<td>11</td>
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<tr>
<td>Parts Per Million PPM</td>
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<tr>
<td>Gold Range ONE ml</td>
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<tr>
<td>Gold Range POTASH+ ml</td>
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<td>0</td>
</tr>
<tr>
<td>Gold Range ADD 27 ml</td>
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<tr>
<td>Gold Range ZONE ml</td>
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<td>1</td>
</tr>
<tr>
<td>Gold Range SILICA ml</td>
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<td>2</td>
</tr>
</tbody>
</table>

STD = standard strength, AGR = aggressive strength.

## Advance

<table>
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<th>Week 3</th>
<th>Week 4</th>
</tr>
</thead>
<tbody>
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<td>STD AGR</td>
<td>STD AGR</td>
<td>STD AGR</td>
</tr>
<tr>
<td>Electrical Conductivity EC</td>
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<td>1.1</td>
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<tr>
<td>Centifarad CF</td>
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<td>11</td>
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<tr>
<td>Parts Per Million PPM</td>
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<td>550</td>
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<tr>
<td>ADVANCE A ml</td>
<td>19.8</td>
<td>22.7</td>
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<tr>
<td>ADVANCE B ml</td>
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<td>ADVANCE ZONE ml</td>
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<td>1</td>
</tr>
<tr>
<td>ADVANCE SILICA ml</td>
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<td>2</td>
<td>2</td>
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</table>

STD = standard strength, AGR = aggressive strength.

## Nutrient Only (No Additives - Target EC / PPM / CF values as above)

| Gold Range NUTRIENT A ml | 5.3 | 6.8 | 7.6 | 10.6 |
| Gold Range NUTRIENT B ml | 5.3 | 6.8 | 7.6 | 10.6 |

## Foliar Spray Application

| Gold Range LIQUID LIGHT ml | 30 | 30 | 60 | 60 |
| Gold Range SATURATOR ml | 60 | 60 | 60 | 60 |

Measurements below are based on 1 Quart of water.

Do not adjust pH. Spray plants twice per week.

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DMMKTG-0065

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**DUTCH MASTER GROWERS TIPS**

For further information and the most accurate results, please use the online Nutrient Calculator found on our website at www.dutchmaster.com.au. Our online Nutrient Calculator is fully interactive, adjustable and allows you to dial in all the parameters of your growing needs making plant nutrition very simple, easy and accurate.

- All Black Bottle product usage instructions are the same as the equivalent Gold Range product usage instructions. Therefore, mixing directions for Black Bottle SILICA and Gold Range SILICA are the same.

If you are running a larger reservoir than 1 gallon, then multiply Feed Chart recommended nutrient and additive millilitres accordingly. Therefore, if your reservoir is 25 gallons, multiply recommended millilitres by 25 to achieve correct dosing.

- For 3 week grow periods, remove week 4 on the Feed Chart. For 2 week grow periods, remove weeks 4 and 3. For longer grow periods, add week 4. For longer or shorter flowering periods, add or remove week 6.

- The recommended EC / PPM / CF values shown on this Feed Chart are calculated based on 0.6 EC / PPM / CF Base water. If your water value is greater than 0.6 EC / 100 PPM / 2 CF, divide water EC / PPM / CF by 0.6 to find the correct EC / PPM / CF. If you are growing sensitive plants, then lower your intended level EC / PPM / CF, then slowly add water to your reservoir until your reading is down to your desired EC / PPM / CF. pH adjustment is always performed last.

- Always add all permitted additives (Gold Range ADD.27, Gold Range SILICA, Gold Range ZONE etc.) to reservoir / tank water before adding your main nutrient in equal parts of A and B. This will allow you to adjust pH or, in severe cases, nutrient solution strength. Always use the ‘Standard’ feed recommendation on this Feed Chart.

- The conversion factor used on this Feed Chart from EC (electrical conductivity) to PPM (parts per million) is 0.5. Therefore, 1.0 ms/cm EC equals 500 PPM and 10 CF. Dutch Master Gold Range ONE is a single part nutrient (therefore 1 part for grow and 1 part for flower) that has been specially formulated NOT to fall out.

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### DUTCH MASTER CONVERSION CHART

<table>
<thead>
<tr>
<th>EC ms/cm</th>
<th>Dutch Master 0.5 ppm</th>
<th>Hanna 0.5 ppm</th>
<th>Eutech 0.64 ppm</th>
<th>Truncheon 0.7 ppm</th>
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<td>2450 ppm</td>
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Gold Range NUTRIENT

Gold Range NUTRIENT is designed to be a premium, all inclusive, powerful 2 part nutrient system. Simply add to your reservoir with Dutch Master Gold Range additives as shown on the Dutch Master Online Nutrient Calculator for the best results possible! Gold Range NUTRIENT is jam packed full of the finest, high quality US & British Pharmaceutical grade minerals and B vitamins! Benefits: No need to use P/K based bloom boosters or nitrogen based kelp/seaweed boosters or cal/mag boosters! Suits all types of systems and media / substrates. No deficiencies… truly the best a plant can get!

USAGE INSTRUCTIONS:

For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized, interactive feeding program to suit your needs.

To use Gold Range NUTRIENT, simply follow these easy guidelines!

1. Fill your tank to 2/3rds of its capacity.
2. Add any permitted additives such as Dutch Master Gold Range ADD.27 / MAX first (DO NOT use MAX if you are using Gold Range ADD.27), then add Gold Range ZONE and Gold Range SILICA one at a time, stirring to mix before adding the next one. Please remember Gold Range NUTRIENT is very powerful and you should be very careful when you add any phosphorus boosters, Pk 13 / 14 or nitrogen boosters (kelp, seaweed or guano etc). If using Gold Range POTASH+ with Gold Range NUTRIENT, be sure to watch your leaf tips for ‘tip burn’ as this is a very powerful combination that should be used only by experienced growers!
3. Add the correct amount of Gold Range NUTRIENT part A for your tanks final or total capacity (according to the online Nutrient Calculator), stirring to mix.
4. Add the correct amount of Gold Range NUTRIENT part B for your tanks final or total capacity (according to the online Nutrient Calculator), stirring to mix.
5. Never mix part A and part B undiluted! Always add separately to water.
6. Never mix Grow and Flower parts together. Always mix Grow A only with Grow B and Flower A only with Flower B.
7. Grow must be used in the vegetative cycle and Flower must be used in the bloom cycle.
8. Top up your reservoir or tank to its final level or volume and check the strength using a TDS (PPM or EC) meter. If required, add more Gold Range NUTRIENT (one part at a time) in small equal quantities, until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength.
9. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info.
10. Do NOT use any Calcium / Magnesium supplements as our nutrients are choc full of them!
11. Feed according to your systems normal requirements.

Gold Range ONE

Gold Range ONE is a single / one part premium nutrient system. Simply add either grow or flower to your reservoir with Dutch Master Gold Range additives – nothing could be easier! Gold Range ONE has a unique, proprietary calcium / sulphur binding technology that maintains perfect solution solubility, unlike all other 1-part brands that end up with a white sludge due to chemical combination and ‘fall out’ that creates massive nutrient deficiencies within your plants! Benefits: Ease of use! Good for use in every type of system and media / substrates! No deficiencies… ever!

USAGE INSTRUCTIONS:

For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.

To use Gold Range ONE, simply follow these easy guidelines!

1. Fill your reservoir or tank to 2/3rds of its capacity.
2. Then add any other additives such as Dutch Master Gold Range ADD.27 / MAX first (DO NOT use MAX if you are using Gold Range ADD.27), then add Gold Range POTASH+, Gold Range ZONE and Gold Range SILICA one at a time, stirring to mix before adding the next one.
3. Add Gold Range ONE to your reservoir (according to the online Nutrient Calculator), stirring to mix.
4. Never mix Grow and Flower parts together. Grow must be used in the vegetative cycle and Flower must be used in the bloom cycle.
5. Top up your reservoir or tank to its final level or volume and check and adjust final nutrient strength using a TDS (PPM or EC) meter. If required, add more Gold Range ONE in small quantities, stirring between each addition until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength.
6. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info.
7. Do NOT use any Calcium / Magnesium supplements as our nutrients are choc full of them!
8. Feed according to your systems normal requirements.
ADVANCE
Dutch Master ADVANCE is a premium 2 part nutrient system designed with the budget conscious grower in mind! Formulated by our in-house Plant Sciences team, ADVANCE utilises the same high quality US and British Pharmaceutical grade elements found in our ‘top of the range’ Gold Range NUTRIENT to ensure purity and minimal heavy metals. Simply add to your reservoir with Dutch Master Gold Range additives as shown on the Dutch Master Online Nutrient Calculator for the best results possible! Suits all types of systems and media / substrates. No deficiencies... ever!

USAGE INSTRUCTIONS:
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.
To use ADVANCE, simply follow these easy guidelines!
1. Fill your reservoir or tank to 2/3rds of its capacity.
2. Add any permitted additives such as Dutch Master ADD.27 / MAX first (DO NOT use MAX if you are using Gold Range ADD.27), then add Gold Range POTASH+, Gold Range ZONE and Gold Range SILICA one at a time, stirring to mix before adding the next one.
3. Add the correct amount of ADVANCE part A for your tanks final or total capacity (according to the online Nutrient Calculator), stirring to mix.
4. Add the correct amount of ADVANCE part B for your tanks final or total capacity (according to the online Nutrient Calculator), stirring to mix.
5. Never mix part A and part B undiluted! Always add separately to water.
6. Never mix Grow and Flower parts together. Always mix Grow A only with Grow B and Flower A only with Flower B.
7. Grow must be used in the vegetative cycle and Flower must be used in the bloom cycle.
8. Top up your reservoir or tank to its final level or volume and check and adjust final nutrient strength using a TDS (PPM or EC) meter. If required, add more ADVANCE (one part at a time) in small equal quantities until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength.
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10. Do NOT use any Calcium / Magnesium supplements as our nutrients are choc full of them!
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Gold Range ADD.27
Gold Range ADD.27 is a tank additive and the worlds first ‘nutrient activator’ that has been clinically proven and field tested to ADD considerably to your achievements! Dutch Masters new anti-stress ‘Protein Based Chelation Technology’ is the next generation in tank additives that does more than just add minerals, vitamins and aminos – it actually makes them work for you! Benefits: Deliver as close to 100% of your nutrients to your plants as possible — no wastage, better results! Reduce day to day stress! Works in all types of systems with all media / substrates — truly universal!

USAGE INSTRUCTIONS:
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.
To use Gold Range ADD.27, simply follow these easy guidelines!
1. Fill your reservoir or tank to 2/3rds of its capacity.
2. Add Gold Range ADD.27 according to the online Nutrient Calculator or at the rate of 3 ml to every 1 litre of made up nutrient solution or 11.4 ml to every 1 gallon of made up nutrient solution from the beginning of week 1 in grow right through until the end of flower.
3. Add any other additives such as Gold Range POTASH+, Gold Range ZONE and Gold Range SILICA after Gold Range ADD.27.
4. Add your primary nutrient such as ADVANCE, ORIGINAL, Gold Range ONE or Gold Range NUTRIENT, stirring well to mix. Please note – Gold Range POTASH+ is not to be used with Gold Range NUTRIENT as Gold Range NUTRIENT provides allthe phosphorus the plants need during flowering.
5. Top up your reservoir or tank with water to its final level or volume and check the nutrient strength using a TDS (PPM or EC) meter. If required, add more nutrients until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength.
6. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info.
7. Feed according to your systems normal requirements.
8. DO NOT use MAX if you are using Gold Range ADD.27 because Gold Range ADD.27 is the next level of technology and contains all the ingredients of MAX with new ground breaking discoveries that makes Gold Range ADD.27 the most advanced tank additive ever produced! Your nutrient is now supercharged and ready to go!
Gold Range POTASH+
Gold Range POTASH+ is a tank additive that contains multiple suites of various ‘bloom boosting’ elements and has proved itself to be a ‘best seller’ in the worldwide hydroponics industry with added next generation ‘synergistic micro-element binding technologies’ giving your plants the ability to reach their maximal genetic flowering capacity! Only the finest US & British Pharmaceutical phosphorus and EDTA micro-elements are used! Benefits: Larger, more colourful blooms! Maximizes weight and size! Use with all brands of nutrients (except Gold Range NUTRIENT) in all types of systems with all media / substrates!

USAGE INSTRUCTIONS:
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.
To use Gold Range POTASH+, simply follow these easy guidelines!
1. Fill your reservoir or tank to 2/3rds of its capacity.
2. Add Gold Range POTASH+ according to the online Nutrient Calculator or at the rate of 1.5 ml per litre or 5.7 ml per gallon of final tank volume / size before you have added your primary nutrient.
3. Add any other additives such as Gold Range ADD.27, Gold Range Zone or Gold Range SILICA stirring between each addition.
4. Add your primary nutrient such as Gold Range NUTRIENT, Gold Range ONE, ADVANCE, ORIGINAL, stirring well to mix. Please note – If using Gold Range POTASH+ with Gold Range NUTRIENT, be sure to watch your leaf tips for ‘tip burn’ as this is a very powerful combination that should be used only by experienced growers!
5. Top up your reservoir or tank with water to its final level or volume and check the nutrient strength using a TDS (PPM or EC) meter. If required, add more nutrients in until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength.
6. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info.
7. Feed according to your systems normal requirements.

Gold Range ZONE
Gold Range ZONE is a tank additive that has been formulated to provide the optimal ‘Root Zone’ conditions by applying the most modern water cleansing technologies available today! Used by countries all over the world, Gold Range ZONE will provide you with a root system to be proud of and we all know that a healthy root zone equates to healthy plants and yields! Benefits: Less system maintenance required! Keeps media clean and reusable! Use as a maintenance right through grow and flower or as a troubleshooter when your root zone needs to be perfect! Absolute root zone optimization!

USAGE INSTRUCTIONS:
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.
To use Gold Range ZONE, simply follow these easy guidelines!
- LIGHT STRENGTH:
Use this schedule from the day you plant out into your system, to the day you harvest for worry free gardening! Recommended for continual use right through grow and flower when water temperature is below 21C / 70F. Add Gold Range ZONE at the rate of 5 ml / 1 teaspoon per 20 litres / 5 gallons of final tank level or volume, with all other additives and before adding your primary nutrient. Check and adjust final nutrient strength using a TDS (PPM or EC) meter. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info. Feed according to your systems normal requirements.
- MEDIUM STRENGTH:
Use this mid range strength whenever your water temperature reaches or exceeds 23C / 74F. Your root zone can quickly get out of balance when your water temperature reaches or exceeds this mark. Using Gold Range ZONE at this strength, before problems occur, will optimize your root zones condition until your water temperature falls back into the safe area below 21C / 70F. Add Gold Range ZONE at the rate of 9 ml / 2 teaspoons per 20 litres / 5 gallons of final tank level or volume, with all other additives and before adding your primary nutrient. Check and adjust final nutrient strength using a TDS (PPM or EC) meter. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info. Feed according to your systems normal requirements.
- AGGRESSIVE STRENGTH:
Use this strength at first signs of a ‘less than optimal’ root zone. Using Gold Range ZONE at this strength is very effective at quickly re-establishing optimal root zone conditions. Once your plants have regained their vigour, return to using medium strength Gold Range ZONE for the remainder of your growing and / or flowering cycles. Add Gold Range ZONE at the rate of 12 ml / 2 ½ teaspoons per 20 litres / 5 gallons of final tank level or volume, with all other additives and before adding your primary nutrient. Check and adjust final nutrient strength using a TDS (PPM or EC) meter. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info. Feed according to your systems normal requirements.
Gold Range SILICA
Gold Range SILICA is a tank additive that provides that much needed silicon that cannot be supplied in ‘stand alone’ nutrient formulations. Silicon plays an extremely vital role in cellular structure, strength and the health of your plants. Most plants grown in hydroponic systems or even soil can be deficient of this essential element, creating a less than ideal framework for your success! Benefits: Stronger, healthier more vital plants! Capable of supporting larger blooms! Use in all types of systems and with all media / substrates! Can be combined with any nutrient and additive brand!

USAGE INSTRUCTIONS:
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.
To use Gold Range SILICA, simply follow these easy guidelines!
1. Fill your reservoir or tank to 2/3rds of its capacity.
2. If you are using Gold Range ADD.27, Gold Range POTASH+ or Gold Range ZONE then add this next according to the Usage Instructions.
3. Add Gold Range SILICA to your tank according to the online Nutrient Calculator or at the rate of 0.5 ml per litre or 2 ml per gallon of final tank level or volume.
4. Add your primary nutrient such as ADVANCE, ORIGINAL, Gold Range ONE or Gold Range NUTRIENT, stirring well to mix. Please note – Gold Range POTASH+ is not to be used with Gold Range NUTRIENT as Gold Range NUTRIENT provides all the phosphorus the plants need during flowering.
5. Top up your reservoir or tank with water to its final level or volume and check the nutrient strength using a TDS (PPM or EC) meter. If required, add more nutrients until you arrive at the correct nutrient strength. If your nutrient solution is too strong then add fresh water until you arrive at the correct nutrient strength.
6. Adjust pH to approximately 5.5 for Rockwool, Perlite, Clay, Vermiculite, Aeroponics, DWC, NFT, Hydro or Coco users or 5.9 for dirt or soilless systems such as Promix or Sunshine mix. See Growers Tips for more info.
7. Feed according to your systems normal requirements.

Gold Range LIQUID LIGHT
Gold Range LIQUID LIGHT is the foremost advancement in foliar / leaf feeding your plants! It’s a well known scientific fact that foliar feeding is many times more efficient and productive than root feeding. In fact, Dutch Master proved it at a leading Vancouver University using ‘real time fluoroscopy’! Aminos and carbs barely get in to roots whereas they flood into the leaves!
Benefits: The only university proven effective way to deliver carbs & aminos right to where they are needed most – the leaves!
Instant visual results within days! Indoor & outdoor with any type of system in any medium / substrate! For maximum results, just add water and Gold Range SATURATOR and spray the leaves with the lights on for a minimum of 3 hours!

USAGE INSTRUCTIONS:
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.
To use Gold Range LIQUID LIGHT, simply follow these easy guidelines!
1. Add 60 ml / 2 oz of Gold Range LIQUID LIGHT together with 60 ml / 2 oz of Gold Range SATURATOR to 1 litre / 1 quart of water in a spray bottle. For a 500 ml / ½ quart spray bottle add 30 ml / 1 oz of Gold Range SATURATOR and for a 250 ml / 8 oz spray bottle add 15 ml / ½ oz of Gold Range LIQUID LIGHT and 15 ml / ½ oz of Gold Range SATURATOR. Gold Range SATURATOR is an advanced delivery agent that transports Gold Range LIQUID LIGHT right inside the leaves of your plant. Remember, Gold Range LIQUID LIGHT will not work as effectively without Gold Range SATURATOR.
2. * IMPORTANT * Do NOT adjust pH.
3. Gently shake the spray bottle with the solution in it to make sure it is well mixed.
4. * IMPORTANT * Ensure your lights are ON and will be for at least the next 3 hours.
5. Make sure your lights are a minimum of 18 to 24 inches from the tops of your plants then spray your plants until the leaves are evenly coated with the spray solution and a small runoff occurs. MAKE SURE YOU AVOID SPRAYING THE GLOBES / BULBS. You only need to spray the top surface of the leaf because Gold Range SATURATOR will deliver everything inside the leaf. If you needed to raise your lights to spray, you may lower them back down after 30 minutes, as all the solution will be absorbed into the leaf within this time.
6. Spray your plants with Gold Range LIQUID LIGHT and Gold Range SATURATOR spray solution using the above measurements and methods twice per week (or every 3rd day) from the beginning of your grow cycle and right up until approximately the end of the 4th week of flowering.
7. Left over solution may be stored in the spray bottle, in a dark, cool environment, for up to a week. However, it is preferable, for optimal results, to mix fresh solutions just prior to spraying.
8. DO NOT use FOLITECH or MAX-FX if you are using Gold Range LIQUID LIGHT as Gold Range LIQUID LIGHT is the next level of foliar spray technology that contains all the ingredients of FOLITECH and MAX-FX with new ground breaking discoveries that makes Gold Range LIQUID LIGHT the most advanced foliar spray ever produced!
9. Spray half strength Gold Range LIQUID LIGHT on very young plants (typically 1 – 2 weeks old). It is preferable to spray Dutch Master Gold Range A.P.S on cuttings (undiluted with 60 ml / 2 oz of Gold Range SATURATOR) whilst establishing an initial root system.
**Gold Range SATURATOR**

Gold Range SATURATOR is a foliar / leaf spray ‘Delivery Agent’ that introduces a radical next generation technology that creates a unique ‘Dual Action Delivery’. Gold Range SATURATOR takes the nutrients or supplements you spray on your plants and delivers them deep inside the active leaf tissue where it is explosively released with ‘high energy uncoupling’, saturating the leaf cells with your foliar payload! Benefits: Spray your plants with the lights on or off (if using with Gold Range LIQUID LIGHT, then ensure lights are left on for at least 3 hours after spraying leaves)! Suitable for use with all brand foliar products! Correct nutrient deficiencies immediately by spraying 1/3 strength nutrients! Doubles the power of Gold Range LIQUID LIGHT! Spray indoors or outdoors!

**USAGE INSTRUCTIONS:**
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.

To use Gold Range SATURATOR, simply follow these easy guidelines!

1. Add 60 ml / 2 oz of Gold Range SATURATOR together with the required amount of foliar product (according to product usage directions) you wish to spray, to 1 litre / 1 quart of water in a spray bottle. For a 500 ml / ½ quart spray bottle add 30 ml / 1 oz of Gold Range SATURATOR and for a 250 ml / 8 oz spray bottle add 15 ml / ½ oz of Gold Range SATURATOR.
2. **IMPORTANT** * Do NOT adjust pH.
3. Gently shake the spray bottle with the solution in it to make sure it is well mixed.
4. Your lights can be switched on or off and should be a minimum of 18 to 24 inches from the tops of your plants. Spray your plants until the leaves are evenly coated with the spray solution and a small runoff occurs. MAKE SURE YOU AVOID SPRAYING THE GLOBES / BULBS. You only need to spray the top surface of the leaf because Gold Range SATURATOR will deliver absolutely everything inside the leaf using the top surface only. If you needed to raise your lights to spray, you may lower them back down after 30 minutes, as all the solution will be absorbed into the leaf within this time.
5. Left over solution may be stored in the spray bottle, in a dark, cool environment, for up to a week. However, it is preferable, for optimal results, to mix fresh solutions just prior to spraying.

**Gold Range REVERSE**

Gold Range REVERSE is a foliar / leaf spray that has been designed to ease the burden on growers whose worst enemy is an awful seed nightmare! Simply spray 7 days into flower and then again 10 days later – too easy! Modern science allows REVERSE to achieve this remarkable feat by its beneficial effects on the Mesophyll layer of the plant. This layer is responsible for most of a plant's energy production (photosynthesis) and more importantly is the starting point of all the metabolic pathways. Reverse helps a plant to express its natural genetic balances. Benefits: No mixing with water, just add SATURATOR and spray!

**USAGE INSTRUCTIONS:**
For best results, see our Growers Tips and use the online Nutrient Calculator for an individualized interactive feeding program to suit your needs.

To use Gold Range REVERSE, simply follow these easy guidelines!

1. As a preventative aid, spray your plants the first time as required (usually approx 7 days into flower cycle) and once again 10 days later OR can be used at the first sight of trouble by spraying with Gold Range REVERSE immediately and once again 10 days later.
2. **DO NOT DILUTE WITH WATER** - Pour the amount of Gold Range REVERSE you need into a spray bottle. Typically 500 ml / ½ quart is enough for one application for the average sized garden.
3. **Important** * Add Gold Range SATURATOR at the rate of 10 ml / 2 teaspoons per litre / quart only! A 500 ml / ½ quart spray bottle will require 5 ml / 1 teaspoon of Gold Range SATURATOR and a 250 ml / 8 oz spray bottle will require only 2.5 ml / ½ teaspoon of Gold Range SATURATOR.
4. Gently shake the spray bottle with the solution to make sure it is well mixed.
5. **Important** * - you must spray the solution within 15 minutes of adding Gold Range SATURATOR!
6. Make sure your lights are a minimum of 24 inches from the tops of your plants then spray your plants until the leaves are evenly coated with the spray solution and a small runoff occurs. MAKE SURE YOU AVOID SPRAYING THE GLOBES / BULBS. You only need to spray the top surface of the leaf because Gold Range SATURATOR will deliver absolutely everything inside the leaf using the top surface only. If you needed to raise your lights to spray, you may lower them back down after 30 minutes, as all the solution will be absorbed into the leaf within this time.
Gold Range REPLICATOR

Gold Range REPLICATOR is a naturally formed, gentle cutting gel formulated as a specialized cut stem sealant, designed by our Plant Sciences team, that nurtures your newly taken cuttings in a revolutionary and nutritious cocoon. This cocoon ensures successful rooting by providing a specialized environment - soaking the cut end of the stem in a nutritious bath of selected British & US Pharmaceutical grade mineral elements and phyto-nutrients. Benefits: Your cuttings are encouraged to produce roots naturally, not artificially with harsh hormones! Amazing strike rate! Easy to use!

**USAGE INSTRUCTIONS:**

For best results, see our [Growers Tips](#). To use Gold Range REPLICATOR, simply follow these easy guidelines!

1. Soak rockwool cubes / slabs in undiluted Dutch Master Gold Range A.P.S. Do not adjust pH!
2. Allow the cubes / slabs to fully soak with Gold Range A.P.S solution, remove and gently squeeze out any excess.
3. Pour the amount of Gold Range REPLICATOR you need into another small bottle. Typically a small, empty and clean medicine bottle can be used. To avoid contamination discard remainder gel after use.
4. After taking your cuttings in your preferred manner (typically a diagonal cut across the stem with a sterile, sharp blade generally using side branches from a mother plant, retaining 2 – 4 sets of leaves per cutting), then simply dip the bottom 10mm / ½ inch of the cut end of the stem into Gold Range REPLICATOR.
5. Pre-poke snug holes into rockwool cubes / slabs or similar rooting medium and carefully push cuttings into pre-formed holes. Your cuttings must be a firm fit into the rockwool cubes / slabs or similar rooting medium.
6. For best results, place cuttings into a propagation tray with a vented clear lid on a thermostatically controlled heat mat.
7. Maintain moist cubes / slabs with undiluted Gold Range A.P.S and also lightly spray cuttings every one to two days, as required, with Gold Range A.P.S and Gold Range SATURATOR (add 60 ml / 2 oz of Gold Range SATURATOR to 1 litre / 1 quart of undiluted Gold Range A.P.S).
8. At the first sign of roots, ‘harden off’ cuttings by allowing more airflow in propagation tray.
9. When multiple roots begin to appear from the bottom of your cube / slab – They are ready to plant out into your main grow system!

Gold Range A.P.S

Gold Range A.P.S is a major leap forward with advancements in the arena of striking cuttings! Ready to use straight out the bottle, Gold Range A.P.S is the first ‘Cutting Specific’ multi-purpose nutrient and foliar / leaf spray designed to carefully nurture your precious babies! Use as an initial ‘cube / slab soak’ to perfectly pH balance and fertilize your rockwool or simply add SATURATOR and foliar / leaf spray for guaranteed success! Benefits: Makes rockwool conditioning so simple! Ready to use straight out the bottle – no dilution required! Root and foliar feed with one product – too easy!

**USAGE INSTRUCTIONS:**

For best results, see our [Growers Tips](#). To use Gold Range A.P.S, simply follow these easy guidelines!

1. Pour the amount of Gold Range A.P.S you require into a container large enough to hold and soak your rockwool cubes / slabs.
2. Allow the cubes / slabs to fully soak with Gold Range A.P.S solution for a few minutes then remove and gently squeeze out any excess.
3. Pour the amount of Gold Range REPLICATOR you need into another small bottle. Typically a small, empty and clean medicine bottle can be used. To avoid contamination discard remainder gel after use.
4. After taking your cuttings in your preferred manner (typically a diagonal cut across the stem with a sterile, sharp blade generally using side branches from a mother plant, retaining 2 – 4 sets of leaves per cutting), then simply dip the bottom 10mm / ½ inch of the cut end of the stem into Gold Range REPLICATOR.
5. Pre-poke snug holes into rockwool cubes / slabs or similar rooting medium and carefully push cuttings into pre-formed holes. Your cuttings must be a firm fit into the rockwool cubes / slabs or similar rooting medium.
6. For best results, place cuttings into a propagation tray with a vented clear lid on a thermostatically controlled heat mat.
7. Maintain moist cubes / slabs with undiluted Gold Range A.P.S and also lightly spray cuttings every one to two days, as required, with Gold Range A.P.S and Gold Range SATURATOR (add 60 ml / 2 oz of Gold Range SATURATOR to 1 litre / 1 quart of undiluted Gold Range A.P.S).
8. At the first sign of roots, ‘harden off’ cuttings by allowing more airflow in propagation tray.
9. When multiple roots begin to appear from the bottom of your cube / slab – They are ready to plant out into your main grow system!