HGV

Superior Plant Nutrition

MIXING GUIDELINES



HGV

Superior Plant Nutrition

Mixing & Application Guide

HGV Usage Rates

Stock Tank Mixing

Dry Step By Step

1	Mix dry bags separately into water at desired concentration. → Follow HGV stock tank mixing SOP.
2	Validate usage rates. → Use usage guidelines to confirm EC targets.
3	Input injection rates into dosers or ml/gal in batch tanks.
4	Verify EC and pH.

Liquid Step By Step

1	Validate usage rates. → Use usage guidelines to confirm EC targets.
2	Input injection rates into dosers or ml/gal in batch tanks.
3	Verify EC and pH after mixing.

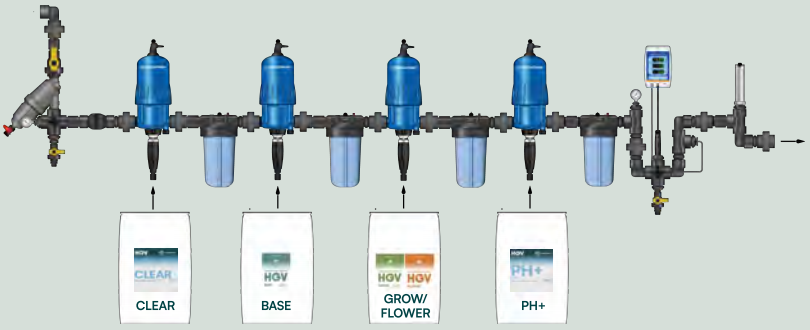
Always verify EC and pH at the point of delivery to ensure accuracy.

HGV Mixing

Using PH+ Products

Recommended Mixing Order:

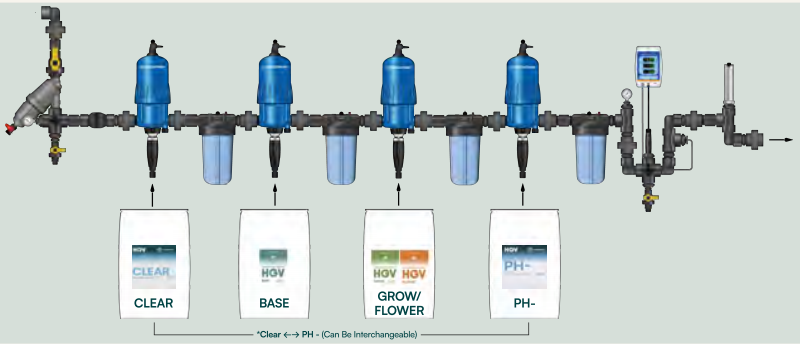
1. HGV Clear (Hypochlorous Acid)
2. HGV Base (Calcium Nitrate)
3. HGV Flower Or HGV Grow
4. HGV PH+ (Or Equivalent)



Using PH- Products

Recommended Mixing Order:

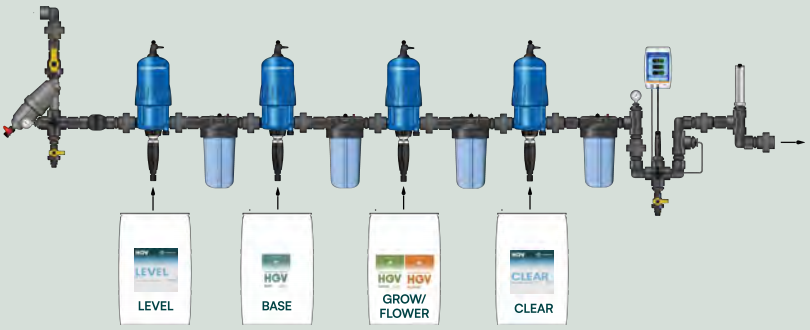
1. Clear (Hypochlorous Acid)
2. HGV Base (Calcium Nitrate)
3. HGV Flower Or HGV Grow
4. HGV PH- (Or Equivalent)



Using Level Products

Recommended Mixing Order:

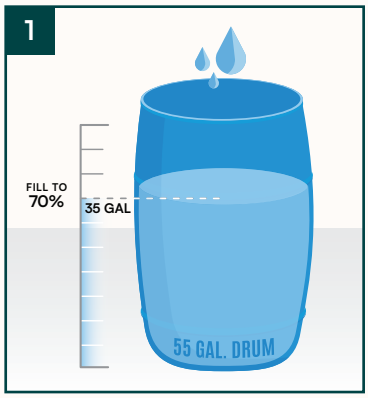
1. HGV Level (Or Potassium Silicate Equivalent)
2. HGV Base
3. HGV Flower Or HGV Grow
4. Clear (Hypocholorous Acid)



For additional help, contact your HGV rep or visit hgvnutrients.com/resources

HGV Mixing Instructions

Stock Tank Mixing



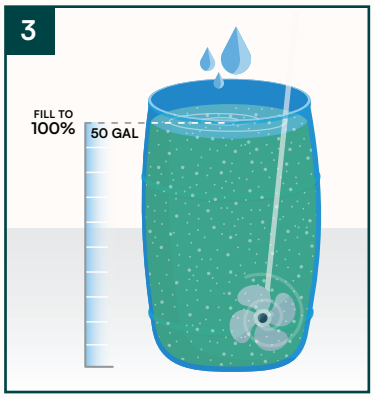
1. Add Water

Fill tank to 70% of final volume. Warm or hot water is preferred.



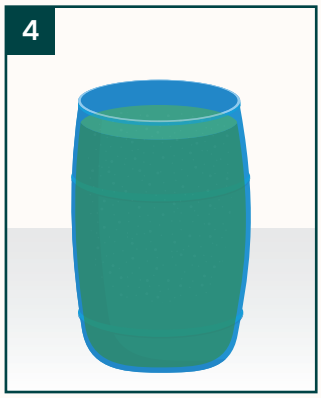
2. Add HGV

While agitating, add total Lbs/Gal weight of HGV Flower or HGV Grow.



3. Add Water & Mix

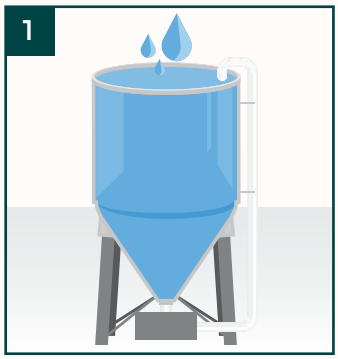
Fill tank to full target volume. Continue to agitate until fully dissolved.



4. You're Done!

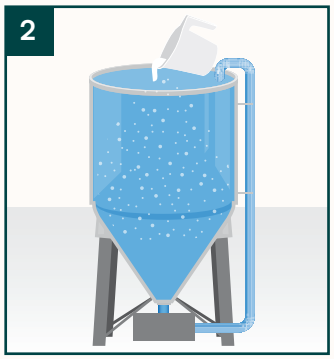
Your liquid concentrate is now ready to dose.

Batch Tank Dosing with either liquid concentrate or g/gal



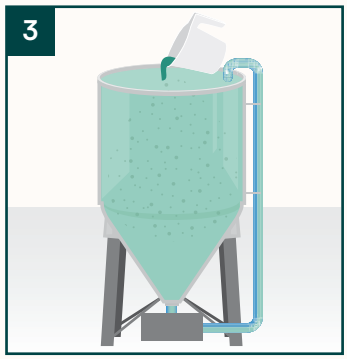
1. Add Water

Add water to tank (total volume).



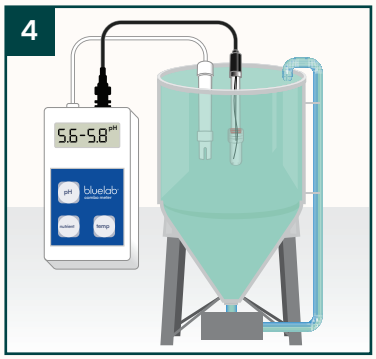
2. Add Base

Add HGV Base (or Cal. Nitrate) to tank, let mix for 5 minutes.



3. Add HGV

Add HGV Flower or HGV Grow to tank, let mix for 5 minutes.



4. Check EC, Adjust pH

Once you achieve a target EC of 3.0 and pH range of 5.6-5.8, it is ready to use.

View Usage Rates

Other Guidelines

- Concentration is determined by doser capacity and water temp.
- Acceptable Mix Rates: 0.5 — 2.5 Lbs/Gal
- Stock tank mixing - Calculate volume for entire bag usage
- Once stock tank is mixed, there is no need to agitate further

HGV Usage Rates

Usage Rates (mL/Gal)

Liquid Line Usage Rates

1 Lb/Gal			
EC	Base	Grow	Flower
1.0	13 mL	23 mL	23 mL
1.5	19 mL	32 mL	32 mL
2.0	29 mL	48 mL	48 mL
2.5	38 mL	65 mL	65 mL
3.0	46 mL	76 mL	76 mL
3.5	53 mL	89 mL	89 mL
4.0	61 mL	102 mL	102 mL

2 Lb/Gal			
EC	Base	Grow	Flower
1.0	7 mL	12 mL	12 mL
1.5	11 mL	18 mL	18 mL
2.0	14 mL	24 mL	24 mL
2.5	19 mL	31 mL	31 mL
3.0	22 mL	36 mL	36 mL
3.5	28 mL	46 mL	46 mL
4.0	31 mL	53 mL	53 mL

2.5 Lb/Gal			
EC	Base	Grow	Flower
1.0	6 mL	10 mL	10 mL
1.5	10 mL	16 mL	16 mL
2.0	12 mL	19 mL	19 mL
2.5	16 mL	26 mL	26 mL
3.0	18 mL	30 mL	30 mL
3.5	22 mL	36 mL	36 mL
4.0	25 mL	42 mL	42 mL

Stock Tank Validation

	1 Lb/Gal			2 Lb/Gal			2.5 Lb/Gal		
	Base	Grow	Flower	Base	Grow	Flower	Base	Grow	Flower
	20 mL	20 mL	20 mL	20 mL	20 mL	20 mL	20 mL	20 mL	20 mL
EC	0.7	0.6	0.6	1.4	1.1	1.1	1.7	1.3	1.3
Acceptable Range	0.6—0.8	0.56—0.64	0.56—0.64	1.3—1.5	1.05—1.15	1.05—1.15	1.6—1.8	1.25—1.35	1.25—1.35

Usage Rate - 25 Lb. Bag

(Grams/Gal)

EC	Base	Grow	Flower
1.0	1.4 g	2.3 g	2.3 g
1.5	2.1 g	3.5 g	3.5 g
2.0	2.8 g	4.7 g	4.7 g
2.5	3.5 g	5.8 g	5.8 g
3.0	4.2 g	7.0 g	7.0 g
3.5	4.9 g	8.2 g	8.2 g
4.0	5.6 g	9.3 g	9.3 g

Usage Rate Adjustment Calculator

If usage rate does not obtain target EC, use the formula below to adjust.

- Actual EC ÷ Target EC = Difference
- Current mL/Gal ÷ Difference = New Value
- New Value will achieve target EC

Example:

2.5 EC ÷ 3.0 EC = 0.833

15 ÷ 0.833 = **18**

25 ÷ 0.833 = **30**

New Usage Rate Value:

Base = **18**

Grow/ Flower = **30**

Last update: 7/29/24

HGV

Condition Line

Usage Guidelines



What Is HGV PH +?

HGV pH + is 17% K_2O derived from potassium hydroxide. It's designed to raise pH levels when your solution is below the optimal range for nutrient uptake, helping ensure proper absorption throughout the plant's life cycle.

What Is HGV PH –?

HGV pH – is 20% K_2O_5 derived from phosphoric acid, formulated to lower pH levels when your nutrient solution is above optimal ranges for nutrient availability. Lowering pH ensures balanced nutrient uptake and improves consistency throughout the plant's lifecycle.

How To Use HGV PH +

- **Dilution is strongly recommended** before use to reduce the risk of nutrient interactions.
- Standard dilution: 50:1 — mix 1 gallon of HGV pH + with 50 gallons of fresh water.
- After dilution, inject only after all nutrients have been fully mixed into the solution.
- To determine the correct usage rate, start with a 1-gallon test mix and adjust based on your source water and desired pH outcome.

Dilution Rate:

- 50:1 (50 gallons fresh water : 1 gallon HGV pH + concentrate).

Usage (After Dilution):

- 15—35 mL per gallon of nutrient solution.
- Adjust based on source water pH and nutrient mix.

Disclaimer - Always verify the final pH before applying to plants. Start low and test frequently.

How To Use HGV PH -

- HGV pH – can be used undiluted directly from the bottle in systems with adequate dosing capacity.
- If your injection system has limited dosing volume, it's recommended to pre-dilute for accurate metering.
- A 1:1 dilution (1 part HGV pH – to 1 part water) is the minimum recommended, and can be adjusted further based on system needs.

Usage Rate (Concentrated):

- 0.25 — 5 mL per gallon of nutrient solution.
- Start with a lower dose and increase gradually to reach desired pH.

Optional Dilution:

- 1:1 (1 gallon HGV pH – : 1 gallon water).
- Useful for precision dosing, automation compatibility, and minimizing injection errors.

Disclaimer - Always verify pH after dosing. Handle with care — use appropriate PPE when working with acids.

Safety Considerations

When handling water conditioners, always wear proper PPE including gloves, eye protection, and long sleeves. Work in a well-ventilated area and avoid direct contact with skin or eyes. Store products securely and refer to the Safety Data Sheet (SDS) for detailed handling and emergency instructions.

For additional help, contact your HGV rep or visit hgvnutrients.com/resources

HGV

Condition Line

Usage Guidelines



What Is HGV Level?

HGV Level is 3% K_2O derived from potassium silicate. It acts as a mild pH stabilizer while also providing plant-available silicon, which supports stronger cell walls, improved plant structure, and more efficient nutrient uptake throughout the plant's lifecycle.



What Is HGV Clear?

HGV Clear is 0.028% hypochlorous acid solution designed to support clean irrigation systems by reducing biofilm, minimizing microbial buildup, and promoting overall system hygiene. It is safe, non-toxic, and compatible with nutrients — making it a reliable addition to any fertigation routine.

How To Use HGV Level

Always add first in your mixing or dosing sequence.

- This ensures proper homogenization and reduces the risk of nutrient interactions.
- Can be used undiluted directly from the bottle.
- If dilution is preferred (e.g., for automated dosing or volume limitations), start with a 1:1 dilution and adjust as needed.
- Conduct a 1-gallon mix test to fine-tune dosing and compatibility.

Usage Rate (Concentrated):

- 1—5 mL per gallon of nutrient solution (undiluted).

Optional Dilution:

- 1:1 (1 part HGV Level : 1 part water).
- Ideal for precision injection or reduced concentration handling.

Disclaimer - Potassium silicate can precipitate if mixed out of order. Always add first and allow for thorough agitation.

How To Use HGV Clear

- Can be added first or last in the mixing sequence — its passive nature minimizes reactivity.
- No dilution is required — product is ready to use out of the bottle.
- Best used as part of a preventative maintenance program to reduce biofilm buildup and promote consistent system performance.

Usage Rate (Concentrated):

- 2—10 mL per gallon of nutrient solution.
- Adjust based on water source, system condition, and sanitation goals.

Disclaimer - HGV Clear supports irrigation line cleanliness and is safe for use alongside all nutrient programs.

Safety Considerations

When handling water conditioners, always wear proper PPE including gloves, eye protection, and long sleeves. Work in a well-ventilated area and avoid direct contact with skin or eyes. Store products securely and refer to the Safety Data Sheet (SDS) for detailed handling and emergency instructions.

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Feed Schedule

Unit: mL/gal	2.5 lb/gal & Liquid Formula										
Phase	Veg		Flower								
Irrigation Method	Vegatative		Generative			Vegatative			Generative		
Mixing Order	Clone Soak	Clones /Mother/ Veg	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
Clear	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5	2-5
HGV Base	10	18	18	18	18	18	18	18	18	18	10
HGV Grow	16	30									
HGV Flower			30	30	30	30	30	30	30	30	16
Target EC	1.5	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	1.5
Target PPM 500	750	1500	1500	1500	1500	1500	1500	1500	1500	1500	750
Target PPM 700	1050	2100	2100	2100	2100	2100	2100	2100	2100	2100	1050

- This feed chart is designed for **Coco and Rockwool** systems.
  - For **soil or outdoor applications**, please contact your HGV support representative for tailored recommendations.
- Target ECs are a baseline recommendation. Actual EC requirements may vary depending on **environmental conditions, lighting intensity, and plant response.**
  - For tailored adjustments, please contact your HGV support representative.
- **For pH +/- and HGV Level usage recommendations:**
  - Contact your HGV support representative or visit www.hovnutrients.com for detailed guidance.

For additional help, contact your HGV rep or visit hgvnutrients.com/resources