



WATER-SOLUBLE FERTILIZERS FOR COMMERCIAL GROWERS

USAGE GUIDE



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About FloraPro®

WHY FLORAPRO® WORKS FOR YOU

LEGACY DOESN'T SPROUT OVERNIGHT. IT'S GROWN OVER DECADES

Since 1976, General Hydroponics has been at the center of a global community of growers who take pride in their craft. We know what it's like to push boundaries, defy the rules, and create something extraordinary. Because that's exactly how we got our start.

WE'VE EARNED THE HIGH HYPE

FloraPro is for the growers who can't afford inconsistency and won't settle for mediocrity. This isn't flowery speech. It's rooted in 50 years of research, testing, and experience. When you choose FloraPro powdered nutrients for your plants, you take on the responsibility of handling precise measurements and mixing elements tailored for crops like cannabis. It's a quality process that demands quality nutrients, and we provide nothing short of it. Whether you're running a craft operation or managing multiple facilities across the country, FloraPro powdered nutrients give you customizable control that's just as convenient as it is consistent.

Because at General Hydroponics, we're not just in the business of cultivating cannabis. We're in the business of growing growers.



FOUR BAGS, ONE COMPLETE SOLUTION

NUTRITION THAT MOVES WITH YOUR GROW

FloraPro gives you a reliable four-part system that allows you to taper nitrogen levels correctly while maintaining optimal levels of phosphorus, potassium, magnesium, and sulfur. Reference our FloraPro feed programs for rate recommendations meticulously designed to provide the ideal NPK ratios at every plant phase.

WHEN TO USE EACH POWDER

	PROPAGATION	VEGETATIVE	EARLY FLOWER	MID FLOWER	LATE FLOWER	FINISH
CALCIUM + MICROS	✓	✓	✓	✓	✓	✓
GROW	✓	✓				
BLOOM			✓	✓	✓	
LATE BLOOM			✓	✓	✓	✓

AS THE PROGRAM ADVANCES, WE ACHIEVE TWO MAJOR GOALS:

- Maximize Yield:** We reduce Nitrogen from Early to Mid Flower to weaken the vegetative signal, prompting the plant to direct resources into developing flowers, causing them to swell.
- Encourage Maturation:** During the last 2–3 weeks, a further drop in Nitrogen induces natural leaf senescence. This triggers a strong final effort by the plant to focus all remaining resources on finishing.

THE LINEUP

CALCIUM + MICROS (14-0-0)



The foundation of every mix. This formula supplies calcium, nitrate nitrogen, and a full suite of chelated micronutrients for easy uptake. These micros support enzyme activity, cell-wall strength, and balanced metabolism. Since calcium is immobile in the plant, a fresh supply of Calcium + Micros is crucial at every stage.

GROW (10-12-22)



Designed specifically for vegetative growth. Grow supports steady nutrient uptake during vegetation. It's precise ammoniacal-to-nitrate nitrogen balance and higher N-to-K ratio support rapid leaf growth, stem development, and root establishment. Grow builds a sturdy frame and should be paired with Calcium + Micros in all vegetative recipes.

BLOOM (7-12-27)



Balanced nutrition for flower development. Bloom shifts the N-to-K ratio toward potassium to support flower-focused metabolism, driving bud initiation and flower formation. Phosphorus fuels energy transfer and early reproductive development. During early and mid-flower, Bloom is the primary driver, working alongside Late Bloom, for peak performance. Pair with Calcium + Micros to maintain strong cell walls as flowering intensifies.

LATE BLOOM (0-24-26)



Formulated for the final stages. Late Bloom is nitrogen-free and guides plants transitioning from late flowering to ripening. Phosphorus, potassium, and sulfur support tighter flower formation and enhance aroma, flavor, and resin quality. Designed to be used alongside Bloom, Late Bloom fine-tunes the final weeks for control over density, finish, and overall crop expression.

WHAT ARE WATER-SOLUBLE FERTILIZERS?

THE CHEMICAL COMPONENTS

Plants need a balanced diet, just like we do. They rely on six macronutrients — N, P, K, Ca, Mg, and S —for most of their growth, supported by essential micronutrients like Fe, Mn, Zn, B, Cu, and Mo. FloraPro delivers them all in precise ratios clearly listed on every bag, so you always know exactly what your plants are getting.

GROUNDBREAKING GROWTH... MINUS THE GROUND

Hydroponics is the process of cultivating plants using a water-based nutrient solution rather than native soil. This methodology is powered by water-soluble fertilizers (WSF)—engineered dry blends of mineral salts that dissolve completely in water to deliver essential nutrition in its most accessible form. For decades, WSFs have set the standard for commercial crop production. They offer a highly concentrated, shelf-stable, and cost-effective foundation for your crop's nutrition, all without sacrificing performance.



BIG BENEFITS OF WATER SOLUBLE FERTILIZERS



OPERATIONAL ADVANTAGES

UNIFORM APPLICATION

Fully soluble powders distribute evenly through irrigation, drip, or spray systems.

CONSISTENT CROP QUALITY

When plants get the same feed, it makes their size, maturity, and marketability more uniform.

REDUCED LOGISTICS FOOTPRINT

Compact powders save on weight, freight, storage, and overall handling costs.



PLANT IMPACT

IMMEDIATE NUTRIENT AVAILABILITY

Dissolved nutrients are already in ionic form, so the plant takes them up almost instantly.

OPTIMIZED GROWTH CYCLES

Fast uptake keeps the plant stocked with its essential nutrients at each stage.

EFFICIENT NUTRIENT USE

More nutrients reach the plant, reducing waste and runoff.



GROWER CONTROL

STAGE-SPECIFIC FORMULATION

Easily switch formulas to match the plant's stage, from high-nitrogen vegetation to high-potassium bloom.

PRECISE CONTROL AND CUSTOMIZATION

Consistent N–P–K ratios enable precise mixing to specific EC targets, making fine-tuning nutrient levels simple and highly controlled.

IDEAL FOR FERTIGATION

Concentrated stock solutions run smoothly through water-powered, pneumatic, and Venturi systems without clogging or separation.

Feed Insights

FLORAPRO STOCK SOLUTION

STANDARD POWDER FEED PROGRAM



BEFORE GETTING STARTED

- Application rates are based on a stock solution concentration of 1 lb per gallon.
- Feed rates in mL per gallon.
- To adjust EC targets, scale all FloraPro components 10–15%; monitor response. Contact Tech Services for support on larger recipe changes.

PROPAGATION

PRODUCT	RATE
FLORAPRO CA+MICROS	7.0
FLORAPRO GROW	9.0
FLORAPRO BLOOM	—
FLORAPRO LATE BLOOM	—
*TRUEFLO	3
NITROGEN (PPM)	60
**TARGET PH	5.5 - 5.8
EC (MS/CM)	0.6 - 0.8

MIXING ORDER

PROPAGATION TIPS

- Soak the clone plugs in your prepared nutrient solution before inserting the cuttings.
- Keep the substrate evenly moist.
- Avoid aggressive dry-backs until roots are fully established.

VEGETATIVE WEEKS 1 - 3

PRODUCT	RATE
FLORAPRO CA+MICROS	30.0
FLORAPRO GROW	35.0
FLORAPRO BLOOM	—
FLORAPRO LATE BLOOM	—
*TRUEFLO	3
NITROGEN (PPM)	240
**TARGET PH	5.6 - 6.1
EC (MS/CM)	2.3 - 2.5

MIXING ORDER

VEGETATIVE TIPS

- Monitor stretch and stem rigidity. Adjust N/irrigation if tissue is soft or internodes are excessive.
- For prolonged veg, use rates from "High EC Program" for "Late Veg" before transitioning to flower.
- Increase irrigation as roots grow; maintain dry-backs for oxygen availability.
- Baseline root zone EC/pH in early veg to identify trends before issues manifest.

EARLY FLOWER WEEKS 1 - 3

PRODUCT	RATE
FLORAPRO CA+MICROS	30.0
FLORAPRO GROW	—
FLORAPRO BLOOM	31.5
FLORAPRO LATE BLOOM	8.0
*TRUEFLO	3
NITROGEN (PPM)	200
**TARGET PH	5.7 - 6.2
EC (MS/CM)	2.4 - 2.6

MIXING ORDER

EARLY FLOWER TIPS

- For shorter flowering genetics, shorten the use of this recipe by 1 week.
- Weeks 2–3: Monitor stretch/rigidity. If N or irrigation is excessive, shorten "Early Flower" by one week to accelerate the lower-N "Mid Flower" transition.
- Monitor root zone EC, pH, and moisture; prevent salt accumulation and crop damage.

MID FLOWER WEEKS 4 - 6

PRODUCT	RATE
FLORAPRO CA+MICROS	26.5
FLORAPRO GROW	—
FLORAPRO BLOOM	27.5
FLORAPRO LATE BLOOM	14.0
*TRUEFLO	3
NITROGEN (PPM)	180
**TARGET PH	5.7 - 6.2
EC (MS/CM)	2.3 - 2.5

MIXING ORDER

MID FLOWER TIPS

- Peak nutrient demand: Monitor root zone closely to quickly identify undesired changes to EC/pH as plants transition into this bulk/stack phase.
- Optimize airflow and humidity to support transpiration; this is critical during peak nutrient demand to ensure proper transport of nutrients.

LATE FLOWER WEEKS 7 - 8

PRODUCT	RATE
FLORAPRO CA+MICROS	18.5
FLORAPRO GROW	—
FLORAPRO BLOOM	15.5
FLORAPRO LATE BLOOM	24.0
*TRUEFLO	3
NITROGEN (PPM)	115
**TARGET PH	5.7 - 6.2
EC (MS/CM)	1.9 - 2.1

MIXING ORDER

LATE FLOWER TIPS

- Observe senescence: Uniform fade indicates controlled N reduction; patchy color suggests imbalance. Maintain stability rather than chasing color with late-stage nutrient cuts.
- Monitor root zone EC trends to correct salt accumulation as nutrient strength tapers down.
- Continued nitrogen reduction is critical during the final stages of flower development. Feed the Late Flower recipe or 10-14 days before transitioning to the Finish recipe or plain water flush prior to harvest.

FINAL WEEKS 9+

PRODUCT	RATE
FLORAPRO CA+MICROS	12.5
FLORAPRO GROW	—
FLORAPRO BLOOM	—
FLORAPRO LATE BLOOM	29.0
*TRUEFLO	3 - 9
NITROGEN (PPM)	50
**TARGET PH	5.7 - 6.2
EC (MS/CM)	1.3 - 1.5

MIXING ORDER

FINISH TIPS

- Shorten or replace plain water flushing with this Finish recipe.
- Monitor how quickly plants respond to nitrogen reduction. A noticeable color change in fan leaves is expected in many cultivars, but leaves should remain functional to support the final stages of flower development.
- Confirm harvest timing with trichome maturity, not just leaf color.

*0.028% HOCl. TrueFlo should be added to the nutrient solution after the pH has been lowered through the addition of mineral fertilizers or acidic pH adjusters. Apply in pH range of 4.0 - 6.5 for best results. TrueFlo rates can be increased. 5-9 mL/gal will prevent line buildup when using supplements as part of the FloraPro Powder Feed Program.

**The pH levels shown on this chart are optimized for use with Rockwool or Coco growing media. For peat-based media, increase pH range to 6.0 - 6.4 throughout the lifecycle.

Disclaimer: Feed chart provided as a recommendation only. Actual plant needs and/or results achieved may vary.



FLORAPRO STOCK SOLUTION

HIGH EC POWDER FEED PROGRAM



BEFORE GETTING STARTED

- Application rates are based on a stock solution concentration of 1 lb per gallon.
- Feed rates in mL per gallon.
- Match Nutrient Intensity to Environmental Capacity; avoid High
- EC rates in low-energy environments.
- To adjust EC targets, scale all FloraPro components 10–15%; monitor response. Contact Tech Services for support on larger recipe changes.

PROPAGATION

PRODUCT	RATE
FLORAPRO CA+MICROS	7.0
FLORAPRO GROW	9.0
FLORAPRO BLOOM	—
FLORAPRO LATE BLOOM	—
*TRUEFLO	3
NITROGEN (PPM)	60
**TARGET PH	5.5 - 5.8
EC (MS/CM)	0.6 - 0.8

MIXING ORDER

PROPAGATION TIPS

- Soak the clone plugs in your prepared nutrient solution before inserting the cuttings.
- Keep the substrate evenly moist.
- Avoid aggressive dry-backs until roots are fully established.
- As roots emerge, rapidly scale nutrient concentration towards vegetative strength to maximize early biomass development.

VEGETATIVE WEEKS 1 - 3

PRODUCT	RATE
FLORAPRO CA+MICROS	31.0
FLORAPRO GROW	38.0
FLORAPRO BLOOM	—
FLORAPRO LATE BLOOM	—
*TRUEFLO	4
NITROGEN (PPM)	250
**TARGET PH	5.6 - 6.1
EC (MS/CM)	2.5 - 2.7

MIXING ORDER

VEGETATIVE TIPS

- Monitor stretch and stem rigidity. Adjust N/irrigation if tissue is soft or internodes are excessive.
- For prolonged veg, use rates from “Standard Program” for “Early Veg” before stepping up to High EC.
- Increase irrigation as roots grow; maintain dry-backs for oxygen availability.
- Baseline root zone EC/pH in early veg to identify trends before issues manifest.

EARLY FLOWER WEEKS 1 - 3

PRODUCT	RATE
FLORAPRO CA+MICROS	30.0
FLORAPRO GROW	—
FLORAPRO BLOOM	33.0
FLORAPRO LATE BLOOM	12.5
*TRUEFLO	4
NITROGEN (PPM)	210
**TARGET PH	5.7 - 6.2
EC (MS/CM)	2.6 - 2.8

MIXING ORDER

EARLY FLOWER TIPS

- For shorter flowering genetics, shorten the use of this recipe by 1 week.
- Weeks 2–3: Monitor stretch/rigidity. If N or irrigation is excessive, shorten “Early Flower” by one week to accelerate the lower-N “Mid Flower” transition.
- Monitor root zone EC, pH, and moisture; prevent salt accumulation and crop damage.

MID FLOWER WEEKS 4 - 6

PRODUCT	RATE
FLORAPRO CA+MICROS	28.5
FLORAPRO GROW	—
FLORAPRO BLOOM	25.5
FLORAPRO LATE BLOOM	21.0
*TRUEFLO	4
NITROGEN (PPM)	185
**TARGET PH	5.7 - 6.2
EC (MS/CM)	2.4 - 2.6

MIXING ORDER

MID FLOWER TIPS

- Peak nutrient demand: Monitor irrigation closely to prevent root zone EC/pH fluctuations.
- Confirm root zone EC/pH before reacting to visual plant responses.
- Note marginal leaf burn; early signs likely indicate salt buildup vs. nutrient deficiency.
- Optimize airflow and humidity to support transpiration; this is critical during peak nutrient demand to ensure proper transport of nutrients.

LATE FLOWER WEEKS 7 - 8

PRODUCT	RATE
FLORAPRO CA+MICROS	19.0
FLORAPRO GROW	—
FLORAPRO BLOOM	15.0
FLORAPRO LATE BLOOM	26.0
*TRUEFLO	4
NITROGEN (PPM)	115
**TARGET PH	5.7 - 6.2
EC (MS/CM)	1.9 - 2.1

MIXING ORDER

LATE FLOWER TIPS

- Observe senescence: Uniform fade indicates controlled N reduction; patchy color suggests imbalance. Maintain stability rather than chasing color with late-stage nutrient cuts.
- Monitor root zone EC trends to correct salt accumulation as nutrient strength tapers down.
- Continued nitrogen reduction is critical during the final stages of flower development. Feed the Late Flower recipe for 10-14 days before transitioning to the Finish recipe or plain water flush prior to harvest.

FINAL WEEKS 9+

PRODUCT	RATE
FLORAPRO CA+MICROS	12.5
FLORAPRO GROW	—
FLORAPRO BLOOM	—
FLORAPRO LATE BLOOM	32.0
*TRUEFLO	4 - 9
NITROGEN (PPM)	50
**TARGET PH	5.7 - 6.2
EC (MS/CM)	1.5 - 1.7

MIXING ORDER

FINISH TIPS

- Shorten or replace plain water flushing with this Finish recipe.
- Monitor how quickly plants respond to nitrogen reduction. A noticeable color change in fan leaves is expected in many cultivars, but leaves should remain functional to support the final stages of flower development.
- Confirm harvest timing with trichome maturity, not just leaf color.

*0.028% HOCl. TrueFlo should be added to the nutrient solution after the pH has been lowered through the addition of mineral fertilizers or acidic pH adjusters. Apply in pH range of 4.0 - 6.5 for best results. TrueFlo rates can be increased. 5-9 mL/gal will prevent line buildup when using supplements as part of the FloraPro Powder Feed Program.

**The pH levels shown on this chart are optimized for use with Rockwool or Coco growing media. For peat-based media, increase pH range to 6.0 - 6.4 throughout the lifecycle.

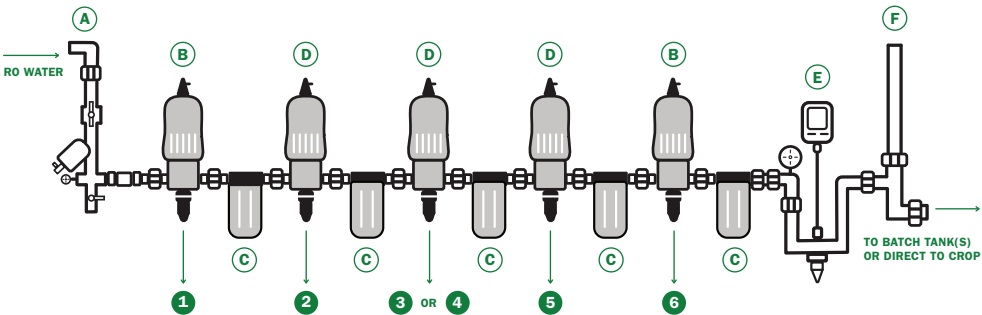
Disclaimer: Feed chart provided as a recommendation only. Actual plant needs and/or results achieved may vary.



POWDER FEED PROGRAM

HI-FLO PANEL CONFIGURATION

HI-FLO RATED FOR 2.2-40 GPM OR 4.3-116 PSI



TAG	QUANTITY	DOSATRON PART NUMBER	DESCRIPTION
A	1	HYKSTART150	HI-FLO 1 1/2" STARTER KIT
*B	2	D40MZ3000BPVFHY D40MZ3000BPAFHY	40 GPM DOSING PUMP 1.25 TO 7.5 ML
C	4	HYKMC150	HI-FLO 1 1/2" MIXING CHAMBER KIT
D	3	D40MZ1000BPVFHY	40 GPM DOSING PUMP 3.75 - 37.5 ML/GAL
E	1	HYKMON150	HI-FLO 1 1/2" MONITOR KIT
F	1	WHA150-SS-KIT	WATER HAMMER ARRESTOR KIT

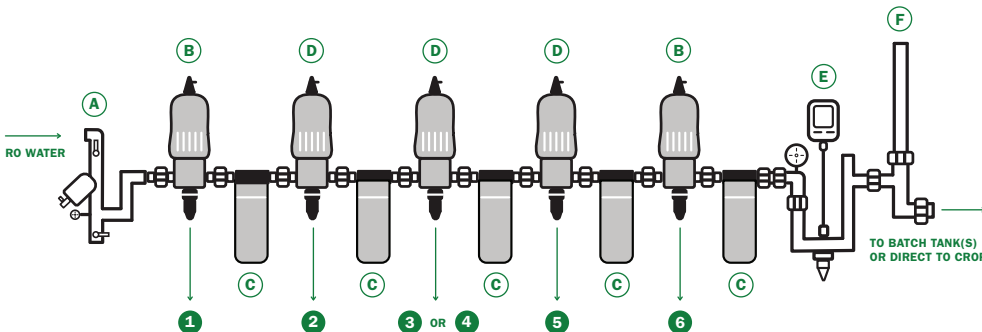
*SEAL OPTIONS

Viton Seals (VF) - For products with neutral to acidic pH. (TrueFlo & pH Down)
Aflas Seals (AF) - For products with a higher than neutral to alkaline pH. (Silicates & pH Up)

POWDER FEED PROGRAM

LO-FLO PANEL CONFIGURATION

LO-FLO RATED FOR 0.05-14 GPM OR 4.3-85 PSI



TAG	QUANTITY	DOSATRON PART NUMBER	DESCRIPTION
A	1	HYKSTART-STD	LO-FLO 3/4" STANDARD STARTER KIT
*B	2	D14MZ3000VFBPHY D14MZ3000AFBPHY	14 GPM DOSING PUMP 1.25 TO 11 ML
C	4	HYKMC34	LO-FLO 3/4" MIXING CHAMBER KIT
D	3	D14MZ1000BPVFHY	14 GPM DOSING PUMP 3.75 TO 37.5 ML
E	1	HYKMON	LO-FLO 3/4" MONITOR KIT
F	1	WHA34-SS-KIT	WATER HAMMER ARRESTOR KIT

*SEAL OPTIONS

Viton Seals (VF) - For products with neutral to acidic pH. (TrueFlo & pH Down)
Aflas Seals (AF) - For products with a higher than neutral to alkaline pH. (Silicates & pH Up)

Mixing Guide

WHAT STOCK SOLUTIONS ARE AND THE THREE PROCESS OPTIONS

UNDERSTANDING STOCK SOLUTIONS

When you're aiming for consistent, high-performance growth, stock solutions are your backbone. A stock solution is a concentrated, pre-dissolved mix of WSFs that is then dosed to the plants. Regardless of the size of your operation, successful production of stock solutions generates repeatable accuracy, more predictable results, and clean running fertigation systems.

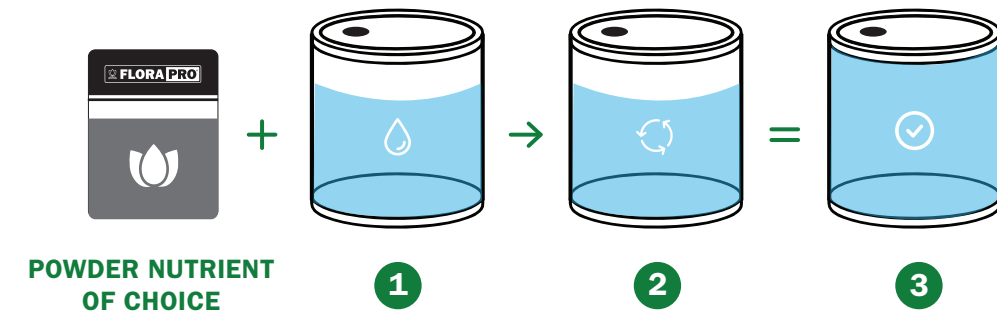
WHY STOCK SOLUTIONS STAY SEPARATE

In nutrient chemistry, some elements simply don't play well together at high concentrations. For example, calcium can't be concentrated with phosphorus or sulfur without forming insoluble compounds. These are materials that will "fall out" of the solution, clog injectors, and compromise your feed.

REMINDER: Use Reverse Osmosis (RO) or high-purity water when mixing stock concentrates. Utilizing source water with existing mineral content introduces those reactive elements that can trigger precipitation before the FloraPro salts have fully dissolved



HOW TO MAKE AND MIX A STOCK SOLUTION



MIX FLORAPRO STOCK SOLUTIONS IN

- PARTIALLY FILL AND GRADUALLY APPLY**
Fill your tank to approximately 70% of the final volume with RO water. Slowly add the full bag of fertilizer while agitating the water.
- THOROUGHLY MIX AND TOP OFF**
Mix for 15–30 minutes until the powder is clear and uniform. Top off with water to reach the final volume, where 1 lb. of fertilizer = 1 gallon of concentrate.
- FINISH AND VALIDATE**
Mix until the solution is clear and uniform. To conclude, validate accuracy by checking the EC using a 1:200 dilution to ensure the concentrate matches your benchmark EC.

THREE WAYS TO RUN YOUR STOCK SOLUTIONS

Every grow has its own pace and scale, so FloraPro is designed to support a variety of practical ways to turn concentrates into plant-ready nutrition. The following are some of the most widely used and effective approaches growers rely on.

MEASURE BY HAND

The hands-on method. You manually pull from your stock solutions, blend into a reservoir to the desired EC, adjust pH, and feed. Simple and reliable for growers who prefer direct control or run smaller operations.

INJECTION TO BATCH TANKS

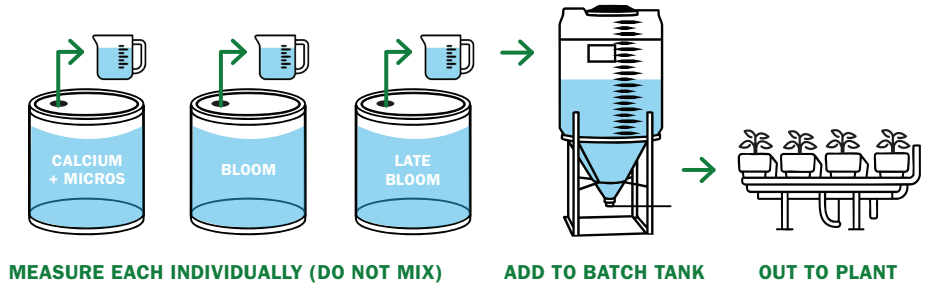
This is the most common method for indoor production. Growers set/adjust the ratio of fertilizer required for each batch. You still feed from a stock solution, while automation improves consistency and reduces manual labor.

DIRECT-TO-CROP INJECTION

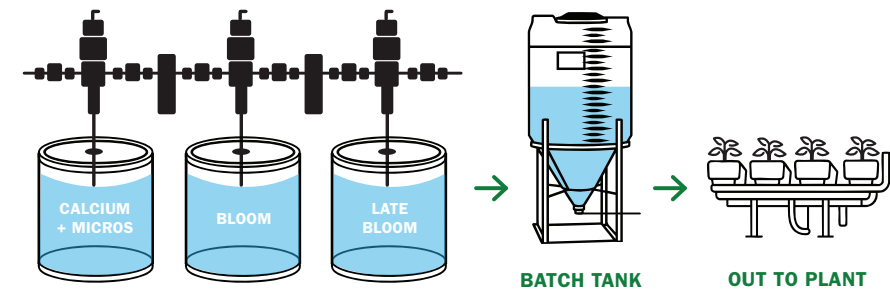
No day tank, no intermediate step. Injectors pull straight from the stock solutions and mix nutrients in-line as irrigation occurs. This fast, scalable option is designed for facilities with higher levels of automation.

All three methods have the same result: a nutrient solution ready to be distributed to the roots. And the process is the same from veg to bloom—only the nutrient ratios change.

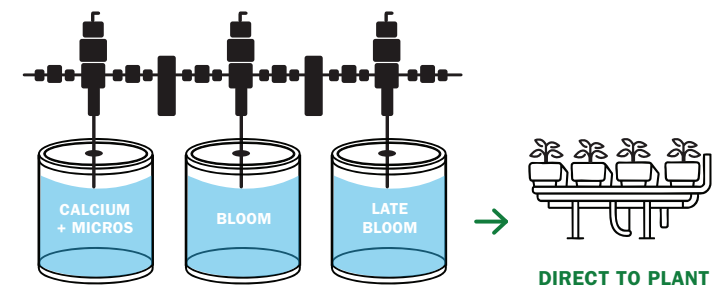
MEASURE BY HAND



INJECTION TO BATCH TANKS



DIRECT-TO-CROP INJECTION



Application

HOW TO USE FLORAPRO

YOUR EVERYDAY REFERENCE FOR MIXING, HANDLING, AND STORING FLORAPRO STOCK SOLUTIONS

Great stock solutions begin before powder meets water. FloraPro is engineered for precision, so your mixing process is accurate from the start. Follow these guidelines for an accurate, repeatable, and consistent production of stock solutions.

START WITH A CLEAN STOCK TANK

And make sure to clean it between each mixing.

USE FULL FLORAPRO BAGS

Each one is blended to deliver the exact nutrient ratios listed on the label. Using less than a full bag can throw off ratios and consistency, especially with micronutrients.

USE CLEAN, HIGH QUALITY WATER

Reverse osmosis (RO) water is the gold standard. It removes minerals, metals, and contaminants that can interfere with nutrient stability. But if you're using non-RO water, test it first. Excess minerals or metals can react with fertilizer salts, causing precipitation and altering your nutrient chemistry.

WARM WATER IS BEST

For preparing stock solutions. Dissolving fertilizer salts is an endothermic process, so it requires energy. Using warm water (100–120°F, when possible) or mixing after the room temperature has naturally risen helps speed dissolution and prevent residue.

KEEP COMPONENTS SEPARATE

Calcium + Micros must always stay in a separate stock tank from Grow, Bloom, or Late Bloom. At high concentrations, calcium reacts with phosphorus and sulfur, creating insoluble solids that can clog injectors and damage equipment. Separation keeps your system clean, predictable, and running exactly as intended.

EXPECT NORMAL VARIATION

WSFs may leave a light layer of harmless sediment over time or show slight color differences from batch to batch. Both are normal and do not impact performance.

STORE DRY PRODUCT CORRECTLY

CAKING: FloraPro ingredients naturally attract moisture from the air, which can crystallize over time. These granules may create a temporary “shell,” but this is reversible and does not change the chemical potency.

THE 3-FOOT DROP: To undo any caking, drop the bag of product onto a hard floor from waist height (~3 feet above the ground). Make sure to generate a good impact; just tapping the bag or dropping it from your shins won't be a strong enough force to fix it.

HOW TO PREPARE A STOCK SOLUTION

HERE'S THE STEP-BY-STEP PROCESS GROWERS RELY ON FOR CLEAN, CONSISTENT CONCENTRATES

FILL YOUR TANK WITH RO WATER TO 70% OF THE DESIRED FINAL VOLUME

Starting with most of your water already in the tank helps the powder dissolve more efficiently. The extra headspace keeps the solution moving as you mix and prevents undissolved material from clumping.

SLOWLY ADD THE FULL BAG OF FLORAPRO WHILE AGITATING

Adding powder gradually prevents clumping and ensures every particle makes full contact with the water. Agitation helps pull the salts into solution quickly and evenly.

MIX FOR 15–30 MINUTES OR UNTIL FULLY DISSOLVED

You're aiming for a smooth, uniform solution with no visible solids.

ADD THE REMAINING RO WATER TO REACH YOUR FINAL VOLUME

Topping off the tank after dissolving prevents overflow during mixing and locks in the correct final concentration. One pound of fertilizer should equal one gallon of finished concentrate.

MIX FOR ANOTHER 15–30 MINUTES UNTIL THE SOLUTION IS CLEAR AND HOMOGENEOUS

Clarity is your visual confirmation that everything has dissolved the way it should. A uniform concentrate maintains consistency when the solution is later mixed into your feed water.

RECOMMENDED: VALIDATE ACCURACY BY CHECKING EC USING A 1:200 DILUTION

EC (Electrical Conductivity) shows how many total nutrients are in the solution. A 1:200 dilution—one part concentrate to 199 parts water—makes the EC low enough for accurate readings. Confirming that each new stock solution matches your benchmark EC is a good way to stay consistent.



STEP-BY-STEP GUIDE TO VALIDATING STOCK SOLUTION EC



Best Practices

AFTER YOU MIX: BEST PRACTICES FOR STORAGE & HANDLING

FLORAPRO CONCENTRATES ARE STABLE AFTER DISSOLVING. THESE REMINDERS HELP BUILD GOOD HABITS THAT KEEPS PRODUCTION CONSISTENT:

NO ONGOING AGITATION IS NEEDED

Once properly dissolved, the stock will stay in solution.

SKIP THE AIRSTONES

These release bubbles to increase oxygen and circulation. But in concentrates, they encourage slimy biofilm that builds up in tanks and lines.

COVER YOUR TANKS

This prevents evaporation, contamination, and shifts in concentration.

KEEP IT COOL, DARK, AND DRY

When storing, avoid high heat and direct sunlight to prevent nutrient stability from degrading.

USE WITHIN ABOUT TWO WEEKS

Nutrient-rich concentrates can slowly accumulate bacteria. Using your stock solutions within this window maintains nutrient integrity and reduces the risk of biofilm accumulation.



FEED PROGRAM & FINE-TUNING

YOUR REFERENCE FOR DIALING IN DOSAGE, CONFIRMING ACCURACY, AND ADJUSTING BASED ON PLANT RESPONSE.

HIGH-YIELD FEED PROGRAM OVERVIEW

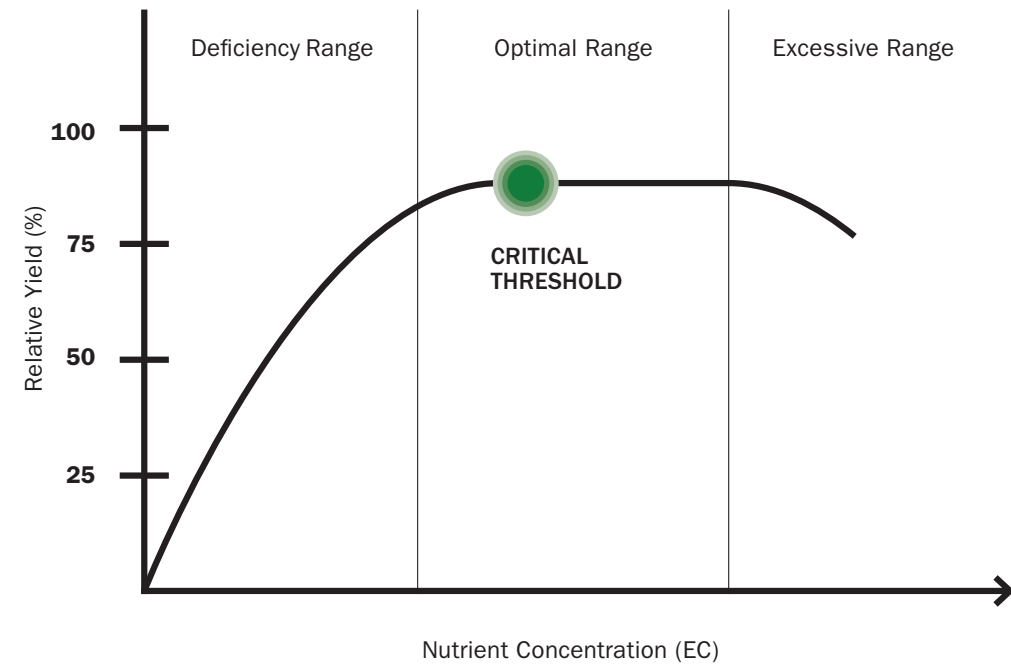
Indoor crops need nutrition that can keep up, especially high-intensity crops like cannabis grown under high PPFD and supplemental CO2. That's why FloraPro is continuously and extensively tested in General Hydroponics' R&D facility. By conducting trials in a controlled environment based on commercial growing spaces, our team can establish and refine feed rate recommendations that give cultivators a proven starting point. Individual strains and facilities may require adjustments, but our ratios provide a strong baseline.

USING EC AND NITROGEN TARGETS

EC measures the overall strength of the solution, while Nitrogen ppm measures the usable nutrition the plant receives. Together, their approximate values can help you fine-tune your feeds for a more consistent crop. Continuous optimization of these levels by variety helps to minimize fertilizer waste, maximize crop output and quality and sustain beneficial ROI.



Optimizing Yield: The Nutrient Response Curve



Grower Resources

FLORAPRO STOCK SOLUTION

STANDARD POWDER FEED PROGRAM

STANDARD PROGRAM																
Feed rates in mL per gallon. Use 1.0 lb per gallon concentrated stock solutions	Weekly Schedule		PROPAGATION		VEGETATIVE			EARLY FLOWER			MID FLOWER			LATE FLOWER		FINISH
			1	1	2	3	1	2	3	4	5	6	7	8		
			7.0	30.0			30.0			26.5			18.5		12.5	
			9.0	35.0			—			—			—		—	
			—	—			31.5			27.5			15.5		—	
			—	—			8.0			14.0			24.0		29.0	
0.028% HOCl	TrueFlo* (mL/gal)		3	3			3			3			3		3 - 9	
This chart is optimized for Rockwool and Coco growing media	Nitrogen (ppm)		60	240			200			180			115		50	
	pH Target **		5.5 - 5.8	5.6 - 6.1						5.7 - 6.2						
	EC (mS/cm)		0.6 - 0.8	2.3 - 2.5			2.4 - 2.6			2.3 - 2.5			1.9 - 2.1		1.3 - 1.5	

*0.028% HOCl. TrueFlo should be added to the nutrient solution after the pH has been lowered through the addition of mineral fertilizers or acidic pH adjusters. Apply in pH range of 4.0 - 6.5 for best results. TrueFlo rates can be increased. 5-9 mL/gal will prevent line buildup when using supplements as part of the FloraPro Powder Feed Program.

**The pH levels shown on this chart are optimized for use with Rockwool or Coco growing media. For peat-based media, increase pH range to 6.0 - 6.4 throughout the lifecycle.

Disclaimer: Feed chart provided as recommendation only. Actual plant needs and/or results achieved may vary.

FLORAPRO STOCK SOLUTION

HIGH EC POWDER FEED PROGRAM

HIGH EC PROGRAM														
Feed rates in mL per gallon. Use 1.0 lb per gallon concentrated stock solutions	Weekly Schedule		1		2		3		1		2		3	
	FloraPro Ca+Micros		7.0		31.0				30.0		28.5		19.0	
	FloraPro Grow		9.0		38.0				—		—		—	
	FloraPro Bloom		—		—				33.0		25.5		15.0	
	FloraPro Late Bloom		—		—				12.5		21.0		26.0	
	TrueFlo* (mL/gal)		3		4		4		4		4		4	
This chart is optimized for Rockwool and Coco growing media	Nitrogen (ppm)		60		250		210		185		115		50	
	pH Target		5.5 - 5.8		5.6 - 6.1				5.7 - 6.2					
	EC (mS/cm)		0.6 - 0.8		2.5 - 2.7		2.6 - 2.8		2.4 - 2.6		1.9 - 2.1		1.5 - 1.7	

*0.028% HOCl. TrueFlo should be added to the nutrient solution after the pH has been lowered through the addition of mineral fertilizers or acidic pH adjusters. Apply in pH range of 4.0 - 6.5 for best results. TrueFlo rates can be increased. 5-9 mL/gal will prevent line buildup when using supplements as part of the FloraPro Powder Feed Program.

**The pH levels shown on this chart are optimized for use with Rockwool or Coco growing media. For peat-based media, increase pH range to 6.0 - 6.4 throughout the lifecycle.

Disclaimer: Feed chart provided as recommendation only. Actual plant needs and/or results achieved may vary.

VALIDATING BENCHMARK EC VALUES

Accurate stock solutions are the foundation of every recipe. Since EC varies by water source and meter, growers should establish internal benchmarks.

TO VERIFY:

1. Create a 1:200 dilution (10 mL stock into 1,990 mL RO water).
Be sure to use precise liquid measuring equipment.
2. Mix thoroughly.
3. Measure EC with a calibrated meter.
4. Record readings for each component every time a new batch is made.

Now you've set your facility's standard.

VERIFYING RECIPES / TREATED GALLONS

WHEN BUILDING YOUR FINAL FEED:

1. Add each input one at a time, mixing thoroughly between additions.
2. Measure and record EC and pH after each FloraPro component.
3. Keep the same order every time.
4. Confirm all inputs dissolved fully.

This ensures consistency across batches, rooms, facilities, and staff.

ADJUSTING FERTILIZER RATES (ONLY WHEN NEEDED)

Start with the environment: How are your plant conditions? VPD, CO₂ levels, temperature, humidity, and airflow all influence transpiration, which drives nutrient uptake. Fixing these can resolve high substrate EC without touching your feed. Then, consider the leaching fraction. A slightly higher runoff volume helps remove excess salts from the substrate.

IF ENVIRONMENTAL ADJUSTMENTS AREN'T POSSIBLE, THEN ADJUST FEED STRENGTH.

- **To decrease feed strength:** Proportionally scale all FloraPro components downward by 10–15%. Monitor plant response before further adjustments.
- **To increase feed strength in Veg:** Proportionally scale all FloraPro components upward by 10–15%. Monitor plant response before further adjustments.
- **To increase feed strength in Flower:** Incrementally adjust the FloraPro Late Bloom rate by 10–15%. This targeted approach prevents over-delivering nitrogen. Monitor plant response before further adjustments.

For significant recipe modifications or site-specific feed rates, contact General Hydroponics Technical Services for expert consultation.

Fine-tuning is where growers become craftspeople, and FloraPro gives you the range to steer with confidence.

WHY GROWERS CHOOSE FLORAPRO



FLEXIBLE, SCALABLE, AND AFFORDABLE

Not all WSFs are created the same. FloraPro powdered nutrients form a unique four-part formula (Calcium + Micros, Grow, Bloom, and Late Bloom). This lineup is designed to give you more control at every stage of your craft. The powdered format lowers the cost per gram of nutrient and scales easily, regardless of the size of your operation. Compatible with all substrates and General Hydroponics specialty supplements, it gives you flexibility, control, and efficiency in a single system. It's a formulation designed to keep your process both profitable and successful.



TRUSTED EXPERTISE AND SUPPLY RELIABILITY

General Hydroponics has been perfecting its craft since 1976 so that you can perfect yours. Multiple approved suppliers are maintained for each raw material, reducing the risk of disruptions and ensuring continuous availability across the U.S. and Canada. With 50 years of hydroponic innovation, FloraPro delivers proven formulas backed by decades of research and professional horticultural support.



HIGH QUALITY, RELIABLE PERFORMANCE

Every bag of FloraPro is made with high-quality salts that have an ultra-low amount of insolubles, helping reduce sediment in reservoirs, dosers, and lines. With large-capacity industrial blenders, precise ingredient measurements, and real-time lab checks, each batch consistently meets Guaranteed Analysis standards. The stock solutions also stay stable without constant agitation, giving you reliable, high-performance results every time.



THE DIFFERENCE IS IN THE DETAILS

Using WSFs requires control, precision, and flexibility. If growing is rooted in a specific science, how can one brand rise above the rest? The answer is in the details: how consistently nutrients dissolve, how accurately formulations deliver essential elements, and how easily a system adapts to the changing needs of the plant. FloraPro is built around these principles, giving growers the precision and reliability needed to manage every stage of growth.

GROWING CONCERNS

1. WHY FOUR FLORAPRO PRODUCTS?

To give growers control over proper feeding at every stage. It also helps separate calcium from phosphorus and sulfur in concentrated form.

2. IS FLORAPRO COMPATIBLE WITH OTHER PRODUCTS?

Yes, FloraPro is compatible with other General Hydroponics supplements. Remember: To avoid fallout, keep concentrated WSF stock solutions in separate stock containers.

3. DO STOCK SOLUTIONS NEED TO STAY SEPARATE?

Yes. Calcium + Micros must always be kept apart from Grow, Bloom, and Late Bloom when concentrated. Our experts are here to help you manage these technical constraints and guide you through the process.

4. THE COLOR OF MY STOCK SOLUTION LOOKS DIFFERENT.

We do not use artificial dyes to standardize color. Because our formulas rely on naturally mined minerals, slight hue variations may occur. Each batch is lab-tested to ensure consistent potency and performance—these differences are normal. Our team is here to help with any questions.

5. HOW LONG DO STOCK SOLUTIONS LAST?

Use within about 2 weeks to avoid bacterial growth and biofilm.

6. CAN I USE AIRSTONES?

Not recommended. They accelerate biofilm growth in nutrient-rich solutions.

TROUBLESHOOTING

1. SOLUTION WON'T DISSOLVE?

Use warm water when available; if not, use stronger agitation or extend mixing time. Confirm the mix was blended using RO water and did not exceed the recommended 1 lb per gallon ratio.

2. SEDIMENT IN TANK?

You may notice a trace amount of sediment in your stock solution; this is perfectly normal when working with Water-Soluble Fertilizers (WSF). Regular cleaning of your stock tanks will prevent sediment deposits from accumulating over time. To ensure system longevity, always use injection equipment equipped with intake filters to prevent particles from entering the fertigation stream.

3. EC READINGS SEEM OFF?

Verify with a 1:200 dilution, calibrate the meter, and confirm that everything is fully dissolved. (See “Verifying Stock Solutions” in the “Feed Program & Fine-Tuning” section.) Annual or semiannual water testing also helps keep things consistent.

4. SUBSTRATE EC KEEPS RISING?

Optimize the environment first, and only then lower the feed strength evenly across all parts. (See “Adjusting Fertilizer Rates” in the “Feed Program & Fine-Tuning” section).

5. EMITTERS CLOGGING?

Check for precipitation from incompatible concentrates, review water quality, and flush the system.

