



**GENERAL
HYDROPONICS®**

FLORAPRO®

CALCIUM + MICROS • GROW • BLOOM



PRODUCT GUIDE

WATER-SOLUBLE FERTILIZERS FOR COMMERCIAL GROWERS

GAME-CHANGING NUTRITIONAL SYSTEM FOR COMMERCIAL GROWS



plant depicted is hemp

For decades, water-soluble fertilizers (WSF) have been the standard for commercial greenhouse production, designed for the nutritional needs of traditional agricultural plants like tomatoes, cucumbers, lettuce, peppers and more.

These formulas make feeding large-scale horticultural crops easier and less expensive by replacing liquid formulas with a scalable, affordable way to provide commercial plants a consistent nutrition program.

But times change. Indoor production systems are rising in popularity, impacting nutritional needs. Plant types and varieties are evolving. The nutritional systems used to feed them should, too.

That's why there's FloraPro®. From the industry-leading General Hydroponics team comes a new plant nutrition system, devised to accommodate both indoor and greenhouse feed systems. When developing FloraPro, the team considered the nutritional needs of plant types that are grown today, like contemporary vegetable varieties, small fruits, cannabis, culinary and aromatherapeutic herbs and microgreens, and other more traditional plant types as well.

WHAT IT IS

THREE BAGS, ONE SYSTEM

Calcium + Micros provides a solid base throughout, Grow gives crops what they crave during the vegetative stage, and Bloom supports specific nutritional needs during flowering. If a plant has only a vegetative stage—easy. Use only Grow.



CALCIUM + MICROS



GROW



BLOOM

CUSTOMIZABLE

With FloraPro®, you can “flex” the amount of each component, or the total amount of nutrients supplied to achieve your particular goals.

LESS COMPLICATED

Many other programs require four or more products. FloraPro® uses only three.

SCALABLE AND AFFORDABLE

Our goal is the same as yours: to save you time and money as your operation grows.

STRATEGICALLY SIZED FOR LARGE-SCALE CULTIVATORS

Packaged in convenient 11.3 kg (25 lb) bags for commercial stock tanks and injection systems.



WHY IT'S DIFFERENT

1. **DEVELOPED BY THE BEST.** At General Hydroponics, we've been making—and perfecting—WSF formulas for more than 40 years.
2. **GEARED TOWARD INDOOR AND GREENHOUSE CROPS.** Unlike other formulas which were designed for the nutritional needs of crops like tomatoes, cucumbers, lettuce or peppers for greenhouse production, FloraPro® blends a more preferred ratio of nutrients for contemporary vegetable varieties, small fruit production, cannabis, culinary and aromatherapeutic herbs, and microgreens.
3. **HIGH-QUALITY INPUTS, EVERY TIME.** No fillers. No contaminants. Just technical-grade nutrients made from 100% water-soluble ingredients, so you can be confident about what you're pushing through your irrigation system.
4. **OPTIONS FOR EVERY OPERATION.** High-alkalinity water? No problem. FloraPro® Calcium + Micros HW (Hard Water) is specifically balanced for operations with water alkalinity over 120 ppm CaCO_3 equivalent.



PERFECTLY BALANCED FOR YOUR CROPS

When it comes to nutrients, more is not always better. Plant nutrition is all about balance. Minerals must be properly proportioned for plants to use them effectively. And not all plants require the same proportions.

That's why, unlike other commercial nutrients, the FloraPro® formula provides precise minerals in the right proportions for vigorous growth in plants like indoor vegetables, herbs and cannabis. Some brands simply take an existing formula—intended for greenhouse tomatoes, for example—and recommend it for other crops. We don't.

FloraPro® was designed from the ground up, formulated specifically with the amounts of phosphorous, potassium, and other essential nutrients crops grown in controlled environments require.

COMPATIBLE WITH OTHER NUTRIENTS

While FloraPro® is a complete nutrition program, specialty nutrients can be used for additional benefit. FloraPro® was extensively tested for compatibility with existing Hawthorne Gardening Company specialty nutrients.



FORMULATION FEATURES

- Balanced nutritional profile
.....
- Tailored to nutritional demands during vegetative or flowering and maturation phases
.....
- Precise set of ratios gleaned from decades of research and development

THE POTENTIAL PROBLEM AND THE FLORAPRO® SOLUTION

An overabundance of one nutrient leads to difficulty in uptake or utilization of another, resulting in nutritional deficiencies, or “nutrient antagonism.” Balance is critical. FloraPro is designed to create the right balance of nutrients that promotes uptake and utilization of other nutrients, or “nutrient synergism.”

TABLE 1.
SELECTION OF COMMON NUTRIENT ANTAGONISMS OFTEN FOUND IN HORTICULTURAL PRODUCTION

IF EXCESSIVE IN MEDIA OR TISSUE:	MAY CAUSE A DEFICIENCY OF:
Nitrogen (as ammonium- NH_4^+)	Potassium, Calcium, Magnesium
Potassium (K^+)	Nitrogen (NH_4^+), Calcium, Magnesium
Phosphorous (H_2PO_4^- , HPO_4^{2-})	Iron, Zinc, Copper, Calcium
Calcium (Ca^{+2})	Potassium, Phosphorous, Magnesium, Boron
Magnesium (Mg^{+2})	Calcium, Potassium
Iron (Fe^{+2})	Manganese, Zinc, Copper

Adapted from “Water, Media and Nutrition for Greenhouse Crops,” Ball Publishing, Batavia, IL. 1996



● PROFESSIONAL TECHNICAL SERVICES

PLANT NUTRITION

Our holistic approach to plant nutrition takes into account environmental conditions, growing media, water quality and your cultivation practices to create a nutritional regimen customized for your crop and facility. We also offer pilot trials so you can see the difference—and feel confident in the results—before making the switch.

Comprehensive consultations include:

- Starting water quality
- Environmental conditions like lighting, humidity, temperature and CO₂ enrichment
- Physical properties of growing media
- Fertilizers: base programs and additives
- Fertilizer delivery/irrigation systems

HAWTHORNE PROFESSIONAL TECHNICAL SERVICES

Contact Hawthorne Professional Technical Services today and let us design a customized fertility program to help you optimize growth and improve performance. tsupport@hawthornegc.com or call: (888) 808-4826

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HAWTHORNE GARDENING[™]
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