



**EXZELER**  
PURSUE EXCELLENCE



Empowering the Next  
Era of Agriculture



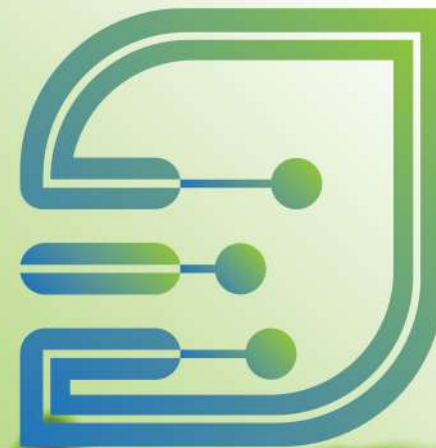
**EXZELER**  
PURSUE EXCELLENCE



# Who We Are

**EXZELER AG** is a Swiss-based agri-innovation company uniting science, sustainability & precision to deliver high-performance **Fertilizers & Biostimulants**.

With Swiss reliability, German expertise & global reach, we stand as a trusted partner for farmers, distributors & agribusinesses worldwide.



**EXZELER**  
PURSUE EXCELLENCE







# What We Do

**Our portfolio supports the full crop cycle:**

- **FlowTech Fertilizers** – high-purity, water-soluble inputs for efficient fertigation and foliar use.
- **BioPulse Biostimulants** – advanced natural solutions that enhance root vitality, stress tolerance, and yield quality.

Beyond products, we provide registration, compliance, training, and agronomic guidance to secure results across diverse markets.



# Our Advantage

- Integrated chemistry + biology for both immediate impact and long-term soil health.
- Clean, soluble, and reliable formulations compatible with modern systems.
- Proven expertise and long-term partnerships across Europe, the Middle East, Africa and Asia.





# Mission & Vision

Our mission is to deliver innovative, sustainable, and performance driven solutions that boost productivity and resilience while safeguarding resources. We envision a future of farming built on knowledge, modern tools, and responsible practices.



**Turning Science  
into Growth  
& Growth into  
Resilience**

An abstract graphic on the left side of the image, composed of various green geometric shapes including rectangles, circles, and leaf-like forms, arranged in a grid-like pattern.

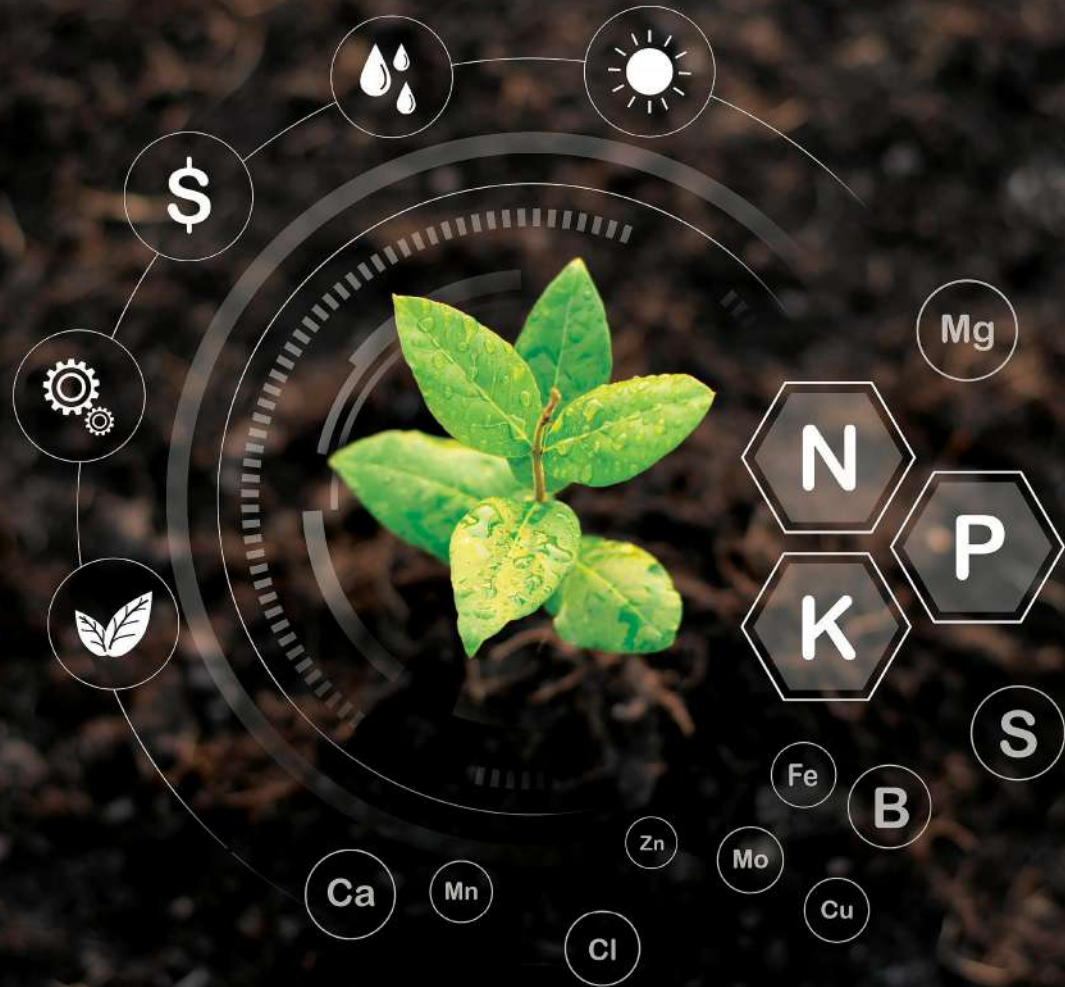
Precision Fertilizers  
for Modern Agriculture

The FlowTech logo, featuring the word 'FLOW' in black and 'TECH' in blue, with a stylized green and blue graphic element integrated into the 'T' and 'E' of 'TECH'.

**FLOWTECH**

A background image on the right side showing a pair of hands in white gloves holding a tray of small white fertilizer pellets, with a green plant in the foreground.





# What is **FLOWTECH**

**FlowTech** is Exzeler's line of high-purity, water-soluble fertilizers designed for efficient fertigation and foliar nutrition. Each product is fully soluble, chloride-free where needed, and formulated to deliver nutrients with maximum crop safety and performance.



# Why FLOWTECH

- Purity & Solubility – clean formulations, no residues, ideal for fertigation systems.
- Complete Portfolio – MAP, MKP, NOP, SOP, AMS, CN, UP and tailored NPKs.
- Crop Efficiency – precise nutrient delivery for every stage of growth.
- Reliability – consistent quality that farmers and distributors can trust.





An aerial photograph of a large-scale agricultural field, likely a vegetable or fruit plantation. The crops are arranged in neat, parallel rows, stretching from the foreground into the distance. The plants are a vibrant green, and the soil between the rows is a dark, rich brown. Overlaid on the right side of the image are several blue circles of varying sizes. The largest circle contains the text 'Smart Fertilizers for Precision Farming'. There are also four smaller circles arranged in a cluster to the left of the main circle, and two more circles further up and to the left, creating a sense of depth and focus on the technology being advertised.

## Smart Fertilizers for Precision Farming



## Sulfur-Rich Nitrogen for Vigorous Growth and Lasting Quality

### Product Description

FlowAMS is a high-purity, water-soluble Ammonium Sulfate (21-0-0 + 60 SO<sub>3</sub>) fertilizer delivering 21% ammonium nitrogen and 60% sulfur trioxide in a fully soluble, low-pH formulation. It provides crops with essential nitrogen in the ammonium form, which promotes steady vegetative growth and improves root-zone pH in alkaline or calcareous soils.

Sulfur is delivered as readily available sulfate (SO<sub>4</sub><sup>2-</sup>), which supports protein synthesis, enzyme activity, and enhances the uptake of nitrogen, phosphorus, and micronutrients.

FlowAMS is especially effective when used in high-pH soils, hard water fertigation systems, and for crops with moderate to high sulfur demand.

Its low salt index, non-corrosive nature, and absence of chloride make it suitable for fertigation, hydroponics, and high-frequency application programs.

# FLOWAMS

**AMMONIUM  
SULFATE**  
Water-Soluble  
Fertilizer

AMMONIACAL NITROGEN

NH<sub>4</sub> - N

21%

AMMONIACAL SULFUR

SO<sub>3</sub>

60%



10 kg

20 kg

25 kg

# Dual Action Deep Green Fully Soluble Power

## Key Benefits

- Dual Nutrient Action:** Ammonium nitrogen + sulfate sulfur support fast vegetative growth and protein metabolism
- Acidifying Effect:** Improves phosphorus, iron, and zinc availability in high-pH soils
- Better Nitrogen Efficiency:** Sulfur supports N assimilation, minimizing nitrate leaching and ammonia loss
- Greener, Healthier Canopy:** Ideal for leafy crops and early growth phases
- Irrigation-Friendly:** Prevents scale buildup, keeps drippers clean

## Compatibility & Sustainability

- Compatible with most NPKs and micros
- Avoid mixing with calcium-containing fertilizers (e.g.,  $\text{CaNO}_3$ )
- Low salt index, residue-free, clean for drip systems
- Fully biodegradable and safe for frequent use
- Improves soil pH balance over time in alkaline regions

**Activate Growth  
Unlock Sulfur  
Elevate Quality**

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Leafy Vegetables			
	Fertigation	5-10 kg/ha	From transplant to vegetative peak Apply every 7-10 days × 3-5 times
	Foliar	0.5-1% solution	Every 7-14 days during rapid Leaf expansion × 2-4 times
Tomato, Pepper, Eggplant			
	Fertigation	8-12 kg/ha	Early veg to fruit set Every 10 days × 3-5 applications
	Foliar	0.5-1.5% solution	Every 7-10 days during flowering or After stress × 2-4 times
Cereals & Maize			
	Fertigation	8-12 kg/ha	From tillering to booting Repeat every 10-14 days × 2-3 times
	Foliar	1-2% solution	One spray before stem elongation or flowering (if needed)
Brassicas & Root Crops			
	Fertigation	10-15 kg/ha	Vegetative to head/bulking phase Apply every 10 days × 3-4 times
	Foliar	1-2% solution	During sulfur/N deficiency or Growth surge × 2-3 times
Tree Crops (Citrus, Mango, Olive)			
	Fertigation	15-25 kg/ha	At pre-bloom and canopy growth 3-4 rounds per cycle



## Premium Phosphorus and Potassium Nutrition

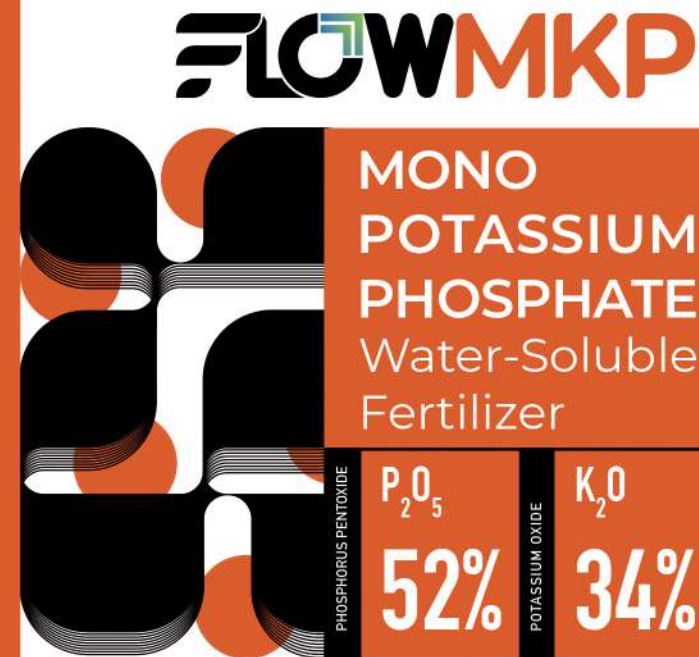
### Product Description

FlowMKP is a high-purity, water-soluble Monopotassium Phosphate (MKP) fertilizer containing 52%  $P_2O_5$  and 34%  $K_2O$ . It is chloride- and sodium-free, with a low pH, making it ideal for fertigation and foliar application in sensitive crops, especially under saline or alkaline soil conditions.

It supports:

- Early root development and seedling establishment
- Flowering induction and pollination success
- Fruit development and quality (sugar accumulation, color, firmness)

FlowMKP is especially important when crops shift from vegetative to reproductive phase, where balanced phosphorus and potassium are critical for energy transfer, hormonal regulation, and fruit load balance.





# Early Roots Strong Blooms Lasting Yield

## Key Benefits

- Root development and establishment: Promotes early phosphorus-driven root expansion
- Flower & Fruit Set: Induces flowering, boosts pollen viability and ovary retention
- Fruit Quality: Enhances color, sugar content, firmness, and shelf life
- Acidic Reaction: Improves solubility and availability of nutrients in alkaline soils
- Safe for Fertigation: Fully soluble, no chloride or sodium, non-corrosive
- Chloride-free: safe for berries, citrus, vegetables

## Compatibility & Sustainability

- Compatible with most micronutrients, biostimulants, and urea
- Do not mix with calcium or magnesium fertilizers (e.g.,  $\text{CaNO}_3$ ,  $\text{MgSO}_4$ ) - use in separate tanks
- Ideal for fertigation & foliar systems (clean, non-corrosive, no scaling)
- Zero chloride / low salt index: safe for sensitive crops and alkaline soils
- Sustainable use: improves nutrient use efficiency and reduces nutrient runoff

The Clean Power,  
Behind Rooting,  
Blooming and  
High-Quality Harvests



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables (Tomato, Pepper, Eggplant)			
	Fertigation	5-10 kg/ha	Start 10–15 days before flowering → Ensures ATP-driven flower induction & early fruit set
	Foliar	1–2% solution	Apply at first flower appearance and again at fruit set; enhances K-dependent sugar translocation
Melons & Cucurbits			
	Fertigation	5-10 kg/ha	During flowering and early bulking → improves ovary retention and cell wall thickening
	Foliar	0.5–1% solution	At bloom and early swelling to improve uniform fruit sizing
Berry Crops			
	Fertigation	4-6 kg/ha	At bud break and early bloom → boosts phosphate energy flow to floral organs
	Foliar	0.5–1% solution	Pre-bloom and post-bloom to promote berry firmness and anthocyanin buildup
Grapes, Citrus			
	Fertigation	6-10 kg/ha	Use at pre-flowering and early fruit set → Enhances flowering uniformity and fruit shape
	Foliar	1.5–2% solution	2–3 sprays from early fruit set to veraison or color change
Orchards (Apple, Mango, Olive)			
	Fertigation	6-12 kg/ha	From flowering to early fruit sizing (3–4 rounds per cycle)



## Chloride-Free Potassium & Nitrate Nitrogen for Premium Crop Quality

### Product Description

FlowNOP is a high-purity, fully water-soluble Potassium Nitrate ( $\text{KNO}_3$ ) fertilizer delivering 13% nitrate nitrogen ( $\text{NO}_3\text{-N}$ ) and 46% potassium oxide ( $\text{K}_2\text{O}$ ) in a clean, chloride-free form. It provides two essential nutrients in perfect synergy: nitrate nitrogen ensures rapid, efficient uptake without ammonia toxicity, while potassium regulates osmotic balance, sugar transport, and enzyme activation, leading to better fruit size, sweetness, firmness, and storage life.

FlowNOP is ideal for fertigation in high-value fruiting crops, vegetables, and ornamentals, and can be used as a foliar spray where potassium demand peaks and rapid correction is needed. Its chloride-free, low-salt index formulation makes it safe for even the most sensitive crops.

# FLOWNOP

## POTASSIUM NITRATE

### Water-Soluble Fertilizer

TOTAL NITROGEN

N

13.5%

WATER-SOLUBLE  
POTASSIUM OXIDE

$\text{K}_2\text{O}$

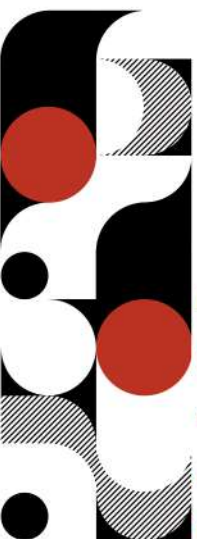
46%



10 kg

20 kg

25 kg



## Fast Uptake Balanced Nutrition Zero Chloride

### Key Benefits

- Supplies rapidly available nitrogen and potassium during peak demand
- Enhances fruit size, color, firmness, and sweetness
- Improves plant tolerance to drought, salinity, and temperature stress
- Chloride-free and low salt index - safe for sensitive crops and soils
- Fully soluble, clean, and suitable for fertigation and targeted foliar use

### Compatibility & Sustainability

- Each formula combines nitrogen (N), O --- correct ot : Each formula
- combines nitrogen (N), Phosphorus (P<sub>2</sub>O<sub>5</sub>) and Potassium (K<sub>2</sub>O) in ratios
- ..nitrogen (N), Phosphorus (P<sub>2</sub>O<sub>5</sub>) and Potassium (K<sub>2</sub>O)nitrogen (N), Phospho-
- rus (P<sub>2</sub>O<sub>5</sub>) and Potassium (K<sub>2</sub>O)Compatible with calcium, magnesium, and
- most micronutrient fertilizers
- Avoid mixing with strongly acidic products (e.g., UP) in the same tank-apply separately.
- 100% soluble and non-corrosive - no clogging in drip or spray systems.

## The Clean Power of Nitrogen and Potassium for Quality-Driven Harvests



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Tomato, Pepper, Eggplant			
	Fertigation	8-15 kg/ha	From flowering to fruit bulking; Apply every 7-10 days × 3-5 times
	Foliar	1-2% solution	At early fruit set and mid-bulking × 2-3 sprays
Leafy Greens & Lettuce			
	Fertigation	6-12 kg/ha	During full canopy development and pre-harvest × 2-3 applications
	Foliar	0.5-1%	Biweekly during harvest period to maintain turgor and leaf color
Melon, Cucumber, Zucchini			
	Fertigation	8-15 kg/ha	From fruit set to pre-harvest; Every 7-10 days × 3-4 times
	Foliar	1-2%	At fruit swelling and pre-harvest to improve Brix × 1-2 sprays
Citrus & Fruit Trees			
	Fertigation	12-20 kg/ha	From fruit enlargement to color change; Repeat every 10-15 days × 2-3 rounds
	Foliar	1-2%	Late-season sprays for color, firmness, and storability × 1-2 applications
Grapes & Berries			
	Fertigation	8-12 kg/ha	At berry sizing and ripening; Every 7-10 days × 2-3 applications
	Foliar	0.5-1.5%	From veraison to pre-harvest for sweetness and color enhancement × 1-2 sprays



## Balanced, Targeted Nutrition for Every Crop Stage

### Product Description

FlowNPK is Exzeler's range of fully water-soluble NPK fertilizers designed for complete crop nutrition through fertigation and foliar programs. Each formula combines nitrogen (N), Phosphorus (P<sub>2</sub>O<sub>5</sub>) and Potassium (K<sub>2</sub>O) in ratios tailored to specific crop stages - from root establishment to flowering, fruiting, and finishing.

All FlowNPK products are chloride-free, highly soluble, and enriched with essential secondary nutrients and micronutrients where needed, ensuring consistent performance across vegetables, fruit trees, vineyards, and greenhouse crops.

By providing balanced and stage-specific nutrition, FlowNPK™ supports:

- Rapid and healthy root establishment
- Optimal flowering and fruit set
- Maximum fruit growth and uniform quality
- Extended shelf life and post-harvest performance

# FLOWNPK



## X - X - X + TE Water-Soluble Fertilizer

19-19-19  
15-30-15  
12-12-36  
10-52-10

•  
•  
•



10 kg

20 kg

25 kg



# Precision Formulas Complete Feeding Proven Results

## Key Benefits

- Stage-specific NPK ratios for maximum efficiency and yield response
- Fully soluble, clean, and safe for drip irrigation and foliar sprays
- Chloride-free formulations protect sensitive crops
- Optional micronutrient enrichment to correct hidden deficiencies
- Suitable for open field, greenhouse, and hydroponic systems

## Compatibility & Sustainability

- Compatible with most water-soluble fertilizers and biostimulants
- Avoid direct mixing with calcium-based products unless pre-tested
- Formulated for precise fertigation schedules, minimizing nutrient waste
- Supports sustainable farming by improving nutrient use efficiency

The Right Formula,  
at the Right Time,  
for the Right Yield



Growth stage	Core SKUs (N-P-K + TE)	Primary crop focus & use notes
Starter / Establishment	10 - 52 - 10 13 - 40 - 13	Transplant solutions, early rooting, pre bloom primer in vegetables, cucurbits, berries, and trees when P demand peaks.
Vegetative Growth	28 - 14 - 14 20 - 20 - 20	Canopy build in leafy greens, brassicas, solanaceae; steady N with moderate P for early to mid veg.
Flower Induction & Fruit Set	15 - 30 - 15 13 - 40 - 13	Pre bloom through fruit set in tomato/pepper/eggplant, cucurbits, vines, and orchards to support flowering, pollen viability, and initial fruit load.
Fruit Development & Sizing	16 - 8 - 24 12 - 6 - 24	Potassium forward feeding for cell expansion, sugar transport, firmness; ideal mid season through bulking.
Finishing / Ripening / Quality	12 - 12 - 36 12 - 6 - 24	Late season K emphasis for color, Brix, firmness, and storability; taper N to avoid soft growth.

**Optional alternatives (use one, not all, to prevent duplication):**  
**Balanced all rounders:** 18-18-18 or 19-19-19 (pick one only; both serve the same role as 20-20-20 in many programs).  
**High K with some P:** 12-12-36 (already listed under finishing; can also back up mid bulking in cool conditions).





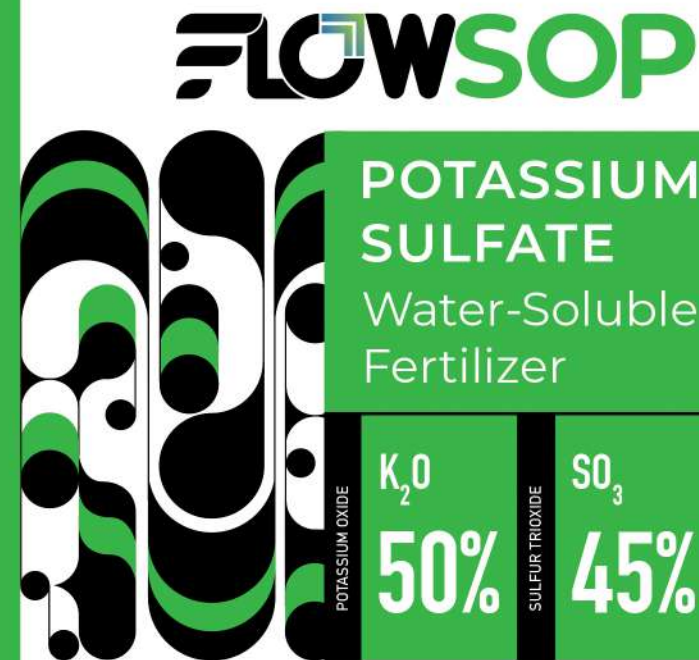
## Potassium & Sulfur for Fruit Quality, Stress Defense and Crop Performance

### Product Description

FlowSOP is a premium-grade potassium sulfate ( $K_2SO_4$ ) fertilizer containing 50%  $K_2O$  and 45%  $SO_3$ , formulated for versatile use across vegetables, orchards, vineyards, and field crops. It supplies two essential nutrients in a chloride-free, low-salt index form, making it ideal for sensitive crops and soils where chloride buildup can limit yield and quality.

Potassium from FlowSOP is vital for fruit development, sugar accumulation, and stress tolerance, while sulfate sulfur drives protein synthesis, enzyme activity, and nutrient metabolism. This balanced combination improves crop vigor, enhances fruit firmness, and boosts post-harvest quality.

FlowSOP's high solubility and clean dissolution make it suitable for both fertigation and foliar programs, ensuring uniform nutrient distribution with no clogging or residue. Its consistent quality allows reliable performance across a wide range of water qualities, soil types, and cropping systems, supporting farmers who aim for high yields with premium market quality.



10 kg

20 kg

25 kg



# No Chloride Fully Soluble Broad-Spectrum Excellence

## Key Benefits

- Provides clean potassium and sulfur nutrition for high-value crops
- Improves fruit size, color, sugar content, and post-harvest shelf life
- Enhances plant tolerance to drought and salinity stress
- Free of chloride and sodium-safe for sensitive systems
- Promotes uniform ripening and overall fruit quality

## Compatibility & Sustainability

- Compatible with most fertilizers and micros
- Do not mix with calcium products in the same tank
- 100% soluble and residue - free - suitable for drip, pivot, and spray systems
- Supports sustainable K nutrition with no chloride accumulation
- Ideal for long-term soil health and export crop standards

Reliable Quality  
Pure Potassium  
Designed for Yield



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Tomato, Pepper, Eggplant			
	Fertigation	10-15 kg/ha	Flowering to harvest; Every 7-10 days × 3-5 rounds
	Foliar	1-2% solution	Pre-harvest spray to boost firmness and Brix × 2-3 times
Melon, Cucumber, Zucchini			
	Fertigation	10-15 kg/ha	From early bulking to pre-harvest × 3-4 rounds
	Foliar	1-2% solution	For size and taste enhancement pre-harvest
Citrus, Mango, Apple			
	Fertigation	10-20 kg/ha	At fruit set and color development; every 2 weeks × 3 rounds
	Foliar	1-2% solution	Pre-harvest spray for color and storability
Grapes & Berries			
	Fertigation	8-12 kg/ha	Veraison to ripening; repeat 2-3 times
	Foliar	0.5-1.5% solution	Ripening sprays to improve quality and sugar movement






## Ultra-Concentrated Potassium for Premium Crops

### Product Description

FlowSOP53 is Exzeler's ultra-pure, high-concentration potassium sulfate fertilizer, delivering 53%  $K_2O$  and 45%  $SO_3$  in a fully water-soluble, chloride-free form. Engineered for precision fertigation, hydroponics, and high-value export crops, it provides the highest potassium density available in a sulfate form, ensuring maximum nutrition in every gram applied.

Potassium from FlowSOP53 plays a critical role in regulating water balance, sugar transport, and enzyme activation, directly enhancing fruit size, firmness, sweetness, and storage life. Sulfur in the sulfate form supports protein synthesis and chlorophyll formation, while also improving nitrogen use efficiency.

Thanks to its exceptional solubility and minimal residue, FlowSOP53 is perfectly suited for low-volume irrigation systems, soft fruit production, and premium orchard crops where quality, uniformity, and market standards are non-negotiable. Its chloride-free formulation makes it safe for even the most salt-sensitive crops, protecting yield and soil health over the long term.



# FLOWSOP53

## POTASSIUM SULFATE

### Water-Soluble Fertilizer

POTASSIUM OXIDE	$K_2O$	$SO_3$
	53%	45%
	SULFUR TRIOXIDE	



10 kg

20 kg

25 kg



# Higher K Highest Standards Zero Compromise

## Key Benefits

- Provides the highest potassium concentration for chloride-sensitive systems
- Enhances fruit firmness, color, sweetness, and storability.
- Supports stress resilience under drought and salinity.
- Precision-formulated for clean injection and minimal residue.
- Ideal for high-frequency fertigation and low-volume, high-density production.

## Compatibility & Sustainability

- Compatible with most micronutrients, biostimulants, and nitrate-based inputs.
- Do not tank-mix with Ca- or Mg- fertilizers; separate application is advised.
- Fully water-soluble, zero chloride, and filter-safe.
- Highest K<sub>2</sub>O formulation available improves nutrient efficiency per dose.
- Ideal for premium berries, hydroponics, and export fruit systems.

# Reliable Quality Pure Potassium Designed for Yield



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Berries (Strawberry, Raspberry)			
	Fertigation	8-12 kg/ha	Flowering to fruit maturity; Weekly applications × 3–5 rounds
	Foliar	0.5–1.5% solution	At ripening stage to boost color and shelf life
Tomato, Cucumber			
	Fertigation	10-15 kg/ha	From fruit set through harvest; Every 7–10 days × 3–4 rounds
Citrus, Apple			
	Fertigation	12-20 kg/ha	Mid-season to ripening; Every 2–3 weeks × 3 applications
Grapes			
	Fertigation	10-15 kg/ha	At veraison and during ripening × 2–3 times
	Foliar	1–2% solution	At color change and pre-harvest to enhance finish



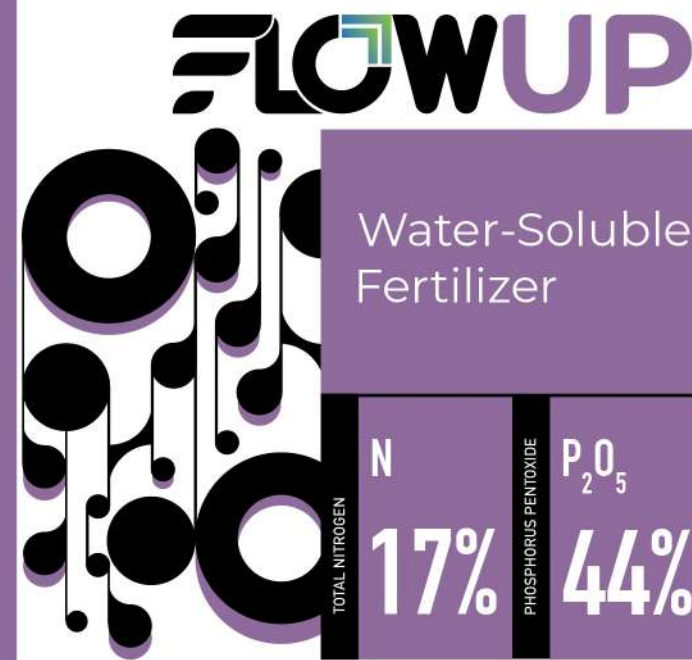


## Acidic Nitrogen–Phosphorus Power for Clean Lines and Efficient Uptake

### Product Description

FlowUP is a premium Urea Phosphate (UP) fertilizer combining 17% nitrogen (N) and 44%  $P_2O_5$  in a 100% water-soluble, low-pH formulation. Its strong acidifying action improves phosphorus solubility and micronutrient uptake while simultaneously preventing scale buildup in fertigation systems.

FlowUP is ideal for high-frequency fertigation, hydroponics, and alkaline soils. It promotes early vegetative growth, root establishment, and phosphorus efficiency without adding salts or chloride.





# Early Roots Strong Blooms Lasting Yield

## Key Benefits

- Provides readily available nitrogen and phosphorus in one clean formula
- Reduces irrigation water pH and unlocks nutrients in alkaline soils
- Enhances root development and early crop vigor
- Prevents scale formation in drip lines and emitters
- Excellent compatibility with fertigation programs and sensitive crops

## Compatibility & Sustainability

- Compatible with most micros, potassium nitrate, and biostimulants use separate tanks
- Excellent for low-pH systems, hydroponics, or hard water correction
- 100% soluble and residue-free; prevents clogging in emitters
- Improves nutrient use efficiency in high-pH and calcareous soils

Acidify Smart  
Feed Efficiently  
Keep Lines Clean



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables (Tomato, Pepper, Eggplant)			
	Fertigation	5-10 kg/ha	From transplanting to flowering; Apply every 7-10 days x 3-4 times
Leafy Greens & Lettuce			
	Fertigation	4-8 kg/ha	From early vegetative stage; Repeat weekly x 3-4 applications
Root Crops (Onion, Carrot, Potato)			
	Fertigation	5-10 kg/ha	From sprouting to mid-vegetative stage; Every 10-14 days x 2-3 times
Grapes & Berries			
	Fertigation	5-8 kg/ha	At bud burst and early shoot growth; 2-3 rounds pre-bloom
Citrus & Fruit Trees			
	Fertigation	6-12 kg/ha	At early canopy growth or root flush; 2-4 applications per cycle
Nursery Crops			
	Drench/ Fertigation	1-2 g/L Solution	Weekly from first true leaves through transplanting





## Phosphorus-Powered Start for Rooting and Early Vigor

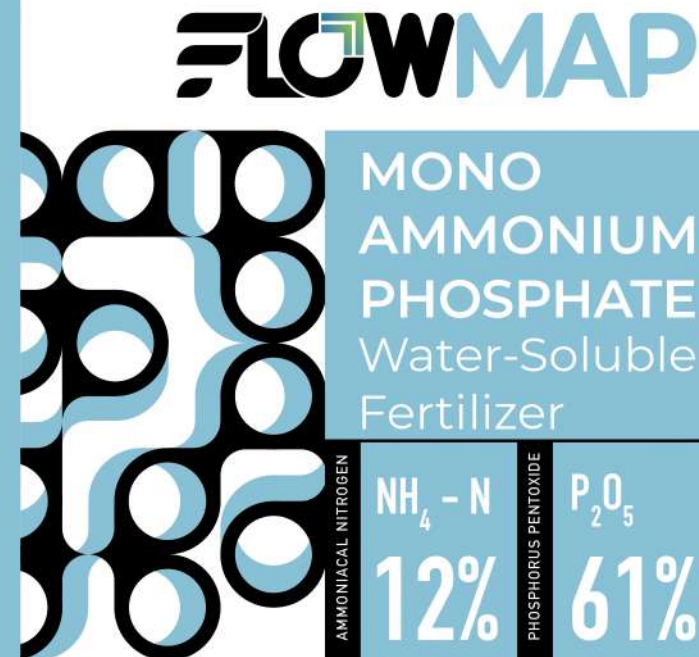
### Product Description

FlowMAP is Exzeler's high-purity Monoammonium Phosphate (MAP) fertilizer delivering 61%  $P_2O_5$  and 12%  $NH_4^+-N$  in a fully water-soluble, low-salt index formulation. Its moderately acidic pH improves phosphorus solubility in alkaline soils, making it ideal for fertigation, foliar use, and transplanting solutions.

By providing readily available phosphorus, FlowMAP stimulates:

- Root system initiation
- Early shoot development
- Stronger seedling establishment

It also supplies ammonium-N, which promotes early nitrogen metabolism without excessive vegetative growth-ideal for a balanced start.



10 kg

20 kg

25 kg

# Seedling Strength Rooted Resilience Yield from the Ground Up

## Key Benefits

- Early Root Stimulation: Phosphorus supports root tip elongation and cell division
- Acidifying Action: Improves solubility of P, Fe, Zn in alkaline/calcareous soils
- Balanced Starter N: Ammonium form supports gentle early growth and root-zone pH adjustment
- Fully Soluble & Safe: No chloride or sodium; ideal for fertigation and foliar application
- Improves Transplant Vigor: Supports fast recovery and early nutrient uptake

## Compatibility & Sustainability

- Compatible with urea, micronutrients, biostimulants (e.g. HumiPULSE, FulviPULSE)
- Avoid mixing with Ca<sup>2+</sup> or Mg<sup>2+</sup> fertilizers (e.g. CaNO<sub>3</sub>, MgSO<sub>4</sub>) - use separate tanks or time gaps
- Clean & fully soluble: No precipitation or clogging in drip and pivot systems
- Acidifies the rhizosphere - improves phosphorus efficiency in alkaline zones
- Low salt index, chloride-free - safe for seedlings, berries, and high-value crops

## Root-Driven Growth Powered by Precision Phosphorus



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables (Tomato, Pepper, Eggplant)			
	Fertigation	5-10 kg/ha	At transplanting and during early vegetative growth; repeat every 7-10 days × 3-4×
	Foliar	0.5-1% solution	Apply 10-15 days after transplant for root and shoot balance × 2-3 rounds
Leafy Greens & Lettuce			
	Fertigation	4-8 kg/ha	Weekly from establishment until leaf canopy closes × 3-4 applications
	Foliar	0.3-0.7% solution	Early vegetative and post-pruning recovery sprays × 2-3 times
Potato, Onion, Beet			
	Fertigation	5-10 kg/ha	During early sprouting and root initiation phase; 2-3 rounds before tuber bulking
	Foliar	0.5-1% solution	At leaf expansion, especially under phosphorus deficiency stress × 1-2 sprays
Fruit Trees			
	Fertigation	6-12 kg/ha	At root flush (spring) and flower initiation stage × 2-3 times
	Foliar	0.5-1% solution	At bud burst and early leaf expansion × 2 sprays
Nursery & Seedbeds			
	Fertigation / Drench	1-2 g/L solution	Weekly for 2-3 weeks post-emergence for strong root foundation



## Fast-Acting Calcium & Nitrate for Stronger Plants & Superior Shelf Life

### Product Description

FlowCN is a premium water-soluble Calcium Ammonium Nitrate (CAN) fertilizer delivering 15.5% nitrate nitrogen ( $\text{NO}_3^-$ ) and 26.5% calcium oxide (CaO). This chloride-free formulation ensures rapid calcium delivery and immediate nitrogen uptake, making it an essential input for high-value horticulture and fruit crops.

By strengthening cell walls, FlowCN boosts tissue integrity, fruit firmness, and shelf life. The nitrate form of nitrogen supports balanced growth and synergizes nutrient uptake especially for potassium and magnesium. Its low salt index and neutral pH make it safe for sensitive crops and irrigation systems.

# FLOWCN

**CALCIUM  
NITRATE**  
Water-Soluble  
Fertilizer

TOTAL NITROGEN	N	NITRATE NITROGEN	$\text{NO}_3$
	15.5%		14.4%
AMMONIACAL NITROGEN	$\text{NH}_4\text{-N}$	CALCIUM OXIDE	CAO
	1.1%		26%



10 kg

20 kg

25 kg



# Firm Fruits Balanced Growth Precision Absorption

## Key Benefits

- **High Calcium Availability:** Improves fruit firmness, storage life, and tissue strength
- **Nitrate-Driven Absorption:** Supports fast, balanced nitrogen uptake without ammonia toxicity
- **Synergistic Uptake:** Enhances absorption of potassium and magnesium
- **Low Salt Index:** Gentle on seedlings, leaves, and drip systems
- **Reduces Disorders:** Prevents blossom-end rot, tip burn, and cracking in fruiting crops

## Compatibility & Sustainability

- Compatible with FlowNOP, FlowNPK, and micronutrients
- Avoid mixing with SOP, MAP, MKP, or humates in one tank
- Low chloride & neutral pH = safe for sensitive crops
- Soluble, clean, no clogging risk in drip or pivot systems

## Where Calcium Meets Precision for Shelf Life, Strength & Stability



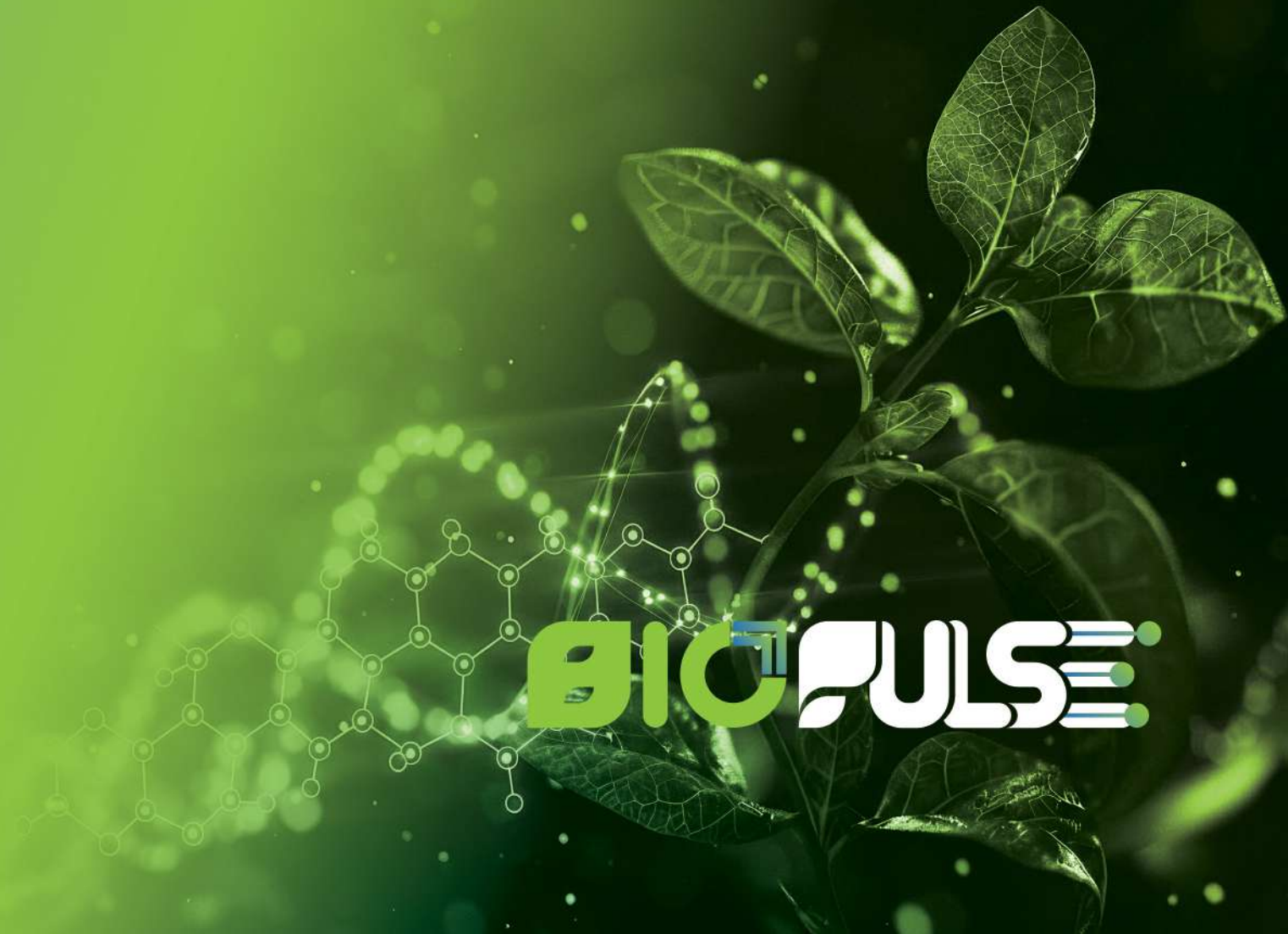
Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Leafy Vegetables			
	Fertigation	5-15 kg/ha	Apply weekly from early vegetative stage to harvest × 4–6 times
	Foliar	0.5–1.5% solution	Apply every 7 days during active leaf expansion × 3–4 times
Melons, Cucumber, Zucchini			
	Fertigation	10-15 kg/ha	During flowering & fruit fill Every 10 days × 3–5 applications
	Foliar	1–2%	Weekly sprays from fruit initiation × 2–4 times
Citrus & Pome Fruits			
	Fertigation	15-25 kg/ha	Start post-bloom Repeat 3–5× until color break
	Foliar	1–2%	2–3 applications pre-harvest to improve firmness
Tomato, Pepper, Eggplant			
	Fertigation	10-20 kg/ha	Start 2 weeks post-transplant Repeat every 10–14 days × 4–6 times
	Foliar	0.5–2% solution	From flowering to mid-fruit fill Apply every 7–10 days × 3–5 times
Grapes & Berries			
	Fertigation	8-12 kg/ha	From berry set to veraison 3–4× total applications
	Foliar	0.5–1.5%	Weekly during ripening × 2–3 times

**Precaution:**  
Do not tank-mix with sulfates or phosphates (e.g., SOP, MAP, MKP). Use separate tanks or alternate schedules. Always test new mixes.





Next Generation  
Biostimulants



**BIOCAPULS**





# What is



# BioPULSE

**BioPULSE** is Exzeler's biostimulant line, developed to enhance soil vitality, rooting, nutrient efficiency and stress tolerance. Each product is based on natural active ingredients — humic substances, amino acids, seaweed, microbial extracts tailored to specific crop needs.





# Why BIO PULSE

- Root & Soil Health – stimulate deeper rooting and active rhizosphere biology.
- Stress Resilience – improve tolerance to drought, salinity and heat.
- Yield & Quality – support flowering, fruit set and uniform crop development.
- Versatile Use – suitable for fertigation, foliar and nursery applications.







## Intelligent Humic Biostimulant for Soil Health & Root Vitality

### Product Description

HumiPULSE is a next-generation humic acid biostimulant, engineered to transform soil health and optimize root-zone dynamics. It contains 82–85% potassium humates (with 68–73% humic acids), extracted from premium leonardite, and is enriched with 5% cold-extracted seaweed (*Ascophyllum nodosum*) for hormonal synergy and abiotic stress defense.

More than just a soil conditioner, HumiPULSE stimulates rhizosphere biology, enhances nutrient uptake efficiency, and promotes resilient root systems even under drought, salinity, or low organic matter. The formulation is 100% water-soluble, making it suitable for fertigation, foliar, and nursery systems, and compatible with most crop nutrition and biological programs.

# HUMIPULSE

Fully Water-Soluble  
Humic Substances

POTASSIUM HUMATES

85%

TOTAL HUMIC ACIDS

73%

POTASSIUM |  $K_2O$

12%



1 kg

10 kg



## Powered by Soil & Sea For Stronger Roots Healthier Soil Resilient Plants

### Key Benefits

- **Stimulates Root Growth:** Deep and lateral root expansion via humic acids + seaweed auxins/cytokinins
- **Improves Soil Structure:** Increases aggregation, porosity & water retention-ideal for compacted or sandy soils
- **Activates Microbial Life:** Organic carbon source enhances soil biodiversity and microbial activity
- **Boosts Nutrient Uptake:** Natural chelation and membrane stimulation enhance NPK and micronutrient absorption
- **Increases Stress Tolerance:** Betaines and antioxidants support plants during heat, drought, or salinity stress
- **Improves Yield Quality:** Stronger shoot, root balance, better fruit set, color, firmness & shelf life

### Compatibility & Sustainability

- Fully compatible with NPKs, micros, and most biostimulants
- Avoid tank-mixing with  $\text{CaNO}_3$  or highly acidic inputs (< pH 4)
- 100% biodegradable and residue-free
- Ideal for regenerative and low-input farming systems

## The Smart Pulse for Soil Life and Root Power



Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables			
	Soil/Fertigation	4-5 kg/ha	Transplanting, flowering, early fruit set (3-4 applications per cycle)
Leafy Greens			
	Soil/Fertigation	3-5 kg/ha	Early growth and mid-season boost (every 3-4 weeks closing parent esis)
Root Crops			
	Soil/Fertigation	4-5 kg/ha	Early rooting and during thickening (2-3 applications total)
Berry Crops			
	Soil/Fertigation	3-5 kg/ha	Early flowering and fruit bulking (every 4-6 weeks)
Fruit Trees			
	Fertigation	5-7 kg/ha or 5-10 g/tree	From bud swell to fruit set (3-4 applications per season)
Citrus			
	Fertigation	4-5 kg/ha	Bud break and post-fruit set (monthly during cycle)
Orchards (Date, Olive, Almond)			
	Fertigation	4-7 kg/ha	After pruning, during early fruit dev. (every 4-6 weeks)
Field Crops			
	Soil Application	5-6 kg/ha	Pre-sowing and early vegetative phase (2-3 applications total)



## Fusion Biostimulant for Soil Vitality, Root Strength & Microbial Life

### Product Description

HuMIX-PULSE is an advanced fusion biostimulant combining 80% potassium humates (with 68–73% humic acids) and 5–6% fulvic acids with a bio-activation complex of beneficial bacteria, enzymes, natural plant hormones, and 5% cold-extracted *Ascophyllum nodosum* seaweed extract.

The humic fraction enhances soil structure, nutrient retention, and cation exchange capacity, while fulvic acids improve nutrient mobility within the plant. The bio-activation complex accelerates nutrient release, stimulates root growth, and boosts stress tolerance through enzymatic action, hormonal regulation, and microbial synergy.

HuMIX-PULSE is >99% water-soluble and suitable for fertigation, foliar application, and nursery/root dip use, making it a versatile solution for vegetables, fruit trees, orchards, vines, ornamentals, and field crops.

# HUMIXPULSE

Bioactivated  
Fully Water-Soluble  
Humic Substances

POTASSIUM HUMATES

85%

TOTAL HUMIC ACIDS

73%

POTASSIUM |  $K_2O$

12%



1 kg

10 kg



# Humic Science Meets Biological Activation For Resilient, High-Performing Crops

## Key Benefits

- Stimulates deeper, denser root systems for improved nutrient and water access
- Enhances nutrient efficiency through chelation and enzymatic release of bound nutrients
- Boosts soil microbial biomass, biodiversity, and long-term fertility
- Improves plant tolerance to drought, salinity, and heat stress
- Supports flowering, fruit set, and uniform crop development

## Compatibility & Sustainability

- Compatible with most NPK fertilizers, micronutrients, and organic biostimulants
- Avoid mixing with highly acidic or calcium-heavy products in the same tank
- 100% plant-based, biodegradable, and non-GMO
- Supports regenerative and low-residue agriculture

## The Smart Pulse for Soil Health, Root Power & Crop Resilience

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Vegetables & Field Crops			
	Fertigation / Soil drench	3-5 kg/ha	Planting, vegetative peak, flowering, or after stress (2-4 applications per cycle)
Fruit Trees & Vines			
	Fertigation	5-10 g/tree	From bud swell to fruit set (3-4 applications per season)
Ornamentals			
	Fertigation / Soil drench	3-4 kg/ha	Rooting and post-transplant recovery (2-3 times per cycle)
All Crops			
	Foliar	0.2-0.5% (200-500 g/100 L)	Flowering, fruit initiation, or stress recovery (2-3 times per cycle)
Nursery Crops			
	Root dip	2-3 g/L	Immediately before transplanting





## High-Performance Microbial Biostimulant for Root Growth, Nutrient Efficiency & Stress Tolerance

### Product Description

RootPULSE is an advanced root biostimulant combining 5% plant-based amino acids and 7% humic acids with a consortium of non-symbiotic plant growth-promoting rhizobacteria (PGPR), enzymatic complexes, and bioactive metabolites. It is designed to accelerate root initiation, improve nutrient uptake efficiency, and enhance crop resilience under challenging soil and climatic conditions.

The humic fraction improves soil structure and nutrient chelation, while amino acids serve as immediate energy and nitrogen sources for plant metabolism. The microbial component synthesizes growth hormones (auxins, cytokinins, gibberellins) and stress-protective compounds, while producing enzymes that release bound phosphorus and micronutrients from the soil.

# ROOTPULSE

Root Growth  
Promoter Through  
Multiple Biostimulatory  
Function

#### BIOACTIVE COMPOUNDS

5%

AMINO ACID

7%

HUMIC ACID

10%



1L

5L

# Engineered for Deep Rooting Built for Resilient Crops

## Key Benefits

- **Accelerates Root Development:** Stimulates root branching and elongation for better anchorage and nutrient access.
- **Improves Nutrient Efficiency:** Increases N, P, and K uptake by up to 60%, 33% and 90% respectively.
- **Boosts Stress Tolerance:** Enhances plant resilience to drought, salinity, heat and transplant shock.
- **Microbial & Enzyme Synergy:** Produces protease, phytase, cellulase and xylanase to unlock soil nutrients.
- **Supports Yield & Quality:** Improves fruit set, size uniformity and overall crop performance.

## Compatibility & Sustainability

- Compatible with most NPK fertilizers, micronutrients, and biostimulants.
- Avoid mixing with strong oxidizers or pesticides harmful to beneficial microbes.
- Shelf life: 2 years with high microbial survival under varied storage conditions.
- 100% biodegradable and environmentally safe.

# The Smart Pulse for Root Power and Nutrient Efficiency

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables (tomato, pepper, eggplant, cucumber)			
	Soil/Fertigation	2-3 L/ha	At transplanting, early vegetative stage, and pre-flowering (3 applications per cycle)
Leafy Greens (lettuce, spinach, kale)			
	Soil/Fertigation	1.5-2 L/ha	Early vegetative stage and mid-cycle boost (2-3 applications per cycle)
Root & Tuber Crops (carrot, beet, potato)			
	Soil/Fertigation	2-3 L/ha	Early rooting and tuber initiation (2-3 applications total)
Fruit Trees & Orchards (apple, citrus, olive, mango)			
	Fertigation	3-4 L/ha	From bud swell to early fruit set (2-3 applications per season)
Nursery Crops			
	Root dip	1-2 mL/L	Immediately before transplanting





## Rapid Nutrient Mobilization & Plant Vitality

### Product Description

FulviPULSE is a high-purity fulvic acid biostimulant derived from premium organic sources, containing  $\geq 80\%$  fulvic acids, 7% sulfur (S), and 6% magnesium (Mg) in fully water-soluble form.

With its low molecular weight and exceptional chelation capacity, fulvic acids penetrate plant tissues rapidly, mobilizing macro- and micronutrients and increasing nutrient efficiency.

The added magnesium enhances chlorophyll formation and photosynthesis, while sulfur supports amino acid and protein synthesis. Together, they boost crop resilience under drought, salinity, and temperature stress while improving overall plant vigor and productivity.

FulviPULSE is especially effective in foliar sprays and fertigation programs to correct nutrient deficiencies, stimulate metabolism, and enhance crop performance across all growth stages.

# FULVI PULSE

DRY MATTER

90%

FULVIC ACID

80%

SULFUR (S) (W/W)

7%

MANGNESIUM (Mg) (W/W)

6%



# Powerful Chelation Mobilizing Nutrients for Maximum Efficiency

## Key Benefits

- Delivers ≥80% fulvic acids for maximum chelation and nutrient mobility
- Supplies magnesium (6%) for chlorophyll and energy metabolism
- Provides sulfur (7%) for protein synthesis and enzyme activation
- Improves micronutrient uptake in challenging pH soils
- Increases stress tolerance and accelerates recovery after damage

## Compatibility & Sustainability

- Compatible with most fertilizers, micro-nutrients, and biostimulants
- Can be tank-mixed to enhance foliar nutrient absorption
- 100% biodegradable; safe for beneficial soil microbes
- Concentrated formulation reduces handling and packaging waste

## The Smart Pulse for Nutrient Mobility and Rapid Uptake

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Vegetables (tomato, pepper, cucumber)			
	Foliar	0.3–0.5% solution	Every 10–15 days during active growth or deficiency correction
	Fertigation	2–1 kg/ha	Every 2–3 weeks during vegetative and Reproductive phases
Orchards			
	Foliar	0.3–0.5%	Pre-flowering, fruit set, and mid-season quality sprays
	Fertigation	2–3 kg/ha	At root flush and during high nutrient demand periods
Leafy Greens			
	Foliar	0.2–0.3%	Every 7–10 days during vegetative growth
	Fertigation	1–2 kg/ha	Throughout growth cycle
Ornamentals & Flowers			
	Foliar	0.2–0.3%	During vegetative growth and before flowering
	Fertigation	1–2 kg/ha	For continuous quality improvement



## Plant-Derived Amino Acids for Growth, Recovery & Quality

### Product Description

AminoPULSE is a high-purity, plant-origin amino acid biostimulant designed to boost metabolic activity, improve nutrient assimilation, and strengthen plants against abiotic stress.

Produced from enzymatically hydrolyzed plant proteins not animal by products it delivers a complete spectrum of L-amino acids (total 22%, with 20% free amino acids) in a highly absorbable form, along with 3% total nitrogen.

This formulation directly supplies amino acids that plants would otherwise have to synthesize under stress, supporting key physiological processes such as protein and pigment synthesis, stomatal regulation, osmotic balance, and tissue repair. By bypassing energy-intensive biosynthesis, AminoPULSE allows plants to focus resources on growth, recovery, and yield formation.

AminoPULSE chelates micronutrients including Fe, Mn, Zn, Cu, and Ca, improving their foliar and root uptake efficiency. Its rapid absorption makes it ideal during transplanting, flowering, fruit set, drought recovery, and other high-stress periods.

# AMINO PULSE

High-Quality Plant-Based Amino Acids

TOTAL NITROGEN

3%

TOTAL AMINO ACIDS

22%

FREE AMINO ACIDS

20%



1L

5L

# The Plant's Own Building Blocks For Growth, Recovery & Quality

## Key Benefits

- Supplies 20% free L-amino acids for maximum physiological impact
- Plant-based origin ensures rapid absorption and high compatibility
- Enhances crop recovery from abiotic stress
- Improves nutrient uptake and metabolic efficiency
- Promotes flowering, fruit set, and uniform quality

## Compatibility & Sustainability

- Compatible with most fertilizers, micro-nutrients, and biostimulants
- 100% biodegradable and residue-free
- Safe for all crop types and growth stages
- Suitable for conventional and sustainable farming programs

# The Smart Pulse for Growth, Recovery & Yield Quality

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting vegetables (tomato, pepper, eggplant)			
	Foliar	0.3–0.5% solution	3–4 sprays: <b>1st</b> at 7–10 days after transplant, <b>2nd</b> at flowering, <b>3rd</b> during fruit set, optional <b>4th</b> during fruit bulking
	Fertigation	1–2 L/ha	Every 10–14 days from transplant to early harvest, 3–5 applications
Leafy vegetables (lettuce, spinach, cabbage)			
	Foliar	0.2–0.3%	2–3 sprays: early vegetative stage, mid-growth, and pre-harvest for color and quality
	Fertigation	1–1.5 L/ha	Every 7–10 days during the cycle, 3–4 applications
Cucurbits (melon, cucumber, zucchini)			
	Foliar	0.3–0.5%	3 sprays: pre-flowering, early fruit set, and mid-fruit growth
	Fertigation	1–2 L/ha	Every 10–14 days from pre-flowering to harvest, 3–4 applications
Fruit trees (apple, citrus, mango, stone fruits)			
	Foliar	0.3–0.5%	2–3 sprays: pre-flowering, post-fruit set, and during fruit sizing
	Fertigation	2–3 L/ha	Every 15–20 days during high demand phases (spring flush to fruit sizing), 3–4 applications



## Ultra-Concentrated Amino Acids for Rapid Plant Response

### Product Description

ProtiPULSE is a highly concentrated biostimulant containing 42% free L-amino acids, 50% organic matter, and 17% total nitrogen, derived through advanced enzymatic hydrolysis. The unique production process preserves the full biological activity of the amino acids, ensuring maximum efficiency in plant metabolism. ProtiPULSE is designed for rapid plant response during critical growth stages such as flowering, fruit set, and recovery from abiotic stress. The high amino acid concentration accelerates protein synthesis, improves nutrient assimilation, and promotes uniform growth. This product is particularly effective for short-window interventions, helping crops recover quickly after environmental stress or providing an extra push during key production phases.

# PROTI PULSE

TOTAL AMINO ACIDS

42%

ORGANIC MATTER

50%

TOTAL NITROGEN

17%



# Concentrated Energy for Critical Growth Moments

## Key Benefits

- Delivers a powerful dose of L-amino acids for immediate plant response
- Supports flowering, fruit set, and early fruit development
- Improves recovery after drought, heat, or salinity stress
- Enhances nutrient assimilation and energy metabolism
- Fully soluble, safe for fertigation and foliar use

## Compatibility & Sustainability

- Compatible with most fertilizers, micro-nutrients, and biostimulants
- 100% biodegradable and residue-free
- Plant-safe at recommended doses
- Suitable for both conventional and sustainable production systems

# The Smart Pulse for Seaweed Power & Crop Resilience

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables (tomato, pepper, eggplant)			
	Foliar	0.3–0.5% solution	3–4 sprays: pre-flowering, early fruit set, mid-fruit growth, and optional pre-harvest quality boost
	Fertigation	1–2 kg/ha	Every 10–14 days during reproductive phase, 3–4 applications
Leafy vegetables (lettuce, spinach, cabbage)			
	Foliar	0.2–0.3%	2–3 sprays: early vegetative stage, mid-growth, and pre-harvest for quality enhancement
	Fertigation	1–1.5 kg/ha	Every 7–10 days during the growth cycle, 3–4 applications
Cucurbits (melon, cucumber, zucchini)			
	Foliar	0.3–0.5%	3 sprays: pre-flowering, fruit set, and mid-fruit growth
	Fertigation	1–2 kg/ha	Every 10–14 days from flowering to harvest, 3–4 applications
Fruit Trees (apple, citrus, mango, stone fruits)			
	Foliar	0.3–0.5%	2–3 sprays: pre-flowering, post-fruit set, and during fruit sizing
	Fertigation	2–3 kg/ha	Every 15–20 days from flowering to pre-harvest, 3–4 applications



## Cold-Extracted Seaweed for Growth, Flowering & Stress Resilience

### Product Description

AlgaPULSE is a premium biostimulant produced from sustainably harvested *Ascophyllum nodosum* (8-10%) seaweed, cold-extracted to preserve its high content of natural growth hormones (cytokinins, auxins, betaines), amino acids, and trace elements.

This natural composition stimulates root initiation, flowering, and fruit development, while improving plant tolerance to abiotic stresses such as drought, salinity, and temperature fluctuations. AlgaPULSE supports hormonal balance, ensuring uniform growth and better yield quality.

Thanks to its gentle formulation, AlgaPULSE is suitable for frequent foliar sprays and fertigation applications, making it an excellent companion for all crop stages where stress protection and growth stimulation are needed.

# ALGA PULSE

Natural Sap  
Extraction of  
Northern Seaweed

DRY MATTER

8-10%

ALGINIC ACID

1.4%

MANNITOL

1.1%



1L

5L



# Sea-Powered Growth

## Stronger Roots

## Better Flowers

## Resilient Yields

### Key Benefits

- Enhances root growth and early crop establishment
- Promotes flowering and fruit set for improved yields
- Increases stress tolerance and recovery speed
- Improves fruit quality, uniformity, and shelf life
- Safe for regular use throughout the growth cycle

### Compatibility & Sustainability

- Compatible with most fertilizers, micro-nutrients, and biostimulants
- Gentle on crops-suitable for sensitive stages like flowering and fruit set
- 100% natural, biodegradable, and safe for soil microbiology
- Ideal for integration into sustainable and regenerative farming programs

## The Smart Pulse for Natural Growth and Stress Resilience

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting vegetables (tomato, pepper, eggplant)			
	Foliar	0.3–0.5% solution	3–4 sprays: <b>1st</b> at 7–10 days after transplant, <b>2nd</b> at flowering, <b>3rd</b> at fruit set, optional <b>4th</b> during fruit bulking
	Fertigation	1–2 L/ha	Every 10–14 days from transplant to mid-harvest, 3–5 applications
Leafy vegetables (lettuce, spinach, cabbage)			
	Foliar	0.2–0.3%	2–3 sprays: early vegetative stage, mid-growth, and pre-harvest for quality and stress tolerance
	Fertigation	1–1.5 L/ha	Every 7–10 days during growth cycle, 3–4 applications
Cucurbits (melon, cucumber, zucchini)			
	Foliar	0.3–0.5%	3 sprays: pre-flowering, early fruit set, and mid-fruit development
	Fertigation	1–2 L/ha	Every 10–14 days from pre-flowering to harvest, 3–4 applications
Fruit trees (apple, citrus, mango, stone fruits)			
	Foliar	0.3–0.5%	2–3 sprays: pre-flowering, post-fruit set, and during fruit sizing
	Fertigation	2–3 L/ha	Every 15–20 days from flowering to pre-harvest, 3–4 applications



## Premium Red Seaweed Biostimulant for Rooting, Stress Resilience & Quality Yields

### Product Description

MarinPULSE is a high-purity powdered biostimulant derived from Rhodophyta (red seaweed), formulated from high quality raw material. It is rich in alginic acid (18.53%), O – 19.3%), and natural plant growth regulators including cytokinins and gibberellins (≥600 ppm). Its bioactive compounds, including mannitol, betaines, and marine polysaccharides, stimulate root initiation, enhance nutrient uptake efficiency, and increase tolerance to environmental stress factors such as drought, salinity, and temperature extremes. Potassium improves osmotic balance, sugar transport, and fruit quality, while alginic acid supports soil structure, moisture retention, and beneficial microbial activity. MarinPULSE is 100% water-soluble, pH 9–11, and suitable for fertigation, foliar sprays, and nursery/root dip applications. It integrates seamlessly into intensive, sustainable, and regenerative farming programs.

# MARINPULSE

Dry Powdered  
Seaweed Extract From  
Red Seaweed  
(Rhodophyta)

K<sub>2</sub>O

18%

ALGINIC ACIDS

18%

ORGANIC MATTER

50%



# Ocean-Derived Strength For Stronger Roots, Healthier Growth & Premium Fruit

## Key Benefits

- Stimulates root hair development and branching for strong crop establishment
- Enhances nutrient uptake and translocation efficiency
- Increases plant resilience to abiotic stresses (heat, drought, salinity)
- Boosts flowering, fruit set, and uniform fruit sizing
- Improves soil structure and microbial health through alginates and organic matter

## Compatibility & Sustainability

- Compatible with most NPK fertilizers, micronutrients, humic acids, and amino acids
- Avoid mixing with highly acidic inputs (pH < 4) or strong oxidizers
- 100% natural and biodegradable, supports soil biodiversity
- Low environmental footprint; sustainable marine harvest origin

# The Smart Pulse for Seaweed Power & Crop Resilience

Crop Group	Application Method	Rate Per Application	Best Timing & Frequency
Fruiting Vegetables (tomato, pepper, eggplant)			
	Foliar	250–300 g/ha (0.15–0.2%)	Pre-flowering, fruit set, and mid-fruit development (2–3 applications per cycle)
	Fertigation	2–3 kg/ha	At transplanting, pre-flowering, and early fruit set (3 applications per cycle)
Leafy Greens (lettuce, spinach, cabbage)			
	Foliar	200–250 g/ha (0.1–0.15%)	Mid-growth and pre-harvest for quality improvement (2 applications per cycle)
	Fertigation	1–2 kg/ha	Early vegetative stage and mid-cycle boost (every 3–4 weeks, 2–3 applications)
Cucurbits (melon, cucumber, zucchini)			
	Foliar	250–300 g/ha (0.15–0.2%)	Pre-flowering and mid-fruit swelling (2 applications per cycle)
	Fertigation	2–3 kg/ha	Pre-flowering, fruit set, and mid-fruit bulking (3 applications per cycle)
Fruit Trees (apple, citrus, mango, stone fruits)			
	Foliar	300–400 g/ha (0.2%)	Pre-flowering, post-fruit set, and mid-fruit sizing (2–3 applications per season)
	Fertigation	3–4 kg/ha	From bud swell to early fruit sizing (3–4 applications per season)
Nurseries & Transplants			
	Root dip	1–2 g/L	Immediately before transplanting
	Seed soak	0.01–0.05%	4–8 h before sowing



## Get in Touch

We're here to support you with the right solutions for your crops and business. Whether you are a grower, distributor, or partner, Exzeler offers direct access to product knowledge, technical expertise, and collaboration opportunities.

Learn more about our solutions and explore the full **FlowTech** and **BioPULSE** product lines on our website.

Contact our team for inquiries, partnership discussions, or technical support:

**Website:** [www.exzeler.com](http://www.exzeler.com)

**Email:** [info@exzeler.com](mailto:info@exzeler.com)

