

Nutritional Recommendations for Watermelon in Open Field

Watermelon cultivation requires a precise supply of essential nutrients to ensure healthy growth and maximum yield. These nutrients are categorized into three groups based on their uptake capacity:

- **Macronutrients:** Nitrogen (N), Phosphorus (P), and Potassium (K)
- **Secondary Nutrients:** Magnesium (Mg), Calcium (Ca), and Sulfur (S)
- **Micronutrients:** Manganese (Mn), Copper (Cu), Chlorine (Cl), Molybdenum (Mo), Zinc (Zn), Iron (Fe), and Boron (B)

Although required in varying amounts, all these nutrients are crucial for optimal plant development. Any deficiency or excess can negatively impact growth and yield. To determine precise nutrient application, several factors must be considered:

1. **Soil Fertility & Nutritional Status** – Understanding baseline soil conditions ensures nutrient applications are balanced and effective.
2. **Nutrient Interactions** – Some nutrients can inhibit or enhance the availability of others. For instance, an excess of one nutrient may limit the uptake of another.
3. **Fertilizer Efficiency** – The choice of fertilizer impacts nutrient availability and plant uptake.
4. **Growth Stage Requirements** – Nutritional needs change across development phases, and fertilization should be tailored accordingly to maximize efficiency.

Optimized Fertilization Approach

To achieve precise nutrient delivery, Haifa recommends Nutrigation™ (fertigation), which provides nutrients directly through irrigation, ensuring targeted feeding at the root zone.

Haifa's Nutrigation™ programs supply the exact nutrient quantities required for optimal watermelon growth. For potassium needs, Haifa recommends potassium nitrate (Multi-K™), an efficient, chloride-free source of both potassium and nitrate-nitrogen. Multi-K™ offers superior nutritional value, application efficiency, and plant uptake.

Beyond Multi-K™, Haifa provides a comprehensive range of water-soluble fertilizers, ensuring complete nutrient coverage through Nutrigation™.



Recommended Nutrigration™ Programs

The following Nutrigration™ programs are designed for open-field watermelon cultivation under specific conditions:

- **Expected yield:** 70 - 80 t/ha
- **Soil type:** Loam (no soil analysis available)
- **Pre-sowing application:** 10 t/ha manure

Macronutrients addressed: NPK (Calcium and Magnesium assumed sufficient in soil or irrigation water; if deficient, supplement with Haifa Mag™ and Haifa Cal™ GG).

The recommendations are based on crop requirement data from Castilla la Mancha Irrigation Advisory Service (SIAR), Spain.



Suggested Nutrigration™ program using straight fertilizers

Weeks after planting	Multi-K™ kg/ha	Haifa MAP™ kg/ha	Ammonium Nitrate kg/ha
2	25	10	25
3	25	15	25
4	50	25	50
5	60	25	50
6	60	25	40
7	110	15	35
8	110	15	45
9	110	10	85
10	175	10	85

Suggested Nutrigration™ program using Poly-Feed™ NPK fertilizers

Weeks after planting	Poly-Feed™ Formula	Rate kg/ha
2	19-19-19 + ME	10
3		15
4		25
5	15-5-30+1MgO+ME	25
6		25
7		15
8	19-19-19 + ME	15
9		10
10	15-5-30+1MgO+ME	10

Tailor Your Fertilization Plan

For a customized Nutrigration™ plan suited to specific conditions, use Haifa's NutriNet™ tool, which enables growers to fine-tune fertilization based on soil status, climate, and yield goals.

