

# GROFLOW® 45H

**NPKS 14-14-11-0**

Start 'n' Grow. Balanced high analysis NPK solution with activated humic acid, for effective uptake of nutrients

## BENEFITS OF GROFLOW® 45H

- Activated humic acids, for enhanced nutrient uptake, plant growth & soils health. Premixed in synergistic ratios, for optimized plant growth from early season to flowering.

## GROFLOW® – YOUR COMPLETE CROP NUTRIENT SYSTEM

1. **GROFLOW® 45H “START’N’GROW”**
  - Highly available phosphorus to promote root growth and plant establishment from early season to flowering.
  - Humic acid maximises the nutrient availability and uptake.
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2. **GROFLOW® 44H “GROW”**
  - Drives vegetative plant development. Improves the plant height without compromise stem thickness and the plant for flowering development conditions.
  - Humic acid maximises the nutrient uptake and reducing nutrient leaching.
3. **GROFLOW® 47H “FILL’N’GROW”**
  - Delivers high potassium relative to nitrogen to improve the flowering and fruit set.
  - A moderate amount of phosphorus is required to deliver the energy to support the flowering and fruit set.
  - Humic acid maximises the nutrient availability and uptake.
  - For green fruits Groflow® 47H is highly preferred to retain the green colour and should be continued for the final step.
4. **GROFLOW® 42H “FINISHER”**
  - Promotes fruit fill, sugars, fruit colour and improves the fruit size.
  - Highly recommended for fruits that undergo a colour change prior to harvest.
  - If you wish to add micronutrients and biostimulants most appropriate additives to the GROFLOW® range are: SUPA AGRI MIX and BOOSTER ZNMO.

## THE IMPORTANCE OF NITROGEN, PHOSPHORUS, POTASSIUM & HUMIC ACID IN THE GROFLOW SYSTEM

Nitrogen is the major building block in protein and chlorophyll. It is also essential for lipid and cytoplasm formation. Highly mobile in the plant, it is translocated and utilised in the growing tips.

Phosphorous assists in root development and energy production in plant cells to carry-out vital metabolic functions and nucleic acid biosynthesis. Phosphorus acts as a structural component of nucleic acids and phospholipids which form plant membranes. It is also important in cell division, photosynthesis, sugar and starch formation, energy transfer and movement of carbohydrates. Phosphorous deficiencies are very common in alkaline calcareous and acid soils, due to its binding with calcium in high pH soils and aluminium and iron in acid soils.

Potassium optimises water use efficiency and is the key nutrient to improve crop photosynthesis and sugar production in fruits. Potassium is very important in fruit bearing plants. Potassium regulates the electrolytes and turgidity of plant cells. Potassium occurs in the guard cells of the stomata and is therefore essential in respiration and transpiration. Potassium is required at all growth stages and a lack of potassium cannot be rectified with late applications.

Humic acid assists the penetration of nutrients into plants more efficiently and holds nutrients in the root zone. Humic acid, the active constituents of humus, plays an important role in nutrient availability and improves cation exchange. Microbial activity, water- holding capacity and soil structure all improve with humic acid application.

# GROFLOW® 45H

CHARACTERISTICS: pH: 9.5 – 10.5 ; Specific Gravity: 1.28 – 1.32

AUS Analysis W/W%: 13.9% N, 14.5% P, 11.0% K, Humic acid: Activated (proprietary).

International Analysis W/W%: 9.9% N, 24.1% (P<sub>2</sub>O<sub>5</sub>), 9.5 % (K<sub>2</sub>O), Humic acid: Activated (proprietary).

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## APPLICATION

**BROADACRE:** Such as Barley, Canola, Cotton, Grain legumes, Maize, Oats, Rice, Sorghum, Triticale, Wheat & Pasture crops. **Foliar: 2 – 5 L/ha** in a minimum of 50 - 100 L final spray volume for Ground rigs or 10 – 20 in a minimum of 25 - 50 L final spray volume for Aerial rigs. Apply as required or during peak vegetative growth to correct deficiencies. In legumes apply during pod development.

**DECIDUOUS TREE CROPS:** Such as Apple, Almond, Cherry, Nectarine, Peach, Pear, Pistachio and Walnut. **Fertigation: 10 – 20 L/ha.** At 7 – 14 days from bud burst through to flowering. Note: **DO NOT apply as a foliar to stone fruit during leaf growth.** Can be applied Post harvest but before leaf drop.

**EVERGREEN TREE CROPS:** Such as Avocado, Citrus, Macadamia, Lychee. **Fertigation: 10 – 20 L/ha.** Apply at 7 – 14 day intervals during active growth period. Do not apply to fruit containing copper residue as burn may result. Apply prior to application of copper.

**FRUITING VEGETABLES:** Such as Capsicum, Cucurbits, Eggplant, Tomatoes, Watermelons, Pumpkins. **Foliar: 4 – 8 L/ha** in a minimum of 600 – 1200L final spray volume. **Fertigation: 7 – 20 L/ha.** Apply during vegetative growth stages. Use where balanced NPK levels are required. When practical use higher (more dilute) water rates. **DO NOT apply in heat of day.**

**LEAFY VEGETABLES:** Such as Endive, Fennel Lettuce, Broccoli, Cabbage, Cauliflower, Kale and Herbs. **Foliar: 4 – 8 L/ha** in a minimum of 600 – 1200L final spray volume. **Fertigation: 8 – 20 L/ha.** Apply during active growth period, at heading stage on lettuce and leafy vegetables. **DO NOT apply in heat of day.**

**ROOT VEGETABLES:** Such as Beetroot, Carrot, Leek, Onion, Potato, Radish, Sweet Potato. **Foliar: 4 – 5 L/ha** in a minimum of 600 – 1200L final spray volume. **Fertigation: 7 – 20 L/ha.** Apply as required during tuber & root fill. **DO NOT apply in heat of day.**

**VINE and BERRY CROPS:** Such as Blueberry, Strawberry, Raspberry, Wine and Table Grapes. **Foliar: 5 – 8 L/ha** in a minimum of 1000 – 1600L final spray volume. **Fertigation: 10 – 20 L/ha.** At 7 day intervals from bud burst to cap fall. **Do not exceed 2x concentration or 2x hectare rate.** Apply higher fertigation rate post harvest. **DO NOT apply in heat of day.**

Fertigation rates are dependent on seasonal nutrient demand.

Agitate contents well prior to application.

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NOTE: The suggested rates of application of the Product are designed for typical Australian conditions and should be used as a guide only. Each farmer's climatic conditions, water quality, soil types, application processes and practices may differ and therefore necessitate corrections to ensure optimum results. Good agricultural practice requires that application be avoided under extreme weather conditions such as temperatures over 28°C, high humidity, frost, rain etc. It is recommended that when applying to a crop or area for the first time, or in combination with other chemicals, a small test area should be sprayed and observed prior to the total spray. Where possible, it is recommended that regular leaf tests are conducted to determine actual plant nutrient availability during each growth cycle. Soil tests at least once per year are essential.