



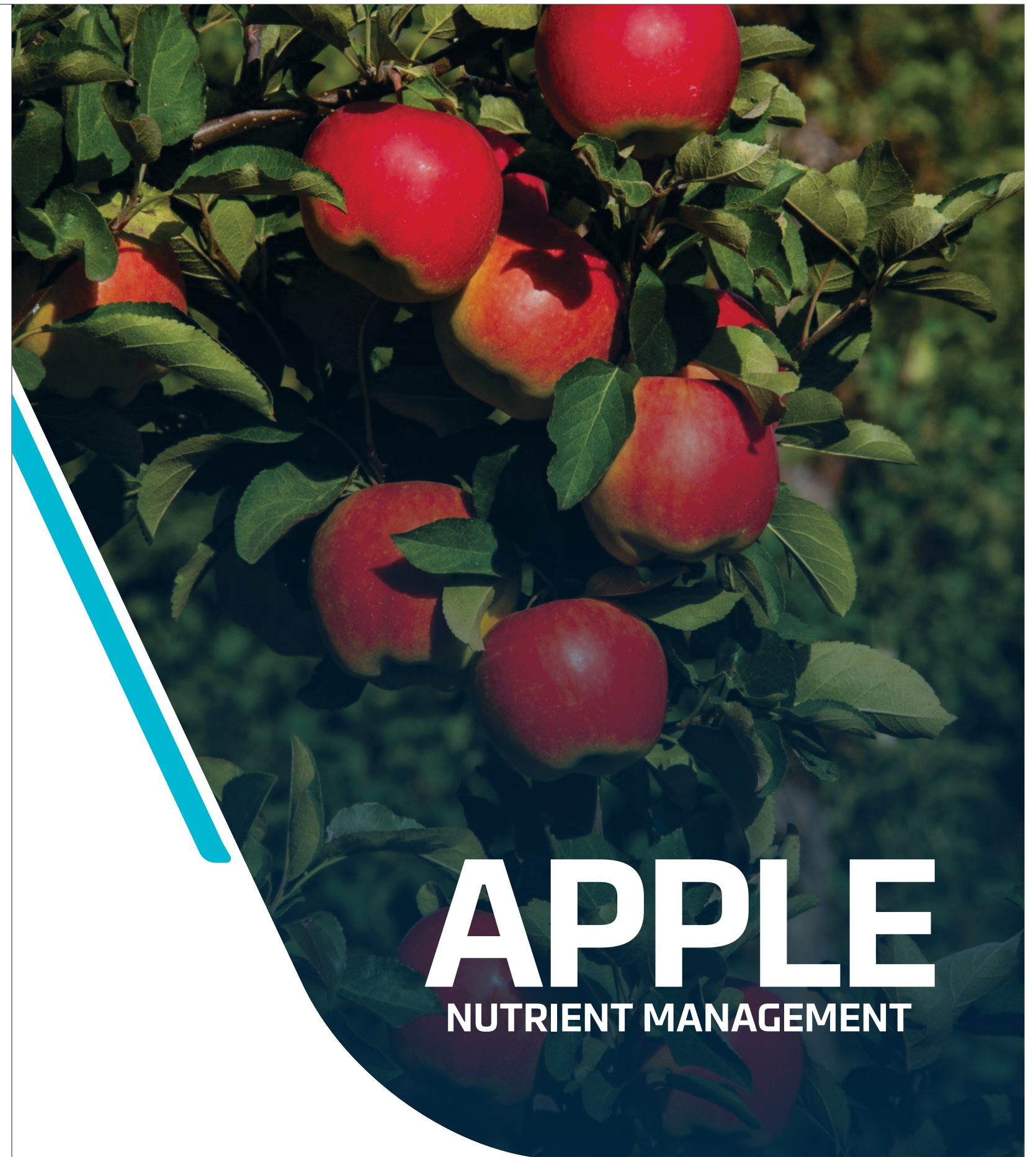
IMPACT FOR A SUSTAINABLE FUTURE



BIOZ | ICL | Select™ | PeaK | Polysulphate | FertiFlow™ | NutriVant™
Foliar Nutrition Line

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APPLE

NUTRIENT MANAGEMENT



ICL Speciality Fertilizers is a major supplier of specialist crop advice and fertilizers to farmers and growers worldwide. The ICL Crop Nutrition concept is founded on nutritional requirements of crops, a diverse product portfolio designed to meet all nutritional needs of crops, and application expertise.

Apple

The Apple (*Malus pumila*) is a popular temperate fruit. Apples are mostly eaten fresh, but a small portion of the produce is processed into juices, jellies, canned slices, and other products.

Apple is primarily grown in Jammu and Kashmir, Himachal Pradesh, and the hills of Uttar Pradesh and Uttaranchal in India. It is also grown to a lesser extent in Arunachal Pradesh, Nagaland, Punjab, and Sikkim.

High yields require balanced nutrition. High yields are determined by the number of fruits and their size. To achieve high apple yields, the fruit number on the tree must be balanced correctly. Tree density, orchard orientation, and spacing between plants are essential to ensure that crops make the best use of environmental conditions and reach their yield potential. There are two categories of nutrients that apples and other plants need: macronutrients and micronutrients. Both the types are necessary, but macronutrients must be provided in bigger amounts, and apple trees are far more likely to be in need of these supplemental nutrients.

The management of nutrients necessary to generate high yields of high-quality apple is summarised in this brochure.

Summary of the nutrition Macronutrient

Macronutrients include nitrogen, phosphorus, potassium, calcium, magnesium, and sulphur. Nitrogen is the most abundant element in the production of leaves, flowers, and fruit, and thus has the greatest influence on apple growth and appearance.

Phosphorus is required for early growth and rooting, as well as for the production of a large number of healthy flower clusters & large fruit size.

Potassium is an important nutrient for apples, not only for tree growth and development but also for fruit size and quality. Throughout the growing season, the apple plant's demand for potassium varies with the growth of phenological phases. The potassium demand rises during the ripening of fruits.

Calcium is required for healthy leaf development and canopy growth, which serves as the firm framework for higher yields.

Sulphur contributes to the strength, vigour, and hardness of roots & is a component of many proteins.

Magnesium promotes good photosynthetic activity, resulting in productive growth and fruit retention on the tree.

Micronutrients

While much lower levels of micronutrients are required to meet the yield and quality crop production requirements, the proper balance of these trace elements is critical.

Boron is essential for cell wall development, division, elongation, pollen tube growth, fruit development, and sugar transport in plants.

Zinc is involved in the synthesis of plant growth hormones and enzymes, as well as the development of chlorophyll, vital for photosynthesis and overall plant growth.

Iron is a important element in chlorophyll, playing a vital role in photosynthesis, electron transport, and the formation of essential energy-transferring enzymes.

Manganese is essential for enzymes in photosynthesis, respiration, and nitrogen metabolism, aiding carbohydrate breakdown and chloroplast formation. Molybdenum is crucial for nitrogen metabolism and nitrate conversion, while copper is vital for plant growth, lignin formation, respiration, and electron transport.

Nutrient Requirements According to Crop Growth stages

Bud Burst - Flowering Stage

- Nitrogen : Helps to increase the tree reserves, which can later be re-mobilized to support early spring flowering, fruit set, and early leaf development.
- Phosphorus : Increases the number of flower clusters, the intensity of the clusters, and the level of fruit set.
- Potassium : Encourage rapid growth of new plant tissues and maximum tree productivity.
- Calcium : Helps in the rapid growth of roots and leaves, resulting in high yield.
- Magnesium : Increases flowering and leaf growth and helps in the process of photosynthesis.
- Zinc : Promotes early leaf development and bud burst.
- Boron : Promotes the growth of pollen tubes and maintains better flower and fruit set.



Flowering to Fruit setting Stage

- Phosphorus : Encourages the setting of flowers and fruit.
- Potassium : Promote more number of flowers, increased flower density and quality
- Calcium : Stimulates enzymes and is required for cell division, elongation, and fruit growth.
- Magnesium : Enhances the ability of a plant to produce flowers and fruit.
- Boron : Helps in germination and elongation of pollen tube and maintain flower set.



Fruit Development Stage

- Phosphorus : Enhances the fruit set and development.
- Potassium : Improves fruit size & shape while reducing fruit disorders.
- Calcium : Helps to maintain good quality of fruits.
- Magnesium : Maintains fruit development.
- Sulphur : Improves fruit size & shape while reducing fruit disorders.
- Boron : Helps to improve the fruit set.
- Manganese : Maintaining the tree's productive growth.



N

P

K

Ca

Mg

S

Zn

Fe

Mn

B

Cu

Mo

Maturity Stage

- Potassium : Boost the quality of produce by improving the colour, shape, and weight of fruits.
- Calcium : Helps to maintain fruit freshness and firmness during storage.
- Magnesium : Enhances the fruit productivity and improves the quality.
- Sulphur : Helps to improve quality and shelf life of fruits.
- Boron : Helps in improving the quality of produce.



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Post Harvest Stage

- Nitrogen : Increases the tree's reserves to encourage vigorous foliage growth.
- Phosphorus : Boost bud development, early rooting, and new tissue growth.
- Potassium : Promotes the development of a strong and healthy root system and improves the uptake of other nutrients.
- Calcium : Encourages the development of foliage and roots and their functions, which promote healthy plant growth.
- Magnesium : Helps in activating enzymes involved in respiration, photosynthesis & nucleic acid synthesis.
- Zinc : Replenish reserves and support leaf and new buds development.



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Mo

ICL Product Portfolio for Apple

Polysulphate grade	Standard
Potassium (K ₂ O)	12.5%
Calcium (CaO)	15%
Magnesium (MgO)	5%
Sulphur (S)	17.5%

Unlike the majority of commercially produced fertilizers, Polysulphate is not a manufactured product. It is mined in rock form and the production process is limited to crushing and sieving the mined rock into uniform desired size. A single application to a field or plant is often all that is required to achieve optimal plant nutrition.

4 in 1 Multi nutrient natural fertilizer

The naturally occurring combination of sulphur, potassium, magnesium, and calcium creates an effective 'nutritional package' that can often be applied directly to the soil. Where necessary, Polysulphate can be used in combination with other fertilizers, but the application itself remains simple and cost-effective.

Polysulphate provides a prolonged and steady release of nutrients, matching the crop's uptake of nutrients throughout its lifecycle. The gradual release of nutrients reduces nutrient leaching thus decreasing pollution hazards.

Polysulphate is compatible with every type of soil and growing condition. It can even be applied to acidic and saline-alkaline soils and is an effective source of nutrients for all crops.

Polysulphate fertilizer is a 'clean' product that can be mass-produced with minimal environmental impact and has the lowest carbon footprint

Key Advantages

- Polysulphate encourage the foliage and roots growth and keep the plant healthy.
- It has neutral pH & very low salinity index.

- Polysulphate is a readily available sulphur source, addresses potential nutrient deficiencies in apple orchards, important for fruit flavor, aroma, and overall quality.
- Helps in healthy fruit development, enhances disease resistance, environmental stress resistance, and enhancing the shelf life of the fruit.
- Polysulphate enhances plant vigor and productivity by providing magnesium, promoting efficient chlorophyll synthesis and photosynthesis, and ensuring overall plant health.
- Calcium in polysulphate aids in cell wall formation, plant tissue strength, and preventing disorders like bitter pit in apples, while also improving fruit quality, texture, and shelf life.
- Delivers superior yield, improved quality and increased profitability.

Method of Application: Soil Application

Dosage: 100 to 1000 g/tree/year

Polysulphate



ICL BIOZ

ICL's BIOZ product line offers sustainable farming solutions with advanced biostimulants. These products promote plant growth, resilience, and soil activity, enabling maximum productivity while minimizing environmental impact. They boost crops' resilience against biotic and abiotic stresses, enabling them to thrive in adverse conditions and recover quickly.

BIOZ Heliodor

Aquatic Plant Extract (Ascophyllum nodosum)	10%
Natural Clay Minerals	90%

- A solid granular biostimulant sourced from Ascophyllum nodosum seaweed, increases population of beneficial soil microorganisms.
- Enhance soil structure and microbial activity, promoting a healthier soil environment.
- Help apple plants tolerate various environmental stresses like drought, salinity, and temperature fluctuations, enhancing resilience and reducing crop losses.
- Promote root development by stimulating the growth of lateral and adventitious roots.
- Enhanced flowering and fruit setting contribute to higher fruit yields.
- Enhance nutrient uptake and plant vigour in apple plants.
- Promotes efficient photosynthesis, leading to increased carbohydrate production and supports better fruit development with improved sugar content in apples.
- Increases crop yield and quantity.

Method of Application:

Soil Application

Dosage: 10 to 100 g/tree/year



Nutrivant Technology

It's difficult to imagine modern agriculture without foliar feeding these days. It has become an essential component of farming in almost every field around the world. When compared to soil applications, foliar feed delivers nutrients much closer to the plant.

However, scientists at Ben Gurion University in Israel have created a unique adjuvant known as FertiVant. Nutrivant increases the overall benefit of foliar feeding. ICL has exclusive rights to this patented technology.

FertiVant Technology is a foliar spray based on NutriVant adjuvant, which breaks through leaf cuticles to increase penetration rate and uptake of minerals. This technology improves yields, produce quality, and grower revenues by reducing spray volumes and reducing costs. FertiVant Technology also provides a continuous release of nutritive elements, known as Long Lasting Performance (LLP), lasting up to four weeks after spraying. It is chloride-free and suitable for all crops.

Nutrivant's humectant keeps nutrients dissolved in water on the leaf's surface for up to 14 days by keeping the surface moist and increasing surface tension, preventing washout by precipitation (rain, mist, dew, and so on) and sprinkler irrigation systems.

Nutrivant's surfactant ensures uniform droplet size and coverage. Sticker keeps these droplets on the leaf's surface.

Nutrivant technology ensures faster penetration of nutrients through the cuticle. Nutrivant formulations boost the plant's natural resistance to fungal infections.

In India, Nutrivant Products are available in 4 stage specific grades - Starter, Booster, Fruit, and Peakvant.

Method of Application: Foliar Application

Dosage: 5-10 g/L of water

NutriVant™ Foliar Nutrition Line

Nutrivant Starter 11-36-24+Micronutrients



Nutrivant Starter as the name suggests is to be applied as soon as there is enough foliage to take the spray. During the pink bud stage, a tree transitions from dormancy to active growth, requiring adequate nitrogen for new shoots, leaves, and flower buds. Phosphorus promotes strong, healthy flower buds, while potassium enhances plant resilience to environmental stresses. Micronutrients like iron, manganese, zinc, copper, molybdenum, and boron are essential for plant physiological processes, enzyme activation, photosynthesis, and nutrient uptake and utilization.

Nutrivant Fruit 12-5-27+8CaO+Micronutrient



Nutrivant Fruit is a potash heavy grade with added calcium which ensures better fruit size and quality. Nutrivant Fruit is a fertilizer formulation designed to support apple trees during the fruit set to development stage. It provides a balanced NPK ratio, promoting fruit setting to fruit development. It facilitates nutrient transport, crucial for overall fruit quality. The inclusion of 8% calcium oxide reduces the risk of disorders like bitter pit. Micronutrients complement macronutrients, promoting enzymatic activity, photosynthesis, and nutrient assimilation. Nutrivant Fruit is a comprehensive solution for meeting the specific nutritional needs of apple trees, fostering healthy trees and high-quality apples.

Nutrivant Booster 8-16-39+Micronutrient



Nutrivant Booster gives the much-needed boost to the plant before it enters the reproductive stage. Nutrivant Booster supports energy demands, flower setting, and fruit formation. It promotes stress tolerance and enhances fruit quality by facilitating nutrient transport. Essential micronutrients like iron, manganese, zinc, copper, molybdenum, and boron complement these processes, fostering enzymatic activities, photosynthesis, and nutrient uptake.

Nutrivant Peakvant 00-49-32



Nutrivant Peakvant is recommended just before harvest for color development and maturity. Nutrivant Peakvant is a nutrient supplement that aids in fruit development, quality, and maturation. It promotes fruit size, color, and flavour, aids in sugar movement, and prevents excessive foliage growth, directing energy towards fruit development. Proper application during the fruit ripening stage ensures a successful harvest of healthy, flavourful apples.

Techleaf



A unique water Soluble foliar fertilizer

Techleaf is a water-soluble foliar fertilizer with high nutrient content and purity. Its M-77 technology and Double Power Impact complex ensure good uptake and prolonged availability of micro-nutrients. Techleaf covers all macro and micro-nutrients, targeting every growth stage and correcting nutrient imbalances and minor deficiencies. Due to its purity and high-quality raw materials, Techleaf products dissolve quickly and completely, making application easy.

M-77 Technology compounds enhance the delivery of spray solution, assists in speedy uptake and effectiveness of nutrients, resulting in healthier and more productive crops.

- M-77 technology extends the effectiveness of the chelates delivered by the foliar spray.
- Functional elements and vitamins improve the metabolic activity of the tissues absorbing the spray and the utilization of the nutrients.
- M-77 technology has stress-reducing compounds that enhance plants' resistance against abiotic stresses.

The DPI (Double Power Impact) Technology's Fast response time makes it the ideal curative foliar feed. The DPI technology provides improved photosynthesis and superior delivery and nutrient uptake for effective results.

- The DPI Technology improves the availability of applied nutrients in the plants, particularly nitrogen, and phosphate.
- Provides an extra stimulant to photosynthetic reactions by boosting transpiration rates and chlorophyll levels using light as an energy source.
- The DPI technology improves transpiration levels and CO assimilation rates in treated leaves, as well as leaf weight and size.

Techleaf 31-11-11

Nitrogen (N)	31%
Phosphorus (P2O5)	11%
Potassium (K2O)	11%



- Techleaf 31-11-11 foliar fertilizer provides various benefits to apple crops throughout the post-harvest period.
- This fertilizer's high nitrogen content promotes the growth of new shoots and leaves, helping to replenish the tree's energy reserves after harvesting.
- Phosphorus promotes root development and plant vigor, providing a strong foundation for the next growing season, whereas potassium improves stress resistance and nutrient transfer within the plant.
- The balanced nutrient ratio encourages healthy regrowth and prepares the apple trees for the winter dormant period, ultimately increasing their resilience and productivity in upcoming growing season.
- Techleaf 31-11-11 foliar fertilizer applying after harvesting supports in the tree's restoration and prepares it for robust growth and fruit production the following year.

Method of Application: Foliar Application

Dosage: 5-10 g/L of water

Techleaf 11-5-19+9CaO+2.5MgO

Nitrogen (N)	11%
Phosphorus (P2O5)	5%
Potassium (K2O)	19%
Calcium (CaO)	9%
Magnesium (MgO)	2.5%



- The Techleaf 11-5-19+9CaO+2.5MgO foliar fertiliser offers particular benefits for apple crops during fruit setting.
- The formulation's balanced NPK ratio (11:5:19) promotes vigorous vegetative growth and healthy flower and fruit development.

- Calcium oxide (CaO) promotes cell structure, reducing the risk of bitter pit and enhancing fruit quality.
- Magnesium oxide (MgO) promotes chlorophyll formation and photosynthesis, which is essential for energy production.
- Techleaf 11:5:19+9CaO+2.5MgO is a comprehensive foliar fertiliser that promotes fruit setting and laying the foundation for a productive apple crop harvest.

Method of Application: Foliar Application

Dosage: 5-10 g/L of water

Unique Water Soluble fertilizers

ICL Specialty Fertilizers is proud to offer a new complete portfolio of water-soluble single fertilizers. Our single source water-soluble fertilizers are specially selected and produced for professional growers. All single water-soluble fertilizers are derived from an unrivalled quality source. Pure and clean fertilizers are needed to grow vegetables, fruits and cash crops safely.

FertiFlow 12-6-22+12CaO Water Soluble Fertilizer

Nitrogen (NO3)	12%
Phosphorus (P2O5)	6%
Potassium (K2O)	22%
Calcium Oxide (CaO)	12%



- FertiFlow 12-6-22+12CaO which has the ratio of NPK and Calcium 2:1:4:2 is mainly useful in the primary formation and physical growth of the plant.
- 12% Calcium oxide helps in covering up the deficiency of Calcium.
- FertiFlow 12-6-22+12CaO fertilizer is a crucial nutrient for apple crops during the fruit setting stage.
- It promotes robust vegetative growth, flower development, root and fruit development, stress resistance, and fruit quality.

- The additional 12% calcium oxide strengthens cell walls, reducing the risk of fruit disorders and improving fruit structure.
- FertiFlow 12-6-22+12CaO fertilizer provides essential nutrients tailored to apple trees' specific needs, contributing to healthier and more productive fruit development.
- Post-harvest application of FertiFlow 12:6:22+12CaO, the balanced nutrient profile supports tree recovery, with nitrogen aiding in new shoot and leaf generation, phosphorus maintaining root health, potassium promoting stress tolerance, and calcium oxide fortifying cell walls.
- FertiFlow 12-6-22+12CaO fertilizer application after harvest ensures well-nourished trees, promoting their vigor and setting the stage for a successful and productive next growing season.

Method of Application: Drenching Application or Fertigation

Dosage: 15-25 g / tree / year

FertiFlow Potassium+8-0-47+7S Water Soluble Fertilizer

Nitrogen (NO3)	8%
Potassium (K2O)	47%
Sulphur (S)	7%



- FertiFlow Potassium+8-0-47+7 Sulphur is the only soluble fertilizer which provides 47% Potassium and 7% Sulphur with 8% Nitrogen.
- FertiFlow Potassium+8-0-47+7 Sulphur, Nitrogen : Potash (1:6) and Sulphur : Potash (1.6:7) increases the availability of Sulphur and Potash and improves the quality.
- Potassium, a crucial element in fruit development, enhances quality, color, flavor, and regulates water uptake, resulting in plump, well-hydrated, and larger apples.
- The inclusion of sulphur supports various metabolic processes, aids in the synthesis of amino acids and proteins, promotes the development of essential enzymes and structural proteins, and enhances the aromatic qualities of the fruit.

- Lower nitrogen content controls vegetative growth during fruit development, redirecting energy towards fruit production and minimizing foliage risk, focusing resources on maturation and quality of apples.
- Helps to reduce fruit disorders while increasing fruit development and size, productivity and skin quality.
- FertiFlow Potassium+ helps in producing sweeter, juicy fruits, with uniformity of size and color. Increases sugar and colouring content in fruits.
- FertiFlow Potassium+ 8-0-47+7S fertilizer is designed to maximize fruit yield and quality in apple crops by increasing the crop's capacity to withstand stress and achieving high yields.

Method of Application: Drenching Application or Fertigation or Foliar Application

Dosage: 15-25 g/tree/year or 5-10 g/L of water

Hi Peak 0-44-44
100% Water Soluble Fertilizer

Phosphorus (P2O5)	44%
Potassium (K2O)	44%



- Hi Peak is high nutrient grade (88%).
- It has balanced ratio highly concentrated source of phosphorus and potash.
- Hi Peak 0-44-44 fertilizer, with high phosphorus and potassium content, is crucial during the bud burst stage for promoting budding, early shoot development, root development, and robust flowering, laying the foundation for a productive growing season.
- During the pink bud stage, high phosphorus and potassium content support flower development, ensuring healthy buds and stress resistance, promoting successful transition from dormancy to active growth.
- The Hi Peak 0-44-44 fertilizer is beneficial during fruit setting due to its nitrogen-free nature, high phosphorus content, and abundant potassium. This balance promotes optimal fruit development, uniform growth, and enhanced fruit quality, minimizing the risk of excessive foliage growth.

- The apple crop's ripening stage requires high levels of phosphorus and potassium. Phosphorus aids in energy transfer, color development, and flavor, while potassium enhances sugar transport and overall fruit quality, ensuring a fruitful harvest.
- It is safe for crops and the environment and ideal for fertigation.
- It is free from chloride, sodium and heavy metals.

Method of Application: Drenching Application or Fertigation

Dosage: 10-15 g/tree/year

Select Boronated Calcium Nitrate
(14.5-0-0+17Ca+0.2B)
Water soluble fertilizer

Nitrogen (N)	14.5%
Calcium (Ca)	17%
Boron (B)	0.2%



- Boronated Calcium Nitrate (14.5% N, 17% Ca, 0.2% B) fertilizer offers a well-rounded nutrient profile to support apple trees during the critical stages of bud burst and fruit development.
- Nitrogen supports early shoot and leaf development, ensuring a robust start to the growing season.
- The presence of 17% calcium (Ca) is particularly advantageous for cell division and structure, promoting healthy bud formation. The calcium content supports strong cell walls, reducing the risk of disorders like bitter pit and enhancing overall fruit structure.
- Additionally, the inclusion of 0.2% boron is crucial during this stage, as boron plays a key role in flower bud initiation and overall reproductive development, setting the stage for successful fruit production. Boron, in its balanced concentration, remains essential for fruit development, aiding in pollen tube elongation and ensuring proper seed development within the fruit.
- Boronated Calcium Nitrate promotes healthy fruit growth, enhancing quality apples by addressing nitrogen needs during early growth and calcium and boron requirements for structural development and fruit quality.

Method of Application: Drenching Application or Fertigation

Dosage: 25-50 g/tree/year

**MICRO CREATING
MACRO IMPACT!**



**Micronutrient
Fertilizers**

Micronutrients, which are essential elements required in comparatively small amounts for crop growth, are present in the Select Range. Even though demands for micronutrients are small in quantity, these nutrients directly affect crop growth and development. It consists of Zn EDTA (12%), Fe EDTA (12%), and Boron (20%).

Select Boron
**Di-Sodium Octa Borate
Tetra Hydrate**
Boron (as B) - 20%



- Boron is important for flower and fruit development, promoting healthy bud differentiation, fruit set, pollen tube elongation, fertilization, and uniform fruit development.
- Supports early fruit development by aiding in cell division and proper seed formation.
- It helps in sugar transport, enhancing fruit sweetness, colour development, and overall quality.
- Enhances the Calcium uptake in plants.
- Improves the quality of produce and prevents the boron deficiency.

Method of Application: Foliar Application

Dosage: 1 g/L of water

Select Zn EDTA
**Chelated Zinc as
Zn EDTA 12%**



- Zinc is a vital micronutrient that aids in physiological processes like cell division and elongation, strengthening tree health and resilience.
- Zinc activates several enzymes crucial for various physiological processes and enzyme activities in apples, contributing to plant growth and development.
- Zinc supports the synthesis of plant hormones, aiding in root development, flowering, and fruiting in apple crops.
- Zinc supports new shoot and leaf development, aiding tree recovery after fruiting. It also helps in preparing the tree for the next growing season, promoting vigor and productivity.
- Zinc is essential for chlorophyll production, contributing to photosynthesis and overall plant health.

Method of Application: Foliar Application

Dosage: 1-2 g/L of water

Select Fe EDTA
**Chelated Iron
(as Fe EDTA) - 12%**



- Supports photosynthetic processes, leading to improved carbohydrate production for growth and fruit development.
- Plays a role in various enzymatic reactions, contributing to essential metabolic processes within the plant.
- Contributes to the development of vibrant green leaves and supports the synthesis of pigments, enhancing fruit color and quality.
- Facilitates chlorophyll synthesis, enhancing the apple tree's ability to photosynthesize and produce energy, promoting overall plant health and vigor.
- Addresses iron deficiency in apple trees, preventing symptoms like chlorosis (yellowing) of leaves.
- In advance climatic conditions, ferrous helps in healthy growth of plants.

Method of Application: Foliar Application

Dosage: 1-2 g/L of water



Liquid Fertilizers

Liquid fertilizers are essential nutrients for crop growth and development. They provide essential nutrients like calcium, which strengthens plant cell structure, and boron, which aids in flowering, fruit setting, and nutrient mobility. Zinc supports enzyme activation and hormone synthesis, enhancing crop quality, resilience, and productivity when applied correctly.

Select Liquid Calcium
Concentrated Liquid Calcium (11% CA)



- Calcium enhances cell wall strength, reducing the risk of disorders like the bitter pit in apples.
- Calcium is crucial for proper fruit development, contributing to better texture, firmness, and overall quality.
- Enhances the apple's resistance to certain diseases and reduces post-harvest decay.
- Contributes to the plant's ability to withstand environmental stresses, promoting resilience in adverse conditions.
- Supports healthy root growth, improving nutrient absorption.
- It helps to prevent physiological disorders like bitter pit, internal browning, and poor fruit development, ensuring better fruit quality.



Select Liquid Boron
Ethanolamine
Boron Ethanolamine (10% B)

- Helps in flower formation, pollination, and seed development in apple. It helps in the production of pollen tubes and supports reproductive processes.
- Helps in protein synthesis, sugar translocation and regulating the carbohydrate metabolism.
- Helps in cell division and elongation, contributing to healthy shoot and root growth in plants.
- Improves flower and fruit setting and promoting overall growth and development of apple.

Select Liquid Zinc
Zinc Oxide Suspension
Concentrate (39.5% ZN)



- Helps in growth hormone synthesis and enzymatic functioning.
- Helps in various metabolic processes within apple plants, contributing to growth and development.
- Regulates hormone levels and helps in the synthesis of auxins that promote root development, fruit setting, and overall plant growth.
- Prevents the Zinc deficiency and improves crop health through stronger stems, healthier foliage and fruit production.

Apple Crop Nutrition Schedule
Soil & foliar fertilization
>10 Standard Orchards



Growth Stages							
	Bud Burst Stage	Pink bud stage	Fruit Set Stage	Fruit Development stage (15-20 days after fruit set)	Fruit Development stage (30-35 days after fruit set)	Beginning of ripening (30 - 35 days before harvest)	After harvest (within 15 days of harvest)
Fertilizers application (Soil)	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree
Polysulphate (0-0-12.5+5MgO+15CaO+17.5 S)	1000 g			1000 g			500 g
ICL BIOZ HELIODOR	100 g			100 g			
Boronated CN (14.5-0-0+17Ca+0.2B)	1000 g			500 g			500 g
NPK complex (15-15-15 or 16-16-16)	1000 g			500 g			

Fertilizer application (Foliar)	g/l water	g/l water	g/l water	g/l water	g/l water	g/l water	g/l water
NutriVant Starter (11-36-24)		5 g / l water					
TechLeaf (11-5-19+9 Cao+2.5 MgO)			10 g / l water				
NutriVant Fruit (12-5-27+8CaO)				10 g / l water			
NutriVant Booster (8-16-39)					5 g/l water		
Fertiflow Potassium+ (8-0-47+7S)					5 g/l water		
NutriVant PeakVant (0-49-32)						5 g/l water (two spray)	
TechLeaf (31-11-11)							10 g/l water
Select Calcium Liquid (11%)						1 ml/ l water	
Select Zn EDTA (12%)				1 g/l water			2 g/l water
Select Boron (20%)		1 g/l water				1 g/l water	







Apple Crop Nutrition Schedule
Soil & foliar fertilization
3 – 5 year High
Density Orchards



Growth Stages							
	Bud Burst Stage	Pink bud stage	Fruit Set Stage	Fruit Development stage (15-20 days after fruit set)	Fruit Development stage (30-35 days after fruit set)	Beginning of ripening (30 - 35 days before harvest)	After harvest (within 15 days of harvest)
Fertilizers application (Soil)	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree
Polysulphate (0-0-12.5+5MgO+15CaO+17.5 S)	50 g			50 g			50 g
ICL BIOZ HELIODOR	5 g			5 g			
Fertilizers application (Fertigation)	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree
Hi Peak (0-44-44)	10 g	10 g	10 g			10 g	
Fertiflow (12-6-22+ 12 CaO)				15 g	15 g		
Boronated CN (14.5-0-0+17Ca+0.2B)	30 g	30 g	30 g				
Fertilizers application (Foliar)	g/l water	g/l water	g/l water	g/l water	g/l water	g/l water	g/l water
NutriVant Starter (11-36-24)		5 g / l water					
TechLeaf (11-5-19+9 Cao+2.5 MgO)			10 g / l water				
NutriVant Fruit (12-5-27+8CaO)				10 g/l water			
NutriVant Booster (8-16-39)					5 g/l water		
Fertiflow Potassium+ (8-0-47+75)					5 g/l water		
NutriVant PeakVant (0-49-32)						5 g/l water (two spray)	
TechLeaf (31-11-11)							10 g/l water
Select Calcium Liquid (11%)						1 ml/ l water	
Select Zn EDTA (12%)				1 g/l water			2 g/l water
Select Boron (20%)		1 g/l water				1 g/l water	

Apple Crop Nutrition Schedule
Soil & foliar fertilization
>5 year High
Density Orchards



Growth Stages							
	Bud Burst Stage	Pink bud stage	Fruit Set Stage	Fruit Development stage (15-20 days after fruit set)	Fruit Development stage (30-35 days after fruit set)	Beginning of ripening (30 - 35 days before harvest)	After harvest (within 15 days of harvest)
Fertilizers application (Soil)	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree
Polysulphate (0-0-12.5+5MgO+15CaO+17.5 S)	100 g			50 g			50 g
ICL BIOZ HELIODOR	10 g			10 g			
Fertilizers application (Fertigation)	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree	g/tree
Hi Peak (0-44-44)	10 g	10 g	10 g			10 g	
Fertiflow (12-6-22+ 12 CaO)				25 g	25 g		25 g
Boronated CN (14.5-0-0+17Ca+0.2B)	40 g	40 g	40 g				
Fertilizers application (Foliar)	g/l water	g/l water	g/l water	g/l water	g/l water	g/l water	g/l water
NutriVant Starter (11-36-24)		5 g / l water					
TechLeaf (11-5-19+9 Cao+2.5 MgO)			10 g / l water				
NutriVant Fruit (12-5-27+8CaO)				10 g/l water			
NutriVant Booster (8-16-39)					5 g/l water		
Fertiflow Potassium+ (8-0-47+75)					5 g/l water		
NutriVant PeakVant (0-49-32)						5 g/l water (two spray)	
TechLeaf (31-11-11)							10 g/l water
Select Calcium Liquid (11%)						1 ml/ l water	
Select Zn EDTA (12%)				1 g/l water			2 g/l water
Select Boron (20%)		1 g/l water				1 g/l water	