



# AGRICULTURAL FERTILIZERS

KHOSHEH PARVARAN ZISTFANAVAR co.  
KNOWLEDGE-BASED COMPANY



DEPARTMENT OF AGRICULTURAL RESEARCH

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## Preface

KHOSHEH PARVARAN ZISTFANAVAR, is a research based agri-biotech manufacturing company based in Mashhad, Iran. The Company is focused on bio solutions for crops and soils. KHOSHEH PARVARAN ZISTFANAVAR manufactures Bio-pesticides, Bio-fertilizers, Bio-stimulants, Gel-based chemical fertilizers and other Agri inputs. Our R&D team consisted of 4 full time PhD researchers with over 15 years of experience in plant nutrition and physiology, agro-biotechnology, nano-biotechnology and promotion of crop health and yield through eco-friendly approaches. Our team had over 50 international peer reviewed publications and over 30 conference and technical publications. We also have Patents on our technologies and products. Farmers Demand for recent developments, technologies, information and innovative products in agriculture is increasing, and our company with the help of its exclusive research and education network attempt to equip the farmers with the knowledge needed to succeed and experience the high-performance and sustainable agriculture.

The bio-fertilizers produced by our company are including Nito-Power Bacter Dayan® (nitrogen fixing bacteria), Phospho-Power Bacter Dayan® (phosphate solubilizing bacteria), Petas-Power Bacter Dayan® (potassium solubilizing bacteria) and Sulfo-Power Bacter Dayan® (sulfur oxidizing bacteria) which are developed based on highly active, salt and drought tolerance microorganisms. Besides, the amino acids bio-fertilizer (Amino-Power®) has also been developed through the unique process which insures the highest activity and quality of amino acid bio-fertilizer. The chemical fertilizers in gel formulation contain the plant required macro and micro-elements. The gel form allows obtaining a high ratio of nutrients per liter of product, and it is completely soluble in water. Moreover, the high concentration of nutrients enables to use a low dosage of the gel resulting in lower water usage. These products are recommended for all types of orchards, gardens, greenhouses and farms. The quality of the products is guaranteed by high professional skills of the manufacturer, use of high quality import and domestic materials as well as the state-of-art production technologies. All products meet the national and international standards.



Ferdowsi University of Mashhad  
Business incubator



KHOSHEH PARVARAN ZISTFANAVAR Co.  
KNOWLEDGE-BASED COMPANY



DAYAN

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ساخت ایرادخ



# DAYAN Nitro-Bacter®



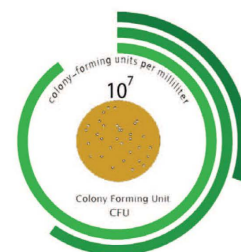
Packaging: 5 Liter

The product has been developed using highly active nitrogen fixing bacteria. Nitrogen fixation is a process by which nitrogen in the earth's atmosphere is converted into ammonia (NH<sub>3</sub>) or other molecules available to plant. Besides nitrogen fixation, these microorganisms also produced other useful metabolites such as organic acids, enzymes, vitamins, and phytohormones. The organic acids and enzymes play a major role in soil pH adjustment, availability of micro-elements, and suppressing the phyto-phatogens. The phytohormones are growth stimulator and improve the plant growth and development, increase plant yield and resistancy to various abiotic and biotic stressors. This product contains *azotobacter* sp. and *azospirillum* sp. and recommended for all types of orchards, gardens, greenhouses, farms and organic farming.

## Benefits DAYAN Nitro-Bacter®:

The microorganism used in this product besides nitrogen fixation, produce useful phytohormones, enzymes, organic acids, and chelating agents. Application of nitrogen chemical fertilizer could be reduced up to 20-30% If Nitro-Bacter DAYAN® is used according to the recommendations.

- Increase crop yield by 20-30%
- Provide protection against drought and some soil borne diseases
- Replace chemical fertilizers
- Reduce the costs towards chemical fertilizers
- Stimulate plant growth
- Supplement to fertilizers
- Active the soil biologically
- Cost effective
- Restore natural soil fertility
- Eco-friendly



## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 4 to 20° C.

Applications:	
Items	Recommendation
Crops	5 liters/hectare
Orchard	3 to 4 liters/hectare
Seed treatment	1 liter of product for the seeds required to plant one hectare of crop
Single tree	10 to 15 ml

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.  
 - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of bio-fertilizer used.  
 - Application of nitrogen chemical fertilizer could be reduced up to 10-20% If Nitro-Bacter DAYAN® is used according to the recommendations.



irrigation water    Seed treatment    Root treatment    Treatment tubers



# DAYAN Phospho-Power Bacter®

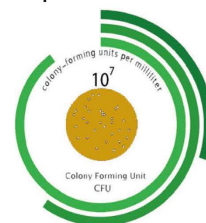


Packaging: 5 Liter

Phosphorus is one of the main nutrient elements for plant growth and development. The major part of the phosphorus in the soil is inaccessible (insoluble) to the plant and the amount of available (soluble) phosphorus is negligible in agricultural soils. Nowadays, climate changes, inappropriate soil tillage operations, continuous exposure to pesticides, herbicides and chemical fertilizers all together resulted in soil structure destruction, soil organic matter and nutrient losses. The soil microbial population has severely influenced. Phospho-Power Bacter Dayan® contains highly active microorganisms which could potentially solubilize the inaccessible phosphorous sources, increase the bioavailability of phosphorous and other elements for plants. The microorganism used in the product produce organic acids, phytohormones, enzymes which these microbial metabolites increase the yield of plants, regulate soil pH, and enhance the bioavailability of other micro-elements. This product exclusively formulated and contains highly active and multi acting species of *Pseudomonas* sp. and *Bacillus* sp. with high phosphate solubilizing activity. This product is developed to partially provide the phosphorous requirement of plant through solubilizing insoluble phosphorus sources present in the soil.

## Benefits DAYAN phospho-Power Bacter®:

The microorganisms used in this product are highly salt- and drought-tolerant microorganisms, hence they could survive and function in the poor, drought and saline soil. Application of phosphate chemical fertilizer could be reduced up to 20-30% If Phospho-Power Bacter DAYAN® is used according to the recommendations.



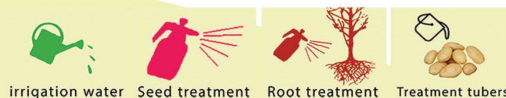
- Increase crop yield by 20-30%
- Replace chemical fertilizers
- Stimulate plant growth
- Active the soil biologically
- Restore natural soil fertility
- Provide protection against drought and some soil borne diseases
- Reduce the costs towards chemical fertilizers
- Supplement to fertilizers
- Cost effective
- Eco-friendly

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 4 to 20° C.

Applications: Items	Recommendation
Crops	5 liters/hectare
Orchard	3 to 4 liters/hectare
Seed treatment	1 liter of product for the seeds required to plant one hectare of crop
Single tree	10 to 15 ml

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.  
 - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of bio-fertilizer used.  
 - Application of phosphate chemical fertilizer could be reduced up to 10-20% If Phospho-Power Bacter DAYAN® is used according to the recommendations.





# DAYAN Petas-Power Bacter®

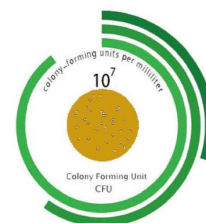


Packaging: 5 Liter

Potassium is one of the essential macro-elements required by the plants. Petas-Power Bacter DAYAN® contains potassium solubilizing bacteria that are capable of decomposing feldspars, mica, silicates and other mineral resources and, releasing the potassium element accessible for plant uptake. In addition, these microorganisms not only decompose potassium sources to release potassium but also produce organic acids, enzymes and beneficial microbial metabolites which all together increase the crop yield and resistancy to abiotic and biotic stressors. This product has been developed using exclusive active species of *Bacillus* sp. and *Pseudomonas* sp. with high potassium solubilizing properties. This product could partially provide the potassium requirement of plant through solubilizing insoluble potassium sources present in the soil.

## Benefits DAYAN petas-Power Bacter®:

The microorganisms used in this product are highly salt and drought-tolerant microorganisms, hence they could survive and function in the poor, drought and saline soil. Application of potassium chemical fertilizer could be reduced up to 20-30% If Petas-Power Bacter DAYAN® is used according to the recommendations.



- Increase crop yield by 20-30%
- Replace chemical fertilizers
- Stimulate plant growth
- Active the soil biologically
- Restore natural soil fertility
- Provide protection against drought and some soil borne diseases
- Reduce the costs towards chemical fertilizers
- Supplement to fertilizers
- Cost effective
- Eco-friendly

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 4 to 20° C.

Applications: Items	Recommendation
Crops	5 liters/hectare
Orchard	3 to 4 liters/hectare
Seed treatment	1 liter of product for the seeds required to plant one hectare of crop
Single tree	10 to 15 ml

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.  
 - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of bio-fertilizer used.  
 - Application of potassium chemical fertilizer could be reduced up to 10-20% If Petas-Power Bacter DAYAN® is used according to the recommendations.



Plant Availability

Free of sodium and chloride

Assured quality

Satisfaction guarantee

irrigation water

Seed treatment

Root treatment

Treatment tubers



# DAYAN Solpho-Power Bacter<sup>®</sup>

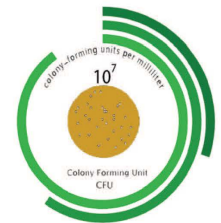


Packaging: 5 Liter

Sulfur (S) is one of the essential nutrients required for plants growth. In recent years, sulfur deficiencies have become more frequent and the importance of sulfur in crop production is becoming more and more recognized. Most of the agricultural soils in arid and semi-arid regions of the world are calcareous soils and S deficiency is a very common phenomenon. Decreasing soil pH is considered, as an effective way to deal with the stabilization of nutrients in calcareous and alkaline soils. Application of sulfur in the soil and its oxidization to sulfuric acid by sulfur oxidizing bacteria appeared to be a feasible approach for soil pH amendment and subsequently enhancing nutrients availability for plants. The sulfur oxidizing bacteria naturally exist in the soil however, their population and activity have been significantly limited due to the low levels of organic matter in agricultural soils. This product is developed using potent and exclusive active species of *Thiobacillus* sp. with high sulfur oxidizing activity. This product enhances and speeds up the oxidation and conversion of elemental sulfur into sulfuric acid.

## Benefits DAYAN Solpho-Power Bacter<sup>®</sup>:

The microorganisms used in this product slowly oxidize the elemental sulfur to sulfuric acid and therefore amend the soil pH. As result, the uptake of other nutrients such as Zn, Fe, P, Mn, Mg and Ca by plant root is enhanced. The microorganisms used in this product are highly salt- and drought-tolerant microorganisms, hence they could survive and function in the poor, drought and saline soil.



Applications: Items	Recommendation
Crops	5 liters/hectare
Orchard	3 to 4 liters/hectare
Sulfur treatment	3 liters/ ton elemental sulfur
Single tree	10 to 15 ml

Note:  
The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.  
This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of bio-fertilizer used.

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 4 to 20° C.





# DAYAN Amino-Vafer®



Packaging: 1 Liter

**A**mino-Vafer DAYAN® contains complete profiles of free amino acids and bioactive peptides. Amino acids play an important role in the metabolism of plants and are building blocks of proteins and the phytohormone auxin. Amino-Vafer DAYAN® has a plant-strengthening effect especially in stressful condition. Amino-Vafer DAYAN® should be applied during the phases of rapid plant growth, root formation and fruit development. Well supplied plants are less susceptible to extreme climate conditions, fungi and pest insects. Amino-Vafer DAYAN® is an organic biostimulator containing 30% free amino acids and peptides. Amino-Vafer DAYAN® acts as natural bio-stimulants and organic chelate ligands for micronutrients. It could be absorb through leaves and roots. They support plant recovery during abiotic or biotic stress. Amino-Vafer DAYAN® is obtained by various biological and enzymatic hydrolysis of natural proteins. The production process guarantees the presence of free amino acids and high chelate quality for trace elements. It is free of chlorine and heavy metals.

## Benefits DAYAN Amino-Power®:

- Increases the synthesis of growth stimulating hormones and Induces flower and fruit setting related hormones.
- Improves fruit setting and reduces fruit drop and Improves fruit size, color and quality.
- Stimulates protein synthesis as it contains amino acids (building blocks).
- Enhance the chlorophyll concentration and photosynthesis efficiency.
- Enhance the physiological activity, growth and plant development.
- Promotes enzymatic activity by acting as a natural stimulant.
- Improve the resistance to the biotic and abiotic stresses.
- The amino acids in this product are highly absorbent.
- Advances maturity and increases the keeping quality.
- Provides drought resistance through its direct action.
- Promotes uptake of micro and macro nutrients.
- Increases crop yield and quality.

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 4 to 20° C.

### Applications:

Items	Recommendation
Foliar application	2-3 L of product is diluted with 1000 liters of water and then foliar applied/hectare
Crops	3 to 4 liters/hectare through irrigation water
Orchard	2 to 3 liters/ hectare
Single tree	8 to 12 ml

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.
- This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of bio-fertilizer used.



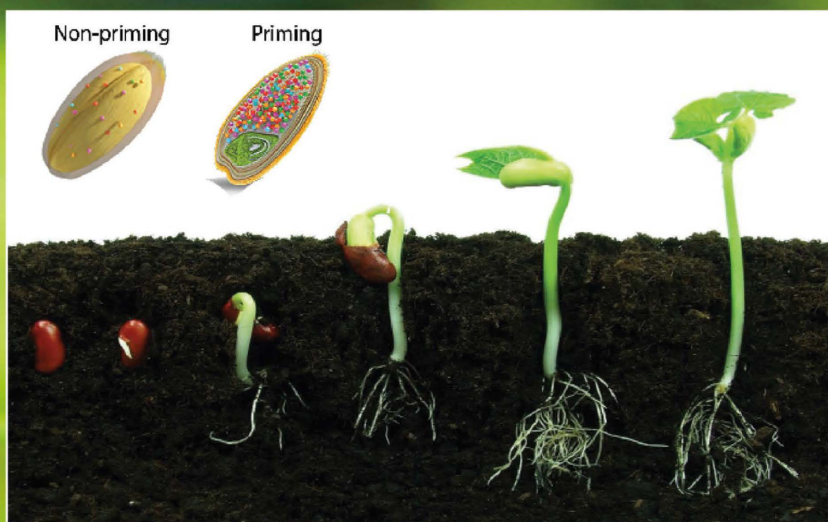
Foliar application



Irrigation water



# DAYAN Seed Priming Liquid®



Packaging: 0.5 Liter

**K**hoshe Parvaran Zist Fanavar provided industry-leading innovative seed technology, using the latest biological tools and techniques, which provide value added solutions to maximize the natural potential of seed in the field. Seed priming is one of the key technology categories we offer for a number of crops. During priming, the seed is taken part way through second phase and then dried, before the root can emerge from the seed. Once conditions (temperature and moisture) are appropriate in the field, third phase can continue, germination occurs in a much shorter time. Besides a faster speed of emergence, there are several benefits of using primed seed. Priming enables seed to germinate and emerge even under adverse agro-climatic conditions such as cold and wet or extreme heat. Uniform emergence helps optimize harvesting efficiency which can increase yield potential. If all the plants emerge at the same time, they will likely mature at the same time for harvest. Priming also helps improve vigor for fast and healthy plant development. This product has been formulated based on different priming agents such as distilled water, salicylic acid, acetyl salicylic acid, ascorbic acid, polyethylene glycol and KNO<sub>3</sub>. It is free of chlorine and heavy metals.

## Benefits of DAYAN Seed Priming Liquid®:

- Wider temperature range for germination
- Optimized harvesting performance
- Earlier canopy development
- Faster speed of emergence
- Increased final population
- Improved uniformity

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 4 to 25° C.

Applications:			
Seeds	Seed Weight (kg)	Application	Soaking time
Persian Melon	50	1 Liter in 100 Liters of water	5 h
Lawn	20	0.8 L in 100 Liters of water	8 h
Onion	20	0.8 L in 100 Liters of water	3 h
Fava Bean	40	0.6 L in 100 Liters of water	4 h
Pea	50	0.4 L in 100 Liters of water	5 h
Sesame	50	0.4 L in 100 Liters of water	3 h

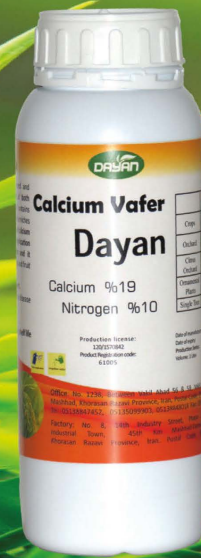
To view further information regarding the application of this product at other plants contact in the website, brochure our R&D team



Seed priming



# DAYAN Calcium Vafer® (19% CaO, 10% Nitrogen)



Packaging: 1 Liter

Calcium as one of the essential elements is widely recognized for its important function in plants to increase nutrient uptake, build strong cell walls for sturdier plants, and increase vitality. Maintaining high levels of bio-available calcium in the soil is critical in achieving adequate levels of calcium uptake. Calcium Vafer DAYAN® is perfectly developed and balanced to offers plant-available blends of both calcium (CaO 19%) and nitrogen (10%). It contains nitrogen in the form of nitrate (NO<sub>3</sub>-), which enriches plant nutrition and improves the efficiency of calcium uptake. Calcium Vafer DAYAN® is suited to application through nutrigation and foliar application and it provides the calcium requirement of all crops and fruit trees throughout their growth seasons. This product contains 19% calcium (CaO) and 10% nitrogen. It is free of chlorine, sodium and heavy metals.

## Benefits of DAYAN Calcium Vafer®:

- Soil structure, helping to maintain an optimum root environment for high yielding crops.
- Cell wall strength, leading to better quality, shelf life and lifting marketable crop yields.
- Directly available for plant uptake, resulting in fast and predictable growth responses.
- The preferred calcium source for most horticultural and high value agricultural crops.
- None volatile nor adsorbed to soil particles, leaving it readily available to plants.
- The pH of the product is adjusted to ensure the availability of nutrients to plants.
- Improves the plant uptake of the cations potassium, calcium and magnesium.
- Provides the plant calcium and nitrogen requirements simultaneously.
- Cell wall strength, helping plants tolerate disease and insect infection.
- Enhance the plant growth and development.
- Increasing plant lodging resistance.

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.

### Applications:

Items	Recommendation
Foliar application	2 L in 1000 L of water/hectare
Crops	3 to 4 liters/hectare
Orchard	2 to 3 liters/hectare through irrigation water
Single tree	8-10 ml in 20L of water/tree

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.
- This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of fertilizer used.
- Re-usage of this product is advised if needed



Foliar application



Irrigation water



# DAYAN Micro-Mix® (1&2)



Packaging: 1 Liter

**D**AYAN Micro-Mix® is a complete micronutrient liquid plant food formulated for the maximum uptake of nutrients. DAYAN Micro-Mix® is developed in two formulations called DAYAN Micro-Mix® 1 & 2. The DAYAN Micro-Mix® 1 specifically formulated for non-saline soils and DAYAN Micro-Mix® 2 which specifically formulated for saline soils. This exclusive product contains manganese, molybdenum, zinc, iron, boron, copper, sulfur, cobalt, silicon, molybdenum and vitamins (B1, B2, B3, B6, and C) with high plant bio-availability. This product is developed perfectly to adequately supply micronutrients throughout the growth cycle and for prompt correction of deficiencies. This product contains water soluble micronutrients for nutrigation and foliar application. DAYAN Micro-Mix® is formulated according to the Hoagland food program and is suitable for use in hydroponic systems. It is manufactured according to the highest international standards, with strict quality control. It is free of chlorine, sodium and heavy metals.

## Advantages:

- It is highly concentrated micro-nutrient which sufficiently provides the plant micro-nutrients requirements.
- Correct deficiencies and cure mal-functioning of the plant.
- Enhances plant growth development and productivity.
- Enhances plant resistance to disease, insects and frost.
- Improve crop yield, quality and shelf life.
- Supports flowering and fruiting.
- Directly available for plant uptake, resulting in fast and predictable growth responses.
- The pH of the product is adjusted to ensure the availability of nutrients to plants.

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.

DAYAN Micro-Mix® 1			DAYAN Micro-Mix® 2		
For Non-Saline Soils			For Saline Soils		
Micro-nutrients	Concentration (w/v)	ppm	Micro-nutrients	Concentration (w/v)	ppm
Chelated Iron	0.6	6000	Chelated Iron	0.6	6000
Boron	1.48	14000	Boron	0	0
Manganese	1.3	13000	Manganese	1.3	13000
Copper	0.36	3600	Copper	0.36	3600
Molybdenum	0.013	130	Molybdenum	0.013	130
Zinc	1.36	136000	Zinc	1.36	136000
Cobalt	0.006	60	Cobalt	0.006	60
Sulfur	3.2	32000	Sulfur	3.2	32000
Silicon	0.31	3100	Silicon	0.31	3100
Vitamins (B1, B2, B3, B6, C)	1	10000	Vitamins (B1, B2, B3, B6, C)	1	10000

Applications:	
Items	Recommendation
<b>Foliar application</b>	0.5 to 1 L of product is diluted with 1000 liters of water and then foliar applied/hectare
<b>Crops</b>	1 to 2 liters/hectare through irrigation water
<b>Orchard</b>	1 L of product is diluted with 1000 liters of water/hectare through irrigation water (nutrification). During fruit formation the plant micro-nutrients requirement are high, therefore at least two times foliar applications or nutrification with 14 days intervals are recommended.
<b>Single tree</b>	Dissolve 2 to 3 ml of this product in 20 liters of water and then irrigate the root zone.
<b>Hydroponic</b>	50 ml product is diluted with 1000 liters of water
<b>Greenhouse cultivation</b>	50 ml of product is diluted with 1000 liters of water for 1000 square meters
- The agricultural consultant/adviser could decrease or increase our recommended values based on the plant nutrient requirements. - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of fertilizer used. - Re-usage of this product is advised if needed.	



Foliar application

Irrigation water



# DAYAN Iron Chelate (6 %)®



Packaging: 1 Liter

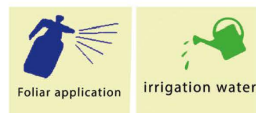
The iron deficiency is probably of greatest economic importance affecting numerous high value crops growing in strategic areas. Iron chelates are now routinely used to prevent and correct deficiencies. The usual iron chelate for hydroponics or fertigation is FeEDTA. The DAYAN Iron Chelate® contains 6 % water soluble iron chelated by EDTA, 95% of which is chelated by the ortho-ortho isomer. This is most biologically effective hence correction of iron deficiency is quick and reliable. The DAYAN Iron chelate remains stable in solution at very low pH levels so ideal for adding to acidified stock tanks. Moreover, the high chemical stability of DAYAN Iron chelate plausible its application for use in calcareous, high pH (up to 9.0 and above) soils. It is compatible with soluble phosphates thereby remaining effective in hydroponics and liquid feed systems. DAYAN Iron chelate is an easy to use liquid formulation. DAYAN Iron Chelate® is a liquid formulation of ferric ethylenediaminetetraacetic acid (Fe-EDTA) containing 6 % water soluble iron. The pH stability range is 4-11. It is manufactured according to the highest international standards, with strict quality control. It is free of chlorine and heavy metals.

## Advantages:

- A high performance iron chelate to prevent and correct iron deficiency in most, horticultural and ornamental crops growing in high pH conditions.
- Especially recommended where the correction of iron deficiency is agronomically critical to achieve crop quality and profitability.
- As an efficient iron source in hydroponics and fertigation systems particularly where low pH stock tanks are employed.
- It is highly concentrated iron chelate formulation which provides the plant iron requirement.
- For the quick correction of iron deficiency when symptoms appear in a growing crop.
- Technically superior to most existing formulations (95% ortho-ortho isomer).
- The pH of the product is adjusted to ensure the availability of nutrients to plants.

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.



Applications:	
Items	Recommendation
<b>Foliar application</b>	1 to 1.5 L of product is diluted with 1000 liters of water and then foliar applied/hectare
<b>Crops</b>	2 to 3 liters/hectare through irrigation water
<b>Orchard</b>	1 to 2 L of product is diluted with 1000 liters of water/hectare through irrigation water (nutrification).
<b>Single tree</b>	Dissolve 3 to 5 ml of this product in 20 liters of water and then irrigate the root zone.
<b>Hydroponic</b>	50 ml product is diluted with 1000 liters of water
<b>Greenhouse cultivation</b>	50 ml of product is diluted with 1000 liters of water for 1000 square meters
- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements. - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of fertilizer used. - Re-usage of this product is advised if needed.	



Plant Availability

Free of sodium and chloride

Assured quality

Satisfaction guarantee



# DAYAN Potass Vafer®

(54% K<sub>2</sub>O, 45% P<sub>2</sub>O<sub>5</sub>)

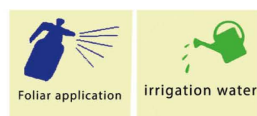


Packaging: 1 Liter

**P**otassium is one of the major nutrients required by the plant in large amounts, (about 1.5 to 2.0% of plant weight). The 90% of the total potassium present in soils is found in insoluble primary minerals that are inaccessible for plant. Thus, application of potassium as fertilizer is mandatory, particularly when the objective is to increase the plant yield and improving the quality (shape, size, color, taste) of agricultural products. Phosphorus is found in the soil in organic compounds and in minerals. Nevertheless, the amount of readily available phosphorus is very low compared with the total amount of phosphorus in the soil. Therefore, in many cases phosphorus fertilizers should be applied in order to meet crop requirements. This product possessed high solubility and fully adapted to provide potassium and phosphorous requirements of plant in different stages of development. The suspension and gel nature of the product increases the nutrient uptake by plants. This product contains 54% K<sub>2</sub>O and 45% P<sub>2</sub>O<sub>5</sub>. It is free of chlorine and heavy metals.

## Benefits of DAYAN Potass Vafer®:

- simultaneous supplementation of potassium with phosphorous increase the potassium uptake in plant and overall enhances the plant yield.
- Improves the size, shape, color, taste and shelf life of the agricultural products.
- The pH of the product is adjusted to ensure the availability of nutrients to plants.
- Improve the plant resistancy to the diseases and pests.
- Provide the plant potassium and phosphorus requirements.
- Enhance plant resistancy to the drought, cold and frost stresses.
- Enhance the plant growth and development.
- Increasing plant lodging resistance.



## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.

Applications:	
Items	Recommendation
Foliar application	1 L in 1000 L of water/hectare
Crops	2 to 3 liters/hectare
Orchard	2 to 3 liters/ hectare
Single tree	3-5 ml in 20L of water/tree

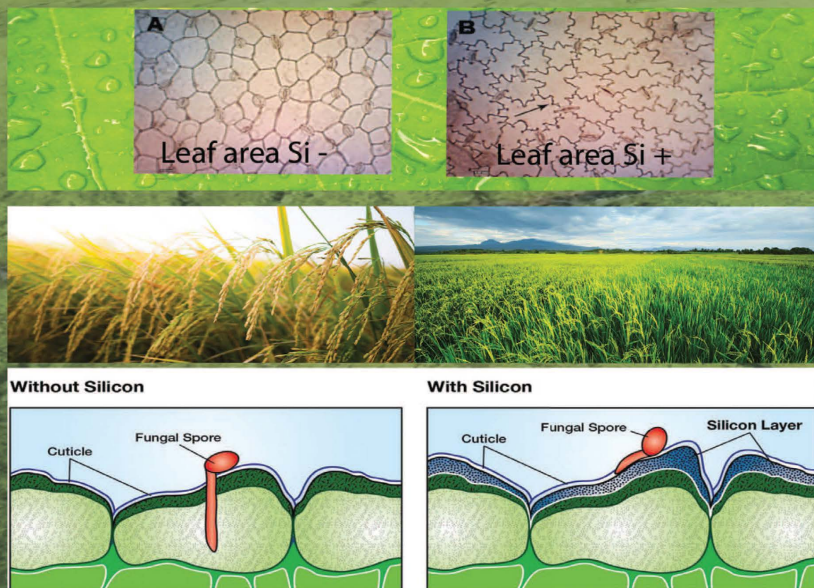
- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.  
 - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of bio-fertilizer used.





# DAYAN Silicon®

Potassium silicate



Packaging: 1 Liter

Silicon strengthens the plants cell walls producing stronger healthier plants with massive root systems and increases resistance to pests and disease. Silicon improves uptake of nutrients and transport through the plant. The strength cell walls, helps plants to resist attacks from fungi, increases wear tolerance, disease resistance, insects resistance. Silicon increases chlorophyll production leading to darker green leaves and improves light collection. It increases uptake of available CO<sub>2</sub> and utilizes the enhanced metabolic processes to deliver higher yields. Silicon's activity in the soil matrix has been proven to improve micronutrient uptake (boron, copper, iron, manganese, zinc) and reduce toxic metal uptake (aluminum) as well as sodium. DAYAN Silicon® is liquid formulated silicon with high bioavailability to plants. It is manufactured according to the highest international standards, with strict quality control. It is free of chlorine and heavy metals.

## Advantages:

- Especially recommended where the silicon deficiency is agronomically critical to achieve crop quality and profitability.
- It is highly concentrated silicon formulation which provides the plant silicon requirement.
- The pH of the product is adjusted to ensure the availability of nutrients to plants.

DAYAN Silicon®	
Guaranteed Specification	
Elements	(w/v)
Silicon	20 %
Potassium	15 %

Applications:	
Items	Recommendation
<b>Foliar application</b>	1/5 L of product is diluted with 1000 liters of water and then foliar applied/hectare
<b>Crops</b>	2 to 3 liters/hectare through irrigation water
<b>Orchard</b>	1 to 2 L of product is diluted with 1000 liters of water/hectare through irrigation water (nutrigration).

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.  
 - This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of fertilizer used.  
 - Re-usage of this product is advised if needed.

## Storage:

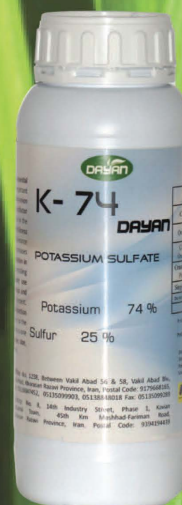
- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.





# DAYAN Potas -74®

(74% K<sub>2</sub>O, 25% SO<sub>3</sub>)

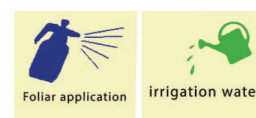


Packaging: 1 Liter

The POTAS-74 is a highly concentrated liquid suspension fertilizer containing potassium (74% K) and sulfur (25% S). The POTAS-74 with its exclusive formula and maximum plant availability is made of highest quality technical grade of chemicals. It provides 100% soluble potassium and sulfur for immediate plant uptake through both foliar and root feeding. It is the best choice for improving color, size, development and ripening and of fruit and vegetables. This buffered concentrated liquid potassium improves formation and translocation of starches, sugars and fats, regulation of plant stomata opening/closing and thus water use, aids in enzyme activation, helps cells maintain their internal pressure and ionic balance, maintains balance of salts and water in cells, maintains quality parameters such as size, shape, color, taste, and shelf life, increases root growth and resistance to drought. Besides potassium, the sulfur in this product plays a key role in aiding a variety of growth functions in plant including nutrient uptake and chlorophyll production, seed development and root strength, stress and pest resistance, nitrogen utilization, carbohydrate formation and synthesis of oil. This product can be applied throughout the growing season for the quick correction of potassium and sulfur deficiencies. Application of POTAS-74 increases the crop yield and improves produce quality.

## Benefits of DAYAN Potas-74®:

- simultaneous supplementation of potassium with sulfur increase the potassium uptake in plant and overall enhances the plant yield.
- Improves the size, shape, color, taste and shelf life of the agricultural products.
- The pH of the product is adjusted to ensure the availability of nutrients to plants.
- Improve the plant resistancy to the diseases and pests.
- Provide the plant potassium and sulfur requirements.
- Enhance plant resistancy to the drought, cold and frost stresses.
- Enhance the plant growth and development.
- Increasing plant lodging resistance.



## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.

Applications:	
Items	Recommendation
<b>Foliar application</b>	1 to 1.5 L of product is diluted with 1000 liters of water and then foliar applied/hectare
<b>Crops</b>	2 to 3 liters/hectare through irrigation water
<b>Orchard</b>	1 to 2 L of product is diluted with 1000 liters of water/hectare through irrigation water (nutrigration).
<b>Single tree</b>	Dissolve 3 to 5 ml of this product in 20 liters of water and then irrigate the root zone.

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.
- This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of fertilizer application than increase in the amount of fertilizer used.
- Shake well before use.



Plant Availability

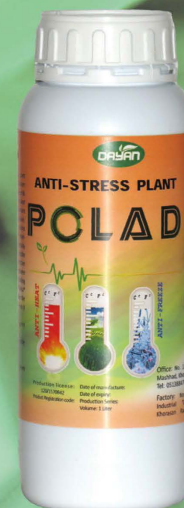
Free of sodium and chloride

Assured quality

Satisfaction guarantee



# POLAD Anti-Stress®



Packaging: 1 Liter

Nowadays environmental stresses are one of the most important factors reducing the yield of crops. POLAD Anti-Stress® is also trigger production of proteins involve in plant induced systemic resistance. POLAD Anti-Stress® enhances crop performances under environmentally stressful conditions, delivering a vast array of benefits to edible and ornamental crops. Treated plants will continue to function normally, overcoming the difficulties generated by extreme conditions, such as drought, temperature changes including frost, salinity and other water stresses. POLAD Anti-Stress® contains salicylic acid, ascorbic acid and potassium that helps crops deal with a wide range of stresses. Easy to apply, through a foliar spray, it accumulates in plant cells improving the balance between water and nutrients within the plant cells, including calcium mobilization. POLAD Anti-Stress® penetrates through the leaf surface within 24 hours after the application, and is distributed throughout the plant to help it cope with stressful conditions for 3-4 weeks.

## Advantages:

- Increase the yield (up to 30%) and improve quality parameters of yield in the plant under environmental stress.
- Enhance the plant induced systemic resistance against environmental stressors.
- Increase the plant growth and productivity under environmental stresses.
- Prevent plants from frost and drought damages.

### Applications:

Items	Recommendation
Foliar application	2 L of product is diluted with 1000 liters of water and then foliar applied/hectare
Cut Flowers	1.5 L of product is diluted with 1000 liters of water for 12 h soak up

- The agricultural consultant/adviser could decrease or increased our recommended values based on the plant nutrient requirements.
- This product could be used even at higher levels than recommended values, however we recommend increasing the numbers of bio-fertilizer application than increase in the amount of fertilizer used.
- Re-usage of this product is advised if needed.

## Storage:

- Keep in a cool and dry place and keep away from direct sunlight.
- The recommended range of the temperature for storage is 15 to 30° C.

