

# Fertilizers Catalog

Building success with the high quality  
and innovative horticultural solutions.

[www.dutchdirect.us](http://www.dutchdirect.us)



# High Performance Blend

**WS NPK VEG** and **WS NPK BLOOM** are the highest quality, water soluble fertilizer blends balanced and formulated for indoor, greenhouse and outdoor hydroponics irrigation.

Use **Calcium Nitrate** as the base for a complete recipe, both **WS NPK VEG** and **WS NPK BLOOM** blends are rapidly dissolvable and easy to handle.



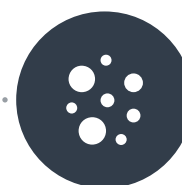
**Balance**



**Essential  
Micro-nutrients**



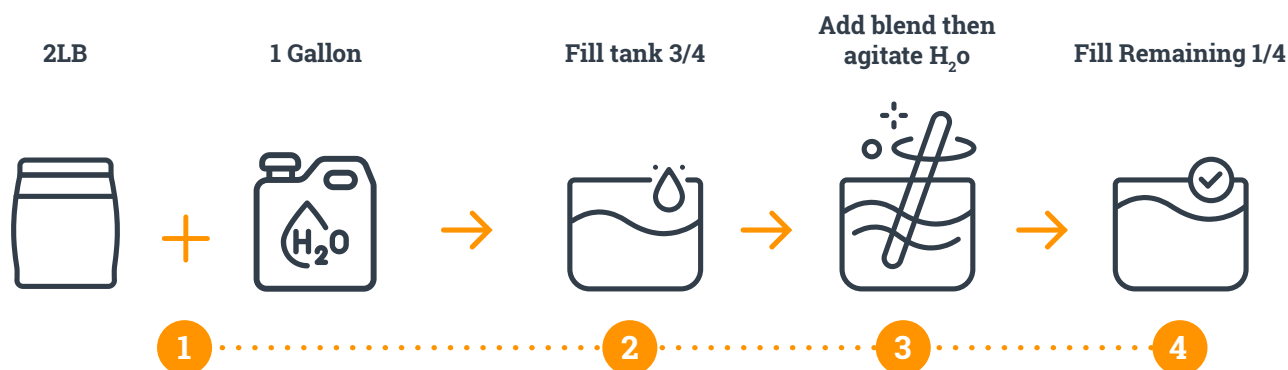
**Low Heavy  
Metals**



**Fully Soluble  
DRY Fertilizer**

## Liquid Concentrate Mixing Instructions

Always use **WS NPK VEG** and **WS NPK BLOOM** in combination with **Calcium Nitrate**.



## Recommendations

- Mix with RO or tap water. EC may vary depending on tap source
- When applying concentrate to feeding solution, always add base first.
- Measure by weight, not volume. Do not combine in dry or concentrate forms.
- Reference Eurosolids feed chart, dose at a rate according to desired solution strength.

# Calcium Nitrate

## Horticultural Grade

**Calcium Nitrate** Horticultural Grade is a highly pure Calcium fertilizer which dissolves rapidly and completely. Our product has a limited caking sensitivity and is recommended as of early spring until fruit setting and fruit development. The high level of Calcium improves the strength of cell walls during active cell division stages. The presence of Nitrogen has a positive effect on the uptake of Calcium in the plant.

Use **Calcium Nitrate** as the base throughout the crop's life cycle.

### Benefits



Improves fruit quality (less sensitive to bitter pit and blossom end rot) and shelf-life.



Developed for fertigation in open field and greenhouses. Also suitable for foliar application.

### Product Characteristics

- Low on heavy metals
- Low on Sodium and Chloride
- Production process certified according to ISO 9001:2009
- White granules



### Application



Hydroponic



Fertigation



Soil Application

### Composition (%w/w)

Total Nitrogen	15.5%
Nitric Nitrogen	14.3%
Ammoniacal Nitrogen	1.2%
Calcium Oxide	26.3%
Calcium	18.8%

### Compatibility

Compatible with other fertilizers, with the exception of Sulphate or Phosphate fertilizers. Therefore a separate tank is needed or fertilizers should be applied at different times.

### Packaging



25kg

# WS NPK VEG

4.7.25+9,5MgO+TE

**WS NPK VEG** was developed to provide the horticulture industry with a high-quality, cost-efficient fertilizer for the vegetative phase. Our formula is performance-driven, delivering all the essential nutrients your plants need for healthy growth and maintaining a perfect balance. Our ratio of **4.7.25+9,5MgO+TE**, provides all the essential nutrients your plants need for healthy growth. With high levels of nitrogen, phosphorus, potassium, magnesium, and sulfur, your plants will have the perfect balance of nutrients needed for strong roots, stems, and foliage development.

## Benefits



In addition to water soluble NPK's, our formula also contains trace elements, including iron, manganese, zinc, copper, boron, and molybdenum. These essential elements are chelated with EDTA to ensure they are readily available for plant uptake.



The addition of magnesium oxide and sulfur trioxide provides a source of magnesium and sulfur, two elements crucial for vegetative growth.



Our fertilizer is designed to provide your plants with everything they need to thrive during the vegetative phase.

- Our fertilizer has been rigorously tested to ensure it meets the highest standards of quality and effectiveness.
- We have received positive feedback from growers who have seen significant improvements in their plants' health and vigor when using our formula.
- Whether you are a professional grower or a hobbyist, our fertilizer is an excellent choice for anyone looking to grow healthy and robust plants during the vegetative phase.



## Application



Hydroponic



Fertigation



Soil Application

## Composition (%w/w)

Total Nitrogen (N)	5 %
Nitric Nitrogen (N-NO <sub>3</sub> )	4 %
Ammoniacal Nitrogen (N-NH <sub>4</sub> )	1 %
Phosphoric Anhydride (P <sub>2</sub> O <sub>5</sub> )	7 %
Phosphorus (P)	3 %
Potassium Oxide (K <sub>2</sub> O)	25 %
Potassium (K)	21 %
Magnesium Oxide (MgO)	9,2 %
Magnesium (Mg)	5,5 %
Sulphur Trioxide (SO <sub>3</sub> )	28,5 %
Sulphur (S)	11,4 %
Iron (Fe), EDTA-chelated	0,124 %
Manganese (Mn), EDTA-chelated	0,062 %
Zinc (Zn), EDTA-chelated	0,013 %
Copper (Cu), EDTA-chelated	0,013 %
Bore (B)	0,051 %
Molybdenum (Mo)	0,006 %

## Compatibility

Compatible with other fertilizers, with the exception of calcium fertilizers.

## Packaging



25kg

## WS NPK BLOOM

1-13-27+7 MgO+TE

**WS NPK BLOOM** is expertly designed to provide plants with the ideal balance of nutrients needed for healthy flowering. The unique NPKS ratio of **1-13-27+7 + MgO + TE** provides the perfect balance that plants require for optimal growth and production. During the blooming stage, plants require higher levels of phosphorus and potassium compared to nitrogen and sulfur, and our blend meets these needs. The higher phosphorus content (13%) stimulates root development, flower initiation, and fruit formation, while the high potassium content (29%) promotes strong stem growth, improves stress tolerance, and enhances the plant's ability to absorb and utilize water and other nutrients. Additionally, our blend's sulfur component (7%) is crucial in enhancing the production of essential oils and improving the overall quality of the yield.

### Benefits



These trace elements are present in our blend at precisely calculated concentrations to ensure that plants receive the optimal amount of each element for their growth and development needs.



Highly soluble in water, ensuring that the plants can absorb the nutrients efficiently. Additionally, the blend contains chelated micro-nutrients that facilitate their uptake by the plants.



The high-quality inputs used in our blend provide superior performance, and the cost-effective formulation ensures that growers receive the best nutrition for optimal plant health and yields.

### Product Characteristics

- Our Bloom blend also contains a precisely balanced mix of trace elements to support healthy plant growth and development.
- Iron (Fe), EDTA -chelated (0.124%) is essential for chlorophyll production and helps the plant absorb and utilize other nutrients.
- Manganese (Mn), EDTA -chelated (0.062%) plays a vital role in photosynthesis.
- Our blend features a 2:1 ratio of iron to manganese, which is ideal for both iron and manganese uptake.
- Zinc (Zn), EDTA -chelated (0.013%) is important for enzyme activity and overall plant metabolism.
- Copper (Cu), EDTA -chelated (0.013%) is required for the formation of lignin and is involved in the production of chlorophyll.
- Boron (B) (0.051%) is necessary for proper cell wall development, and Molybdenum (Mo) (0.006%) is essential for nitrogen fixation and promotes healthy root growth.



### Application



Hydroponic



Fertigation



Soil Application

### Composition (%w/w)

Total Nitrogen (N)	2 %
Nitric Nitrogen (N-NO <sub>3</sub> )	1 %
Ammoniacal Nitrogen (N-NH <sub>4</sub> )	1 %
Phosphoric Anhydride (P <sub>2</sub> O <sub>5</sub> )	13 %
Phosphorus (P)	6 %
Potassium Oxide (K <sub>2</sub> O)	29 %
Potassium (K)	24 %
Magnesium Oxide (MgO)	7,4 %
Magnesium (Mg)	4,5 %
Sulphur Trioxide (SO <sub>3</sub> )	31,1 %
Sulphur (S)	12,5 %
Iron (Fe), EDTA-chelated	0,124 %
Manganese (Mn), EDTA-chelated	0,062 %
Zinc (Zn), EDTA-chelated	0,013 %
Copper (Cu), EDTA-chelated	0,013 %
Bore (B)	0,051 %
Molybdenum (Mo)	0,006 %

### Compatibility

Compatible with other fertilizers, with the exception of calcium fertilizers.

### Packaging



25kg

## HIGH PERFORMANCE BLEND

					PART A	PART B	PART B
		EC	PPM	PH	CaNi 15-0-0 mL/GALLON	WS NPK VEG mL/GALLON	WS NPK BLOOM mL/ GALLON
VEG	WEEK 1	2.5	1750	6.3	16.0	19.8	-
	WEEK 2	3.0	2100	6.2	19.2	23.8	-
	WEEK 3	3.0	2100	6.1	19.2	23.8	-

BLOOM	WEEK 1	3.0	2100	6	19.2	-	23.8
	WEEK 2	3.0	2100	5.9	19.2	-	23.8
	WEEK 3	3.2	2240	5.8	16.0	-	29.7
	WEEK 4	3.2	2240	5.7	16.0	-	29.7
	WEEK 5	3.2	2240	5.6	16.0	-	29.7
	WEEK 6	3.2	2240	5.6	16.0	-	29.7
	WEEK 7	3.2	2240	5.5	16.0	-	29.7
	WEEK 8	3.2	2240	5.4	16.0	-	29.7
	WEEK 9	3.2	2240	5.4	16.0	-	29.7
	WEEK 10	0	0	0	0	-	0

Our helpful feed chart is a baseline for using **WS NPK VEG** OR **BLOOM** fertilizer for cannabis. Use the chart to adjust the schedule if desired. Optimal EC and pH may vary per cultivar.



CaNi



WS NPK VEG



WS NPK BLOOM





Target EC/PPM		
EC	PPM 500	PPM 700
1.5	750	1050
1.6	800	1120
1.7	850	1190
1.8	900	1260
1.9	950	1330
2.0	1000	1400
2.1	1050	1470
2.2	1100	1540
2.3	1150	1610
2.4	1200	1680
2.5	1250	1750
2.6	1300	1820
2.7	1350	1890
2.8	1400	1960
2.9	1450	2030
3.0	1500	2100
3.1	1550	2170
3.2	1600	2240
3.3	1650	2310
3.4	1700	2380
3.5	1750	2450

Base (15,5,0,0 - 28CaO)				
EC	PPM 500	PPM 700	mL/ GAL	g/GAL
0.67	335	468	9.6	2.3
0.71	357	500	10.2	2.5
0.76	379	531	10.9	2.6
0.80	401	562	11.5	2.8
0.85	424	593	12.1	2.9
0.89	446	624	12.8	3.1
0.94	468	656	13.4	3.2
0.98	491	687	14.1	3.4
1.03	513	718	14.7	3.5
1.07	535	749	15.3	3.7
1.12	558	781	16.0	3.8
1.16	580	812	16.6	4.0
1.20	602	843	17.3	4.1
1.25	624	874	17.9	4.3
1.29	647	905	18.5	4.4
1.34	669	937	19.2	4.6
1.38	691	968	19.8	4.8
1.43	714	999	20.4	4.9
1.47	736	1030	21.1	5.1
1.52	758	1061	21.7	5.2
1.56	781	1093	22.4	5.4

NPK (VEG OR BLOOM)				
EC	PPM 500	PPM 700	mL/ GAL	g/GAL
0.83	415	581	11.9	2.9
0.88	442	619	12.7	3.0
0.94	470	658	13.5	3.2
1.00	498	697	14.3	3.4
1.05	525	765	15.1	3.6
1.11	553	774	15.8	3.8
1.16	581	813	16.6	4.0
1.22	608	852	17.4	4.2
1.27	636	890	18.2	4.4
1.33	664	929	19.0	4.6
1.38	691	968	19.8	4.8
1.44	719	1006	20.6	4.9
1.49	747	1045	21.4	5.1
1.55	774	1084	22.2	5.3
1.60	802	1123	23.0	5.5
1.66	830	1161	23.8	5.7
1.71	857	1200	24.6	5.9
1.77	885	1239	25.4	6.1
1.82	912	1277	26.1	6.3
1.88	940	1316	26.9	6.5
1.94	968	1355	27.7	6.7

\* Ideal for mixing stock tanks and compatible with all dosing systems. This mix is 100% water soluble and will not clog irrigation systems or leave sediment in reservoirs if mixed properly.





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