

# Knowledge grows

# Speciality Product Range



Crop Knowledge -Product Combinations -In-field Expertise



Crop Knowledge -Product Combinations -In-field Expertise

# Contents

Horticulture - Open Field Crops	
Horticulture – Fertigation, Hydroponic, Trickle Irrigation_	
Growing Media and Potting Soils	
Equine Paddocks & Pastures	
Protected Crops	
Field Grown Ornamental Crops	
Brassica Crops	
Outdoor Vegetable Crops	
Soft and Top Fruit Crops	
Removal Data	
YaraLiva TROPICOTE	
YaraLiva NITRABOR	
YaraMila COMPLEX	
YaraMila GROWER	
UNIKA-PLUS	
STARTER SOLUTION PLUS	
T-FLOW TOP	
YaraTera MAGNITRA L	
YaraTera AMNITRA L	

YaraTera CALSAL	25
YaraTera CALCINIT	26
YaraTera KRISTA-K PLUS	27
YaraTera KRISTA MAG	28
YaraTera KRISTA MAP	29
YaraTera KRISTA MgS	30
YaraTera KRISTA MKP	31
YaraTera KRISTA SOP	32
YaraTera KRISTA MOP	33
YaraTera KRISTA CaCl	34
YaraTera KRISTA UREA	35
PG MIX	36
YaraTera KRISTALON	38
YaraMila COMPLEX	40

YaraTera Chelates \_

Conversion tables \_\_\_\_

Mixability of fertilizers for preparation of

concentrated solutions for Fertigation \_\_\_\_



# Horticulture -Open Field Crops

# Horticulture – Open Field

Product Name	Analysis	Description	Pack
YaraMila COMPLEX	12-11-18 SOP + Mg +B + Mn + Fe + Zn	Field grade NPK compound fertilizer. SOP based with sulphur, magnesium, boron, manganese, iron & zinc.	600kg 25kg
YaraMila GROWER	15-9-20 + S + Mg + B + Mn + Zn	Field grade NPK compound fertilizer 35% SOP based with sulphur, magnesium, boron, manganese & zinc.	600kg
YaraLiva TROPICOTE	15.5% N 26% CaO	Calcium Nitrate Field Grade	600kg 25kg
YaraLiva NITRABOR	15.4% N 25.9% CaO 0.3% B	Calcium Nitrate plus Boron	600kg 25kg
STARTER SOLUTION PLUS	11-38-3 + trace elements (w/v)	Chafer Liquid Starter Solution	Bulk
T-FLOW TOP	24-0-0 + 17% CaO (w/v)	Chafer Liquid Nitrogen & Calcium	Bulk
UNIKA-PLUS	12-0-46	Field grade potassium nitrate.	600kg
SOP - G	0-0-51 +18% S	Granular Sulphate of Potash.	600kg 25kg



# Horticulture – Fertigation, Hydroponic, Trickle Irrigation

# Horticulture – Glasshouse

Product Name	Analysis	Description	Pack
YaraTera CALCINIT	15.5% N 26% CaO	Calcium Nitrate Solution Grade Calcium Nitrate Glasshouse Grade	25kg
YaraTera KRISTA-K PLUS	13.7% N 46.3% K <sub>2</sub> 0	Soluble grade Potassium Nitrate	25kg
YaraTera KRISTA-MKP	0-52-34	Soluble grade Mono Potassium Phosphate	25kg
YaraTera KRISTA-MAP	12-61-0	Soluble grade Mono Ammonium Phosphate	25kg
YaraTera KRISTA-MgS	16% MgO 13% S	Soluble grade Magnesium Sulphate Epsom salts	25kg
YaraTera KRISTA-MAG	11% N 16% MgO	Soluble grade Magnesium Nitrate Pellets	25kg
YaraTera MAGNITRA	7% N 10% MgO w/w	Liquid Magnesium Nitrate	27kg
YaraTera AMNITRA	18 % N w/w	Liquid Ammonium Nitrate	24.8kg
YaraTera CALSAL	8.7% N + 17.5% CaO w/w	Liquid calcium nitrate ammonia free.	1500kg
YaraTera KRISTA-SOP	0-0-51 + 18% S	Soluble Sulphate of Potash. Potassium Sulphate	25kg
YaraTera KRISTA-UREA	46-0-0	Soluble Prilled Urea	25kg
YaraTera KRISTA-CaCl	28% Ca 50% Cl	Soluble Calcium Chloride	25kg
YaraTera KRISTA-MOP	60% K <sub>2</sub> 0	Soluble Potassium Chloride	25kg
YaraTera KRISTALON	Red 12-12-36 Lilac Label 20-8-8 Green Label 18-18-18 Blue Label 19-6-20 White Label 15-5-30 Yellow 13-40-13 Brown 3-11-38 Scarlet 7.5-12-36 Orange 6-12-36	Water Soluble Fertilizers plus Micronutrients	25kg



# Growing Media and Potting Soils

Product Name	Analysis	Description	Pack
PG MIX	14-16-18 plus Micronutrients 12-14-24 plus Micronutrients 15-10-20 plus Micronutrients	Starter fertilizers for compost, potting soil and peat substrate.	25kg
	17-10-14 Slow Release	Slow Release N&P	

# Equine Paddocks & Pastures

Product Name	Analysis	Description	Pack
YaraMila COMPLEX	12-11-18 SOP + Mg + B + Mn + Fe + Zn	Horse & Pony Paddock Fertilizer	25kg



# Protected Crops

Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Aubergines	Seedbed Top Dressing (every 2 weeks)	YaraMila Grower YaraMila Grower	283 133	42 20 <b>62</b>	25 12 <b>37</b>	57 27 <b>84</b>	11 5 <b>16</b>
Celery	Seedbed 2 weeks after planting 6 weeks after planting	YaraMila Grower YaraLiva Tropicote YaraLiva Tropicote	283 323 323	42 50 50 <b>142</b>	25 <b>25</b>	57 <b>57</b>	11 11
Cucumber	Seedbed Seedbed Top Dressing (every 2 weeks)	YaraMila Grower Granular-SOP YaraMila Complex	283 50 115	42 0 14 <b>56</b>	25 0 13 <b>38</b>	57 26 21 <b>104</b>	11 9 9 <b>29</b>
Courgettes	Seedbed	YaraMila Grower	283	42	25	57	11
Lettuce - spring & summer planting - autumn planted	Seedbed Seedbed	YaraMila Complex YaraMila Grower	229 183	27 27	25 16	41 37	8 7
Melons	Seedbed Seedbed Top Dressing (every 2 weeks)	YaraMila Grower Granular SOP YaraMila Complex	283 125 115	42 0 14 <b>56</b>	25 0 13 <b>38</b>	57 64 21 <b>142</b>	11 23 9 <b>43</b>
Peppers	Seedbed Top Dressing (every 2 weeks)	YaraMila Grower YaraMila Grower	250 133	38 20 <b>58</b>	23 12 <b>35</b>	50 27 <b>77</b>	10 5 <b>15</b>
Tomatoes	Seedbed Seedbed 2 weeks after planting from 4 weeks after planting (every 2 weeks)	YaraMila Grower Granular SOP YaraMila Grower YaraMila Grower	283 100 67 133	42 0 10 20	25 0 6 12	57 51 13 27	11 18 3 5
Flower crops	Seedbed	YaraMila Grower	283	42	25	57	11

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Yara Analytical Services. (soil, plant and tissue, water, nutrient). Please call 01759 305116

# Field Grown Ornamental Crops





Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Nursery Stock (first year)	Seedbed Top-dressing	YaraMila Grower YaraLiva Tropicote	333 323	50 50 100	30 30	67 67	13 13
Nursery Stock (2nd year on)	Seedbed Top-dressing	YaraMila Grower YaraLiva Tropicote	167 645	25 100 125	15 15	33 33	6
Bedding Plants	Seedbed	YaraMila Grower	467	70	42	93	18
Chrysanthenums and other flowers	Seedbed	YaraMila Grower	467	70	42	93	18
Herbaceous perennials	Seedbed	YaraMila Grower	467	70	42	93	18
Narcissus	Seedbed Top-dressing	YaraMila Grower YaraLiva Tropicote	700 323	105 50 155	63 63	140 140	27 27
Tulips	Seedbed	YaraMila Grower	467	70	42	93	18



# Brassica Crops

Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Brussel Sprouts	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 1371	105 211 <b>316</b>	63 <b>63</b>	140 <b>140</b>	27 <b>27</b>
Cabbage - Spring	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	500 1613	75 248 <b>323</b>	45 <b>45</b>	100 <b>100</b>	19 <b>19</b>
- Summer/autumn/ chinese	Seedbed Seedbed Top-dressing	YaraMila Grower Granular SOP YaraLiva Nitrabor	700 150 1200	105 0 185 <b>290</b>	63 0 <b>63</b>	140 77 <b>217</b>	27 27 <b>54</b>
- Winter/savoy (cut pre Christmas)	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 1371	105 211 <b>316</b>	63 <b>63</b>	140 <b>140</b>	27 <b>27</b>
- Winter/savoy (cut post Christmas)	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 806	105 124 <b>229</b>	63 <b>63</b>	140 <b>140</b>	27 <b>27</b>
- Winter white	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 967	105 149 <b>254</b>	63 <b>63</b>	140 <b>140</b>	27 <b>27</b>







Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Calabrese	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 1129	105 174 279	63 63	140 140	27 27
Cauliflower - Summer/autumn	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 967	105 149 254	63 63	140	27
- Overwintered Roscoff & hardy types	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	500 1290	75 199 274	45	100	19 19
Radish	Seedbed Seedbed Top-dressing	YaraMila Grower Granular SOP YaraLiva Nitrabor	233 100 161	35 0 25 60	21 0 21	47 51 98	9 18 27
Swedes & turnips	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	333 323	50 50 100	30 30	67 67	13 13





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# Outdoor Vegetable Crops





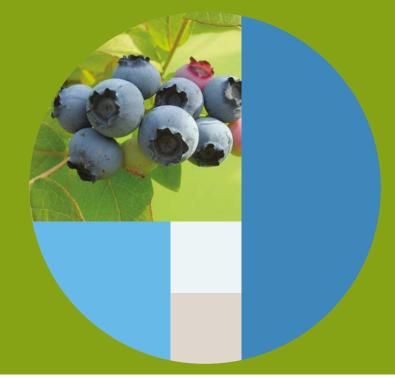
Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Asparagus - Newly planted	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	500 150	75 23 <b>98</b>	45 <b>45</b>	100 <b>100</b>	19 <b>19</b>
- Established	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	333 484	50 75 <b>125</b>	30 <b>30</b>	67 <b>67</b>	13 13
Beans, Broad	Seedbed	YaraMila Grower	167	25	15	33	6
Beans, French/ Runner	Seedbed Top-dressing	YaraMila Complex YaraLiva Nitrabor	875 484	105 75 <b>180</b>	96 <b>96</b>	158 <b>158</b>	70 <b>70</b>
Beetroot	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	700 1129	105 174 <b>279</b>	63 <b>63</b>	140 <b>140</b>	27 <b>27</b>
Carrots (except fen peats)	Seedbed Seedbed Top-dressing	YaraMila Complex Granular SOP YaraLiva Nitrabor	450 450 350	54 0 54 <b>108</b>	50 0 <b>50</b>	81 230 <b>311</b>	17 81 <b>98</b>
Celery	Seedbed Seedbed Top-dressing	YaraMila Complex Granular SOP YaraLiva Nitrabor	550 350 968	66 0 149 <b>215</b>	61 O <b>61</b>	99 179 <b>278</b>	21 63 <b>84</b>

Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Courgettes	Seedbed	YaraMila Grower YaraLiva Nitrabor	500 645	75 99	45	100	19
	Top-dressing		045	99 <b>174</b>	45	100	19
Leeks - Grown on Fen Peat - Grown on all other soils	Seedbed Seedbed Seedbed Top-dressing	YaraMila Grower YaraMila Complex Granular SOP YaraLiva Nitrabor	400 875 100 600	60 105 0 92 <b>197</b>	36 96 0 <b>96</b>	80 158 51 <b>209</b>	15 70 18 <b>88</b>
Lettuce (Spring & Summer)	Seedbed Seedbed Top-dressing	YaraMila Complex Granular SOP YaraLiva Nitrabor	416 200 1129	50 0 174 <b>224</b>	46 0 <b>46</b>	75 102 <b>177</b>	33 36 <b>69</b>
Marrows	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	500 645	75 99 <b>174</b>	45 <b>45</b>	100 <b>100</b>	19 <b>19</b>
Onions - Salad	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	500 645	75 99 <b>174</b>	45 <b>45</b>	100 <b>100</b>	19 <b>19</b>
- Bulb/spring	Seedbed Seedbed Top-dressing	YaraMila Grower Granular SOP YaraLiva Nitrabor	467 100 400	70 0 62	42 0	93 51	18 18
				132	42	144	18
Bulb overwintered	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	167 1129	25 174 <b>199</b>	15 15	33 33	6 <b>6</b>
Parsnips	Seedbed	YaraMila Grower	500	75	45	100	19
i arsnips	Top-dressing	YaraLiva Nitrabor	484	75 <b>150</b>	45	100	19
Rhubarb - 1st year	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	875 323	131 50 <b>181</b>	79 <b>79</b>	175 <b>175</b>	33 <b>33</b>
- Established	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	875 968	131 149	79	175	33
				280	79	175	33
- Forcing	Seedbed Top-dressing	YaraMila Grower YaraLiva Nitrabor	875 1935	131 298 <b>429</b>	79 <b>79</b>	175 175	33 <b>33</b>
Spinach (summer)	Seedbed	YaraMila Grower	875	131	79	175	33
opinioen (sommer)	Top-dressing	YaraLiva Nitrabor	350	54 185	<b>79</b>	175	33
Sweetcorn	Seedbed	YaraMila Grower	500	75	45	100	19
	Top-dressing	YaraLiva Nitrabor	484	75 <b>150</b>	45	100	19









# Soft and Top Fruit Crops

Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Apples - Culinary/cider	Pre-Planting Top-dressing	YaraMila Complex YaraLiva Tropicote	300 645	36 100 <b>136</b>	33 <b>33</b>	54 <b>54</b>	24 <b>24</b>
- Dessert	Pre-Planting Top-dressing	YaraMila Complex YaraLiva Tropicote	300 484	36 75 <b>111</b>	33 <b>33</b>	54 <b>54</b>	24 <b>24</b>
Blackberries	Pre-Planting Top-dressing	YaraMila Grower YaraLiva Tropicote	267 484	40 75 <b>115</b>	24 <b>24</b>	53 <b>53</b>	10 10
Blackcurrants	Pre-Planting Top-dressing	YaraMila Grower YaraLiva Tropicote	267 806	40 125 <b>165</b>	24 <b>24</b>	53 <b>53</b>	10 <b>10</b>
Cherries	Pre-Planting Top-dressing	YaraMila Complex YaraLiva Tropicote	300 806	36 125 <b>161</b>	33 <b>33</b>	54 <b>54</b>	24 <b>24</b>







Сгор	Stage	Product	Total Kg/ha	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	S Kg/ha
Gooseberries	Pre-Planting Top-dressing	YaraMila Grower YaraLiva Tropicote	267 484	40 75	24	53	10
				115	24	53	10
Loganberries	Pre-Planting Top-dressing	YaraMila Grower YaraLiva Tropicote	267 484	40 75	24	53	10
				115	24	53	10
Pears	Pre-Planting Top-dressing	YaraMila Complex YaraLiva Tropicote	300 806	36 125	33	54	24
	lob-oressing		800	161	33	54	24
Plums	Pre-Planting Top-dressing	YaraMila Complex YaraLiva Tropicote	300 806	36 125	33	54	24
			000	161	33	54	24
Raspberries	Pre-Planting	YaraMila Grower YaraLiva Tropicote	267 484	40 75	24	53	10
	Top-dressing	ralaciva hopicole	404	115	24	53	10
Redcurrants	Pre-Planting Top-dressing	YaraMila Grower YaraLiva Tropicote	267 484	40 75	24	53	10
	TOP-OLESSING	ralaciva hopicole	404	115	24	53	10
Strawberries	Pre-Planting	YaraMila Grower	167	25 38	15	33	6
- June bearers	Top-dressing	YaraLiva Tropicote	242	63	15	33	6
- Everbearers	Pre-Planting	YaraMila Grower	167	25	15	33	6
	Top-dressing	YaraLiva Tropicote	323	50 <b>75</b>	15	33	6
Vines	Pre-Planting	YaraMila Grower	167	25	15	33	6
	Top-dressing	YaraLiva Tropicote	161	25 <b>50</b>	15	33	6

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# Removal Data

Сгор	Total fresh matter (t/ha)	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha	Marketable yield (t/ha)	N Kg/ha	P <sub>2</sub> O <sub>5</sub> Kg/ha	K <sub>2</sub> O Kg/ha
Bean	35	119	32	152	15	38	14	45
Broccoli	90	333	95	436	20	90	30	92
Brussels sprouts	90	423	138	555	25	163	49	166
Carrot	100	170	82	496	80	104	64	339
Cauliflower	100	320	110	399	40	112	41	145
Celery	75	203	94	427	50	125	74	272
Chinese cabbage	120	192	99	392	70	105	64	212
Cucumber	120	204	110	407	70	105	48	169
Florence fennel	70	168	55	356	40	80	27	194
Iceberg	80	104	46	242	60	78	34	182
Kale	45	207	71	278	20	120	37	109
Kohlrabi	60	180	62	254	45	126	46	191
Leek	70	182	56	263	55	138	44	200
Lettuce	60	108	41	218	50	90	34	182
Onion	65	124	51	157	60	108	48	145
Radicchio	50	125	46	242	25	63	23	121
Radish	35	70	24	119	30	60	21	102
Red beet	100	270	98	557	60	168	69	290
Red cabbage	90	234	76	348	50	110	40	182
Savoy cabbage	80	304	92	348	40	140	46	155
Spinach	40	144	46	266	30	108	34	200
White cabbagge	120	276	91	392	80	160	59	252

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# **YaraLiva**<sup>™</sup>

# TROPICOTE<sup>™</sup> 15.5%N + 19%Ca

## Field grade Calcium Nitrate

Pack size 600 kgs and 25kgs

**Spreads** Accurately to 24 metres

## Benefits

#### Brassica/salad

- Helps to suppress Club Root.
- Helps prevent Internal Browning.
- Helps prevent Tip Burn.
- Low scorch risk when broadcast.
- Improved marketability and shelf life.
- Rapid greening in cool conditions.

#### Potato

- Helps suppress internal rust spot.
- Improve skin finish.
- Helps reduce bacterial rots in store.
- Calcium helps reduce crop stress.

#### Carrot

- Helps suppress cavity spot.
- Improves skin finish.

#### Top Fruit

- Helps suppress bitter pit.
- Improves stress tolerance in adverse. growing conditions.
- Improves storage potential.
- Better skin finish.



# Product Specification

Total N	15.5%	Bulk density loose	1.1kg/l
Nitrate-N	14.4%	Granulometry (ISO)	90% 2-4mm
Ammoniacal-N	1.1%	Colour	white
Calcium (CaO)	26.3%		

Сгор	Recommendations	Timing
Brassica/salad crops	400/600 kg/ha	In base (club root) or broadcast
Potatoes	375/500 kg/ha	At tuber initiation.
Carrots	330 kg/ha	Prior to or immediately post drilling
Top fruit	250 kg/ha	Applied early spring prior to bud burst.
	100/150 kg/ha	Top up application at early fruitlet growth stage.
	100/350kg/ha	Autumn application post-harvest depending on variety.



**YaraLiva**<sup>™</sup>

# NITRABOR<sup>™</sup> 15.4%N + 18.3%Ca + 0.3%B

## Field grade Calcium Nitrate plus Boron

NITRABOR calcium nitrate fertilizer, contains 0.3%B, in addition to the unique coating system for dry applied uses.

Used for boron demanding crops and where soils are low in Boron.

Pack size

600 kgs and 25kgs

# **Spreads**

Accurately to 24 metres

# **Benefits**

#### Brassica/salad

- Helps prevent heart rot.
- Helps to suppress Club Root.
- Helps prevent Internal Browning.
- Helps prevent Tip Burn.
- Low scorch risk when broadcast.
- Improved marketability and shelf life.
- Rapid greening in cool conditions.

#### Sugar Beet

- Helps prevent browning and heart rot
- Non acidifying effect.

Product Specification						
Total N	15.4%	Bulk density loose	1.1kg/l			
Nitrate-N	14.1%	Granulometry (ISO)	90% 2-4mm			
Ammoniacal-N	1.3%	Colour	yellow			
Calcium (CaO)	25.9%					
Boron (B)	0.3%					

Сгор	Recommendations	Timing
Brassica/salad crops	400/600 kg/ha	In base (club root) or broadcast
Sugar Beet	250/400 kg/ha	At 2 to 3 true leaf stage
Top Fruit	250 kg/ha	Applied early spring prior to bud burst.
	100/150 kg/ha	Top up application at early fruitlet growth stage.
	100/350kg/ha	Autumn application post-harvest depending on variety.





# **YaraMila**<sup>™</sup>

# COMPLEX<sup>™</sup> 12-11-18 SOP + Mg + Micronutrients

# Field grade NPK compound fertilizer, SOP based, with sulphur, magnesium and Micronutrients

Pack size 600 kgs and 25kgs

Spreads

Accurately to 24 metres

# Benefits

#### Brassica/salad

- All in one NPK plus magnesium plus sulphur plus Micronutrients.
- All applied in a single application.
- Contains magnesium, a vital element for crop growth.
- Contains sulphur in the form of sulphate of potash.
- Sulphur an important nutrient in areas of low sulphur deposition, light soils

# Product Specification

and high rainfall where susceptible crops are grown.

 Chloride free YaraMila COMPLEX, ideal for salt sensitive salad crops.

#### Potato

- Contains sulphur in the Sulphate of Potash form.
- SOP has been shown to increase tuber numbers and increase dry matters.
- Available will increase marketable yield and important at tuber bulking.

#### Trees

- Chloride free NPK, for use on young and established trees.
- Encourages uniform growth.
- High sulphur aids greening up in trees.
- Micronutrients match crop removals.

Total N	12.4%	Bulk density loose	1.14kg/l
Citrate soluble P <sub>2</sub> O <sub>5</sub>	11.5%	Granulometry (ISO)	88% 2-4mm
Total K <sub>2</sub> O	17.8%	Colour	green
Magnesium (MgO)	2.7%	Micronutrients	B, Fe, Mn, Zn
Sulphur (S)	8.0%		

## Recommendations

Сгор	Recommendations	Timing
Brassica	875/1250 kg/ha	As a base dressing
Salad	375/625 kg/ha	As a base dressing
Potato	1250 kg/ha	In the seedbed
Trees		
1 – 3 year old trees	250/400 kg/ha	Spring applied
4 year old onwards	400/600 kg/ha	Spring applied



YaraMila

COMPLEX

600kg



YaraMila™

# GROWER<sup>™</sup> 15-9-20 + S + Mg + Micronutrients

# Field grade NPK compound fertilizer, 35% SOP 65% MOP, with Sulphur, Magnesium, Boron, Manganese and Zinc.

**Pack size** 600 kg big bags

**Spreads** 

Accurately to 24 metres

# **Benefits**

#### Brassica

- All in one NPK plus sulphur, magnesium and Micronutrients.
- All applied in a single application.
- High Potash formulation, which is
- Angri Potasti formotation, which is 35% sulphate of potash and 65% muriate of potash based. Ideal for high K demanding crops.
- Contains sulphur in the sulphate of potash form.

- Sulphur is an important nutrient in areas of low sulphur deposition,
- light soils and high rainfall where susceptible crops are grown.
- Reduced phosphate content for high P soils.

#### Potato

- Contains sulphur in the sulphate of potash form.
- SOP has been shown to increase tuber numbers and increase dry matters.
- Available polyphosphate will increase marketable yield and important at tuber bulking.





# **Product Specification**

Total N	15.0%	Bulk density loose	1.08kg/l
Total P <sub>2</sub> O <sub>5</sub>	9.0%	Granulometry (ISO)	85% 2-4mm
Total K <sub>2</sub> O	20%	Colour	Green
Magnesium (MgO)	2.98%	Boron (B)	0.015%
Sulphur (SO <sub>3</sub> )	9.50%	Manganese (Mn)	0.02%
		Zinc (Zn)	0.02%

Сгор	Recommendations	Timing
Brassica	700/960 kg/ha	As a base dressing
Potato	1000 kg/ha	In the seedbed



# UNIKA<sup>™</sup> PLUS

# 12-0-46

## Field grade potassium nitrate

**Pack size** 600kg big bags

## **Benefits**

- Nitrogen, 100% nitrate form, readily available for uptake by plants.
- High potassium level, which will help strengthen plant immune system.
- Chloride free.
- Increases crop yield and quality.
- Increases shelf life and flavour of vegetables.
- Non acidifying effect.
- Fully water soluble.

#### Potato

- Non chloride based potassium nitrate will increase potato dry matter content.
- Precision feeding of nitrate nitrogen and fully soluble potassium to the growing potato crop.

## Nitrate Nitrogen

Directly available for plant uptake, resulting in fast and predictable growth responses. Non- volatile nor adsorbed to soil particles, leaving it readily available to plants. The preferred nitrogen source for most horticultural and high value agricultural crops. Improves the plant uptake of the cations potassium, calcium and magnesium.

# Potassium

Improves The efficiency of other nutrients, lifting crop yields. Fruit shape, colour and sugar content and therefore essential for crop quality. Water use efficiency helping control water loss in hot weather and improves tolerance to cold e.g. frosts, and so essential for stress tolerance.

## Low N/K ratio

UNIKA™ PLUS has a low N-K ratio of 1-3 making it ideal for use during flower and fruit production



# Product Specification

Total N	12.8%	Bulk density	1.26kg/l
		Granule size	2 - 3mm
Total K <sub>2</sub> O	46.3%	Colour	white prills

Сгор	Recommendations	Timing
Brassica	300 kg/ha	Top dressing
Potato		
Maincrop	250 kg/ha	Tuber initiation
Early	250 kg/ha	Seedbed



# STARTER SOLUTION PLUS™

# 11-38-3 + Micronutrients w/v

# Liquid fertilizer for placement

**Pack size** Bulk, 1000 litre non returnable IBC.

## **Benefits**

- Aids rapid crop establishment.
- Efficient utilization of phosphate.
- Improved phosphate availability.

# **Product Specification**

Total N	11%	Total Zinc	0.0024%
Total P <sub>2</sub> O <sub>5</sub>	38%	Specific gravity	1.35
Total K <sub>2</sub> O	3%	Colour	Clear solution
Total Copper Cu	0.025%		
Total Manganese Mn	0.025%		

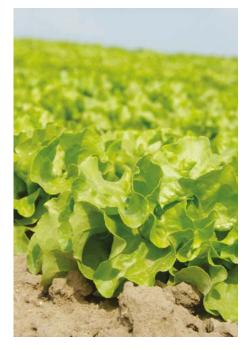
# Recommendations

#### Placement

(This must be amended according to total nitrogen requirement and fertilizer base dressing).

Сгор	Recommendations	Timing
Lettuce	130 - 200 litres/application	Once at drilling or transplanting
Onions	130 - 200 litres/application	Once at drilling or transplanting
Leeks	130 - 200 litres/application	Once at drilling or transplanting
Brassicas	130 - 200 litres/application	Once at drilling or transplanting





# T-FLOW TOP™

# 24-0-0 + 17%CaO w/v

## Liquid Nitrogen and Calcium fertilizer for Placement and Fertigation with fully available Calcium Oxide

#### Pack size

Bulk, 1000 litre non-returnable IBC.

# Benefits of soluble calcium

#### Salads

- Helps prevent Internal Browning.
- Helps prevent Tip Burn.
- Low scorch risk when broadcast.
- Improved marketability and shelf life.

# Rapid greening in cool conditions.

Product Specification

# Helps reduce bacterial rots in store.

Potato

Calcium helps reduce crop stress.
Fertigation

• Helps suppress internal rust spot.

Improve skin finish.

(This must be amended according to total nitrogen requirement and fertilizer base dressing).





Total N	24%	Specific gravity	1.428
Total Calcium Oxide	17%	Colour	Clear solution

Сгор	Recommendations	Timing
Potato	200 litres/ha in total	Leaf development up to TI
Leeks	100 litres/ha per application	6 applications
Celery	100 litres/ha per application	6 applications
Lettuce	50 litres/ha per application	4 applications

# MAGNITRA<sup>™</sup> L 7-0-0 + 10%MgO w/w

# Liquid Magnesium Nitrate

#### Pack size

20 litre cans ( 27 kg ) / 36 x 20 litre per pallet ( 972 kg )

## Benefits

MAGNITRA L is a liquid nitrogen and magnesium fertilizer. MAGNITRA L is suited to application through all fertigation systems – hydroponics, drip systems, low throw sprinklers, centre pivots and spray units.

#### Nitrate nitrogen

- Directly available for plant uptake, resulting in fast and predictable growth responses.
- None volatile nor adsorbed to soil particles, leaving it readily available to plants.
- The preferred nitrogen source for most horticultural and high value agricultural crops.
- Improves the plant uptake of the cations magnesium, potassium and calcium.

#### Magnesium essential for-

- Cation balance high potassium levels in the plant or soil will reduce the efficiency of magnesium, reducing crop yields and quality.
- Other cations such as ammonium, calcium, hydrogen (low pH) and aluminium can also reduce the availability of magnesium.
- Photosynthesis magnesium is a major component of chlorophyll, which is essential for photosynthesis.

#### Ammonia free

Magnesium nitrate is ideally suited for applications in hydroponics as it is free of ammonium.

#### Compatibility

Magnesium nitrate can be mixed with all water soluble fertilizers, except concentrated phosphate solutions.





# Product Specification

Total N	7%	Density (20°C)	1.35kg/l
Nitrate N	7%	pH (1% solution)	3.5
Magnesium Oxide	10%		

Сгор	Recommendation
Most crops	0.2g per litre during the growing season

# AMNITRA<sup>™</sup> L 18-0-0 w/w

# Liquid Ammonium Nitrate

**Pack size** 20 litre cans ( 24,8 kg ) 36 x 20 litre per pallet ( 893 kg )

## **Benefits**

- AMNITRA L is a liquid nitrogen fertilizer. AMNITRA L is suited to application through all fertigation drip systems.
- Safe to handle, non hazardous liquid ammonium nitrate.

#### Compatibility

Can be used in combination with CALCINIT, MAGNITRA L / KRISTA-MAG.

# **Product Specification**

Total N w/w	18%	Density (20°C)	1.24kg/l
Nitrate N	9%		
Ammonium N	9%		

Сгор	Recommendation	
Most crops	0.4g per litre during the growing season	





# CALSAL<sup>™</sup> 8.7%N + 17.5%CaO w/w

# Liquid Calcium Nitrate

**Pack size** Bulk, 1000 litre non-returnable IBC.

## **Benefits**

- CALSAL is a liquid calcium nitrate fertilizer suited to application through all fertigation systems.
- All nitrogen in the nitrate form.
- Less than 0.002% NH<sub>4</sub>-N

#### Compatibility

CALSAL can be mixed with all water soluble fertilizers except stock solutions containing either sulphate or phosphate.

# **Product Specification**

Total N w/w	8.7%
Nitrate N	8.7%
Density (20°C)	1.50kg/l

Сгор	Recommendation
Most crops	0.3g per litre during the growing season





# CALCINIT<sup>™</sup> 15.5%N + 19%Ca

## Soluble Grade Calcium Nitrate

Pack size 25kgs bags.

## Benefits

CALCINIT is a fully water soluble nitrogen and calcium fertilizer. It is a free flowing, fine granular material which dissolves quickly in water without any residues. CALCINIT is suited to application through all fertigation systems – drip systems, low throw sprinklers, centre pivots and spray units.

#### Nitrate nitrogen

- Directly available for plant uptake, resulting in fast and predictable growth responses.
- None volatile nor adsorbed to soil particles, leaving it readily available to plants.
- The preferred nitrogen source for most horticultural and high value agricultural crops.
- Improves the plant uptake of the cations potassium, calcium and magnesium.

#### Calcium improves;

- Cell wall strength, leading to better quality, shelf life and lifting marketable crop yields.
- Cell wall strength, helping plants tolerate disease and insect infection.
- Soil structure, helping to maintain an optimum root environment for high yielding crops.

#### Compatibility

CALCINIT can be mixed with all water soluble fertilizers, except stock solutions containing either phosphate or sulphate.

#### High purity

CALCINIT is free of chlorine, sodium and heavy metals.

#### Guidelines for application

Crop specific recipes for 2 tank "A & B tank" systems available from your local advisor.







# Product Specification

Total N	15.5%	Solubility (20°C)	1200g/l water
Nitrate N	14.4%	EC (1g/l at 25°C)	1.2mS/cm
Ammoniacal N	1.1%	pH (10% solution)	6.0
Calcium CaO	26.3%	Colour	white

# KRISTA<sup>™</sup> K PLUS 13.7-0-46.3

### Soluble grade Potassium Nitrate

Pack size 25kgs bags.

## **Benefits**

**KRISTA K** is a fully water soluble nitrogen and potassium fertilizer. It is a free flowing, fine crystalline powder which dissolves quickly in water without any residues. KRISTA K is suited to application through all fertigation systems – drip systems, low throw sprinklers, centre pivots and spray units.

#### Nitrate nitrogen

- Directly available for plant uptake, resulting in fast and predictable growth responses.
- None volatile nor adsorbed to soil particles, leaving it readily available to plants.
- The preferred nitrogen source for most horticultural and high value agricultural crops.
- Improves the plant uptake of the cations potassium, calcium and magnesium.

# **Product Specification**

#### Potassium improves;

- The efficiency of other nutrients, lifting crop yields.
- Fruit shape, colour and sugar content and therefore essential for crop quality.
- Water use efficiency helping control water loss in hot weather and improves tolerance to cold eg frosts, and so essential to stress tolerance.
- Cell wall strength, helping plants tolerate disease and insect infection.

#### Low N-K ratio

KRISTA K has a low N - K ratio of 1 - 3 making it ideal for use during flower and fruit production.

#### Compatibility

KRISTA K can be mixed with all water soluble fertilizers.

#### High purity

KRISTA K is free of chlorine, sodium and heavy metals.

#### Guidelines for application - Crop

specific recipes for 2 tank "A & B tank" systems available from your local advisor

Nitrate N	13.7%	Solubility (20°C)	316g/l water
Potassium K <sub>2</sub> O	46.3%	EC (1g/l at 25°C)	1.3mS/cm
Potassium K	38.4%	pH (10% solution)	8 - 9







# KRISTA<sup>™</sup> MAG 11-0-0 + 15%MgO

### Soluble grade Magnesium Nitrate

Pack size 25kgs bags.

### **Benefits**

**KRISTA MAG** is a fully water soluble nitrogen and magnesium fertilizer. Free flowing pellets which dissolve quickly in water without any residues. KRISTA MAG is suited to application through all fertigation systems – hydroponics, drip systems, low throw sprinklers, centre pivots and spray units.

#### Nitrate nitrogen

- Directly available for plant uptake, resulting in fast and predictable growth responses.
- None volatile nor adsorbed to soil particles, leaving it readily available to plants.
- The preferred nitrogen source for most horticultural and high value agricultural crops.
- Improves the plant uptake of the cations magnesium, potassium and calcium.

#### Magnesium

Cation balance – high potassium levels in the plant or soil will reduce essential for the efficiency of magnesium, reducing crop yields and quality. Other cations such as ammonium, calcium, hydrogen (low pH) and aluminium can also reduce the availability of magnesium. Photosynthesis – magnesium is a major component of chlorophyll, which is essential for photosynthesis.

#### Ammonia free

Magnesium nitrate is ideally suited for applications in hydroponics as it is free of ammonium.

#### Compatibility

Magnesium nitrate can be mixed with all water soluble fertilizers, except concentrated phosphate solutions.

#### High purity

Magnesium nitrate is free of chlorine, sodium and heavy metals.

#### Guidelines for application

Crop specific recipes for 2 tank "A & B tank" systems available from your local advisor.



Nitrate N	11%	Solubility (20°C)	2250g/l water
Magnesium MgO	16%	EC (1g/l at 25°C)	0.88mS/cm
Magnesium Mg	10%	pH (10% solution)	6.5







# KRISTA<sup>™</sup> MAP 12-61-0

## Soluble grade mono ammonium phosphate

Pack size 25kgs bags.

### Benefits

**KRISTA MAP** is a fully water soluble nitrogen and phosphorus fertilizer. It is a free flowing, fine crystalline powder which dissolves quickly in water without any residues. KRISTA MAP is suited to application through all fertigation systems – hydroponics, drip systems, low throw sprinklers, centre pivots and spray units.

#### Phosphorus

Root development – high phosphorus levels in the soil at planting or transplanting will improve crop establishment and development.

#### Hydroponics

KRISTA MAP is ideally suited for applications in hydroponics. Because it contains ammonium nitrogen, it is advisable to restrict its applications to one tenth of the total nitrogen in the formulation.

#### Compatibility

KRISTA MAP can be mixed with all water soluble fertilizers, except soluble calcium fertilizers, and concentrated magnesium solutions.

#### **High purity**

MAP tech grade is free of chlorine, sodium and heavy metals.

#### pH buffer

The phosphorus component in MAP tech grade buffers fertigation solutions, keeping the pH stable at around 4.5.

#### Guidelines for application

Crop specific recipes for 2 tank "A & B tank" systems available from your local advisor.







# **Product Specification**

Ammoniacal N	12%	Solubility (20°C)	700g/l water
Phosphate P <sub>2</sub> O <sub>5</sub>	61%	EC (1g/l at 25°C)	0.88mS/cm
Phosphate P	26.6%	pH (10% solution)	6.5

# KRISTA<sup>™</sup> MgS 16%MgO + 13%S

## Soluble grade magnesium sulphate

Pack size 25kgs bags.

### **Benefits**

**KRISTA MgS** is a fully water soluble sulphur and magnesium fertilizer. It is a free flowing, fine crystalline powder which dissolves quickly in water without any residues.

KRISTA MgS is suited to application through all fertigation systems hydroponics, drip systems, low throw sprinklers, centre pivots and spray units.

#### Magnesium

Cation balance - high potassium levels in the plant or soil will reduce **essential for**; the efficiency of magnesium, reducing crop yields and quality. Other cations such as ammonium, calcium, hydrogen (low pH) and aluminium can also reduce the availability of magnesium.

# Product Specification

**Photosynthesis** – magnesium is a major component of chlorophyll, which is essential for photosynthesis.

#### Compatibility

KRISTA MgS can be mixed with all water soluble fertilizers except soluble calcium fertilizers.

#### High purity

KRISTA MgS is free of chlorine, sodium and heavy metals.

#### Guidelines for application

Crop specific recipes for 2 tank "A & B tank" systems available from your local advisor.







Magnesium MgO	16%	Solubility (20°C)	750g/l water
Magnesium Mg	9.6%	EC (1g/l at 25°C)	0.7mS/cm
Sulphur S	13%	pH (1% solution)	6.6

# KRISTA<sup>™</sup> MKP 0-52-34

## Soluble grade mono potassium phosphate

Pack size 25kgs bags.

#### Benefits

**KRISTA MKP** is a clean, fully water soluble phosphorus and potassium fertilizer making it particularly suited to a wide range of horticultural crops. It is a free flowing, fine crystalline powder which dissolves quickly in water. KRISTA MKP is suited to application through all fertigation systems hydroponics, drip systems, low throw sprinklers, centre pivots, spray units, misters

#### Nitrogen free

KRISTA MKP contains no nitrogen, making it an ideal source of phosphorus and potassium for late applications to fruiting plants when nitrogen applications need to be controlled. KRISTA MKP is also an ideal source to use in conjunction with nitrogen fertilizers such as calcium nitrate (in separate stock tanks), or potassium nitrate, ammonium nitrate or Urea.

#### Ammonia free

KRISTA MKP is ideally suited for applications in hydroponics as it is free of ammonium.

## **Product Specification**

#### Compatibility

KRISTA MKP can be mixed with all water soluble fertilizers, except soluble calcium fertilizers, and concentrated magnesium solutions.

#### Disease

Foliar applications of KRISTA MKP may help suppress leaf diseases such as powdery mildew, when infection pressure is low.

#### High purity

KRISTA MKP is free of chlorine, sodium and heavy metals.

#### Low EC

KRISTA MKP in solution has a low EC at 0.7 mS/cm. This means it is a relatively safe fertilizer to use for foliar application as the risk of burning or scorching foliage is minimal.

#### pH buffer

The phosphorus component in KRISTA MKP buffers fertigation solutions, keeping the pH stable at around 4.5. KRISTA MKP also buffers chemical solutions, increasing the effectiveness of pesticide sprays.

#### Guidelines for application

Crop specific recipes for 2 tank "A & B tank" systems available from your local advisor.

Phosphate P <sub>2</sub> O <sub>5</sub>	52%	Solubility (20°C)	230g/l water
Phosphate P	22.7%	EC (1g/l at 25°C)	0.7mS/cm
Potassium K <sub>2</sub> O	34%	pH (1% solution)	4.5
Potassium K	28.2%		







# KRISTA<sup>™</sup> SOP 0-0-51%K + 18%S

# Soluble grade Potassium Sulphate (sulphate of potash)

Pack size 25kgs bags.

## Benefits

- **KRISTA SOP** is suitable for fertigation.
- Ideal where high potassium levels are required without additional nitrogen.
- Suitable for crops with a high sulphur demand.
- Very low chloride content.
- Highly soluble, dissolves very quickly.

# Guidelines for application

For crop specific recommendations please contact Yara for details.

# Product Specification

Total K <sub>2</sub> O	51%
Total S	18%
Insolubles	0.1% maximum
Chloride	1.0% maximum
Appearance	White Crystalline Powder







# KRISTA<sup>™</sup> MOP 0-0-60

Soluble grade Potassium Chloride

Pack size 25kgs bags.

#### **Benefits**

**KRISTA MOP** is a fully water soluble potassium chloride fertilizer. It is a free flowing, fine crystalline powder which dissolves quickly in water without any residues. KRISTA MOP is suited to application through all fertigation systems – hydroponics, drip systems, low throw sprinklers, centre pivots and spray units.

## Guidelines for application

Crop specific recipes for 2 tank "A & B tank" systems available from your local advisor.

# **Product Specification**

Potassium Oxide K <sub>2</sub> O	60%
Potassium (K)	49.7%







# KRISTA<sup>™</sup> CaCl 28% Calcium (Ca) + 50% Chloride (Cl)

# Soluble grade Calcium Chloride

Pack size 25kgs bags.

### **Benefits**

A readily soluble material in the form of white hygroscopic flakes. The product is suitable as a soluble calcium source for use in hydroponics and fertigation.

## Tomatoes in rockwool

Independent trials have shown that the conductivity of the applied solution can be raised using chloride based fertilizers without any adverse effects upon crop growth, yield or fruit quality, provided that an adequate and balanced nutrient supply is maintained. This problem can be prevented by the use of pure calcium nitrate. In the table below the conductivity of calcium chloride is detailed and will assist in any recipe adjustment.

# **Product Specification**

Formula - Ca Cl<sub>2</sub>, 1.5 H<sub>2</sub>O Calcium chloride (Ca Cl<sub>2</sub>) - 77% (min.) Calcium (Ca) - 28% Chloride (Cl) - 50% Water of crystallisation (H<sub>2</sub>O) - 20% Sodium (Na) - 1.0% (max) Water insolubles - 0.20% (max) Magnesium (Mg) - 0.05% Sulphate - 0.1% (max) Iron (Fe) - 0.003% (max) Solubility - 977 g/l at 0°C Water insolubles - 0.2% (max) pH of a dilute solution - 9.0 - 10.5 Bulk density - 830 kg/m<sup>3</sup>





Strength of applied solution (g/l)	Conductivity* uS/cm at 20°C	Concentra Ca	tion (mg/l) Cl	Stock solution** kg per 1000 l
0.1	150	28	50	10
0.2	300	56	100	20
0.3	450	84	150	30
0.4	580	112	200	40
0.5	720	140	250	50
0.75	1050	210	375	75
1.0	1400	280	500	200



\* For conductivity at 25°C increase values by 10% \*\* To obtain final strength solution dilute 1-100

# KRISTA<sup>™</sup> UREA 46-0-0

# Soluble grade treated Urea Prills

**Pack size** 25kgs bags.

## **Benefits**

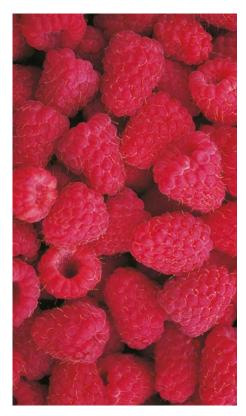
**KRISTA UREA** is a fully water soluble urea nitrogen fertilizer. It is a free flowing, white prills which dissolves quickly in water without any residues.

# Guidelines for application

For crop specific recommendations please contact Yara for details.

# **Product Specification**

Ureic-N	46%
Insolubles	0.02% m/m
Appearance/Colour	White Prills
Prill Size	1 – 3 mm
pH (10% urea solution)	10.0





# PG MIX<sup>™</sup>

# Complete Fertilizer for Peat Based Substrates

# PG MIX 14-16-18 +

magnesium + Micronutrients General purpose, high phosphate fertilizer with an excellent reputation

amongst producers of potting soils and peat substrates.

# PG MIX 12-14-24 +

# magnesium + Micronutrients

Formulated for growing vegetables, pot plants and nursery stock where a lower overall nitrogen level and increased potassium rate are required. This is predominantly for use where higher quantities are applied (1.5 – 1.75 kg/m3)

# PG MIX 15-10-20 +

## magnesium + Micronutrients

Developed where lower phosphate rates are required, whilst offering the ideal balance of nitrogen - potassium and has an increased percentage of nitrogen in the nitrate form.

#### What does PG MIX do?

- PG MIX converts ordinary peat into a high quality potting soil.
- PG MIX gives added value to the potting soil industry.
- PG MIX removes the burden of mixing straights.
- PG MIX provides an even distribution of nutrients in the potting soil.
- PG MIX easy to handle without segregation, dust or clogging.

# What is PG MIX?

PG MIX is-

- All-in-one powdered compound fertilizer.
- Based on raw materials of extremely high quality.
- Quality controlled/guaranteed.
- A balanced nutrient ratio.
- Extremely convenient to handle.
- Thoroughly incorporated and evenly dispersed throughout the potting soil.

#### Packaging

25kg polythene, non slip bags.







# Benefits of PG MIX

#### Even distribution in potting soil

- To avoid patches with high or low nutrient contents, because this gives uneven growth and can cause salt stress.
- Becomes more important the smaller the potting compartments are (trays, cells etc.).
- As a consequence, fine particles are required.

#### Dust free

- The finer the particle sizes are, the higher is the tendency for dusting.
- Dusting means hazard to workers and equipment.
- Dusting means nutrient losses.
- Dusting can cause caking and clogging.

#### Non caking

- products which cake can rarely be automatically and evenly dosed to the potting soil.
- bins and hoppers can get clogged.
- uneven distribution and dosage might be the result.
- costly manual working will be required.

#### Non segregating

- segregation means uneven dosage and distribution.
- this leads to uneven growth.
- and will result in low quality potting soil.
- and unsatisfied customers and claims against potting soils.

A prerequisite for satisfied potting soil customers is an even distribution of a high quality fertilizer in the potting soil.

As a prerequisite, the fertilizer must become thoroughly incorporated, therefore it has to be dust free + non segregating + non caking.

# PG MIX has exactly this reputation !

### PG MIX Fertilizer Product Range - Specifications

Nutrient Content		PG MIX 14+16+18	PG MIX 12+14+24	PG MIX 15+10+20
		%	%	%
Nitrogen	Total N	14,0	12,0	15,0
	NH <sub>4</sub> N	8,5	5,0	6,5
	NO <sub>3</sub> N	5,5	7,0	8,5
	MU-N	-	-	-
Phosphate	Total P <sub>2</sub> O <sub>5</sub>	16,0	14,0	10,1
	Watersoluble P <sub>2</sub> O <sub>5</sub>	15,2	13,3	9,5
Potassium	Watersoluble K <sub>2</sub> O	18,0	24,0	20,0
Magnesium	Total MgO	0,8	2,0	3,8
Boron	В	0,03	0,03	0,03
Copper	Cu	0,15	0,15	0,15
Manganese	Mn	0,16	0,16	0,16
Molybdenum	Mo	0,20	0,20	0,20
Iron	Total Fe	0,09	0,09	0,09
	Chelated Fe	0,09	0,09	0,09
Zinc	Zn	0,04	0,04	0,04

### PG MIX Recommendations for Use

The table shows the quantities, in kg per  $m^3$  peat, of the PG Mix formulations.

Сгор	kg/m <sup>3</sup> substrate
Vegetables - with short raising period (lettuce, endive etc) - with a long raising period (tomato, cucumber, pepper etc) - Strawberries in peat bags or pots - Sowing peat	1.2 1.75 1.75 0.5 to 0.8
Floricultural Crops (young crops) - Raising of floricultural crops - Seed compost - Peat for cuttings - Cuttings of carnation, chrysanthemum, pelargonium	0.5 0.5 0.5 0.5
Border Plants	1.5
<b>Pot Plants</b> - General pot plants - Chloroses and salt sensitive pot plants - Chloroses and sensitive plants - Salt sensitive pot plants - Cymbidium and phalaenopsis	1.5 0.8 1.5 0.8 0.5
<b>Cut Flowers</b> - Carnation - Anthurium	1.5 0.8
<b>Bulb Flowers</b> - General - Lilium	0.5 0.8
<b>Trees and Shrubs</b> - General - Cuttings	1.0 0.5
Retail - multi purpose potting composts	1.5

PG MIX, should be supplemented with a magnesium containing lime, 10% MgO or more, in order to supply the essential plant nutrients, calcium and magnesium and to correct the pH of the peat to the desired level.

At approximately four to six weeks after the start of cultivation in the fertilized peat, growers should begin additional liquid feeding with KRISTALON™ water soluble fertilizers.

# **YaraTera**<sup>™</sup>

# KRISTALON<sup>™</sup> Water soluble NPK fertilizers for liquid feeding

#### Pack size

25kg. Polythene non slip bags.

### Benefits

- Contain a full range of chelated Micronutrients.
- Ideal for all irrigation systems, drip, tape, sprinkler and pivot systems.

# Product Range Composition

KRISTALON	Analysis NPK	N Total	NO <sub>3</sub>	NH <sub>4</sub>	P <sub>2</sub> 0 <sub>5</sub>	K <sub>2</sub> 0	MgO	S	EC	Trace Element Type
Red	12-12-36	12	10.1	1.9	12	36	1	1	1.2	1
Yellow	13-40-13	13	4.4	8.6	40	13	-	-	1.0	1
White Label	15-5-30	15	11.3	3.7	5	30	3	2	1.4	1
Green label	18-18-18	18	9.8	8.2	18	18	-	-	1.0	2
Lilac Label	20-8-8	20	6.8	13.2	8	8	2	10	1.6	1
Blue Label	19-6-20	19	11.9	7.1	6	20	3	3	1.5	1
Brown	3-11-38	3	3	-	11	38	4	11	1.4	3
Scarlet	7.5-12-36	7.5	7.5	-	12	36	4.5	4	1.3	6





# Micronutrients in Kristalon

Micro Nutrients	В	Mo	Cu (EDTA)	Fe (EDTA)	Fe (DTPA)	Mn (EDTA)	Zn (EDTA)
Туре 1	0.025	0.004	0.01	0.07	-	0.04	0.025
Type 2	0.050	0.008	0.02	0.14	-	0.08	0.050
Туре З	0.025	0.004	0.01	-	0.07	0.04	0.025
Туре 4	0.025	0.004	0.01	-	-	0.04	0.025
Туре 5	0.025	0.001	0.01	-	-	-	-
Туре б	0.027	0.004	0.004	0.075	0.075	0.06	0.027



### **KRISTALON** Recommendations

Pot Plants	Stage	KRISTALON	Analysis	Dilution
Foliage Plants	All season	Blue Label	19-6-20	200-100
Begonia	Main feed	Green Label	18-18-18	200-100
	Flowering	White label	15-5-30	150-100
Poinsettia	Main feed	Blue Label	19-6-20	200-100
	End Sept	White Label	15-5-30	150-100
Pot Mums	Main feed	Blue label	19-6-20	100
& Others	Flowering	White Label	15-5-30	100

# **Bedding Plants**

Begonia, Impatiens, Geranium, Petunia, including baskets

	Stage	KRISTALON	Analysis	Dilution
Overwintered	In Spring	Green Label	18-18-18	200-100
Summer		Blue Label	19-6-20	200-100

# Nursery Stock

	Stage	KRISTALON	Analysis	Dilution
Propagation	Root Development	Green Label	18-18-18	200
Open Field	Normal pH plants	Blue Label	19-6-20	200
Container Plants		Blue label	19-6-20	300-100

# Cut Flowers

Cut Flowers	Stage	KRISTALON	Analysis	Dilution
Alstromeria	Main feed Flowering	Blue Label White Label	19-6-20 15-5-30	1-100 1-100
Carnation/	Winter feed	White Label	15-5-30	1-100
Freesia	Summer feed	Blue label	19-6-20	1-100
Chrysanthemum				
- open	Early feed	Blue Acid	16-6-17	1-100
	Main feed	Blue Label	19-6-20	1-100
	Flowering	White Label	15-5-30	1-100
- protected	Early feed	Lilac Label	20-8-8	1-100
	Main feed	Blue Label	19-6-20	1-100
	Flowering	White Label	15-5-30	1-100
Gypsophylla/	Main feed	Blue Label	19-6-20	1-100
Stocks	Flowering	White Label	15-5-30	1-100
Roses	Main feed	Blue Label	19-6-20	1-100
	Flowering	White Label	15-5-30	1-100

# Modular and Brassica Propagation

	Stage	KRISTALON	Analysis	Dilution
Bedding Transplants	General	Green Label	18-18-18	1-200
Vegetable Transplants	Extra root development	Yellow	13-40-13	1-200

# Salad and Vegetable Crops

Сгор		KRISTALON	Analysis	Dilution
Tomato / Aubergine	NB	Brown Calcinit	3-11-38 15.5%N 19%Ca	1-100 1-100
Cucumber/ Melon & Courgette	NB	Brown Calcinit	3-11-38 15.5%N 19%Ca	1-100 1-100
Peppers	NB	Brown Calcinit	3-11-38 15.5%N 19%Ca	1-100 1-100
Celery	NB	Brown Calcinit	3-11-38 15.5%N 19%Ca	1-100 1-100
French Beans	NB	Brown Calcinit	3-11-38 15.5%N 19%Ca	1-100 1-100

# Soft Fruit

Сгор	Stage	KRISTALON	Analysis	Dilution
Strawberries Open field	Vegetative Flowering/ fruiting	Blue Label Red	19-6-20 12-12-36	1-100 1-100
Strawberries in coir	Vegetative Flowering/ fruiting	Scarlet Scarlet	7.5-12-36 7.5-12-36	1-100 1-100
Ca needed High K needed		Calcinit Krista-K Plus	15.5N, 19Ca 13.7-0- 46.3	1-100 1-100
Cane Fruit	Vegetative Flowering/ fruiting	Blue label Red	19-6-20 12-12-36	1-100 1-100

NB- Do not tank mix KRISTALON with CALCINIT. Feed KRISTALON Brown and CALCINIT alternately or use a two tank A-B system.

# How to mix KRISTALON

In Bulk Tanks. Dissolve 1 kg KRISTALON in 1,000 litres water. Or 25kg in 25,000 litres water of ready to use standard strength dilute feed.

As a Stock Solution. Dissolve 1 kg KRISTALON in 10 litres water, or 25kg KRISTALON in 250 litres of water. The 10% stock solution can then be diluted as required. Dilution rate is normally 1 in 100 which means 1 part stock solution in 99 parts water. See recommendations for dilution rates.

# YaraMila™

# COMPLEX<sup>™</sup> 12-11-18 SOP + Mg + Micronutrients

# Fertilizer specially formulated for horse and pony paddocks

**Pack size** 600kg big bags and 25kgs bags

### Benefits

- Balanced nutrients for plant and animal growth.
- Simple and accurate to apply.

### Recommendations

#### For grazing

apply 4 bags/acre from mid-March, repeat early September in favourable conditions.

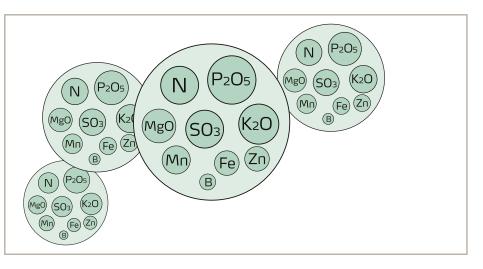
#### For hay-making

apply 8 bags/acre in early/mid March. Allow at least 10 days or until you can't see the fertilizer before grazing.



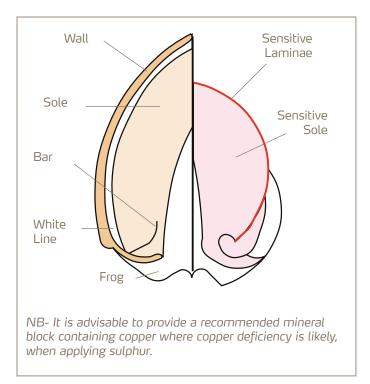
# PADDOCK ROYALE - for balanced plant and animal nutrition

Every particle of fertilizer contains the right balance of nutrients.



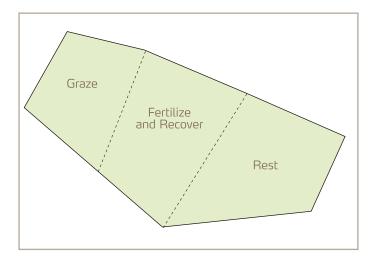
- Containing only 12% nitrogen gives steady growth avoiding lush grass that could cause laminitis in susceptible animals.
- Contains magnesium to supplement the natural supply from the soil. In association with calcium and phosphate metabolism, magnesium is important for strong healthy bone growth in animals.
- Sulphur and zinc are important for the health of skin and hooves.





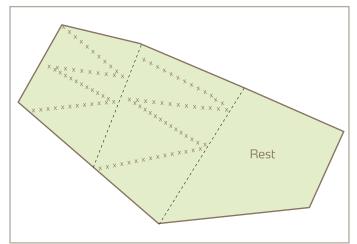
### Paddock Maintenance

- If possible divide your paddocks into 3 equal sized areas.
- Rest a third each spring.
- Allow at least 10 days after fertilizer application or until you can't see the fertilizer before grazing.
- Avoid poaching in the autumn as the damage can last through to the following summer.



# Soil Sampling

- Take soil samples every 3 4 years from each paddock prior to applying fertilizer.
- It is important to maintain the phosphate, potassium and magnesium levels at index 2.
- Where soils are too acidic, growth will be severely restricted.



For further details on soil sampling contact Yara Analytical Services tel- 01759 305116 e-mail- ypl.laboratory@yara.com



# **YaraTera**<sup>™</sup>

# REXOLIN<sup>™</sup> Chelates

# High Performance Iron Chelates

Products	Description	lron content % w/w	Pack size
YaraTera REXOLIN Q48	EDDHA Chelated Iron (ortho-ortho content 4.8%) Microgranular	6.0	20 x 25kg
YaraTera REXOLIN X60	HBED Chelated Iron (ortho-ortho 6.0%) Microgranular	6.0	400kg (20x(4x5kg))
YaraTera REXOLIN Q40	EDDHA Chelated Iron (ortho-ortho content 4.0%) Microgranular	6.0	20 x 25kg
YaraTera REXOLIN Q15	EDDHA Chelated Iron (ortho-ortho content 1.5%) Microgranular	7.0	20 x 25kg

'REXOLIN® is a registered trademark of the Nouryon group of companies in one or more territories.'







# Iron Chelates

Product	Description	Iron content % w/w	Packsize
YaraTera REXOLIN D11	DTPA Chelated Iron Crystals	11.6	30 x 25kg
YaraTera REXOLIN D6	DTPA Chelated Iron Liquid	6.1	1250kg
YaraTera REXOLIN E13	EDTA Chelated Iron Crystals	13.3	40 x 25kg
YaraTera REXOLIN E6	EDTA Chelated Iron Liquid	6.1	4 x 250kg

 $\textbf{`REXOLIN}^{\texttt{@}} is a registered trademark of the Nouryon group of companies in one or more territories.'$ 

# Other Metal Chelates

Product	Description	Mg % w/w	Ca % w/w	Fe % w/w	Cu % w/w	Mn% w/w	Zn % w/w	Packsize
YaraTera REXOLIN Ca10	EDTA Chelated Calcium Microgranular		9.7					30 x 25kg
YaraTera REXOLIN Cu15	EDTA Chelated Copper Microgranular				14.8			30 x 25kg
YaraTera REXOLIN Cu9	EDTA Chelated Copper Liquid				9.0			1250kg
YaraTera REXOLIN Mg6	EDTA Chelated Magnesium Microgranular	6.2						30 x 25kg
YaraTera REXOLIN Mn13	EDTA Chelated Manganese Microgranular					12.8		30 x 25kg
YaraTera REXOLIN Mn6	EDTA Chelated Manganese liquid					6.2		1250kg
YaraTera REXOLIN Zn15	EDTA Chelated Zinc Microgranular						14.8	30 x 25kg
YaraTera REXOLIN Zn9	EDTA Chelated Zinc Liquid						9.0	1250kg

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# Other Metal Chelates

Product	Description	Mg % w/w	Ca	Fe	Сυ	Mn	Zn	Mn	Мо	Со	Packsize
YaraTera REXOLIN BSP	EDTA Micronutrients Microgranular			7.5	0.3	3.7	0.6	0.7 inorg	0.2 inorg		20 x 25kg
YaraTera REXOLIN ABC	EDTA Micronutrients Microgranular	1.85		4.0	1.5	4.0	1.5	0.5 inorg	0.1 inorg		24 x 25kg
YaraTera REXOLIN APN	EDTA (Fe as DTPA) Micronutrients for Hydroponics			6.0 DTPA	0.25	2.4	1.3	1.1 inorg	0.25 inorg		24 x 25kg

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# YaraTera<sup>™</sup> KRISTA<sup>™</sup> Mixability chart

Mixability of fertilizers for preparation of concentrated solutions for fertigation.

	YaraTera AMNITRA	YaraTera CALCINIT	YaraTera KRISTALON grades	YaraTera KRISTA MAP	YaraTera KRISTA MKP	YaraTera KRISTA K	YaraTera KRISTA SOP	YaraTera KRISTA MAG	YaraTera KRISTA MgS	YaraTera CALCI- MAG	Urea	Phos- phoric Acid	Nitric Acid	Boric Acid	Micro- nutrients based in sulphates
YaraTera AMNITRA	-	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES 1	YES 1	YES	YES
YaraTera CALCINIT	YES	-	NO	NO	NO	YES	NO	YES	NO	YES	YES	NO	YES 1	YES	NO
YaraTera KRISTALON grades	Yes	NO	-	YES	YES	YES	YES	YES	YES	NO	YES	NO+	NO+	NO+	YES
YaraTera KRISTA MAP	YES	NO	YES	-	YES	YES	YES	RS***	N0**	RS***	YES	Р	Р	YES	YES
YaraTera KRISTA MKP	YES	NO	YES	YES	-	YES	YES	RS***	N0**	RS***	YES	YES 1	YES 1	YES	YES
YaraTera KRISTA K	YES	YES	YES	YES	YES	-	RS*	YES	RS*	YES	YES	Р	Ρ	YES	YES
YaraTera KRISTA SOP	YES	NO	YES	YES	YES	RS*	-	RS	YES	NO	YES	Р	Р	YES	YES
YaraTera KRISTA MAG	YES	YES	YES	RS***	RS***	YES	YES	-	YES	YES	YES	RS***	Р	NO	YES
YaraTera KRISTA MgS	YES	NO	YES	N0**	N0**	RS*	RS	YES	-	NO**	YES	N0**	YES 1	NO	YES
YaraTera CALCIMAG	YES	YES	NO	RS***	RS***	YES	NO	YES	N0**	-	YES	RS***	Р	NO	NO
Urea	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	-	YES 1	YES 1	YES	YES
Phosphoric acid	YES	NO	NO+	Р	YES	Р	Р	RS***	N0**	RS***	YES	-	YES 1	Р	YES 1
Nitric acid	YES	YES	NO+	Р	YES	Р	Р	Р	YES	Р	NO	YES 1	-	Р	YES 1
Boric Acid	YES	NO	NO+	YES	YES	YES	YES	NO	NO	NO	YES	Р	Р	-	YES
Micronutrients based in sulphates	YES	NO	YES	YES	YES	YES	YES	YES	YES	NO	YES	YES 1	YES 1	YES	-

No +

RS\*\*\*

Yes 1

below 5

Mix only with diluted solution



Restricted mixtures, or high concentrations precipitations could turn out.





Consider the KRISTA SOP solubility

Precaution- should be mixed with precaution, follow the order- 1st water, 2nd specialty nutrient and 3rd acid



Contain chelates which could be damaged with acids

Reduced solubility, is recommended to keep the pH



# Conversion Tables

Metric -> Imperial	Imperial -> Metric
FYM Conversion	
kg t x 2 = units/t kg/m³ x 9 = unit/1000 gal	units/t x 0.5 = kg/t units/1000 gal x 0.11 = kg/m³
Chemical Conversion	
$P_{2}O_{5} \times 0.44 = P$ $K_{2}O \times 0.83 = K$ $NH_{3} \times 0.82 = N$ $SO_{3} \times 0.40 = S$ $SO_{4} \times 0.33 = S$ $CaO \times 0.72 = Ca$ $MgO \times 0.60 = Mg$	P x 2.29 = $P_2O_5$ K x 1.20 = $K_2O$ N x 1.21 = NH <sub>3</sub> S x 2.50 = SO <sub>3</sub> S x 3.00 = SO <sub>4</sub> Ca x 1.40 = CaO Mg x 1.66 = MgO
Area/Distance	
hectare x 2.471 = acre sq km x 0.386 = sq mile km x 0.621 = mile sq m x 10.764 = sq foot m x 1.094 = yard	acre x 0.405 = hectare sq. mile x 2.59 = sq km mile x 1.609 = km sq foot x 0.093 = sq m yard x 0.914 = m
Weight/Volume	
kg/ha x 0.8 = units/acre kg/ha x 0.892 = lbs/acre t/ha x 7.95 = cwt/acre l/ha x 0.089 = gal/acre litre x 1.76 = pint kg x 2.205 = lb	units/acre x 1.25 = kg/ha lbs/acre x 1.121 = kg/ha cwt/acre x 0.126 = t/ha gal/acre x 11.24 = l/ha pint x 0.568 = litre lb x 0.454 = kg
Pressure/Power	
kW x 1.341 = hp bar x 14.7 = lbs/sq inch	hp x 0.746 = kW lbs/sq inch x 0.068 = bar
Temperature	
°C x 1.8 + 32 = °F	°F -32 ÷ 1.8 = °C

### Storage

Weight loss 100 tonnes grain (dried from 20% moisture to 15% moisture) = 5.88t

1 tonne wheat =  $1.35 \text{ m}^3$  storage space

1 tonne OSR = 1.45 m<sup>3</sup> storage space

1 tonne wheat straw =  $20 \text{ m}^3$  big bales

1 tonne barley straw = 18 m<sup>3</sup> big bales



# About Yara

Yara grows knowledge to responsibly feed the world and protect the planet. Supporting our vision of a world without hunger and a planet respected, we pursue a strategy of sustainable value growth, promoting climate-friendly crop nutrition and zero-emission energy solutions. Yara's ambition is focused on growing a climate positive food future that creates value for our customers, shareholders and society at large and delivers a more sustainable food value chain.

To achieve our ambition, we have taken the lead in developing digital farming tools for precision farming, and work closely with partners throughout the food value chain to improve the efficiency and sustainability of food production. Through our focus on clean ammonia production, we aim to enable the hydrogen economy, driving a green transition of shipping, fertilizer production and other energy intensive industries.

Founded in 1905 to solve the emerging famine in Europe, Yara has established a unique position as the industry's only global crop nutrition company. We operate an integrated business model with around 17,000 employees and operations in over 60 countries, with a proven track record of strong returns. In 2020, Yara reported revenues of USD 11.6 billion

Crop Knowledge -Product Combinations -In-field Expertise



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