

Impact for a sustainable future



Product Guide

# Professional Horticulture



# Grow, Nurture, Protect your future

**ICL Professional Horticultures' Levington Advance growing media services are designed to future-proof your business.**

World-leading technical advice is delivered alongside **Levington Advance Solutions** and **Levington Advance Sustain** custom mix growing media. Powered by **Osmocote** controlled release fertiliser as well as extensive research, sustainable options are provided for an ever-changing landscape.

ICL's Grow, Nurture and Protect product ranges and services are specifically designed to meet growers' current and forthcoming requirements.

To arrange a visit by one of the ICL team:

Call +44 (0)1473 237 111

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**Impact for a sustainable future**



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# Everything you need with brands you can trust

ICLs brands have been leading the way in horticulture for over 50 years, from Levington professional growing media, to our patented controlled release fertiliser Osmocote. Use our products and you will be safe in the knowledge your plants are getting what they need for maximum quality and return on investment.

## Grow



### Grow

At our state-of-the-art production facility, we also use some of the best substrates as standard, to make sure that your growing media performs to its maximum capacity when it is delivered to your door.

## Nurture



### Nurture

The ICL group has industry-leading research and development facilities to help continuously improve its market-leading products, keeping them at the cutting edge of horticultural technologies. With brands such as **Osmocote**, **Universol** and **Peters** you can trust that when you need to provide the best care for your plants, our products are guaranteed to perform.

## Protect



### Protect

Plant protection is key to maximising your crop yield and plant quality. We have the products to protect your plants safely throughout the growing cycle. With brands such as **Seeka** and **Pitcher GR**, your crops are in safe hands.

# Grow

**Levington - With over 50 years experience of producing consistent high quality professional growing media.**

Levington has been the go-to supplier for growing media for decades, not only because people trust the product to provide them with the best results, but also because of the constant research and development that goes into making sure Levington remains on top of its game.

# The quality is in the ingredients

As well as the best quality UK & Irish refined peat at our state-of-the-art Scottish production facility, we also use the most advanced and responsibly resourced substrates as standard to make sure that your growing media performs to its maximum capacity when it is delivered to your nursery.

## Levington<sup>®</sup> Advance

Levington Advance growing media contains the finest ingredients, which have been developed and tested over time to provide mediums which your plants will just love to grow in.

### Product advantages

- Screened to optimise particle size then blended to provide the ultimate mix for your crop
- Managed by experts at our UK factory
- Over 50 years of research and development in every bag
- No green waste - we only manufacture professional grade growing media

## Fibagro<sup>®</sup> Advance

Fibagro Advance is a perfect base for peat free growing media as well as complementing peat for peat reduced plant production.

### Product Advantages

- 100% natural and biodegradable
- Healthy and reliable: the defibration process ensures a safe, constant quality with structural stability
- Ecological and economic, peat alternative
- Increases the aeration of substrates due to increased air capacity and drainage
- Promotes root growth
- Fibagro Advance is naturally hydrophilic enabling easy and fast rewetting
- Fibagro Advance stabilises growing media structure
- Added nitrogen for better release and stability



## Start&Gro<sup>®</sup>

Start&Gro is the starter fertiliser for potted, bedding and all container nursery plants. Start&Gro is designed to be premixed into the growing media, providing nutrition for the first weeks of cultivation.

### Product advantages

- High potassium ratio for good colour
- Free flowing
- Good mixability
- 100% water soluble
- No dust
- High chelated trace element level

## H2Gro<sup>®</sup>

The latest generation surfactant, it combines a wetting agent with a penetrating agent, ensuring the water tracts to all areas of the growing media. H2Gro also contains a re-wetting agent, promoting excellent initial and long term wetting of growing media, it performs equally well through wetting and drying cycles.

### Product advantages

- 3 in 1 mode of action - wetting and spreading agent, penetrating agent and re-wetting agent
- Safe to beneficial microbes
- Economical low use rate

## Levington<sup>®</sup> Bark

The bark used in Levington Advance growing media is predominantly pine and comes in two grades 0-8mm and 5-12mm. Additional nitrogen is added to ensure any bacterial breakdown action is stabilised.

### Product advantages

- Opens up structure to give better drainage
- Fertiliser buffering similar to peat
- Different grades available
- Uniform particles aid flow into pots





## Levington® Coir

Using Levington Coir within growing media provides a host of benefits which are helping evolve the current Levington product range. Made from the pith of coconut husks, coir can be manufactured into growing media either on its own, or by blending it with other raw materials such as Fibagro Advance.

### Product advantages

- Uniform particle size helps growing media consistency
- Lightweight helping lower delivery costs
- Absorbs water readily, even when very dry
- Absorbs and holds nutrients within the growing media
- Flows into pots and cells readily
- Optimum pH level for plant growth

## Micromax® Premium

Available in all Levington Advance standard growing media.

Micromax Premium ensures that the plant receives all the trace elements including magnesium it needs to thrive. Its unique formula also increases the efficiency of the major elements.

### Product Advantages

- Contains 15% Iron and a balanced combination of other trace elements
- Up to 18 months supply of trace elements
- Stimulates good rooting for strong and healthy crops
- Perfect start-up effect and good plant colour
- Superior product for outdoor, containerised crops
- Dust-free and prevents toxicity symptoms
- Environmentally friendly, very low leaching of nutrients



# Fibagro<sup>®</sup> Advance

Fibagro Advance is a perfect base for peat free growing media as well as complementing peat for peat reduced plant production.

Manufactured from FSC certified raw materials Fibagro Advance is created from wood chips which are thermo-mechanically processed. During this process the wood chips are put through extremely high temperatures allowing unwanted substances to escape as gas, ensuring that Fibagro Advance is free of any kind of chemical or physical additive and is sterile.

## 100% natural and biodegradable

Fibagro Advance degrades after use, without any residues.

## Healthy and reliable

The defibration process ensures a safe, constant quality with structural stability.

## Ecological and economic

Fibagro Advance is a fully renewable raw material which utilises a by-product of the timber industry sourced from sustainable forests. Moreover, Fibagro Advance is compressible and due to its low bulk density, transport costs are optimised.



## Advantages of using Fibagro Advance

- Reduced leaching
- High Air Filled Porosity for good rooting and drainage
- Improved Water Holding Capacity making it easier to manage plants throughout
- Great structure that doesn't allow the mixes to 'slump' in the pots
- Manufactured in UK site for the professional horticulture market
- Has a stable nitrogen profile
- Fully sterilised - heat treated
- Manufactured from UK FSC certified and sustainable raw materials
- Combined with the strong nutrition packages of ICL, Fibagro Advance can be used in high percentages in mixes providing a robust and cost efficient diluent of peat



## Did you know?

ICL has the perfect nutrition packages with its **Osmocote** CRF range as well as starter fertilisers such as **Osmoform**. Contact your Technical Area Sales Manager for further details of how these can be applied.





# Levington<sup>®</sup> Advance Solutions

At ICL we know that grower requirements vary geographically and from crop to crop, therefore we offer a complete solutions package designed to produce growing media for our customers' individual needs.

## To optimise crop value and performance you can add:

**Osmocote<sup>®</sup> 5** Features an NPK release pattern that matches the plant needs closer than before (see page 26)

**Osmocote<sup>®</sup> Exact** Maximise the efficiency of your feed regime (see pages 24-38)

**Micromax<sup>®</sup> Premium** Enhance the performance of your trace element package (see page 39)

**PRESTOP<sup>®</sup>** A multi use biological fungicide for protection against damping off and root rot diseases (see page 55)

**H<sub>2</sub>Gro<sup>®</sup>** Increase the water efficiency of your growing media (see page 63)

Our Technical Area Sales Managers will be pleased to discuss the effect and benefits of all the different materials available and suggest the best mixes for growing the crops on your nursery.



This symbol indicates that you can incorporate this product as part of your Levington Advance Solution growing media.

## Did you know?

ICL can supply growing media in various formats suitable to your nursery from 75L and Bulk Bags to Probales and Bulk deliveries.



# Levington<sup>®</sup> Advance Sustain

Safe, reliable and sustainable growing media  
from the brand you can trust.

Born from years of research, development and experienced gained from years of working within the ornamental industry, ICL's Levington Advance Sustain provides growers with the ultimate in sustainable growing media. Carefully produced for the professional growing industry ICL have a range of products that can be used as standard or as part of a custom mix programme.

## Tailor Made Solutions

Our team of highly qualified advisers provide you with specific recommendations regarding the correct nutrition for your crops and which inputs can be added to customise your growing media mix. This is all the more essential when growing in a non-peat based growing media. Our advisers are there not only at the outset but provide advice continually throughout the growing season making sure that you maximise your crops quality and profitability.

High quality  
**sustainable**  
growing media  
from ICL

### Grow

Levington<sup>®</sup> Advance  
Sustain 

The non-peat based growing media providing great base nutrition and essential trace elements to your crops

**Fibagro<sup>®</sup>**  
Advance

The ultimate in woodfibre products sourced and produced in the UK by ICL (see page 8)

**Csmocote<sup>®</sup>**

Controlled release fertilisers which guarantee quality of release and performance (see pages 24-38)

**Micromax<sup>®</sup>**

Essential trace element package provided as standard (see page 39)

**PRESTOP<sup>®</sup>**

A multi use biological fungicide for protection against damping off and root rot diseases (see page 55)

**H2Gro<sup>®</sup>**

Increase the water efficiency of your growing media (see page 63)





✓ Peat Free







## Seed and Modular

Levington Advance Sustain Seed and Modular growing media has a base level of fertiliser to meet the individual requirements of crops and their growing regimes. With its small particle size, H2Gro wetting agent and adjusted pH to the ideal level, plants will grow happily and healthily in Levington Advance Sustain.

### Suitable for

- All seed sowing
- Direct rooting of cuttings
- Modules, trays and small pots

### Features and benefits

- Includes Osmoform slow release fertiliser for gradual release of nutrients
- Ideal pH levels for plant growth
- H2Gro granules added in addition to liquid to ensure good wetting up and re-wetting
- Product contains starter fertiliser



✓ Peat Free





## Pot and Bedding

Levington Advance Sustain Pot and Bedding is the ideal peat free media to produce the highest quality pot and bedding plants. ICL's revolutionary H2Gro wetting agent (liquid and granules) is added as standard to ensure water holding, so even the most sensitive and most vigorous plants can be grown.

### Suitable for

- A wide variety of pot and bedding plants

### Features and benefits

- Includes Osmoform slow release fertiliser for gradual release of nutrients
- Ideal pH levels for plant growth
- H2Gro granules added in addition to liquid to ensure good wetting up and re-wetting
- Contains ICL's Fibagro Advance
  - UK sourced and manufactured woodfibre
  - Proven performance for quality plants
- Product contains starter fertiliser



✓ Peat Free



# Levington<sup>®</sup> Advance Sustain Potting

Levington Advance Sustain Potting is a sustainable growing media designed to provide a good open well drained structure with base fertiliser levels. H<sub>2</sub>Gro wetting agent is added to optimise water uptake and rooting. Different markets have different plant specifications so the growth can be controlled by adding Osmocote Exact or by liquid feeding.

## Suitable for

- Indoor and outdoor crops
- Tubs and baskets

## Features and benefits

- Includes Osmoform slow release fertiliser for gradual release of nutrients
- Ideal pH levels for plant growth
- H<sub>2</sub>Gro granules added in addition to liquid to ensure good wetting up and re-wetting
- Contains ICL's Fibagro Advance
  - UK sourced and manufactured woodfibre
  - Proven performance for quality plants
- Product contains starter fertiliser



 **Peat Free**







## Container Nursery Stock

The Levington Advance Sustain range for Container Nursery Stock is the ideal growing medium for great quality plants. Taken as the industry standard over many years, ICL continue to invest in the development of their sustainable raw materials making it the most technologically advanced growing media available.

### Suitable for

#### Container Nursery Stock General

- A wide variety of nursery stock

#### Container Nursery Stock Coarse

- Larger pots
- Overwintering stock outdoors

### Features and benefits

- Includes Osmoform slow release fertiliser for gradual release of nutrients
- Ideal pH levels for plant growth
- H2Gro granules added in addition to liquid to ensure good wetting up and re-wetting
- Contains ICL's Fibagro Advance
  - UK sourced and manufactured woodfibre
  - Proven performance for quality plants
- Product contains starter fertiliser



✓ Peat Free



# Levington® Advance Seed and Modular

Levington Advance Seed and Modular growing media has a low or a medium base level of fertiliser to meet the individual requirements of crops and their growing regimes. With its small particle size, H2Gro wetting agent and adjusted pH to the ideal level, plants will grow happily and healthily in Levington Advance.

## Levington Advance Seed and Modular Low nutrient F1

### Suitable for

- All seed sowing
- Modules, trays and small pots up to 7cm

### Features and benefits

- Having a low level of starter fertiliser ensures even the most sensitive seedlings can grow exceptionally
- Growth of the seedlings can be easily managed with water soluble fertilisers
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance Seed and Modular Medium nutrient F2

### Suitable for

- Seed sowing and direct rooting of softwood cuttings like Chrysanthemums and Fuchsia
- Modules, trays and small pots up to 7cm

### Features and benefits

- For more vigorous seedlings including vegetable plants
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance Seed and Modular Medium nutrient F2S

### Suitable for

- Seed sowing and direct rooting of cuttings
- Modules, trays and small pots up to 7cm

### Features and benefits

- Contains silver sand to improve the flow of the growing media, even into the smallest cells
- Ideal pH levels for plant growth
- Product contains starter fertiliser

\*Product specification is subject to change dependent on raw material availability and moisture content in order to maintain consistency, quality and high level of performance. Due to its inherent inconsistency and potential contamination problems we do not allow green waste on our site. Speak to your local ICL Technical Area Sales Manager for further information regarding this.

Growing media conductivity is measured using a method of analysis of 1:5 dilution rate.



# Levington® Advance Pot and Bedding

This peat reduced range of growing media products is ideal to produce the highest quality pot and bedding plants. While water holding is good, our revolutionary H2Gro wetting agent also helps encourage rooting. With the perfect pH for growing plants, depending upon which product is chosen, even the most sensitive and most vigorous plants can be grown.

## Levington Advance Pot and Bedding

Low nutrient R-M1

### Suitable for

- Growing the most sensitive of pot and bedding plants

### Features and benefits

- Encourages rooting and allows for control of growth with follow up water soluble feeding
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance Pot and Bedding

Medium nutrient R-M2

### Suitable for

- Growing a wide variety of pot and bedding plants

### Features and benefits

- Good quality nutrient supply for feeding of up to four weeks
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance Pot and Bedding

High nutrient R-M3

### Suitable for

- The most vigorous plants including tomatoes

### Features and benefits

- Controlled release fertilisers should not be added due to the high levels of nutrients already contained in this product
- Ideal pH levels for plant growth
- Product contains starter fertiliser

Product specification is subject to change dependent on raw material availability and moisture content in order to maintain consistency, quality and high level of performance. Due to its inherent inconsistency and potential contamination problems we do not allow green waste on our site. Speak to your local ICL Technical Area Sales Manager for further information regarding this.

Growing media conductivity is measured using a method of analysis of 1:5 dilution rate.

- ✓ Fibagro Advance
- ✓ Peat Reduced





# Levington® Advance Potting

A range of peat reduced growing media products designed to provide a good open well drained structure with low base fertiliser levels. H2Gro wetting agent is added to optimise water uptake and rooting. Different markets have different plant specifications so the growth can be controlled by adding Osmocote Exact or by liquid feeding.

## Levington Advance Medium Coarse Potting Low nutrient R-MCP

### Suitable for

- Indoor and outdoor crops
- Pots, tubs and baskets

### Features and benefits

- Blend of particle sizes for open structure providing improved drainage
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance Pot Plant General R-PPG

### Suitable for

- A wide variety of pot plant crops
- Pots, baskets and tubs

### Features and benefits

- A blend of 0-10mm and 6-12mm particles providing a good open structure
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance Alpine, Herbaceous, and Cyclamen Low nutrient R-AHC

### Suitable for

- All Alpine, Herbaceous and Cyclamen crops
- Suitable for pots

### Features and benefits

- A blend of 0-10mm and 6-12mm peat plus 5-12mm pine bark to keep the structure open
- This product is well drained and has a low base fertiliser
- Ideal pH levels for plant growth
- Product contains starter fertiliser

Product specification is subject to change dependent on raw material availability and moisture content in order to maintain consistency, quality and high level of performance. Due to its inherent inconsistency and potential contamination problems we do not allow green waste on our site. Speak to your local ICL Technical Area Sales Manager for further information regarding this.

Growing media conductivity is measured using a method of analysis of 1:5 dilution rate.

- ✓ Fibagro Advance
- ✓ Peat Reduced



# Levington® Advance Container Nursery Stock

The Levington Advance Container Nursery Stock range is the ideal peat reduced growing medium for great quality plants. Taken as the industry standard over many years, ICL continue to invest in the development of their growing media whilst reducing the peat content, making it the most technologically advanced growing media available.

## Levington Advance R-CNS General

### Suitable for

- A wide variety of nursery stock crops
- Use in pots for liners

### Features and benefits

- Levington R-CNS General flows readily into smaller pots yet retains a reasonable open structure for drainage
- Ideal pH levels for plant growth
- Product contains starter fertiliser

## Levington Advance R-CNS Ericaceous

### Suitable for

Acid loving plants such as Heather, Rhododendrons, Camellia and Pieris

### Features and benefits

- The structure of this growing media is based on CNS General with a reduced level of lime
- Product contains starter fertiliser

## Levington Advance R-CNS Coarse

### Suitable for

- Larger pots
- Overwintering stock outdoors

### Features and benefits

- A more open mix
- Ideal pH levels for plant growth
- Product contains starter fertiliser

Product specification is subject to change dependent on raw material availability and moisture content in order to maintain consistency, quality and high level of performance. Due to its inherent inconsistency and potential contamination problems we do not allow green waste on our site. Speak to your local ICL Technical Area Sales Manager for further information regarding this.

Growing media conductivity is measured using a method of analysis of 1:5 dilution rate.

- ✓ Fibagro Advance
- ✓ Peat Reduced





# “The plants are stronger than before and we’re seeing great uniformity”

## Provender produces peat free Lavender

With biosecurity issues becoming more challenging, *Xylella fastidiosa* susceptible plants have become increasingly difficult to source from Europe. As a result, Kent-based wholesaler Provender Nurseries began producing its own Lavenders. Using their own production facilities, and those at two local horticultural colleges, the company grows the crop peat free and has control over its supply chain.

Working with a local college, Stuart Tickner, Nursery Production Manager, set up a trial in 2019 producing several thousand Lavenders in Levington Advance growing media.

“Responding to industry trends and customer demands - the following year we switched to ICL’s peat free growing media ‘Levington Advance Sustain’ and grew the crop in bright blue, 100% kerbside recyclable, 2 litre pots,” he says. “Growing our own we can improve continuity of supply and achieve the quality we require.

Before the 2020 trial he sat down with ICL’s Steve Chapman to devise a bespoke peat free mix for Lavenders.

“Incorporating the right balance of Fibagro Advance woodfibre and bark, it has a texture very similar to Provender’s peat-based Levington Advance mixes,” explains Steve. “To optimise crop management, we included H2Gro water management granules and Osmocote Exact High K - containing high potassium to promote compact growth.”

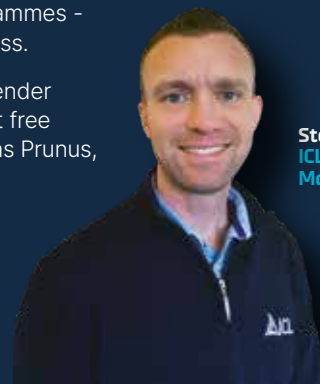
Lavenders prefer to be grown on the dry side. “Our bespoke mix is free-draining and the crop performs really well,” says Stuart. “The plants are stronger than before and we’re seeing great uniformity - consistency is crucial with any growing media mix.

“Steve’s knowledgeable advice has proved invaluable. He has even played a part inspiring our team to take ownership of these programmes - which has proved crucial to their success.

The project proved so successful Provender invested in a polytunnel producing peat free Lavenders at its Swanley site - as well as Prunus, Pinus, Betula and Griselinia.



Lavenders at the Swanley site  
Provender Nurseries



Steve Chapman MBPR  
ICL Technical Area Sales  
Manager for Provender







# Nurture

**ICL products are seen as the industry standard and trusted by growers worldwide when it comes to nurturing ornamental crops to peak condition.**

From the Osmocote range of controlled release fertilisers to the pure and premium quality of Peters water soluble fertiliser, ICL has the solutions to meet every crop situation. With our AngelaWeb 3.0 precision nutrition programme and expert advice, you can be assured that with ICL your crops are getting what they need, when they need it, maximising plant growth and quality and minimising nutrient leaching.

# AngelaWEB3.0

Designed by experts at ICL, AngelaWeb 3.0 takes precision nutrition to the next level.

- New information on tank mixes
- Settings for water soluble feeds
- Detailed release patterns for Osmocote products
- Produces full crop plans
- Improves time management and productivity
- Ensures the crop gets exactly what's required



## How it works...

- First, select the crop, including the variety, as well as growing media type and growth phase
- The crop's specific nutritional demands will be displayed along with the option to create controlled release fertiliser simulations
- Input data from a detailed water source analysis and how it's to be applied
- Next, by choosing either a fertiliser regime which can be water soluble, controlled release Osmocote, or a combination of the two, the software calculates a specific fertiliser programme.
- Once the data is calculated, the software creates a graph showing the percentage of the plant's nutritional needs at each growth stage, as well as the EC level.

The user-friendly platform allows for existing data to be retrieved and changes to be made to certain elements quickly, as the season progresses. Once the necessary tweaks to the fertiliser programme have been changes, AngelaWeb 3.0 will produce new printouts and reports.



## Giving your crops what they need?

Many factors impact on plant quality and providing the correct nutrition is among the most important. It not only has a key role to play in preventing plant diseases, but is vital to healthy growth and, where appropriate, crop yield - therefore ultimately financial performance.

Plants need the correct nutrients depending on the growth stage, the growing media and its pH and Electrical Conductivity (EC). Water quality is another key parameter and on many nurseries it can change through the season when switching between different water sources. How it is applied to crop also has an impact.

## Saving you time, money and helping the environment

While some find manually calculating plant nutrition programmes for different crop stages somewhat daunting, it can also be time consuming. AngelaWeb 3.0 looks to save precious management time and decrease any errors in nutrient calculations.

With the rising price of mineral raw materials and transport costs, fertiliser is a significant input cost. Apply too little and plant quality/yield suffers, apply too much and money is wasted, the environment suffers and growers may fall foul of the new water framework directive.



AngelaWeb 3.0 generates graphs showing the percentage of the plants nutritional needs being fulfilled at each growth stage and at the EC level.





**Osmocote** - Trusted and innovative controlled release fertilisers developed over five decades.

Having pioneered controlled release fertilisers over 50 years ago, our world-leading Osmocote range of products is still evolving thanks to innovative new technologies. The most significant difference between then and now is the level of applied scientific horticultural knowledge.

Our most advanced, 5th generation, Osmocote fertilisers provide a choice of longevities as well as the way nutrients are released making these products unique.

No matter which Osmocote controlled release fertiliser product is selected, growers can rest assured the highest quality and return on investment will be delivered.

### Benefits of using Osmocote

- Plants grow better as they get the nutrients they require at any given growth stage
- Guaranteed safety - nutrient leaching is minimised making it the most environmentally friendly product on the market
- Plant quality is guaranteed thanks to optimum uniform growth
- There are less pest and disease pressures thanks to an even supply of nutrients and healthy plant growth
- Satisfied customers, as plants retain their high quality after consumer purchase, thanks to the continued release of nutrients



### Proven performance, highest safety for plants

**Osmocote®**

Osmocote coating technology

100% coated NPK

Full range of longevities available

**The original**

Controlled Release Fertilizer

1<sup>st</sup> generation coated fertilizer

**Osmocote® Pro**

Additional to Osmocote:

Trace element package included in the granules

Orange/white color tracer for easy recognition

**Proven performance**

Controlled Release Fertilizer

2<sup>nd</sup> generation coated fertilizer

**Osmocote® Exact**

Additional to Osmocote Pro:

Pre-defined release patterns

Designed to perform in every situation - always

Meets highest quality standards

Highest safety for plants

Premium trace element package included

Color tracer for each longevity for easy recognition

**The safest Osmocote ever**

Patterned Release Fertilizer

3<sup>rd</sup> generation coated fertilizer

**Osmocote® Exact**

Additional to Osmocote Exact:

DCT (Double Coating Technology) included. Innovative technology which enables programmed release patterns.

And of course featuring all unique benefits of Osmocote Exact.

Especially suitable for challenging growing conditions.

**Taking fertilizers to a higher level**

Programmed Release Fertilizer

4<sup>th</sup> generation coated fertilizer

**Osmocote® 5**

Additional to Osmocote Exact DCT:

**OTEA-system**  
Better plant growth by Optimized Trace Element Availability throughout the season. Ultra small portions of Trace Elements come available to the plant, every day.

**Nutrient match technology**  
Plants benefit from optimal NPK availability throughout the growing season. Nutrient match release is the ultimate step in synchronizing NPK availability with plant need.

Osmocote 5 is programmed to have lower release at the beginning after potting for safe plant development, accelerating during the main growing season. (Osmocote 5 does not contain DCT.)

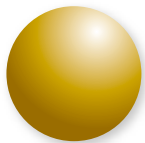
**Establishing the new standard**

Programmed Release Fertilizer

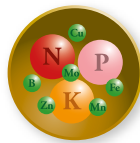
5<sup>th</sup> generation coated fertilizer

## Working principles of Osmocote

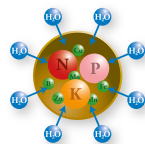
Quick guide to coated controlled release fertilisers...



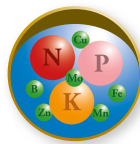
Every granule is covered by an organic coating that regulates the daily release of nutrients.



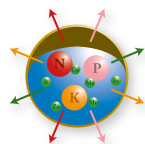
Granules contain NPK, B, Cu, Fe, Mn, Mo and Zn.



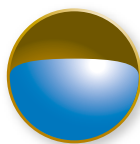
Water penetrates through the coating and dissolves the nutrients inside the granule.



The dissolved nutrients are released through the coating, by osmotic pressure.



Influenced by the temperature, the nutrients are released at a constant, regular and controlled rate during the longevity.



Once empty, the membrane will gradually break down.



# **NEW** Osmocote<sup>®</sup> 5

Osmocote 5 features an NPK release pattern that matches the plant needs closer than ever before. It makes the uptake and usage of applied plant nutrition even more efficient and effective.

## Range



## Matching Plant Demand

Osmocote 5 has been designed to match nutrient release to plant growth making it more efficient and effective. This nutrient matching technology has been extensively trialled around the world so ICL are able to guarantee optimum results.

## Optimised Trace Element Availability System (OTEA)

The experts at ICL have refined the release of trace elements within Osmocote 5 to give growers the best performing product on the market. This improved delivery allows the chelated trace elements to be released throughout the longevity of the product improving the availability within the growing media. Uptake of trace elements is thus improved, optimising plant colour, health, and growth throughout the growing cycle.







The following rates are a general guide. Contact your ICL Technical Area Sales Manager for specific crop rates.

<b>3-4 Months</b> 	<b>Average Nutritional Need</b>	<b>High Nutritional Need</b>	<b>Minimum Recommended Base Rate*</b>
Container nursery stock and perennial crops (grown under protection)	1-1.5 g/l	2-2.5 g/l	1 g/l
Container nursery stock and perennial crops (outdoor production)	2-2.5 g/l	3-3.5 g/l	2 g/l
Pot plants	2-2.5 g/l	3-3.5 g/l	2 g/l
Bedding/balcony plants	2-3 g/l	3-3.5 g/l	2 g/l


\*in case additional water soluble fertilisers are applied

<b>8-9 Months</b> 	<b>Average Nutritional Need</b>	<b>High Nutritional Need</b>	<b>Minimum Recommended Base Rate*</b>
Container nursery stock and perennial crops (grown under protection)	3.5-4.5 g/l	4.5-5.5 g/l	2-3 g/l
Container nursery stock and perennial crops (outdoor production)	4.5-5.5 g/l	5.5-6.5 g/l	3-4 g/l
Pot plants	4.5-5.5 g/l	5.5-6.5 g/l	3-4 g/l

\*in case additional water soluble fertilisers are applied

<b>5-6 Months</b> 	<b>Average Nutritional Need</b>	<b>High Nutritional Need</b>	<b>Minimum Recommended Base Rate*</b>
Container nursery stock and perennial crops (grown under protection)	2-2.5 g/l	3-4 g/l	2 g/l
Container nursery stock and perennial crops (outdoor production)	3-3.5 g/l	4-5 g/l	2-3 g/l
Pot plants	3-4 g/l	4-4.5 g/l	2-3 g/l
Bedding/balcony plants	3-4 g/l	4-4.5 g/l	2-3 g/l

\*in case additional water soluble fertilisers are applied

<b>12-14 Months</b> 	<b>Average Nutritional Need</b>	<b>High Nutritional Need</b>	<b>Minimum Recommended Base Rate*</b>
Container nursery stock and perennial crops (grown under protection)	3.5-4.5 g/l	4.5-5.5 g/l	2-3 g/l
Container nursery stock and perennial crops (outdoor production)	4.5-5.5 g/l	5.5-6.5 g/l	3-4 g/l
Pot plants	4.5-5.5 g/l	5.5-6.5 g/l	3-4 g/l

\*in case additional water soluble fertilisers are applied



## Features and benefits of Osmocote 5

- More efficient and effective uptake of applied plant nutrition, matching the NPK release pattern and the plant's needs with more precision than ever before
- Best possible plant colour, health and growth with the improved trace element delivery system
- Highest nutrient release efficiency
- Optimising the availability of trace elements in the growing media and their uptake by plants (OTEA System)
- Highest safety for plants
- Highest consistency: every bag of the product is identical
- Coloured granules for longevity recognition

# Osmocote<sup>®</sup> Exact Protect

Osmocote Exact Protect is a 4th generation 'programmed release' fertiliser developed for crops potted in the autumn and winter seasons.

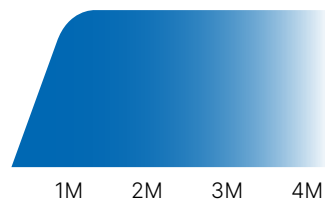
Osmocote Protect 12-14m is designed to be used from mid-October until the end of December, it contains only double coated granules. Nutrient release is 'delayed' with hardly any release during winter so the EC in the growing media remains low during the first 2-3 months.

## Features and benefits

- Availability of nutrients matches closely with plant need as a result of 'programmed release'
- Protect is specially designed for container nursery stock potted in autumn and winter
- Efficient use of released nutrients. Nutrients are released when the plant is able to take them up
- Safe and reliable, it is based on proven Exact technology
- Re-fertilisation in spring is not required saving time and money
- Improves plant quality, yields and ultimately return on investment
- 100% doubled coated granule
- Nutrient release is delayed by 6 weeks or up to 3 months depending on the longevity chosen

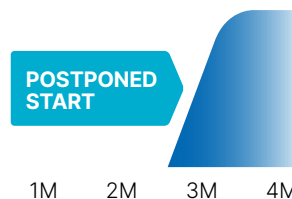
## The postponed start principle

Osmocote Exact  
WITHOUT DCT



Double Coating Technology (DCT)

Osmocote Exact  
WITH 100% DCT



14-8-11+2MgO+TE



# Osmocote<sup>®</sup> Exact High K

Osmocote Exact High K helps provide quality flowering plants which are compact with good leaf colouring. This is essential in order for growers to maximise return on investments through sales and transportation.

Utilising ICL's patented Double Coating Technology (DCT) Osmocote Exact High K optimises the release of new raw materials which match the demands of the plant. This gives growers confidence in performance, safety and end results which lead to higher returns and better plants. Osmocote Exact High K is suitable for use in container nursery stock, perennials, pot plants and bedding plants.



## Features and benefits

- Good results for compact growth; ideal N / K ratio, combined with low P (reduced stretching)
- Plant roots develop very well with new High K because of optimal EC in the first weeks after potting
- Excellent leaf shine and colour, thanks to the full trace element package + ultimate Iron release
- Improved plant quality for consumers thanks to the long lasting effect of Osmocote Exact High K
- Improved availability with use of new raw materials
- Includes DCT for better nutrient release throughout the growing season\*
- Better plants and return on investment

\*3-4 Month does not include DCT (Double Coated Technology)

12-7-19+TE





# Osmocote<sup>®</sup> Exact Standard

Osmocote Exact Standard products employ proven 3rd generation technology, providing the assurance of quality, safety and uniformity throughout the growth season and, if desired, patterned release.

For plants that have equal nutrient demands throughout the entire growing cycle, Osmocote Exact Standard is the ideal choice. The Osmocote Exact range has the right products to suit any situation.

## Osmocote Exact Standard

Osmocote Exact, 3rd generation controlled release fertilisers, combine safety, consistency and patterned release. Osmocote Exact closely follows plant growth, making the product not only very efficient but also very safe.

## Features and benefits

- Highest possible controlled release and safety fertiliser
- All essential trace elements
- Part of the granules are colour-coded according to longevity to avoid mistakes
- Very consistent, every bag of Osmocote Exact Standard gives identical results
- Excellent quality control, exceeding all industry standards
- Available in various release patterns, tailored to the crop requirements
- Provides optimal plant growth, as well as being very efficient and environmentally friendly

16-9-12+TE 3-4m

15-9-12+2MgO+TE 5-6m

15-9-11+2MgO+TE 8-9m & 12-14m



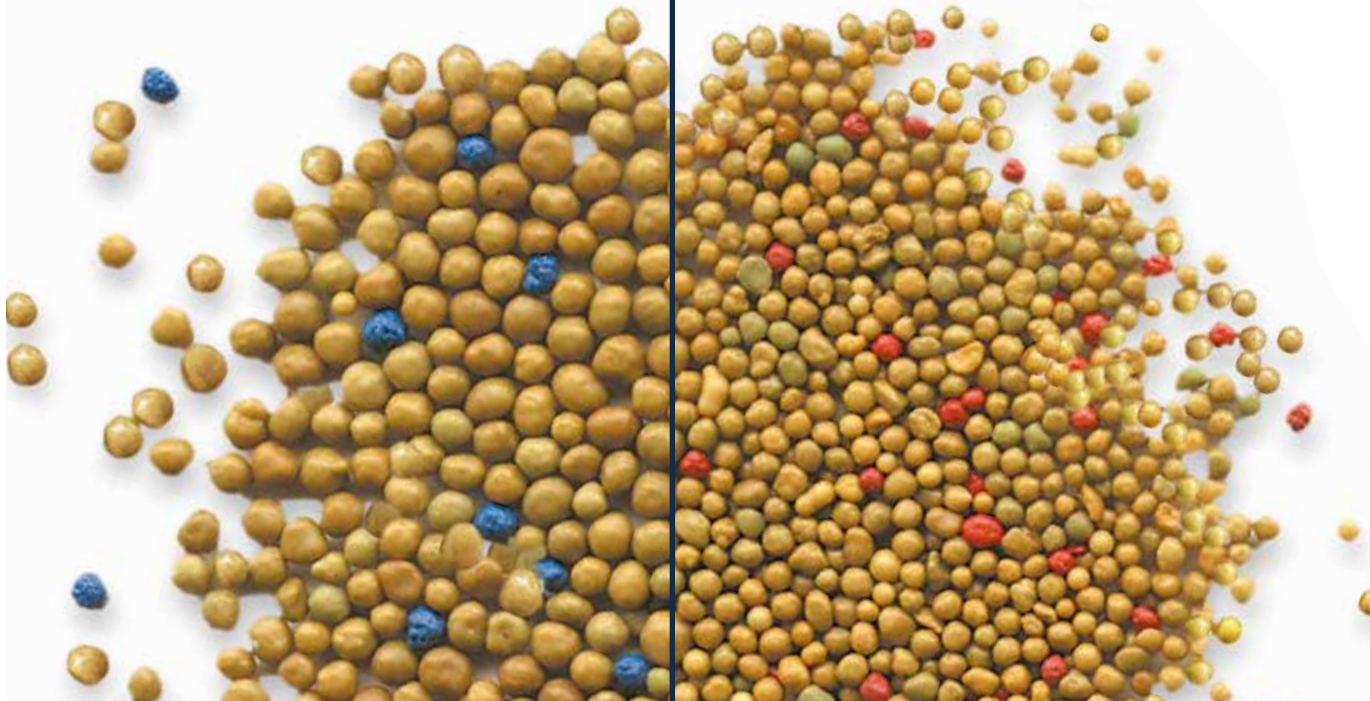
# Osmocote<sup>®</sup> Exact Mini

Specially developed for use in small substrate volumes, Osmocote Exact Mini is ideal for pots smaller than 8cm, for example plugs and trays with small compartments. With a granule size 0.85 to 2.0mm, this product guarantees optimum distribution of nutrients in substrate. The granules are so small that good distribution can be achieved even in volumes starting at 20ml.

**Ideal** for small  
volume pots,  
plugs and trays

Regular Osmocote Exact

Osmocote Exact Mini



## Features and benefits

- The reliability of Osmocote Exact, but for pots with small volumes
- Uniform plant growth, thanks to good granule distribution
- 100% coated and therefore 100% safe for plants
- Every granule contains all the nutrients
- Easy, accurate dosing
- Nutrition and irrigation are separated, enabling both to be optimised
- Very easy to apply

15-9-11+2ngO+TE





# Osmocote<sup>®</sup> Exact Tablet

Osmocote Exact Tablets offer convenience and very accurate rates of nutrients. Due to their cone-like shape, the tablets can be easily pushed into the growing media. As with Osmocote Exact, the longevity is instantly recognised by the colour of the granules in the tablets. Tablets are available in 5 gram and 7.5 gram formats.

## Features and benefits

- Safety: highest possible safety, controlled release and high level of all essential trace elements. Colour-coded for longevity to avoid mistakes
- Consistency: highly consistent, every box of product gives identical results thanks to excellent quality control exceeding all industry standards
- Patterned release: available in standard release pattern, exactly tailored to crop requirements, to provide optimal plant growth. Very efficient and therefore environmentally friendly



14-8-11+2MgO+TE





# Osmocote<sup>®</sup> Pro

Osmocote Pro is a 2nd generation controlled release fertiliser with a high NPK content. Containing all necessary trace elements it has a fixed release pattern.

Osmocote Pro is available in four longevities 3-4 months, 5-6 months, 8-9 months and 12-14 months.

## Features and benefits

- Contains trace elements
- 100% coated NPK, Mg and trace elements, plants are supplied with all required nutrients during the whole crop cycle
- Offers good value for money
- Has a high NPK content
- Safe, reliable and easy to use



### Standard

19-9-10+2MgO+TE 3-4m & 5-6m

18-9-10+2MgO+TE 8-9m & 12-14m

### High K

5-6 11-10-19+2MgO+TE 5-6m

8-9 11-10-19+2MgO+TE 8-9m

## Standard formulation



2<sup>nd</sup>  
Generation  
Controlled Release  
Fertiliser

3-4

5-6

8-9

12-14

## High K formulation



High K

5-6

8-9

# Osmocote® Bloom

Osmocote Bloom controlled release fertiliser for bedding plants is specifically designed for annuals in small pots.



Containing NPK, Magnesium and all necessary trace elements, it is 100% coated and has a pre-defined longevity.

## Features and benefits

- NPK ratio of 2:1:3 is perfect for condensed growth of bedding plants
- Mini granule ideal for mixing in small pots and packs
- Lower fertiliser inputs so environmentally friendly
- Easy to use, at full rates no need for water soluble fertilisers
- Improves shelf life of bedding plants in trade and consumer phases
- Full trace element package and elevated trace element level
- 100% coated NPK, Mg and traces; plants are supplied with all necessary nutrients for the full crop cycle
- Good value for money
- Safe and reliable



12-7-18+1.5MgO+TE





# Osmocote<sup>®</sup> N

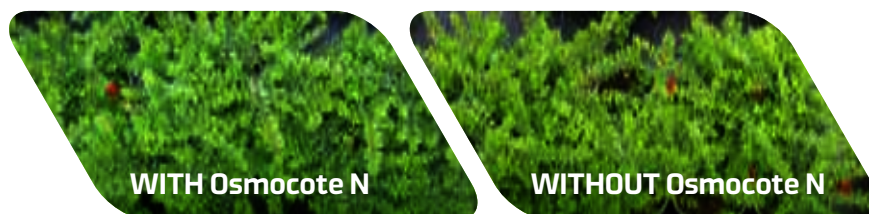
Osmocote N is a fully coated nitrogen & potassium fertiliser. Coated with new advanced coating technology Osmocote N is perfect for pot and bedding plants, perennials and container nursery stock, providing extra nitrogen and potassium, especially required in peat free and peat reduced growing mediums.

## Features and benefits

- Fully coated nitrogen and potassium fertiliser
- Coated with new advanced coating technology
- For pot plants, bedding plants, perennials and container nursery stock crops, providing extra nitrogen and potassium
- Ideal for mixing in substrates
- Ideally suited for peat reduced substrates to buffer nitrogen fixation

## Osmocote N performance

70% peat and 30% woodfibre



## Recommended Rates

Addition in g/l in growing systems

Target crop	Up to 30% peat reduced media	More than 30% peat reduced media
Container nursery stock	0.25 g/l	0.5 g/l
Pot plants / balcony plants	0.25 g/l	0.5 g/l
Perennials	0.25 g/l	0.5 g/l

The above rates are a general guide. Contact your ICL Technical Area Sales Manager for specific crop rates.

\*it is recommended to adjust the rate of Osmocote Exact, when Osmocote N is mixed in.  
**Important:** Maximum dosage starter fertiliser is 0.5 kg/m<sup>3</sup> growing medium. Maximum rates are based on pot volumes. Plant hole dibbling and side dibbling are NOT recommended. In case of pre-mixing in growing medium bunker, please consult your ICL Technical Area Sales Manager

35-0-5



5-6

# Osmocote® Start

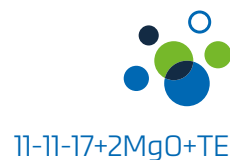
Osmocote Start is designed as a starter fertiliser for crops with a short cultivation cycle.

Fully coated, it has an NPK composition of 11-11-17 and contains all essential trace elements. Refined coatings enable uniform and controlled supply of nutrients to plants with a lower EC, even during shorter growing periods.

Osmocote Start is also virtually free from nutrient leaching. It creates prime rooting conditions since the nutrition it provides can be combined with low salt levels.

## Features and benefits

- Specialist product for slow growing plants with long cropping cycle
- Promotes improved rooting and crop colour
- Fully coated and provides uniform release
- Less leaching and extremely efficient
- Safe to use, no salt-stress
- Easy to apply and dust-free



6  
Weeks

Mid-size  
prills  
Normal

Trace  
Elements  
V

# Osmoform® High N

Osmoform High N is a granulated slow release nitrogen fertiliser.

Osmoform High N is perfect for pot and bedding plant and perennials, providing extra nitrogen, especially required in peat free and peat reduced growing mediums.

## Features and benefits

- Incorporates slow release nitrogen forms, the release of which is influenced by temperature, microbial activity and moisture
- Slow release product to compensate for N-drawdown in peat reduced substrates (woodfibre and bark)
- Developed to be used in combination with other Osmocote products
- Less leaching compared with standard water soluble products



Nutrient  
supply up to  
8-10  
Weeks

Trace  
Elements  
V

Trace  
Elements  
V

# Osmocote® Topdress FT

Osmocote Topdress FT (Fusion Technology) 4-5 month is our coated fertiliser specifically designed for topdress applications in container nursery stock.

Containing fast and slow release NPK, it also contains Mg and all the essential trace elements. As well as providing a quick green up, this topdress will satisfy all the plants nutrition needs over the subsequent 4-5 months.

Simple things are often the best. Knowing that container nursery stock plants tend to fall over in windy conditions, Osmocote Topdress FT contains a component which makes the granules stick to the growing media. Even if the plant falls over, growers know they have not wasted time or money applying a topdress.

## Features and benefits

- Contains fast and slow release nitrogen and phosphorous
- Fine granule size for an even distribution
- Sticks to the growing medium - no loss of granules if the pot is blown over
- Is dust free
- Contains extra trace elements for greening effect

22-5-6+2MgO+TE



# OsmoTop®

OsmoTop has been specifically developed for topdress applications in container nursery stock.

OsmoTop is ideal for topdressing on containers for quick greening or for fast corrections of deficiency symptoms. Only use on well-rooted, containerised plants.

## Features and benefits

- OsmoTop contains fast and controlled release nitrogen
- Fine granule size made with ICL granulation technology for even distribution on the containers
- OsmoTop is dust free
- OsmoTop contains extra trace elements for greening effect

23-5-10+MgO+TE





## The Osmocote Range

Longevity	Osmocote 5	Osmocote Exact Hi.End	Osmocote Exact Protect	Osmocote Exact High K	Osmocote Exact Standard	Osmocote Exact Mini	Osmocote Exact Tablets	Osmocote Pro	Osmocote Pro High K	Osmocote Bloom	Osmocote Start	Osmocote CalMag	OsmoTop	Osmocote Topdress FT	Osmocote Exact Lo.Start	Osmocote N	Osmoform High N
Release pattern																	
	-	-	-	-	-	-	-	-		-	11-11-17	-	-	-	-	-	-
	-	-	-	-	-	-	-	-		-	-	-	-	-	-	-	38-0-0
	-	-	-	-	-	-	-	-		12-7-18	-	-	23-5-10	-	-	-	-
	16-8-12	-	-	12-7-19	16-9-12	15-9-11	-	19-9-10	-	-	-	10-0-0+17CaO+5MgO	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	22-5-6	-	-	-
	16-8-12	15-9-12	14-8-11	12-7-19	15-9-12	15-9-11	14-8-11	19-9-10	11-10-19	-	-	-	-	-	-	36-0-5	-
	16-8-12	15-9-11	14-8-11	12-7-19	15-9-11	-	14-8-11	18-9-10	11-10-19	-	-	-	-	-	-	-	-
	16-8-12	15-8-11	14-8-11	12-7-19	15-9-11	-	-	18-9-10	-	-	-	-	-	-	-	-	-
	-	-	-	-	-	-	-	-	-	-	-	-	-	-	15-8-11	-	-

### Application Rates for Osmocote 5 and Osmocote Exact Standard

Recommended Rates gram per Litre	Release Pattern		Longevity	Light Feeding	Normal Feeding	Heavy Feeding
<b>Bedding Plants</b> For container and baskets use heavy feeding rate	Osmocote 5	Osmocote Exact Standard	2 - 3m	1.5 - 2	2 - 3	3 - 4
			3 - 4m	1.5 - 2	2 - 3	3 - 4
			5 - 6m	2 - 3	3 - 4	4 - 5
			8 - 9m	3 - 4	4 - 5	5 - 6
<b>Pot Plants</b> High K formulations available for certain crops			3 - 4m	1.5 - 2	2 - 3	3 - 4
			5 - 6m	2 - 3	3 - 4	4 - 5
			8 - 9m	3 - 4	4 - 5	5 - 6
<b>Nursery Stock</b>			5 - 6m	2 - 3	3 - 4	4 - 5
			8 - 9m	3 - 4	4 - 5	5 - 6
			12 - 14m	3 - 4	5 - 6	6 - 7
			16 - 18m	4 - 6	6 - 8	8 - 10
<b>Perennials</b> High K formulations available for compact growth/flowering			5 - 6m	1 - 1.5	1.5 - 2	3
			8 - 9m	2	2.5	3.5
			12 - 14m	2.5	3	4

These rates are a general guide. Contact your ICL Technical Area Sales Manager for specific crop rates.  
Recommendations powered by AngelaWeb 3.0

### Ask the expert

ICL recommend the higher rates for peat free growing. For tailored incorporation rates speak to your ICL Technical Area Sales Manager.



### Topdressing

To feed plants in the season after potting, apply in spring

#### Recommended application rates

Osmocote Topdress FT 22+5+6 4 - 5m	Containers < 10 litres	Containers > 10 litres
Container Nursery Stock	2 - 4 g/l	20 - 40g +1 gram for every extra litre content*

\*Example - Total rate when using a 50 litre container:  
3 g/l for first 10 litre = 30 gram  
1 g/l for the additional 40 litre = 40 gram  
Total = 30 + 40 = 70 gram per 50 litre container

#### Recommended application rates

OsmoTop 22+5+10 2 - 3m	Containers < 10 litres	Containers > 10 litres
Container Nursery Stock	1 - 2 g/l	10 - 20 gram +1 gram for every extra litre content

# Micromax<sup>®</sup>

The ultimate trace element packages for your crops.

## Micromax<sup>®</sup> Premium

Micromax Premium is a fine granular fertiliser with trace elements, which are essential in order to obtain optimum plant growth. The unique formula also increases the efficiency of the major elements.

### Features and benefits

- Well balanced combination of trace elements, including B, Cu, Fe (15%), Mn, Mo and Zn.
- Superior product for containerised crops
- Perfect start-up effect
- Long lasting supply of trace elements to the plants, up to 16 months
- Very safe in use, prevents toxicity symptoms
- Simple to apply and an even distribution in growing media
- Stimulates rooting, strong and healthy crops
- Environmentally friendly, very low leaching of nutrients
- Better leaf colour with slow release Magnesium (15% MgO)



Granular  
fertiliser

## Micromax<sup>®</sup> WS Iron

Micromax WS Iron is a premium fully water-soluble fertiliser, consisting of 6% EDDHA-chelated iron plus X3, a biostimulant that enhances the absorption of the Fe-chelate compound into plant leaves resulting in optimum nutrient uptake.

### Features and benefits

- Fe deficiency disappears within a few days.
- Promotes rapid absorption of the Fe enclosed, into the crop's leaves and roots
- Enhances plant photosynthesis and other metabolic functions
- Dissolves quickly and totally, so that solution preparation is easy and trouble-free
- Contains X3, a specific biostimulant that enhances an effective nutrient uptake
- Can be tank-mixed with a wide range of other fertilisers and crop-protection compounds



Water Soluble  
fertiliser

## Micromax<sup>®</sup> WS TE

Micromax WS TE is a premium water-soluble trace element mix, consisting of all major trace-elements (TE), whereby all cationic ones are present in chelated form.

### Features and benefits

- Prevents deficiencies via a well-balanced composition of essential trace elements
- Stimulates rooting and performs a base for healthy plant growth
- Promotes rapid absorption of the TE enclosed, into the crop's leaves and roots
- Enhances all plant's metabolic functions in which these TE are crucial prerequisites
- Dissolves quickly and totally, so that solution preparation is easy and trouble-free
- Contains X3, a specific biostimulant that enhances an effective nutrient uptake
- EDTA and DTPA are powerful chelating agents. Mn-EDTA, is 2 to 5 times better available to the plant than non-chelated manganese (eg manganese sulphate)



Water Soluble  
fertiliser

# “ICL are helping us become a more sustainable business”

Four Crosses Nursery, Llanymynech

## Embracing 40% peat reduced during a pandemic

An expanding large-scale wholesale nursery in Powys, mid-Wales - Four Crosses Nursery produces nearly 3 million container grown hardy nursery stock annually. Heavily reliant on peat, in 2020 nursery owner Gary Swaine consulted with ICL's Steve Hughes and took the bold decision to switch all production to a peat reduced Levington Advance Solutions mix - containing 40% Fibagro Advance.

Manufactured by ICL from sustainable, locally sourced materials certified by the Forest Stewardship Council, Fibagro Advance is highly consistent and performs well in most crop situations.

Gary had some initial concerns. "Woodfibre and bark products are not as hydrophilic as peat," he says. "Following Steve's advice, we include ICL's water management granules H2Gro in our mix and have adopted a little and often watering regime.

"He also recommended a higher level of N - to compensate for the wood products. Instead of Calcium Nitrate, which can be easily leached, slow release Osmoform High N is added to release N gradually."

Utilising ICL's AngelaWeb precision nutrition tool, Steve devised nutrition programmes for the key crops. "Gary puts his trust in Osmocote High K with 12-14month longevity," he explains. "Growing in a frost pocket, the High K produces hardier plants helping prevent frost damage."

According to Gary, the results have been exceptional. "Crops are performing extremely well and we've seen improvements in overall rooting, plus a 15-20% reduction in weeds - due to the drier mix at the top of the containers," he says.

In 2021 Four Crosses successfully reduced the peat proportion to just 50%. "We're becoming peat free at a measured pace," says Gary. "We view ICL as a well-organised, efficient business and a key partner helping us become a more sustainable business."

**Steve Hughes MBPR**  
ICL Technical Area Sales  
Manager for Four Crosses





# Water Soluble Fertilisers

To produce the best plants you need the optimum fertilisers. By offering the most technologically advanced products available today, ICL provides growers with the finest fertilisers enabling them to deliver the highest quality plants to their customers.



## Peters®

**Peters fertilisers** offer optimum feeding, delivering amazing quality and beautiful colour. These products contain NPK, Magnesium, trace elements and M-77 technology.

Our Peters range leads the way technically providing the highest quality products available in the market. There are two types:

- 1) **Peters Professional** - suitable for all water types, this wide range offers very specific products for particular growth phases or specialist crops.
- 2) **Peters Excel** - specifically formulated to improve water quality.

Peters Excel 'Acidifier' is formulated to improve hard-water conditions while Peters Excel 'CalMag' has been developed to combat soft-water conditions and includes calcium and extra magnesium in the formulation.

## Universol®

The ICL **Universol** range is the standard in ornamental water soluble fertilisers - offering reliability and great value for money.

Universol boasts a simple range of powerful fertilisers for all crop growth phases. Each bag is uniquely colour coded, to make choice and application easy, and contains a balanced NPK formula with Magnesium and trace elements.

The Universol range has recently expanded to include hard and soft water fertilisers, minimising water issues and delivering healthier plants and easier cultivation. These new hard and soft water products are complete NPK fertilisers; including Calcium (in soft water formulation), Magnesium and trace elements.

When it comes to water soluble fertilisers, ICL has the answers.

# Peters<sup>®</sup> Professional

ICL's Peters Professional range is the one to count on when needing 100% water soluble fertilisers. Peters Professional has a full range of formulations that respond to specific growing situations and different growth phases.



Thanks to our exclusive M-77 chelating formula, Peters Professional gives an assurance that nutrients and trace elements remain readily available for fast and easy uptake - even during colder times of the year, when plants are under increased stress.

M-77 'unlocks' the rooting area, allowing an effective increase in the absorption of nutrients. Peters Professional products do not contain any salts, such as chlorine, carbonates or sulphates. This helps optimise the feeding capacity rate, even with low levels of EC.

Whether choosing Peters Professional by ICL as a standard fertiliser, or as a means to solve a particular problem, you can be certain it will deliver a complete fertilisation plan.

## Features and benefits

- Contains NPK, magnesium and trace elements
- Pure formulations, no mixed substances
- Quick plant response
- Smaller granules to guarantee 100% water soluble
- Contains M-77 for maximum effect





### Plant Starter

10-52-10

Plant Starter has high phosphates levels together with a balanced N:K ratio. This combination makes Plant Starter the ideal product for stimulating the development of a good root system as well as flower buds. Use after potting young plants for optimum uniform rooting.



### Plant Finisher

9-9-36+2MgO+TE

Specifically formulated for compact controlled growth, with extra iron for optimum leaf colour, Plant Finisher is ideal in the later stages of propagation.



### Combi-Sol

6-18-36+3MgO+TE

Combi-Sol has enhanced levels of trace elements which deliver perfect results, even if diluted. It can be used in two tank systems with calcium nitrate. The product has a 1:6 N:K ratio for promoting excellent, compact plant growth. It is ideal to use when irrigation water contains high levels of nitrogen. It can also be used as a complete fertiliser.



### Foliar Feed

27-15-12+TE

Foliar Feed has 20.4% nitrogen urea content, and comes equipped with a unique package of trace elements. This special combination encourages strong root growth and is the ideal foliar feed. Fast acting and great for greening up plants before sale.



### Grow Mix

21-07-21+3MgO+TE

Grow Mix has a balanced N:K ratio with low levels of phosphate, making it perfect for promoting balanced growth in pot plants. A large amount of the nitrogen consists of urea, allowing for perfect cultivating of orchids.

# AngelaWEB3.0

Technical Advice Service

For more information  
see page 22



# Peters<sup>®</sup> Excel

Our Peters Excel products feature unique formulations delivering complete plant nutrition using a single-concentrate stock tank, while taking into account the quality of irrigation water. This helps minimise labour, reducing overall costs while improving quality. All Peters Excel products are completely water soluble, keeping irrigation systems clean.



ICL offers two main Peters Excel ranges, the 'Acidifier' range for hard water conditions and the 'CalMag' range for soft water.

Acidifier has a bicarbonate-neutralising effect which helps to achieve a stable pH level in the growing media. This improvement also reduces the EC value of the irrigation water. Acidifier also comes with M-77 technology, allowing for maximum absorbability of nutrients. Lastly, Acidifier delivers excellent growth and colour due to its high levels of chelated trace elements.

CalMag delivers a continuous supply of calcium and magnesium, which is missing in soft water systems. It is also extremely reliable due to its composition of raw ingredients and chelated trace elements. This provides for healthy colour and optimum growth. Similar to Acidifier, CalMag contains M-77 technology and has a single-tank mixing concept; all nutrient elements are in a single stock tank.

Whether for hard or soft water conditions, thanks to our Peters Excel range, ICL has the appropriate product to help professional growers cultivate healthy and strong plants.



## AngelaWEB3.0

Technical Advice Service

For more information  
see page 22

## Peters Excel **soft water** range



### CalMag Grower

15-5-15+7CaO+3MgO+TE

CalMag Grower has a balanced N:K ratio that is engineered to promote healthy growth. It is a single-tank mix formula containing all the necessary nutrients plants require. CalMag Grower is also compatible with calcium nitrate.



### CalMag Finisher

13-5-20+7CaO+2MgO+TE

CalMag Finisher is a single-tank mix fertiliser providing plants with all the essential nutrients required. It is often used as a follow-up to CalMag Grower. It has a high potassium formula that leads to compact and condensed growth. CalMag Finisher is also compatible with Calcium nitrate.

### Features and benefits

- Especially developed for use in soft water, unique in its effects
- Healthy growth as a result of continuous supply of calcium and magnesium
- Reliable system thanks to selected composition of raw materials and chelated trace elements
- High level of chelated trace elements ensures perfect colour and growth
- Single-tank-mix concept: all nutrient elements in a single storage tank, including calcium

## Peters Excel **hard water** range



### Hard Water Grow Special

18-10-18+2MgO+TE

Hard Water Grow Special delivers balanced growth where hard irrigation water is used.



### Hard Water Finisher

14-10-26+2MgO+TE

Hard Water Finisher delivers remarkable compact growth and flowering. Due to its N:K ratio of 1:2, it can be used in irrigation water containing high nitrogen levels.

### Features and benefits

- While solving hard irrigation water problems, our acidifying Peters Excel products contain high amounts of chelated trace elements, producing outstanding colour and healthy growth.
- pH level of growing media is stable due to (Bicarbonate)  $\text{HCO}_3^-$  - buffering effect
- Quality of water for watering/irrigation is improved
- Reduces EC value
- Prevents drippers from blocking
- Keeps irrigation systems clean
- Contains Peters M-77 chelating complex

# Universol®

Universol is  
colour dyed for  
ease of use

Universol is a great value water soluble fertiliser for pot, bedding and all container nursery stock. Trusted by growers, the Universol range helps consistently deliver high quality plants.



This versatile range can tackle any situation. Colour-coded for ease of use, the Universol range features our Bright Solution System. Using carefully selected ingredients ensures consistent quality - gives clear results and a clean irrigation system.

Universol products are renowned for their reliability and great value for money.

## Features and benefits

- NPK formula with magnesium and trace elements
- Colour-coded for ease of use
- Excellent value for money
- Features the unique Bright Solution System







### Universol Blue

18-11-18+2.5MgO+TE

Well balanced mid-season growth  
Universol Blue has a balanced NPK ratio and elevated amounts of trace elements to help ensure even growth in the middle of the season. Additionally, it will help to increase the development of the plant. It is a balanced formula to use after Universol Yellow.



### Universol Yellow

12-30-12+2.2MgO + TE

Boost root and shoot bud growth  
Universol Yellow gets plants off to a good start. Containing a high amount of phosphate it gives a valuable early boost to root and shoot bud growth. Apply once or twice soon after potting young plants to aid establishment.



### Universol Green

23-6-10+2.7MgO+TE

Nitrogen boost for extra growth  
Universol Green contains a high level of nitrogen to boost growth. It contains the perfect balance of readily available nitrate nitrogen and ammonium nitrogen to promote medium to long term growth. Universol Green is best to apply at the beginning of the crop cycle, just after completing Universol Yellow.



### Universol Orange

16-5-25+3.4MgO+TE

Slower growth to promote flowering  
Universol Orange is an effective, high-quality water soluble fertiliser which dissolves very quickly for immediate use. While helping to slow down plant growth, it encourages flowering. Packed with potassium, Universol Orange is great to use on flowering pot and bedding plants. It is also ideal to use if there is excess nitrogen in the irrigation water.



### Universol Violet

10-10-30+3.3MgO+TE

Compact strong early growth  
Universol Violet contains high levels of potassium encouraging compact and strong growth, great leaf colour, and excellent flower development. Ideal to use for slowing down plant growth, it can be used as a holding feed.

Additionally, it will help balance out nutrition if nitrogen is present in the irrigation water.

## Recommended Rates

Universol rates for **pot and bedding plants**

	100% Universol	50% Universol 50% Osmocote
Crops with high fertiliser requirements	1 - 2 g/l	0.5-1 g/l
Crops with normal fertiliser requirements	1 - 1.5 gl	0.5 - 0.75 gl
Salt sensitive crops	0.5 - 1 g/l	Depends on situation

Universol rates for **Container Nursery Stock crops**

	100% Universol	50% Universol 50% Osmocote
Crops with high fertiliser requirements	20 g/m <sup>2</sup> /week	10 g/m <sup>2</sup> /week
Crops with normal fertiliser requirements	15 g/m <sup>2</sup> /week	7.5 g/m <sup>2</sup> /week
Salt sensitive crops	10 g/m <sup>2</sup> /week	5 g/m <sup>2</sup> /week

# Universol®

## Soft Water range

Our three new Universol Soft Water products have been developed for application in soft irrigation water and contain NPK, Mg, Ca and a full package of trace elements.

### Features and benefits

- Contains all elements; NPK, magnesium, trace elements and even calcium
- Always the same composition thanks to stringent quality control
- Quick effect due to strong, fast performance
- Dissolves entirely and quickly because of the special ingredients and the 'Bright Solution System'
- Excellent value for money
- Always a suitable analysis for your crop
- Healthy growth as a result of continuous supply of calcium
- Improves the quality of the irrigation water

### Universol Soft Water 312R

18-7-12+6CaO+2MgO+TE

With a nitrogen aimed N:K ratio of 3:2 and high calcium, Universol Soft Water 312R is ideal to encourage early crop growth stages and gives optimum leaf colour. This product can be mixed with calcium nitrate.

Note: mix up to a maximum 50:50. Before adding the CaNO<sub>3</sub>, first dissolve the Universol.

### Universol Soft Water 213R

14-7-22+5CaO+2MgO+TE

With a potassium favouring N:K ratio of 2:3, this product is ideal for flowering crops and compact growth. Universol Soft Water 213R can be mixed with calcium nitrate making it possible to create a N:K ratio of 1:1.

### Universol Soft Water 113R

11-11-31+2CaO+2MgO+TE

With a strongly potassium favouring N:K ratio of 1:3, this formulation is ideal for flowering crops and to harden off crops in their final growth phase.

### Top tip

Add extra Calcium for demanding crops such as Poinsettias



# Universol®

## Hard Water range

Our three new Universol Hard Water products have been developed for application in hard irrigation water, with high levels of bicarbonate.

### Features and benefits

- Contains all elements; NPK, magnesium and trace elements
- Always the same composition thanks to stringent quality control
- Quick effect due to strong, fast performance
- Dissolves entirely and quickly because of the special ingredients and the 'Bright Solution System'
- Excellent value for money
- Always a suitable analysis for your crop
- Improves the quality of your irrigation water, by taking out bicarbonates
- The pH of the soil remains stable as a result of the  $\text{HCO}_3$  - buffering effect

Water with high bicarbonate levels (>150ppm) cause system blockages. Hard water causes precipitation of nutrients in irrigation system.



### Hard Water 211

23-10-10+2MgO+TE

Hard Water 211 contains NPK, Mg and a full package of trace elements. With an N:K ratio of 2:1, it is ideal for plants requiring high amounts of nitrogen during the early growth stage.

### Hard Water 212

19-11-19 +TE

Universol Hard Water 212 is a balanced formula for well-balanced mid-season growth. Designed for use in hard water, its carefully selected raw materials ensure a great acidifying effect. Universol Hard Water 212 can be mixed with other Universol Hard Water formulas.

### Hard Water 225

11-10-28+2MgO+TE

Hard Water 225 promotes compact growth in flowering plants and is ideal for hardening off plants, acidifying irrigation water and neutralising bicarbonate. The N:K ratio of 2:5 means this product can be used in combination with water containing high nitrogen levels and with nitrogen fertilisers (eg nitric acid).





# Protect

**ICL offers a specialist range of plant protection products providing responsible solutions to controlling weeds, insect and disease problems.**

Thanks to continuous and successful partnerships, ICL is able to deliver solutions for a range of pest, weed and disease issues. By innovating new formulas, targeting the release of active ingredients using our patented technologies and through integrating crop management programmes, ICL continues to meet and exceed customers' expectations.

Providing long-term, protective solutions and nutrition programmes to growers - that do not require multiple applications - is a top priority.

Our nationwide team of BASIS and FACTs registered Technical Area Sales Managers are on hand to give advice on all ICL plant protection products.



# Pitcher GR

Coming soon  
to Ireland

Pitcher GR is the new biorational pesticide for the suppression of Black Vine Weevil eggs and early stage instar larvae. It is approved through an Extension of Authorisation for Minor Use (EAMU) in containerised ornamental plants, both protected and outdoors.

## Application

Pitcher GR is a granular biorational insecticide which is applied as a topdress over containerised ornamentals. Application can be via gloved hand (not a preferred method of application) or a suitable handheld application device.

## Application rates

Maximum individual dose = 240kg per Ha per season  
This converts to 24g per m<sup>2</sup>

Based on trials data two applications at 120kg per Ha provides meaningful suppression of vine weevil eggs.

This converts to 12g per m<sup>2</sup> for a single application. Application timing is critical in order to affect eggs and young larval instars while they are near the surface of the container. Always water in following application in order to activate the granules.

## When to apply

Please note when to apply Pitcher GR for maximum efficacy. Understanding the Vine Weevil life cycle is a key part of utilising this product.

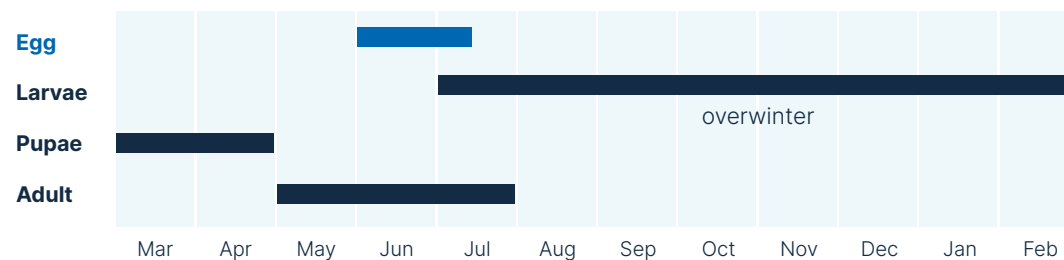
It is important to note that all stages of the lifecycle can be present throughout the year in protected crops. It is important that you check your plants in these situations for the pest.

## Important information

- A minimum period of six weeks should be observed after initial application before any subsequent treatments of Pitcher GR or beneficial parasitic nematodes can be applied
- Pitcher GR is not affected by temperature fluctuations unlike some other biological products
- Pitcher GR must be used as part of an integrated pest management regime, please talk to your Technical Area Sales Manager or Distributor Representative for further information



## Black Vine Weevil life cycle



■ Pitcher GR is effective on vine weevil egg and early instar stages only. Please note - under protection all stages of the life cycle may be present throughout the year

# Vine Weevil Seeka<sup>®</sup> CT

UK  
Only

Vine Weevil Seeka CT contains the beneficial nematode *Steinernema kraussei* and provides effective control of Black Vine Weevil larvae (*Otiorhynchus sulcatus*). Vine Weevil Seeka CT is formulated to provide effective control in cold to warm temperatures which range from 5°C - 30°C.



## Product Profile

<b>Active ingredients</b>	Nematodes: <i>Steinernema kraussei</i>
<b>Volume</b>	Varies on pot volume (please see label)
<b>Dose</b>	Varies on volume (please see label)
<b>Target pests</b>	Black Vine Weevil ( <i>Otiorhynchus sulcatus</i> )
<b>Soil temperature</b>	Between 5°C and 30°C
<b>Application window</b>	When Black Vine Weevil larvae are present

## Advised application method

Drench application: preferred method, especially where crop canopy is dense.

# Vine Weevil Seeka<sup>®</sup>

UK  
Only

Vine Weevil Seeka, powered by BASF technology, is based on the beneficial nematode *Heterorhabditis bacteriophora*. It provides control of Black Vine Weevil larvae (*Otiorhynchus sulcatus*) present in soil or container-grown crops.



## Product Profile

<b>Active ingredients</b>	Nematodes: <i>Heterorhabditis bacteriophora</i>
<b>Volume</b>	Varies on pot volume (please see label)
<b>Dose</b>	Varies on volume (please see label)
<b>Target pests</b>	Black Vine Weevil ( <i>Otiorhynchus sulcatus</i> )
<b>Soil temperature</b>	Between 12°C and 30°C
<b>Application window</b>	When Black Vine Weevil larvae are present

## Advised application method

Drench application: preferred method, especially where crop canopy is dense.



## Application advice

- Apply when larvae are present (lift a few plants/remove from pots to examine root ball - untreated larvae are white)
- Apply to plants in moist soil/growing medium, in sufficient water volume to ensure the root ball is thoroughly treated
- Avoid applications in direct sunlight, evening applications are best
- Do not exceed 300 psi/20 bar/2000 kPa pump pressure
- Nozzle aperture should be greater than 0.5 mm
- Suitable nozzles should produce a coarse spray at the intended application pressure
- Make up the stock solution and mix thoroughly to ensure that the nematodes are well dispersed

## Features and benefits

- Vine Weevil Seeka can be used in organic systems or as part of an IPM programme
- Safe to users and the environment
- No pest resistance problems
- Gives high levels of control between 5°C - 30°C (Seeka CT)
- Simply applied as a drench or through irrigation systems
- Protects root system preventing subsequent damage and plant loss, particularly for container-grown plants
- Larvae treated with Vine Weevil Seeka will not develop into adult Vine weevils, eliminating unsightly damage to the foliage (typically leaf notching)

## Precautions

- Upon receipt, use immediately or store in a refrigerator at 5°C
- Do not use product if past expiry date or incorrectly stored (do not freeze)
- Use entire packet at one time, do not store diluted product

## Application

Depending on what you are trying to achieve with your nematode application, you have a few different options in terms of how you apply. Application is crucial for the efficacy of nematodes and can be the cause of the product being ineffectual.

## Application Methods

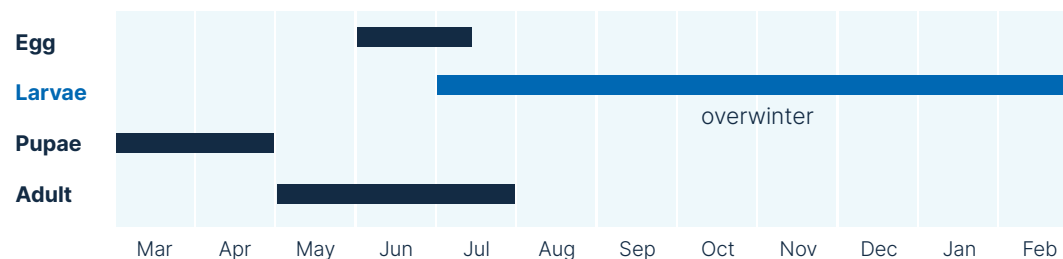
- **Knapsack/pump sprayer**
- **Dosing unit**
- **Irrigation**
- **Foliar sprays** (Western Flower Thrip control)



Increase nematode performance with ICL's exclusive penetrant **Transporter**  
See Page 61



## Black Vine Weevil life cycle



**Vine Weevil Seeka** is effective on Vine Weevil larvae only. Please note - under protection all stages of the life cycle may be present throughout the year.

# Fungus Gnat Seeka®

UK  
Only

Fungus Gnat Seeka, powered by BASF technology, is based on the beneficial nematode *Steinernema Feltiae*. It provides control of Fungus Gnat larvae (*Sciaridae* spp. or more commonly known as Sciarid Fly) as well as Western Flower Thrips.

## Application advice

- Soil or media temperatures should be between 10°C and 30°C for at least two weeks after application
- The soil or media should be moist
- Routinely treat new material coming onto the nursery that may contain Fungus Gnat larvae
- If product is applied over foliage, irrigate immediately with water to wash the nematodes into the growing media

## Advised application method

Drench application: preferred method, especially where crop canopy is dense.

## Product Profile

Active ingredients	Nematodes: species <i>Steinernema Feltiae</i>
Volume	Varies on pot volume (please see label)
Dose	Varies on volume (please see label)
Target pests	Fungus Gnat Larvae ( <i>Sciaridae</i> spp.) and Western Flower Thrips
Soil temperature	Between 10°C and 30°C
Application window	When Fungus Gnat or Western Flower Thrips are present

## Precautions

- Agitate nematodes constantly during application
- Do not use product if past expiry date or incorrectly stored
- For information relating to which chemicals are compatible with Fungus Gnat Seeka ask your distributor

## Benefits

- Fast and effective natural control
- The most robust and efficacious nematode product on the market for Fungus Gnat control
- Control achieved at all times when the pest larvae are active
- No pest resistance problems
- Gives high levels of control between 10°C - 30°C



## Did you know?

Fungus Gnat Seeka can also protect your crops against Western Flower Thrips when applied as a foliar spray.





# PRESTOP®



PRESTOP® is a multi-use biofungicide which contains mycelia and spores of *Gliocladium catenulatum* Strain J1446, a naturally occurring soil fungus, that provides disease control benefits to multiple crop situations.

## Features and Benefits

- Improved resistance management through the multiple capabilities of the naturally occurring micro-organism which has not been genetically manipulated in any way
- Incorporated in to your growing media for ease of use
- Compatible with most biological and integrated pest management programmes
- High level of safety to operators and the environment when used according to label instructions

Additional benefit against other diseases such as *Plasmodiophora brassicae* (clubroot) in brassica crops, *sclerotinia*, *thielaviopsis*, *helminthosporium*, *verticillium*, *penicillium* and *alternaria* species can also be expected.

## Prestop® protects against:

- Damping-off and root or base rot diseases caused by *Pythium*, *Rhizoctonia*, *Phytophthora* and *Fusarium* spp. on vegetables, salads, aromatic plants, ornamentals and fruit crops

## Characteristics

<b>Formulation</b>	Wettable powder
<b>Technology</b>	Bio-fungicide
<b>Pack Size</b>	5 kg - premixed in to growing media by ICL
<b>Pack coverage</b>	200-500g per m <sup>3</sup> - please consult with Technical Area Sales Manager for preferred rate and advice

**PRESTOP®** can be premixed into the growing media by ICL, as part of your **Levington Advance Solution** or **Levington Advance Sustain** growing media mix, giving plants protection from root or base rot diseases.



MAPP no. 19548  
PCS no. 04367







Hicure® is a liquid plant biostimulant (PFC 6) based on amino acids and peptides. Hicure® supports natural processes in the plant enhancing plant performance in general, especially under abiotic stress conditions.

Hicure® contains a range of Amino acids and both long and short chain peptides. The high concentration of amino acids in Hicure means they're ready for the plant to build into key proteins.

**Free amino acids:** 18 different free amino acids immediately available to the plant to protect cells from stress. These also conserve plant energy by providing an organic N source, thus reducing the requirements for N uptake from soil which is energy demanding.

**Short chain peptides:** Absorbed more slowly and then as needed converted into amino acids or they form proteins as the plant needs over 7 to 10 days. Proteins have many important functions in the plant.

**Long chain peptides:** These can be considered as slow-release peptides, extending a positive residual effect on the soil and being absorbed into the plant over a period of weeks.

### Hicure in practice

The best results with Hicure are achieved when applied before crucial physiological phases (e.g. flowering or root development) or suboptimal conditions (e.g. drought, heat). Frequent applications give a more reliable effect than single treatments. Hicure can be embedded easily in your daily activities. It can be mixed with most crop protection products and fertilisers and with all standard high-volume application devices.

### Characteristics

Formulation	Liquid
Technology	Biostimulant
Pack Size	1 Litre
Pack coverage	Please consult the label
Contains	Amino acids and peptides

### Benefits of Hicure

- Proven stress reduction
- Improved quality and shelf life
- Better root development
- Crop losses reduced
- Naturally derived
- Safe to beneficials
- IPM compatible



Built from  
Amino Acids

syngenta®



UK  
Only

Amistar® is a broad spectrum fungicide which can be used on a range of crops in order to prevent a number of diseases including downy and powdery mildew.

Containing azoxystrobin from the strobilurin group of fungicides, Amistar® has systemic, translaminar and protectant properties which help inhibit fungal respiration. Its unique mode of action makes it ideal to use within a crop protection programme.

### Features and benefits

- Available in 1 litre bottle
- Provides protection from a wide variety of diseases
- Quick and efficient uptake by leaf and root to move the active ingredient to the point of infection
- Recommended as a preventative application
- Rainfast in under two hours
- Can be used across a variety of crops
- Can be used in crop protection programmes

### Characteristics

<b>Formulation</b>	Liquid
<b>Technology</b>	Fungicide
<b>Pack size</b>	1 litre
<b>Pack coverage</b>	Please consult label
<b>MAPP No.</b>	18039
<b>Contains</b>	250g/l azoxystrobin



syngenta®

# Vitalnova<sup>®</sup>

## Prime



ICL has partnered with Alltech, an industry leader in animal and plant nutrigenomic research, to present new biological products which increase plant health. Discovering how plants respond to nutrients and novel bioactive compounds at a genetic level allows Alltech to design and formulate solutions that optimise plant health and performance.

### Solutions

Vitalnova Prime is derived from yeast (*saccharomyces cerevisiae*). Yeast cell walls are rich in amino acids and peptides which are known to act as natural elicitors within the plant, stimulating the plants natural defences against environmental stresses (otherwise known as abiotic stress).

### Features and Benefits

- Blend of active ingredients designed to fortify the plant
- Leaves no synthetic chemical residues
- Integrates with pest management programmes
- Healthier plants are more able to resist stress

### Directions for use

Foliar application of Vitalnova Prime at 1L per Ha every 10-15 days (1ml per litre) | 0.5L per Ha every 7 days (0.5ml per litre). For fertigation apply at 1L per Ha (1ml per litre). Product performs best if used within 24 months of the date of manufacture. Half fill the tank with water before adding the required amount of Vitalnova Prime stir the solution during mixing and during spraying operations. If mixing this product with other plant protection products, it is advisable to check the physical compatibility prior to mixing in the tank.

### Guaranteed Analysis

Copper (Cu)	4.00%
Sulfur (S)	2.00%

Derived from Copper sulfate



New product  
from ICL



# Vitalnova<sup>®</sup> Guardian



Vitalnova Guardian, is part of ICL's biological plant health range which includes products formulated to nutritionally support plants' inherent defences, including fertilisers, plant activator and microbial inoculants. Providing unique, natural solutions that improve plant health and resiliency throughout the growing season.

## Solutions

Vitalnova Guardian is a blend of naturally derived polyketides and foliar-applied nutrients essential for plant biofortification, formulated for immediate effect and rapid response in the face of external crop stresses. Well-nourished plants have a more effective defence system.

## Features and Benefits

- Effective foliar action
- A unique combination of cations
- Leaves no synthetic chemical residues
- Foliar applied and fortifies the leaf to help the plant cope with environmental stress
- Integrates with disease management programs (IDM)
- Approved for organic crop production according to EC 834/2007
- Can be used in conjunction with Vitalnova Prime
- Can be used for all crop types (edible and non edible)
- Vitalnova Guardian is a foliar intervention product only when crop stress is evident

## Directions for use

Vitalnova Guardian is foliar applied at 2ml per litre (0.2%) | 2L per Ha. Product performs best if used within 24 months of the date of manufacture. Half fill the tank with water before adding the required amount of Vitalnova Guardian. Stir the solution during mixing and during spraying operations. If mixing this product with other plant protection products, it is advisable to check the physical compatibility prior to mixing in the tank.

## Guaranteed Analysis

Copper (Cu)	2.0%
Iron (Fe)	1.6%
Manganese (Mn)	0.8%
Zinc (Zn)	3.2%

Derived from Copper sulfate, Ferrous sulfate, Manganese sulfate and Zinc



New product  
from ICL



# Specialty Products

**ICL specialty products provide growers with the extra tools to Grow, Nurture and Protect their crops throughout the growing season.**

From optimising water usage with H<sub>2</sub>Gro to general clean up throughout the nursery, ICL products are there to make life easier.



# Transporter

## Optimise nematode penetration

ICL's revolutionary penetrant formulation which aids nematode dispersion within the growing media following application. Transporter is a blend of soil surfactants which optimise the distribution of water allowing for a more even spread of your nematode application, putting the nematodes where they are needed and therefore reducing waste.

### Features and Benefits

- Rigorously tested and no negative effects on nematode species
- Increases efficacy of each nematode application with less wastage
- Can be used in conjunction with fertilisers
- Works quickly with all substrates
- Nematodes are effectively distributed through the substrate and not just on the surface
- Excellent spreading and penetration characteristics
- High strength product, contains 88% surfactant for superior performance

### Did you know?

Transporter should only be used when wanting to apply nematodes as drench in to the growing media. You should not use when applying as a foliar treatment.



Vine Weevil  
Larvae



Fungus Gnat  
Larvae







## Adjuvant

Elasto G5® is a safe and reliable adjuvant to support ornamental crop production with scientifically proven technology and experience behind it.

Not only does Elasto G5 improve efficacy of crop protection products in both typical and challenging circumstances, it enhances retention, spreading and uptake of an active ingredient, all whilst reducing the risk of run off. It is a polyglycerol based product based on renewable resources: glycerol and coconut oil fatty acid.

### Safe

- Low risk of phytotoxicity
- Low risk for beneficial insects
- Reduced risk of run off

### Reliable

- Improved retention, coverage and uptake of crop protection products
- Significant research and technical support in the UK and the Netherlands

### Flexible

- Enhanced efficacy improves plant health
- Helps to meet retail requirements with potential for reduced chemical applications

### Characteristics

<b>Formulation</b>	Liquid
<b>Technology</b>	Adjuvant
<b>Pack Size</b>	5 Litre
<b>Pack coverage</b>	Please consult the label

### How can Elasto G5 help?

To get the best results from your crop, you have to rely on good crop protection programmes. To enhance the efficacy of these programmes, good application techniques and the use of adjuvants are essential to improve their uptake.

For advice on how to use and application please contact your distributor or ICL Technical Area Sales Manager



The ultimate  
horticultural  
adjuvant

**syngenta**®





## Wetting and water conservation agent

H2Gro is a unique blend of surfactants formulated into the most advanced wetting agent designed specifically for growing media. H2Gro uses the latest technology to maximise the water holding capacity of substrates for improved wetting-up, spreadability and re-wetting even in water repellent materials.



### It's all about the science

Due to one end of the H2Gro molecules having a strong non-polar charge, it attaches itself to organic matter in water repellent particles.

#### There are three different chain lengths:

Short (4-6 weeks), Medium (6-10 weeks) and Long (complete season). As the medium and long chain molecules breakdown, they re-attach themselves to the non-polar sites.

### Features and Benefits

- 3 in 1 mode of action - wetting and spreading agent, penetrating agent and re-wetting agent
- Manages water issues
- Granular product gives long lasting effect.
- Effective, efficient and reliable
- Guards against plant stress
- Plants stay in healthier condition after they are sold
- Safe to beneficial microbes
- Less dried out (hydrophobic) areas
- Improves the uptake of nutrients and many other products
- Offers the plant **100%** of the horticultural media to grow in

### Application

#### With irrigation

### Reason

Maintain optimum levels of wetting agent, particularly in longer term crops, to maximise irrigation efficiency, conserving water and optimising nutrient uptake.

#### Prior to shipment

Maximise the effect of final watering, ensure growing media is fully wetted up to increase the shelf life.

#### Interior Plantscapes

Distributes water evenly throughout pots reducing chances of overwatering and increases water conservation.

#### Misting cuttings

Ensures fine mist particles that remain on the leaf surface reducing the number of misting cycles required.



# Sp0tless

## Tank Cleaner

Sp0tless is a highly formulated cleaning agent for the cleaning and decontamination of spraying equipment. It is especially effective at clearing sticky formulations.

### Features and Benefits

- Maintains the effectiveness of spray equipment
- Decontaminates sprayer after use
- It is especially effective at clearing sticky formulations (sulfonylurea (Group B) and carfentrazone-ethyl (Group G) herbicides)

### Directions for use

1. Immediately after spraying and completely emptying tank, hoses and booms. Wash any contamination on the outside of spraying equipment with Sp0tless (50 ml in 10 L water)
2. Rinse inside of tank with clean water and flush through hoses and booms using 10% of tank spray volume. Drain tank completely.
3. Half fill the tank with clean water and add Sp0tless Tank Cleaner at the selected rate. Agitate and briefly flush the hoses, boom and nozzles. Then completely fill tank with water and agitate for 15 minutes. Flush the hoses and spray all of the contents out through the boom. Drain the tank completely.

NOTE: If it is not possible to drain the tank completely, repeat step 3 before going on to step 4.

For very large sprayers with internal sprinklers it is not necessary to completely fill the tank. With agitation and sprinklers running ensure contact time between the cleaning solution and all internal tank surfaces of 15 to 30 minutes.

For extra resistant combinations, allow the cleaning solution to

'sit' for 24 hours to increase residue removal. If it is suspected hoses and spray lines are contaminated increase cleaning solution contact time to 48 hours.

4. Nozzles, screens and filters should be cleaned with a fresh solution of Tank Cleaner and water (50 ml in 10L of water).

5. Rinse the tank with clean water and flush through the hoses and boom. Drain the tank completely.

6. Sample of final rinse may be applied to a susceptible plant to ensure total decontamination.

### Where to use

Can be used with all spray applications.

### Recommended period of use

Year-round.

### Product characteristics

Pack size: 1 litre or 5 litre Packs per outer: 4 x 5 litres

### Health and safety

A Material Safety Data sheet is available on request.

### Application rate

For decontamination of spray tank and cleaning of sticky formulations (sulfonylurea (Group B) and carfentrazone-ethyl (Group G) herbicides): Use 500 ml per 100 litres of water.



Please read label for full instructions



# Ranger®

## Hard Surface Cleaner

Ranger is a Hard Surface Cleaner for use on all hard surfaces including: Concrete\*, Asphalt, Tarmac, Block paving, artificial sports surfaces, any hard surface areas (except memorial marble/slate).

### Features and Benefits

- Cleans and removes algae, slimes and lichens
- Reduces the risk of slippery surfaces
- Low application rates
- Economical to use

### Directions for use

- Ranger can be applied by brush, mop and ideally by surface spray
- It is essential that all areas to be cleaned are thoroughly wetted with the product
- Ranger works on contact and continues to work for 5 to 7 days after application
- In some instances a second treatment may be necessary where there is severe algae / lichen build up

### Where to use

Concrete\*, Asphalt, Tarmac, Block paving, artificial sports surfaces, all hard surfaces (except Marble and slate).

### Recommended period of use

Year-round.

### Product characteristics

Pack size:	5 litres
Packs per outer:	4 x 5 litres
Pack coverage:	500m <sup>2</sup>
Contains:	Dodecyl dimethyl ammonium chloride, as well as a blend of Organic Acid and Surfactants.
HSE Number:	10045
PCS:	PCS registration pending at time of publication

### Health and safety

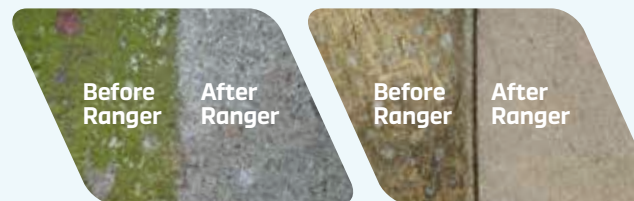
A Material Safety Data sheet is available on request.

### Application rate

1 litre treats 100m<sup>2</sup>

### Water Volume

20 litres water per litre of product.



\*Do not use on high quality concrete that has a smooth finish, such as patio stonework made from reconstituted stone or cement.



Growing Media Type	Peat Reduced	Name	Fibagro Advance FSC Mix 70%	Peat				Pine Bark FSC Mix 70%		Sand	Starter Fertiliser*	Osmoform*	H2Gro*		Micromax*
				0-3 mm	0-10 mm	6-12 mm	10-25 mm	0-8 mm	5-12 mm				Liquid	Granule	
Seed & Modular - Low nutrient		F1		✓							✓		✓		✓
Seed & Modular		F2		✓							✓		✓		✓
Seed & Modular + Sand		F2 + Sand		✓						✓	✓		✓		✓
Pot & Bedding - Low nutrient	●	R-M1	✓		✓						✓	✓	✓	✓	✓
Pot & Bedding - Medium nutrient	●	R-M2	✓		✓						✓	✓	✓	✓	✓
Pot & Bedding - High nutrient	●	R-M3	✓		✓						✓	✓	✓	✓	✓
Medium Coarse Potting (low nutrient)	●	R-MCP1	✓		✓						✓	✓	✓	✓	✓
Medium Coarse Potting (medium nutrient)	●	R-MCP2	✓		✓						✓	✓	✓	✓	✓
CNS General	●	R-CNS General	✓		✓	✓					✓	✓	✓	✓	✓
CNS Ericaceous	●	R-CNS Eri	✓		✓	✓					✓	✓	✓	✓	✓
CNS Coarse	●	R-CNS Coarse	✓		✓	✓	✓				✓	✓	✓	✓	✓
Alpine, Herbaceous and Cyclamen	●	R-AHC	✓		✓	✓			✓		✓	✓	✓	✓	✓
Pot Plant General	●	R-PPG	✓		✓	✓		✓			✓	✓	✓	✓	✓
Pot Plant Coarse	●	R-PPC	✓		✓	✓	✓	✓			✓	✓	✓	✓	✓
Tree Planting	●	R-TPMC	✓		✓						✓	✓	✓	✓	

Peat  
Reduced

## Peat Free

### Levington Advance Sustain - Standard Specification Table<sup>†</sup>



		Bulky raw materials						
Levington Advance Sustain	Name	Fibagro Advance FSC Mix 70%	Pine Bark FSC Mix 70%	Coir	Starter Fertiliser	Osmoform	H2Gro	Micromax
Seed and Modular	SF1		✓	✓	✓	✓	✓	✓
Pot & Bedding	SM2	✓	✓	✓	✓	✓	✓	✓
Potting	SMCP	✓	✓	✓	✓	✓	✓	✓
CNS General	SCNS General	✓	✓	✓	✓	✓	✓	✓
CNS Coarse	SCNS Coarse	✓	✓	✓	✓	✓	✓	✓

Product specification is subject to change dependent on raw material availability and moisture content in order to maintain consistency, quality and high level of performance. Due to its inherent inconsistency and potential contamination problems we do not allow green waste on our site. <sup>†</sup>Bulky raw materials include Peat for all Levington Advance growing media mixes and other materials as stated. For Levington Advance Sustain mixes all raw materials are as stated. All these professional grade raw materials may be substituted at any time to maintain quality, performance or due to availability.

#### PRODUCT CONTAINING GENERIC ADDITIVES

At the growers request, additional materials can be added. Store in a cool, dry place and used in a period up to 21 days (please see label on growing media). Please visit ICL website for full T&Cs. \*While no protective clothing is required we recommend that gloves are worn.



Only the products that are identified as such on this document are FSC<sup>®</sup> certified.  
License code  
FSC<sup>®</sup> C128659

The mark of responsible forestry







## To order your ICL products or get the latest information and advice

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The information contained in this brochure is correct at time of going to print. According to the availability of raw materials and other factors. ® registered trademark of ICL and affiliates. Prestop is a Trade Mark of Lallemand Plant Care and contains Gliocladium Catenulatum Strain J1446. Elasto G5, Hicure and Amistar® is a registered trademark of Syngenta. Amistar® contains azoxystrobin MAPP No. 18039 +Moffett Mounty trucks need to be booked in advance, especially in peak season. ISO 9001 Accredited. PLEASE USE PLANT PROTECTION PRODUCTS SAFELY. ALWAYS READ THE LABEL AND PRODUCT INFORMATION BEFORE USE.

**Impact for a sustainable future**