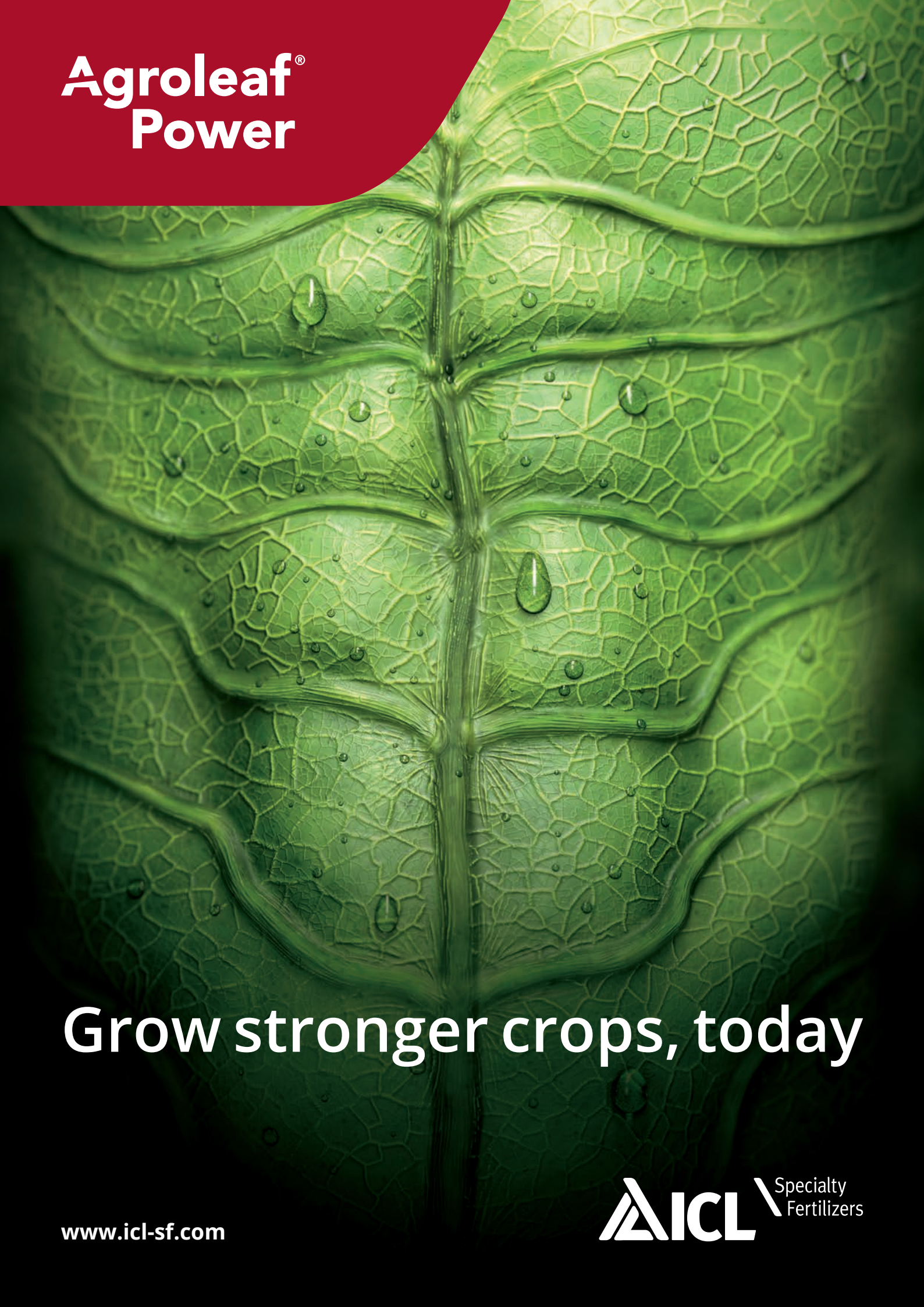
Agroleaf® Power



Grow stronger crops, today

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ICL Specialty Fertilizers

Grow stronger crops, today

The foliar fertilizers with immediate effects.

Agroleaf Power is the foliar fertilizer which improves plant metabolism, increases plant resistance and productivity, grows greener foliage, and creates stronger roots.

All thanks to exclusive DPI and M-77 biostimulant technologies. You will see immediate effects. Agroleaf Power is suitable for use in any crop.

Benefits of Agroleaf Power

1	Foliar feeding with Agroleaf Power enables fast absorption by the plants
2	Very quick response time, so ideal as a curative foliar feed
3	M-77 and DPI technology provide improved photosynthesis
4	Highly concentrated foliar feed, meaning less product to handle
5	Superior delivery and uptake of nutrients thanks to M-77
6	Suitable for all crops

"I have been using ICL Specialty Fertilizers full portfolio of products including Agroleaf, Agromaster, and Solinure for some years now. What drew me to this partnership is not only the excellent products but the full support in form of recommendations and the follow up field visits by their agronomist".

Mr. Aleksandar Stambolija
OSR, soybean, cabbage, and pepper grower
Donji Miholjac, Croatia

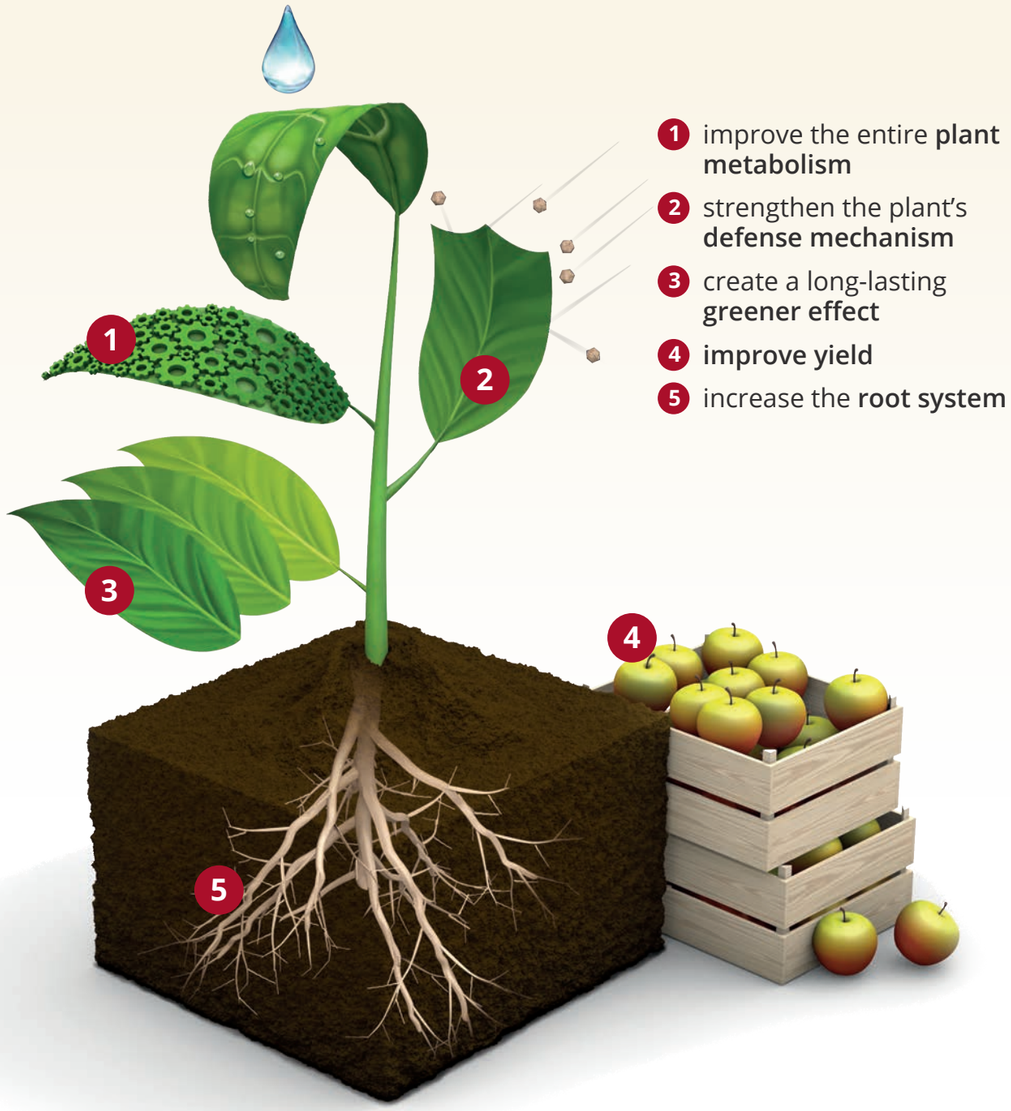
Advanced foliar fertilizer technologies for your success

Agroleaf Power contains two exclusive ICL technologies:

M-77 includes ingredients that enhance the delivery of the spray solution, speedy uptake and effectiveness of the nutrients.

Double Power Impact technology strengthens the plant's defense mechanism and provides an extra stimulant to create highly efficient photosynthetic reactions.

Together, these technologies:



1. improve the entire **plant metabolism**
2. strengthen the plant's **defense mechanism**
3. create a long-lasting **greener effect**
4. **improve yield**
5. increase the **root system**

10% yield increase

Trial case, hops

Objective: The objective of the trial is to test the effect of the foliar fertilizers on hop yield and alpha-bitter acids contents in the case of semi-early red-bine hop variety called Saaz.

Where: Hop Research Institute Co., Ltd., Žatec, Czechia

Crop: Hops, Saaz variety

Treatments:

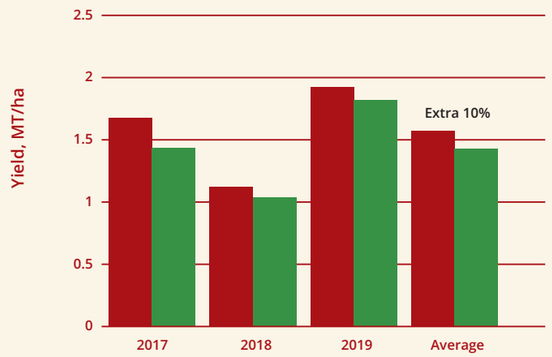
Timing	Grower practice	Agroleaf Power
Beginning of May	Similar NPK ratio and dosages with conventional foliar fertilizers	High N – 5kg/ha Special Zn – 0.5 kg/ha
Mid-June		High P – 5 kg/ha
Beginning of July		Magnesium – 5 kg/ha Special Zn – 0.5 kg/ha
End of July		High K – 5 kg/ha

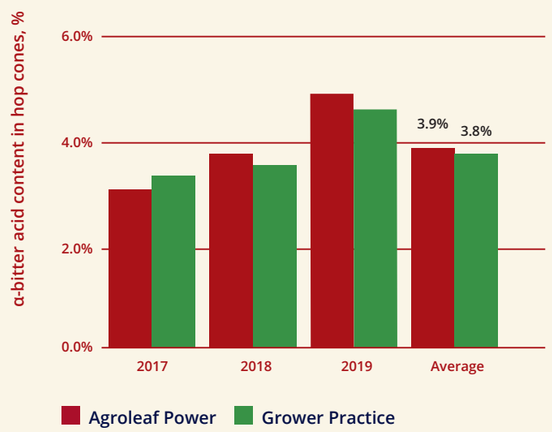
Every year, granular fertilizers were equally applied on both treatment zones: Units, kg/ha: N - 188 | P_2O_5 - 145 | K_2O - 181

Economic evaluation	Agroleaf Power	Grower practice
Yield, MT/ha	**1.57**	1.43
Total cost of foliar fertilization,Euro/ha	**88**	35
Gross income minus cost of foliar fertilization,Euro/ha	**€ 13,257**	€ 12,120
Extra income / ha vs grower practice	€ 1,137	-

Reference price for hop yield = 8,500 Euro/MT

Yield and quality





Conclusion

The Agroleaf Power treatment increased hop yield by **10%** on average. Other quality parameters were equal to or slightly better than grower practice. Agroleaf Power generated € 1,137 extra income compared to grower practice.

12% yield increase

Trial case, potatoes

Objective: Compare the efficiency of Agroleaf Power foliar fertilizer to grower practice in chips potatoes.

Where: Färlöv, Sweden

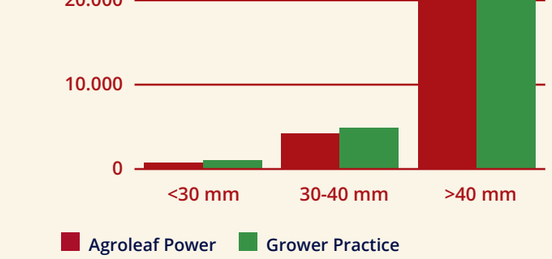
Crop: Chips potato, Saturna

Treatments: **Both treatments received:**

Liquid Pig Manure	20 Mt/ha
Concentrated fruit juice	1.9 Mt/ha
Axan 27-3	300 Kg/ha
Kalimagnesia	150 Kg/ha
Manganese Nitrate	4x1 l/ha
ICL treatment:	
Agroleaf Power High P	4+4 Kg/ha
Agroleaf Power High K	4+4 Kg/ha

Economic evaluation	Agroleaf Power	Grower practice
Cat 1: High quality, > 40 mm (Kg/ha)	47.873	42.629
Cat 2: Medium quality, 30-40 mm (Kg/ha)	2.936	3.389
Gross income / ha	€ 7,219	€ 6,538
Extra costs of ICL treatment (vs grower practice)	77 €/ha	-
Extra income / ha (vs grower practice)	**604 €/ha**	

Yield distribution per size class



Why Agroleaf Power?

- Agroleaf Power will minimize the effects of stress caused by weather, pesticides and heavy production
- Agroleaf Power will quickly correct nutritional deficiencies

Conclusion

The application of Agroleaf Power increased the yield of tubers higher than 40 mm by **12%**. The Agroleaf Power treatment resulted in a **9%** increase of the gross income per hectare thanks to improved potato quality.

Breakdown table (in %)

Agroleaf® Power

Product	Formulation	Product Name	Item code	N-total	NO_3-N	NH_4-N	Urea-N	P_2O_5	K_2O	CaO		MgO	SO_3	B	Cu	Fe	Mn	Mo	Zn	EC at 1g/l (mS/cm)	Max. solubility (kg/100 l)
Agroleaf Power	20-20-20	Total	2096	20	4,3	2,2	13,5	20	20				0,8	0,03	0,070*	0,14**	0,07*	0,001	0,070*	0,8	2,5
Agroleaf Power	31-11-11+TE	High N	2095	31	1,0		30,0	11	11				0,8	0,03	0,070*	0,14**	0,07*	0,001	0,070*	0,5	2,5
Agroleaf Power	12-52-5+TE	High P	2094	12		8,7	3,3	52	5				0,8	0,03	0,070*	0,14**	0,07*	0,001	0,070*	0,7	2,5
Agroleaf Power	15-10-31+TE	High K	2097	15	9,0	1,7	4,3	10	31				0,8	0,03	0,070*	0,14**	0,07*	0,001	0,070*	1,0	2,5
Agroleaf Power	11-5-19+9CaO+2.5MgO+TE	Calcium	2098	11	11,0			5	19	9,0		2,5		0,04	0,030*	0,25**	0,13*	0,020	0,030*	1,2	2,5
Agroleaf Power	10-5-10+16MgO+32SO3+TE	Magnesium	2099	10	2,0		8,0	5	10			16,0	32,0	0,25	0,070*	0,14**	0,25*	0,001	0,070*	1,1	2,5

** EDTA chelated* *** DTPA chelated*

Foliar application methods

Foliar fertilization means the spray application of nutrients to the plant leaves and stems and their absorption.

The observed effects of foliar fertilization include yield increases, better resistance to diseases and pests, improved drought tolerance, and enhanced crop quality The plant's response is dependent on species, fertilizer form, concentration, and frequency of application, as well as the stage of plant growth. Foliar applications are often timed to coincide with specific vegetative or fruiting stages of growth, and the fertilizer formula is adjusted accordingly. The amount of nutrients that plants can absorb via foliar application is limited, and generally much less than their total nutrient requirements.

Foliar application should therefore be used as a supplementary form of fertilization. It cannot replace basal fertilization.

Recommendations for efficient foliar application

- The best times for foliar spraying are early morning and late afternoon, when humidity is higher and the leaves are in a state of full turgor, with their cells full of water.
- Avoid foliar spraying during the warmer hours of the day; absorption at high temperatures is very poor and plants may be exposed to stress and suffer scorching.
- Dew formation after foliar application is an important aid to prolonged penetration, because of resolubilization of the fertilizers in the dew collected on the leaves.
- Spraying should take place under minimal wind conditions. This is especially important with finely atomized sprays, as they drift readily.
- Always spray when soil moisture is sufficient. Leaves will then be turgid and not susceptible to water stress. Consider irrigating on the day prior to spraying.
- The optimum pH for a foliar spray is slightly acidic (5 ± 0.5).
- Avoid foliar spraying just before rainfall or overhead irrigation in order to prevent the sprayed material being washed off.
- The use of a suitable wetting agent or surfactant decreases the surface tension of the spray droplets, which improves the distribution of the droplets, increases the wetted surface area, reduces burning/ scorching of the leaves, and improves the uptake of the product. Always check the compatibility of the surfactant with the foliar fertilizer.
- Ensure that the fertilizer is fully soluble. No special equipment is required – foliar solutions can be applied with the aid of conventional spray equipment, e.g. a fan sprayer, a backpack sprayer, a sleeve sprayer, an aerial sprayer, etc.
- Select the appropriate sprayer volume and pressure for each crop. Using the correct volume of spray is essential to achieve full coverage of the plant canopy.

Learn more about the foliar fertilizer with immediate effects. Visit icl-sf.com

Everris International B.V. (UK, Netherlands, Germany) is certified according ISO - 9001.
Everris International B.V. Heerlen is also certified according ISO – 14001 and OHSAS – 18001.
Everris International B.V. is a legal entity under ICL Specialty Fertilizers.

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