

Asparagus



Crop Advice Sheet

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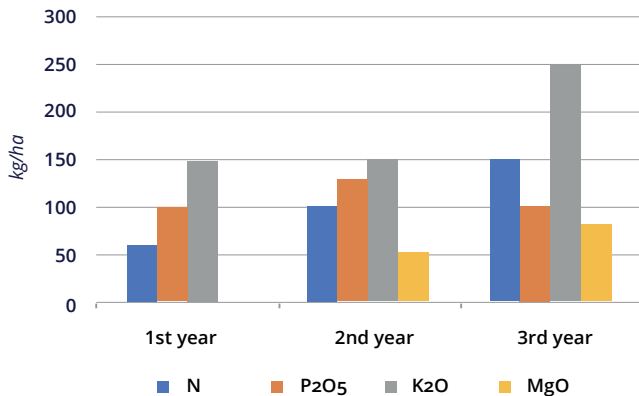
ICL Specialty
Fertilizers

General aspects

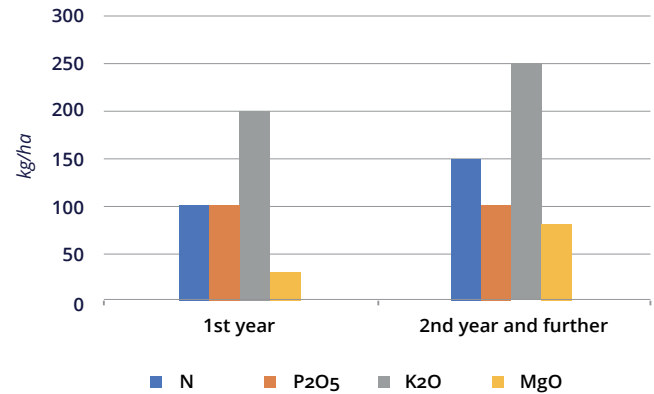
Asparagus is a well-known crop grown in Europe. In 2015, according to Eurostat, it has been grown on over 52 thousand hectares, mainly in countries like Germany, Spain, Italy, France, and The Netherlands.

Asparagus is a perennial soil grown, open field vegetable crop. In the first 2 years, the plant needs time to become established and build up its root system and therefore economical harvesting should start in the third year from planting. Plantations could last for 20 years. Asparagus likes rich soils with a neutral pH of 6-7.

Nutrient requirements, non-irrigated plantations



Nutrient requirements, drip irrigated plantations



Our solution with...



The safest nutrition for new plantations.

Agroblen consists of fully coated NPK that makes the product safe to be applied at planting, close to the young root system, without creating any salinity stress.

Benefits

1. 100% coated NPK - full control of nutrient release.
2. Only 1 application for the entire season.
3. Safe for young plants.
4. Environmental friendly – reduces nutrient losses via leaching, volatilization, denitrification.



Agromaster®

Superior in performance but simple to use. Agromaster combines ICL's advanced coating technology, E-Max, with specially selected conventional granules. This powerful combination provides controlled release of nitrogen for 2-3 up to 5-6 months (M) and high-quality performance in one uniform product. The product range is ideally to be used for both plantation systems – non-irrigated or irrigated by drippers.

Benefits

1. Reduces up to 40% N losses, via leaching / volatilization / denitrification.
2. Enhances crop uniformity thanks to controlled release of nutrients.
3. Provides similar of higher yield with reduced number of applications.
4. Less applications = less costs

Solinure® FX

Solinure FX is an innovative range of fertilizers designed specifically for open-field fertigation. This range consists of potassium chloride-based products that makes the range the best choice for Asparagus crop!

...Our Specialty Fertilizers

NON-IRRIGATED/IRRIGATED BY SPRINKLERS

Analysis (%) / Longevity / Coated (%)	Dosage, kg/ha			Timing / Method of application	Remarks
	1st year	2nd year	3rd year and further		
Agroblen 9-14-19+3MgO 5-6M 100%NPK	400-500			At planting / In row	In soils with medium-low level of NPK
Agroblen 15-0-14+7MgO 5-6M 100% NPK	250-300				In soils where applications of mineralized P are restricted
Agroblen 17-8-9+3MgO 16-18M 100% NPK	500-600				Perfect longevity for 2 years nutrition
Agromaster 12-7-18+3MgO 2-3M 30%N		600-800	800-1000	End of May-June / In row	Sandy-loamy soils with medium-low level of K
Agromaster 15-7-15+2.5MgO 2-3M 30%N		500-700	800-1000		In soils with medium-low level of NPK
Agromaster 11-8-27+2CaO+1.7MgO 2-3M 60%N		500-700	800-1000		Sandy soils with medium-low level of K
Agromaster 16-0-5+10MgO 2-3M 60%N		500-700	800-1000		For areas where application of extra mineral P is no longer allowed. It needs additional K provided low level of K are available in the soil.

DRIP IRRIGATED

General recommendation

1st year

Product	Dosage / week kg/ha	Number of weeks	Timing
Agromaster 10-43-0 1-2M 75% NP	30-50	1	At planting / applied in row as a base-fertilizers
Solinure FX 25-14-14	20-30	12	May-July
Nova Quick-Mg 0-0-15+13MgO	10-20	12	
Nova Ferti-K 0-0-61	30-50	4	Aug-Sept

2nd year and further

Product	Dosage / week kg/ha	Number of weeks	Timing
Solinure FX 13-40-13	15-20	4	Beginning of crop cycle
Solinure FX 25-14-14	50-70	8	June-July
Nova Quick-Mg 0-0-15+13MgO	20-30	8	
Nova Ferti-K 0-0-61	10-15	8	Aug-Sept
Nova Quick-Mg 0-0-15+13MgO	30-50	8	

For areas where application of extra mineral P is no longer allowed

1st year

Product	Dosage / week kg/ha	Number of weeks	Timing
Agroblen 15-0-14+7MgO 5-6M 100% NPK	50-100	1	At planting / applied in row as a base-fertilizers
Agrolution 14-0-30+2.5MgO	30-50	12	May-July
Agrolution 14-0-30+2.5MgO	10-20	4	Aug-Sept

2nd year and further

Product	Dosage / week kg/ha	Number of weeks	Timing
Agrolution 14-0-30+2.5MgO	30-50	4	Beginning of crop cycle
Agrolution 14-0-30+2.5MgO	30-50	16	June-September
Nova Mag-S 0-0-0+16MgO+32SO3	20-25	16	

These recommendations are made based on general information for plant density of 16.000 plants/ha! If density is higher, please increase dosages by 20-25%! In the 2nd year of drip irrigated plantations, Agromaster could be applied at beginning of crop cycle and supply WSF afterwards with reduced dosages. Please adjust your dosages and choose the right NPK analysis based on your soil level of nutrients and fertilizing management!

Trial results

Crop: Asparagus, variety Grolim
Location: France
Objective: To demonstrate that by applying H2Flo and reducing irrigation regime, the yield could be maintained or further increased.

Application method: Irrigation
Soil type: Sandy soil
Assessments: Total yield and its distribution per caliber



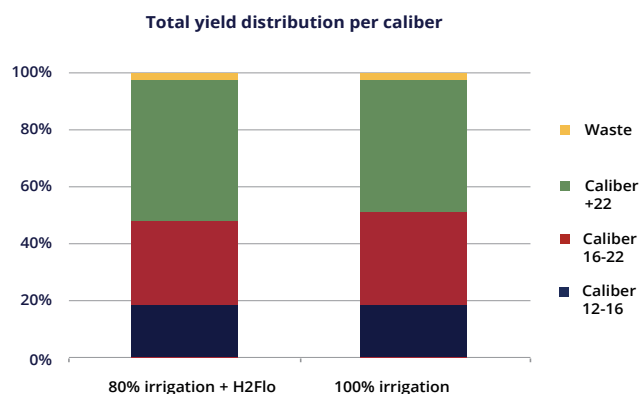
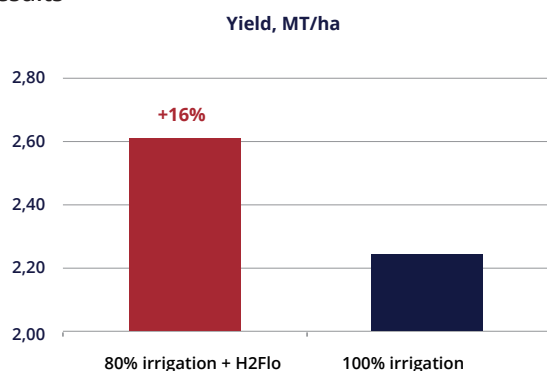
H2Flo®

H2Flo is a wetting and water conservation agent based on a blend of surfactants (88% active ingredients) especially designed to reduce the surface tension of irrigation water allowing both vertical and lateral movement of water into soil profile.

Treatments:

Grower practice	H2Flo
The water was supplied via irrigation system without the usage of any water conservation agents.	The addition of H2Flo in the irrigation system was done once a week, from June till October.
Treatment: 100% irrigation regime	Treatment: 80% irrigation regime + H2Flo
	Dosage of H2Flo: 1.2 liter/ha with first irrigation and 0.15 liter/ha for weekly application in the period mentioned above

Results



Why does H2Flo perform better?

- H2Flo enhances both horizontal and vertical movement of water into the soil
- H2Flo stimulates the root system to use the available nutrients as efficient as possible
- H2Flo lowers the surface tension of the water, allowing it to penetrate the soil as it can spread easier between the soil particles
- With the reduced amount of water and the same level of nutrients, H2Flo maintains an optimum level of soil moisture for plants, increases plant productivity and the final crop quality, especially in sandy soils.

Economic Evaluation	80% irrigation + H2Flo	100% irrigation
Marketable yield, MT/ha	2.62	2.25
Gross income, €/ha	17,270	14,792
Extra cost of ICL treatment (vs. grower practice), €/ha	65	-
Extra income/ha (vs. 100 % irrigation), €/ha	2,413	-

Economic evaluation was calculated based on the price level for different calibers, published in April and May in Languedoc - Provence Region from France.

Attention

Recommendations in this trial info sheet are based on local soil and/or water analyses. Please contact your local ICL Specialty Fertilizers adviser for your personalized fertilizer recommendation. Consult www.icl-sf.com for your contact in the region.

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