Maize

Crop Advice Sheet

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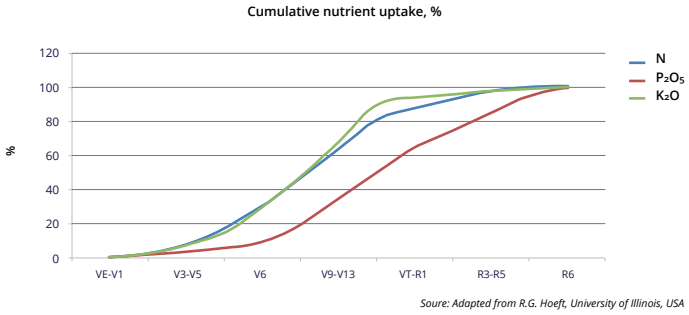
ICL Specialty Fertilizers

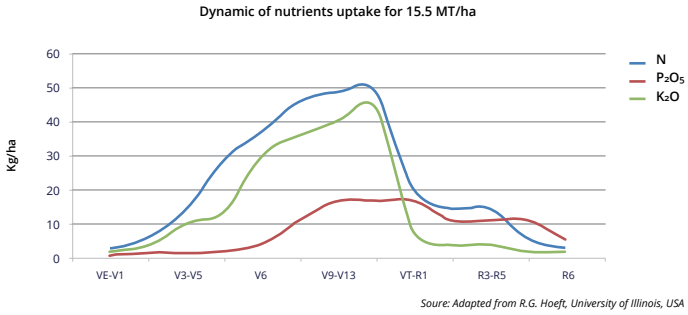
Crop specification

Nutrition

A general recommendation should be made based on nutrient uptake and expected yield. Afterwards, a correction of nutrients should be applied, based on soil analysis, previous crop, manure application and possible losses of nutrients (especially for nitrogen). Nitrogen losses are significantly reduced when Controlled Release Fertilizers are used. Plant growth between V6 stage (6th leaf) and VT (tassel) is well known as a Rapid Growth Period of Corn. Most of the nutrients are rapidly taken up in this period. To insure optimum yields, a steady and sufficient supply of nutrients in this period is critical. P and K based fertilizers are usually applied before or at sowing time (localized) while total nitrogen rate should be divided in multiple applications especially when conventional N fertilizers are used. If Controlled Release Fertilizers are used then the total nitrogen rate might be supplied in one application at sowing. Nevertheless all the nitrogen should be available to the plant by R1(Silking) and R2(Blister). At this time, maize crop is in reproductive stage and will focus its energy in translocating N already in the leaves and stalk into the developing ear. If the crop is irrigated, 50-60% pre-plant plus the rest through the irrigation system is also an effective technique. Nutrients method of application is a subject of soil charactheristics (its level of nutrients, texture, high/low P-fixing capacity).



Soure: Adapted from R.G. Hoeft, University of Illinois, USA



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Controlled Release & Granular Fertilizers

Analysis (%) / Longevity / Coated (%) / Dosage	**Timing / Method of application**	**Remarks**
Polysulphate, 0-0-14+17CaO+6MgO+48SO_3 300-500 kg/ha	Before sowing / Broadcasting	Essential source of sulphur, potassium, calcium and magnesium
Agromaster Start Mini 12-44-0+5SO_3, 1-2M, 36% NP 25-30 kg/ha or **Agromaster Start Mini 21-21-5+2MgO+15SO_3, 40%N** 25-30 kg/ha	At sowing / Ultra-localized (in furrows)	To be applied in addition to regular base fertilizers
Agromaster 11-48-0, 1-2M, 75% NP, 100-200 kg/ha or **Agromaster 32-19-0, 2-3M, 30% N,** 250-300 kg/ha or **Agrocote Max, 1-2M or 2-3M, 100% N,** 150-300 kg/ha	At sowing/ Localized	- For P-fixing soils. - For short crop cycle supplying all N and P in 1 application. - Controlled release source of nitrogen, supplying all N in 1 application
Agromaster 40-0-5, 1-2M, 30% N 100-150 kg/ha	V6-V8 / Side-dressing	Controlled release source of nitrogen for side-dressing applications

These recommendations presented in this Crop Advice Sheet are made based on certain conditions. Please choose the right dosage according to your soil analysis and fertilizing management!
For more information about our products, please visit www.icl-sf.com or contact your local ICL SF area sales manager!

Water soluble fertilizers

Analysis (%) **/ Dosage** (kg/ha)	**Stage**
Nova MAP, 12-61-0, 50-100 kg/ha **Urea, 46-0-0,** 100-120 kg/ha **Ferti-K, 0-0-60,** 25-50 kg/ha	VE-V6 VE-V6 VE-V6
Nova MAP, 12-61-0, 30-60 kg/ha **Urea, 46-0-0,** 100-230 kg/ha **Ferti-K, 0-0-60,** 50-100 kg/ha	V6-VT V6-VT V6-VT
Nova MAP, 12-61-0, 20-40 kg/ha **Urea, 46-0-0,** 25-100 kg/ha **Ferti-K, 0-0-60,** 25-50 kg/ha	VT-R1 VT-R1 VT-R1

The product range should be chosen based on water quality. Nova PeKacid, 0-60-20, can be successfully used when dealing with hard water conditions. Nova range can be used to fulfill the plant needs for Mg and Ca, if necessary. If base fertilizers were used to fulfil 50% of the total nutrients of the plant needs, then use the lower dosages.

Our solution with...

...Our Specialty Fertilizers

Foliar Fertilizers & Specialties

Product name / Analysis (%) / Dosage			Timing / Method of application
H2Flo, wetting and water conservation agent / 1.2-2.4 ltr/ha - first irrigation / 0.6-1.2 ltr/ha - further irrigations			Irrigation
Agroleaf Power High P - 12-52-5+TE / 3-5kg/ha or **Agroleaf Crop Maize, 7-48-7+4MgO+TE /** 3-5 kg/ha			1-2 applications V4 - V6 - Preventing or correcting P deficiency. For severe deficiency repeat the application after 10-14 days / Foliar
Agroleaf Special Zn - 14% Zn EDTA / 1-3 kg/ha			1-2 applications V4 - V8 – Preventing or correcting Zn deficiency. For severe deficiency repeat the application after 10-14 days / Foliar
Agroleaf Power Total - 20-20-20+TE / 3-5 kg/ha			1 application V8 – V10 / Foliar
pHixer	**Water hardness**	**Dosage in 100 ltr water**	A water conditioner for every foliar application
	Soft Medium Hard	40-50 ml 100-180 ml 180-200ml	

Proven performance in field trials

6 % yield increase in Maize

Trial objective
To compare the efficiency of different starter fertilizers applied in furrow at seeding

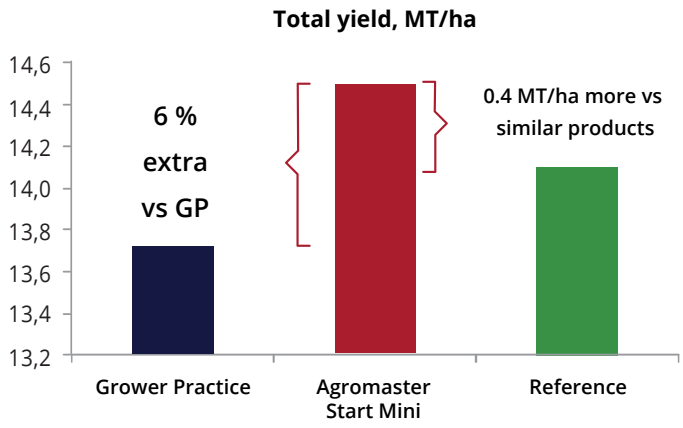
Location
official trial station, Romania

Treatments
Grower Practice (GP): Conventional Fertilizers
MAP – 190 kg/ha – before sowing
MOP – 85 kg/ha – before sowing
Urea – 300 kg/ha – before sowing
Urea – 144 kg/ha – top-dressing at V6.
Total NPK units, kg/ha = 227-99-51

Agromaster Start Mini: GP + Agromaster Start Mini (21-21-5+2MgO+15SO_3) at 25 kg/ha.

Reference: GP+ Micro-granulated fertilizer (11-45-0+12S+2MgO+1Zn) at 25kg/ha

Economic evaluation	Grower practice	Agromaster Start Mini	Reference
Yield, MT/ha	13.7	14.5	14.1
Yield (differences versus Grower Practice), %	-	6%	3%
Total cost of fertilizers, euro/ha	248.3	298.9	332.6
Gross income, euro/ha	1695.9	1792.2	1742.8
Gross income minus fertilizers cost, euro/ha	1447.6	1493.3	1410.1
Gross Income minus fertilizers cost (difference versus Grower Practice), euro/ha	-	45.7	-37.4



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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