

# Winter Wheat



## Crop Advice Sheet

[www.icl-sf.com](http://www.icl-sf.com)

**ICL** Specialty  
Fertilizers



# Crop specification

## Soil

Optimal pH for winter wheat is 6.5. When pH is below 5.5, yields of most wheat cultivars can be markedly lower, due to susceptibility to P, Mo and Ca deficiencies. In soils with pH >7.5 deficiencies of B, Cu, Fe, Mn, P and Zn are likely to appear.

## Temperature

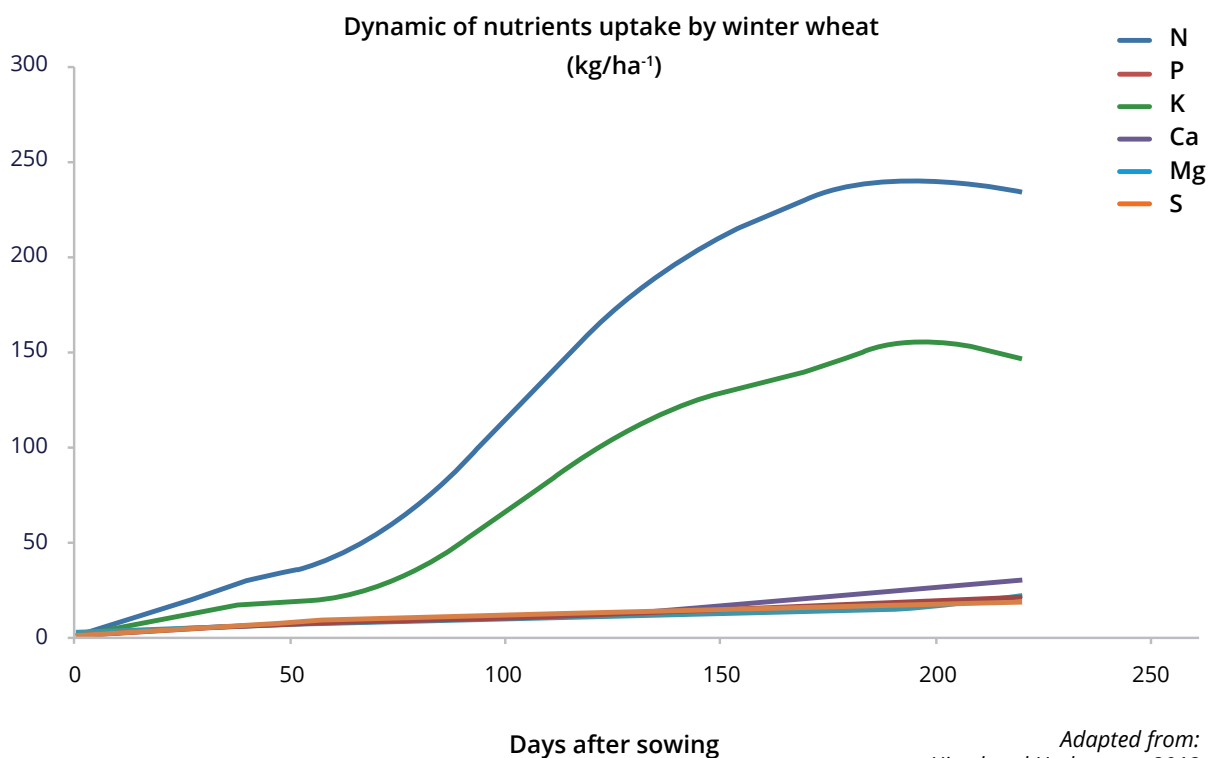
Winter wheat prefers temperatures of 15–25 °C during germination, but can also tolerate temperatures between 2–30 °C. Optimal temperature at tillering and initiation of ear primordia is 6–9 °C.

## Macronutrients

If grain is the only part that is removed from the field during harvest, nitrogen is, by far, the most important element that should be applied to the soil for compensating the nutrient removal. But, if the entire plant is removed (e.g. for using the straw too), potassium is just as important as nitrogen. While phosphorus features no more than 25% of the N & K needs.

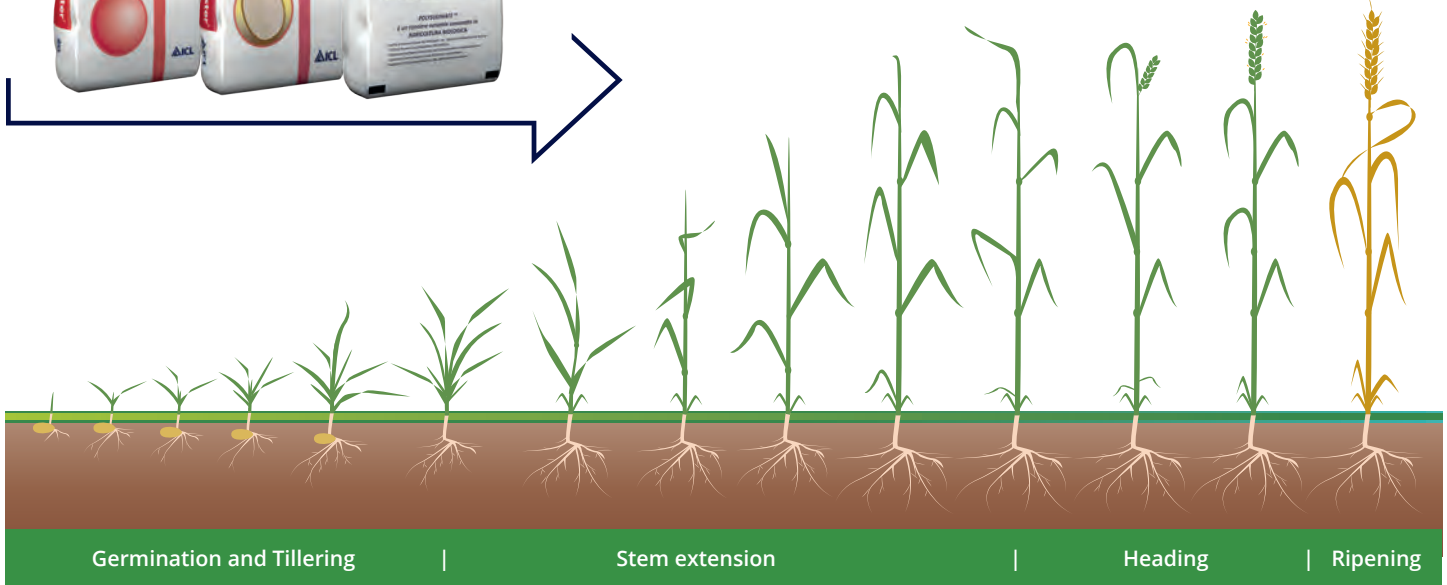
## Micronutrients

If grain is the only part that is removed from the field during harvest, Mn, Zn and Cu should be applied in the following ratio 1 : 0.5 : 0.25. But, if the entire plant is removed (including the straw), Mn application rate should be at least doubled, and the ration of Mn, Zn and Cu should be 2 : 0.5 : 0.5.



*Adapted from:  
Hirzel and Undurraga, 2013*

# Our solution with...



## ... Our Specialty Fertilizers

### Controlled Release & Granular Fertilizers

Analysis (%) / Longevity / Coated % / Dosage	Timing / Method of application
<b>Agromaster, 15-24-10+2MgO+8SO<sub>3</sub>, 2-3M, 30%N</b> 150-200 kg/ha	Before sowing / Broadcasting or row
<b>Agromaster Start Mini, 21-21-5+2MgO+15SO<sub>3</sub>, 2-3M, 40%N,</b> 25-30 kg/ha or <b>Agromaster Start Mini, 12-44-0+5SO<sub>3</sub>, 1-2M, 36%NP</b> 25-30 kg/ha	Sowing / In Furrow
<b>Agromaster, 40-0-5, 1-2M, 30%N</b> 150-200 kg/ha	1 <sup>st</sup> internode visible / Broadcasting
<b>Polysulphate 0-0-14+17CaO+6MgO+48SO<sub>3</sub></b> 100-200 kg/ha	2 <sup>nd</sup> internode visible / Broadcasting
<b>Agromaster 40-0-5, 1-2M, 30%N</b> 50-100 kg/ha	Flag leaf / Broadcasting

### Foliar Fertilizers & Specialties

Product name / Analysis (%) / Dosage	Timing / Method of application
<b>Agroleaf Power High P — 12-52-5+TE / 3-5 kg/ha</b>	Before Tillering / Foliar
<b>Agroleaf Power High N — 31-11-11+TE / 3-5 kg/ha</b> or <b>Agroleaf Crop Cereal — 26-10-15+2MgO+TE / 5-8 kg/ha</b>	1 <sup>st</sup> internode visible / Foliar
<b>Agroleaf Special Mn — 12% Mn EDTA / 0.3-0.5 kg/ha</b> or <b>Agroleaf Special Zn — 14% Zn EDTA / 0.3-0.5 kg/ha</b>	1 <sup>st</sup> internode visible / Foliar
<b>Agroleaf Power Total — 20-20-20+TE / 3-5 kg/ha</b> or <b>Agroleaf Crop Cereal — 26-10-15+2MgO+TE / 5-8 kg/ha</b>	2 <sup>nd</sup> internode visible / Foliar
<b>Agroleaf Power High K — 15-10-31+TE / 3-5 kg/ha</b> or <b>Agroleaf Power High N — 31-11-11+TE / 3-5 kg/ha</b>	Before flowering or "milk" stage of grain / Foliar
<b>pHixer</b>	Water hardness Soft Medium Hard
Dosage in 100 ltr water	40-50 ml 100-180 ml 180-120ml
A water conditioner for every foliar application	

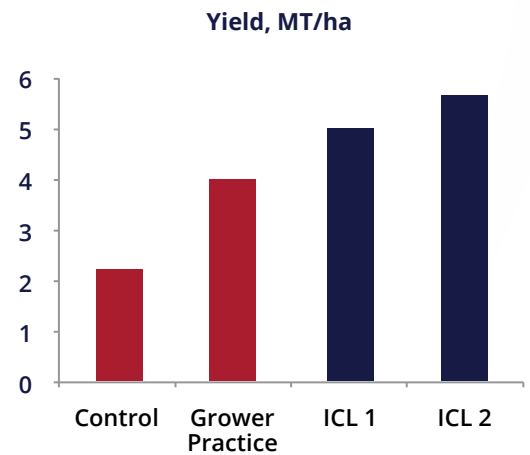
These recommendations are made based on certain conditions. Please choose the right dosage according to your soil analysis and fertilizing management! For more information about our products, please visit [www.icl-sf.com](http://www.icl-sf.com) or contact your local ICL SF area sales manager!

# Up to 40% more grains!

<b>Objective:</b>	Prove the efficiency of Agromaster Start Mini in furrow application versus broadcasting conventional fertilizer.
<b>When:</b>	Sowing - 29th of October Harvest - 20th of July
<b>Trial Station:</b>	N.A.R.D.I. Fundulea, Calarasi, Romania
<b>Crop:</b>	Winter Wheat, Glosa variety
<b>Assessments:</b>	Total yield and the final level of protein

## Treatments & Results:

Control:	Grower Practice:	ICL 1:	ICL 2:
No fertilizer	Base fertilizer: P <sub>2</sub> O <sub>5</sub> = 80 kg/ha K <sub>2</sub> O = 40 kg/ha	Base fertilizer: Agromaster Start Mini = 60 kg/ha	Base fertilizer: Agromaster Start Mini = 80 kg/ha
	Top dressing in spring N = 40 kg/ha	Top dressing in spring N = 40 kg/ha	Top dressing in spring N = 40 kg/ha
	Total NPK level: 40-80-40	Total NPK level: 53-13-3	Total NPK level: 57-17-4



## Why does Agromaster Start Mini 21-21-5+2MgO perform better?

- Ultra-localized application of the product proves the maximum efficiency of nutrients applied in furrow versus conventional fertilizers broadcasted.
- It proves that Phosphorus, being applied close to the seeds, it is immediately available to be uptake by the young root system, ensuring a better start for the plants.
- Controlled Release Nitrogen ensures continuous feeding according to the plant needs, without affecting the root system.

### 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](http://www.icl-sf.com) for your contact in the region.

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