## Highly Efficient Natural Fertilizer

**Allganic®** is SQM's family of fertilizers for **organic agriculture**, designed for a speciality plant nutrient range. It is a group of mineral fertilizers listed by the **OMRI** and approved for use in USDA organic certified crops. All Allganic® fertilizers are natural and environmentally friendly. Our product range includes two of the most important major cropnutrients, **nitrogen and potassium**.







Allganic® Nitrogen Plus is natural sodium nitrate from Chile, containing 15% nitrate nitrogen and 2% potassium oxide. It is recommended to be applied as a supplement to crop rotation and manure application, which will improve the nitrogen use efficiency in various crops. Allganic® Nitrogen Plus is completely water soluble and its nitrate nitrogen is immediately available for crop uptake. It can be applied at different times during the growing season when required.

**Allganic® Potassium** is a 100% water soluble natural potassium sulphate containing 52% water soluble potash and 18% sulphur. It is chlorine free and the most suitable supplement to Allganic® Nitrogen plus for quality produce with a balanced nutrition. This potassium produces tastier, healthier and more colorful fruits and vegetables with an extended storage life.

**Allganic® maKro 60** is a granular potassium chloride extracted from natural saline solution in Northern Chile, containing 60% potassium ( $K_2O$ ). Allganic® maKro 60 is a rich source of natural potassium that can be applied to a wide range of crops, such as corn, wheat, rice, sugar cane, soybean, grains, banana, etc.



## allganic Nitrogen Plus allga

## Specifications allganic Potassium

### allganicma/Tro 60

Total nitrate nitrogen (NO3-)	15.0 %	Potassium oxide (K <sub>2</sub> O) water soluble	Potassium oxide (K <sub>2</sub> O) 52.0 % water soluble		60.0%
Potassium oxide (K <sub>2</sub> O) water soluble	2.0 %	Sulphur (S) Solubility (maximum)	18.0 % 110.0 grams/L	Potassium oxide (K <sub>2</sub> O) water soluble	
Sulphur (S)	1.0 %				
Solubility (maximum)	880.0 grams/L			Solubility (maximum)	345 grams/L

Benchmarking Allganic® and other common organic sources

		3		
Sr no.	Allganic® range	Other bulky organic sources (Manure)		
1	Certified by OMRI which is a pioneer institute in organic produce certification.	No fixed certifying agency.		
2	Concentrated organic source of N & K.	Bulky organic source, needs to be applied in huge quantities to supply even small amounts of N & K.		
3	Free from heavy metals, which are also tested in organic certification, and which may certify the final product as non-organic.	Contains considerable amounts of heavy metals, particularly city compost, which may create problems in organic certification.		
4	Contains a fixed amount of nitrogen (15 %) and potash, which allows for the flexibility to supply the correct amount of N $\&$ K required for specific stages of the crop.	Nitrogen contents vary from time to time and from source to source for the same organic product. For example, compost from different localities will have different compositions.		
5	No decomposition is required.	Decomposition is required if not fully decomposed at the time of usage.		
6	No mineralization is required, as it contains 100 % nitrogen in a readily available form of nitrate.	Nitrogen is in an organic form, and needs to be mineralized.		
7	Best source of nitrogen in cold climates.	In cold climates, the decomposition process will be slowed down, and plants may strive for nitrogen if they are completely dependent on a bulky organic source.		
8	As the sole source of N and K, this allows for the exclusive supply of nitrogen $\&$ potash, if required, for the specific stage when other nutrients are not required.	Organic manure may also contain other nutrients, which may not be required for that specific stage, and which could be supplied in excess. This may create toxicity from non-required nutrients.		
9	Best source of organic N & K for soils low in microbial population.	Require microbial population to mineralize the nitrogen.		

Indicative efficient dosage of Allganic® products on various crops

Crop	Recommended dosage of Allganic® N for soil application (kg/ha)	Recommended dosage of Allganic® Potassium for fertigation (kg/ha))	Recommended dosage of Allganic® Makro 60 for soil application (kg/ha))
Cereals: wheat, rice, corn, oat, barley	75 - 120	100 -175	100 - 250
Rapeseed	50 - 200	75 - 200	75 - 250
Fruit trees: stone fruits, apple, pear, kiwi	125 - 175	150 - 250	150 - 300
Fruit trees: mango, avocado	75 - 100	75 - 175	75 - 250
Citrus	200 - 350	150 - 400	200 - 500
Vegetables: tomato, cucumber, pepper, eggplant	200 - 250	250 - 450	200 - 500
Oignon, garlic	125 - 75	100 -150	125 - 200
Cabbage, brocoli, cauliflower	50 - 75	75 -150	75 - 200
Potato, carrot	175 - 250	200 - 350	200 - 400
Grape	300 - 450	200 - 500	00 - 500
Ornamentals	100 - 150	50 - 150	50 - 150









# SQM in the field: successful case 1 allganic Nitrogen Plus increases organic wheat yield and protein

A field trial in organic hard red winter wheat was conducted by SQM in Jefferson, Iowa, US, in cooperation with Iowa State University to evaluate the use of **Allganic Nitrogen Plus** to provide 20% of the crop N requirement. Wheat was planted at 134 kg/ha on a prior soybean field. Plots consisted of 335m of drilled wheat with 3 replications and two treatments.

### Treatments consisted of:

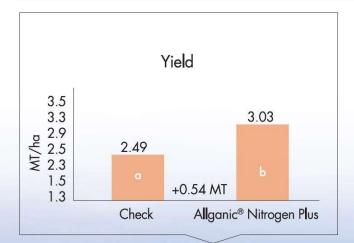
### Check plot:

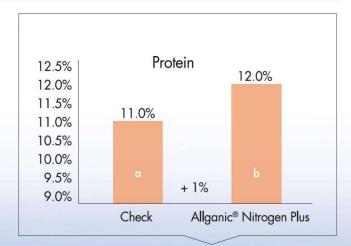
No additional nitrogen.

### Allganic® Nitrogen Plus plot:

• Top-dress application of **Allganic® Nitrogen** Plus at 180 kg/ha (27 kg/ha), corresponding to 20% of the N demand.

### Results:





<sup>\*</sup>Yield increase was statistically significant at the 95% confidence level.

The yield and protein increases in the plots fertilized with Allganic® Nitrogen Plus amounts to a USD 376/ha increase in gross farmer income at today's food-grade organic wheat prices in the US.



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<sup>\*</sup>Protein increase was statistically significant at the 95% confidence level.



# SQM in the field: successful case 2 allganic Nitrogen Plus in organic corn in the U.S: increases organic corn yield by 2 MT/ha

### The two treatments were:

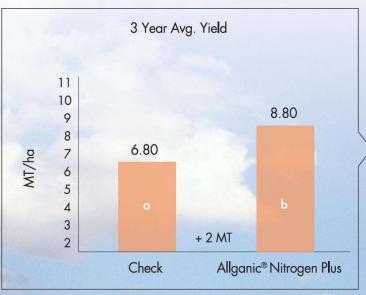
### **Check plot:**

- 54,250 L/ha of liquid swine manure the first season.
- 6.7 MT/ha of chicken manure the two following seasons.

### Allganic® Nitrogen Plus Plot:

- The same amount of manure as the check plot
- PLUS a dry, banded side-dress application of 102 kg **Allganic® Nitrogen** Plus to supply 20% of the corn N demand (40 kg/ha) for a yield target of 10-11.3 MT/ha.
- Timing of application was 30-40 days after planting (knee high).

### Results:



\*Yield increase was statistically significant at the 95% confidence level.

This amounts to over USD 740/ha increase in gross farmer income at today's organic corn prices in the US.

DISCLAIMER

All information is given to the best of SQM's knowledge and is believed to be accurate. Your conditions of use and application of the suggested products and recommendations are beyond our control. There is no warranty regarding the accuracy of any given data or statements. SQM specifically disclaims any responsibility or liability relating to the use of the suggested products and recommendations and shall under no circumstances whatsoever, be liable for any special, incidental or consequential damages which may arise from such use.



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