

Azoplasm: the objective is quality

Azoplasm is the product that can fulfil all needs of cereal cultivations. The use of Azoplasm blended with the most common herbicides has not phytotoxic effects on plants; rather it reinforces the effects of the herbicides. The perfect combination of nitrogen forms and minerals in Azoplasm allows higher unitary production. Several other substances having nutritional properties are dissolved in Azoplasm as betaines, vitamins and free L-amino acids that enhance both the resistance of the plants to biotic stress agents and the qualitative traits of the grains.



Expected benefits

- 1-Increase of **production**;
- 2-Increase of **qualitative traits** of the grains;
- 3-**Stay-green** effects on the plant that can photosynthesize and accumulate more nutrients longer period
- 4-Increase of the efficacy of herbicides, fungicides and insecticides due to the improvement of the nutritional status as well as the healthiness of the plant

COMPOSITION					
Total Nitrogen (N)	13,0 %p/p	15,4 %p/v	Total Iron (Fe)	0,5 %p/p	0,59 %p/v
Organic Nitrogen (N)	2,0 %p/p	2,4 %p/v	Total Zinc (Zn)	0,5 %p/p	0,59 %p/v
Urea Nitrogen (N)	11,0 %p/p	13,0 %p/v	Carbon of biological origin (C)	7,0 %p/p	8,3 %p/v

%w/w equivalent to w/v at 20°C.

GLICINE

Formation of new buds and leaves;
Fundamental for the formation of chlorophyll.

PROLINE

Increase of the germinability of pollen (particularly under unfavourable conditions);
Reservoir of carbon and nitrogen if present in free form
Water balance of the plant;
Support for photosynthetic activity under unfavourable conditions.

GLUTAMIC ACID

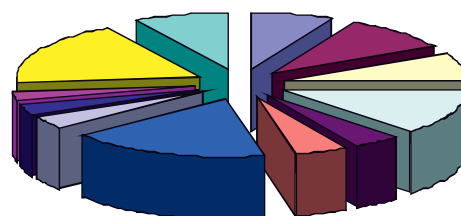
Precursor of new amino acids;
Better uptake of inorganic nitrogen;
Stimulation of the formation of new leaves;

ARGININE

Rejuvenation of aging plants;
Stimulation of the formation of new roots;
Reservoir of nitrogen if present in free form.

ALANINE

Increase of the synthesis of chlorophyll;
Increase of productivity as well as quality of the product.



Aspartic acid	Glicine
Alanine	Serine
Arginine	Valine
Glutamic acid	Phehylalanine
Leucine	Proline
Lisine	Others

DOSES AND ADMINISTRATION

APPLICATIONS WITH BOOM SPRAYER		
CROP	PERIOD OF APPLICATION	DOSE
Autumn and winter cereals	Tillering and heading blended with common herbicides	10-20 l/ha

Formulation: soluble liquid - Package size: 1 - 5 - 10 - 20 - 200 -1000 l - pH (sol. 6%): approx. 5,9 - Conductivity (sol. 10%): approx. 11,5 ds/m - Density (T= 20°C): approx. 1180 kg/m³

Azoplasm trial

Results Cra-CER Foggia - Italy - 2013/14

EXPERIMENTAL CONDITIONS

Durum wheat: cv. Turchese;

Date of sowing: Dec 16th, 2013

Date of harvest: July 9th, 2014

Date of treatments in association with herbicide:

Early application: Feb 11th, 2014;

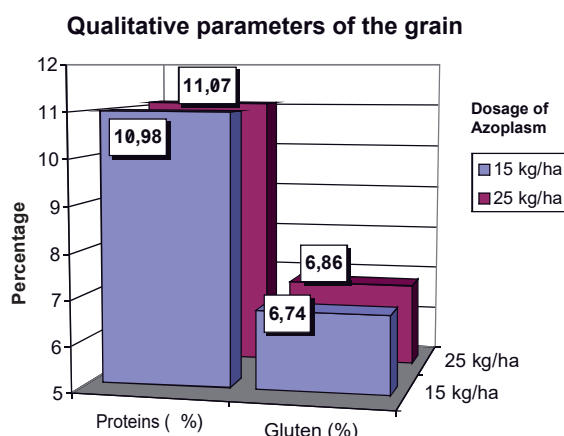
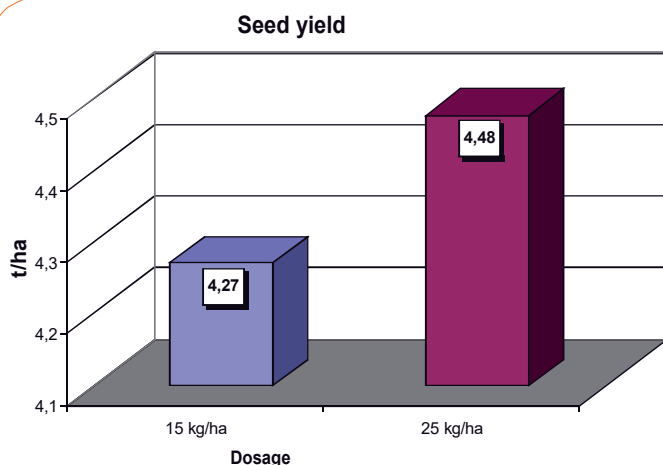
Usual application: March 17th, 2014;

SCHEDULE OF INTERVENTION

Herbicide used	Dose of Azoplasm in the	Timing of application
Traxos one	0 kg; 15 kg; 25 kg	Early herbicide/usual
Atlantis WG+Biopower +Buctril	0 kg; 15 kg; 25 kg	Early herbicide/usual
Zenith + Floramix	0 kg; 15 kg; 25 kg	Early herbicide/usual

OBJETIVO: 1. VERIFY THE TOXICITY OF AZOPLASM BLENDED WITH HERBICIDES
2. VERIFY THE FINAL QUALITY OF THE PRODUCTION

RESULTS



First results confirm the **total absence of phytotoxic effects** on the plants treated with Azoplasm alone and Azoplasm added to herbicides (applied at dosages reported on the label). Timing of application produced interesting results: **early applications of herbicides blended with Azoplasm increased the productivity** up to 4.37 tons ha⁻¹ in comparison with 3.73 tons ha⁻¹ obtained from conventional applications of herbicides. This finding is in accordance with suggestions found in literature: the elimination of weeds in early stages allows wheat root system develop better. Further results clearly show how the concentration of Azoplasm is directly correlate with productivity: the higher is the dose, the higher is the production of grains. Moreover, protein content and gluten content also increased after a treatment with Azoplasm 25 kg in comparison with Azoplasm 15 kg.