Foliar nutrition on corn

Objective of the trial

Increasing the yield with foliar fertilization applied together with the weed control applications.

General information

Conditions of the trial:

Trial location:	Belgium – East Flanders	Density:	103,000 plants/ha
Variety:	LG30222	Soil type:	Sandy loam
Sowing date:	23/04/2017	In cooperation with:	Agriprofit

Fertilization – on the whole field:

- 45.000 L/ha cattle slurry (liquid fraction)
- 150 kg starter N-P 20-10 in the rows
- 350 kg ammonia nitrate - full field

Herbicides

- Haldis 1 L/ha + Arundo 1 L/ha + Banteng 1 L/ha

Treatments

3 modalities:

- ⇨ T0: Untreated control
- ⇨ T1: Chelal Zn at 2 L/ha
- ⇨ T2: Landamine Zn at 5 L/ha

The foliar nutrition was used in combination with the weed control in the 4 leaf stage (30/05/18).

Results

At first sight there were no differences in the field, but there was definitely a difference in the weight of the cobs:

Modality	Weight 5 cobs (g)	Number of seed row per cob
Control	988	5 x 14
Chelal Zn	1196	4 x 14 1 x 16
Landamine Zn	1127	3 x 14 2 x 16

Analysis:

	Control	Chelal Zn	Landamine Zn
Dry matter (%)	66.0	64.8	64.9
Yield fresh weight – calculated (kg/ha)	11,397	13,550	13,109
Total dry matter (kg/ha	7,522	8,780 **(+ 16%)**	8,507 **(+ 13%)**
Total proteins on dry matter (%)	9.0	9.1	8.7
Total proteins (kg/ha)	677	799 **(+ 18%)**	740 **(+ 9%)**
Digestible proteins on dry matter (%)	5.5	5.5	5.3
Starch content on dry matter (%)	78.0	77.4	76.4
Starch (kg/ha)	5,868	6,796 **(+ 15.8%)**	6,499 **(+ 10.8%)**

Conclusion: a substantial increase in yield has been achieved through the use of foliar nutrition.