

Results of trials with PlantAktiv application – task defined in 2014 for winter oilseed rape by BioAktiv CZ GmbH

Detailed small plot trial using PlantAktiv growth promoter

A) Initial data:

Aim: This was to study, in a total of 5 test versions, the effect of PlantAktiv in varying dosages (0.5 and 1 kg/ha) and at different application times (autumn, spring) on growth parameters, yields and the quality of winter oilseed rape.

Technical approach at Č. Újezd

Variety: Hybrid Rohan
 Replications: 4
 Small plot dimensions: 11.875 m² (1.25 x 9.5 m)
 P, K, Ca, Mg fertilization: none

B) Methods

Test versions in 2013/14, PlantAktiv dosages

| Version | Autumn – 4th - 5th leaf | Spring – Spray against rape stem weevil (Ceutorhynchus napi) |
|----------------|--------------------------------|---------------------------------------------------------------------|
| 1 (control) | | |
| 2 | 1 kg/ha PlantAktiv | |
| 3 | 1 kg/ha PlantAktiv | 1 kg/ha PlantAktiv |
| 4 | | 1 kg/ha PlantAktiv |
| 5 | 0.5 kg/ha PlantAktiv | 0.5 kg/ha PlantAktiv |

Characteristics studied:

1. Autumn – No. of plants, autumn analyses
2. Harvest – Yield, seed moisture
3. Post-harvest – TKM (thousand grain wt.) and oil content

Sampling/observation dates:

No. of plants: 10/9, 2013
 Autumn analyses: 11/5, 2013
 Harvest: 7/23, 2014

Positive effects of PlantAktiv on these characteristics:

1. Root length in autumn – in the treated crop roots are 1.2 cm longer
2. Root crowns in treated crop – 7.1 mm
3. Seed yield differs by 0.31 tonne/ha between treated and untreated plot
4. Oil content is 0.3 – 1.5 % higher in all crops treated with PlantAktiv than in the untreated control plot, the max. being 47%
5. Thousand grain weight is 4.527 g for the treated plot and 4.343 g for the untreated plot

| Version | Application | TKM (g) | Yield (tonnes) | Increase (%) |
|---------|-------------------------------|---------|----------------|--------------|
| 1 | Control plot | 4.34 | 5.57 | |
| 2 | 1 kg Autumn | 4.48 | 5.81 | 5% |
| 3 | 1 kg Autumn + 1 kg Spring | 4.52 | 5.91 | 6% |
| 4 | 1 kg Spring | 4.43 | 5.79 | 5% |
| 5 | 0.5 kg Autumn + 0.5 kg Spring | 4.48 | 5.42 | -3 % |

The results obtained for one year show that plants treated with PlantAktiv give better yields and seeds of better quality. The best performance was achieved with two applications, in autumn and spring using 1 kg/ha each time. The most economical approach for the year in question was version no. 2 where 1 kg was applied in autumn, and version no. 4 which used 1 kg in spring.

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The complete report with diagrams and statistics may be inspected at the premises of BioAktiv CZ s.r.o. (GmbH).