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The aim of the demonstration experiments

To test the influence of preparations *Humate Green OK* (concentration of humic substances 2g/l) on the potato yield.

Materials and methods

Demonstration experiments were settled on poor sod-podzoloc sandy soil: pHKCl – 6,0, P2O5 – 262 mg kg⁻¹, K2O – 157 mg kg⁻¹, organic substances – 3,0%, total nitrogen – 0,15%. Potatoes 'Madara' were planted in early May, 9 tubers in 1 m² in four replicates. As the main fertilizer was used mineral fertilizer NPK 10-10-20 at the rate 500 kg/ha.

Variants of experiment

1. Control (without treatment)
2. *Humate Green OK* (treatment of tubers + spraying 2 times)

Treatment of tubers

1. Without treatment
2. Potato tubers were treated with the work solution *Humate Green OK* (10ml of concentrate to 1 litre of water) at the rate of 40ml the work solution per 1 kg of potatoes.

Treatment was carried out as follows: potatoes were dropped in one layer on the film and tubers were sprayed from all sides, then tubers were covered with film and they were held until complete drying.

Treatment of vegetative plants

- 1) at the plant height 10-12cm
- 2) during the development of flower buds.

The norm of the treatment is: the work solution *Humate Green OK* (5ml of concentrate to 1 litre of water) at the rate of 40ml/1m².

Yield was harvested in early August. The data of the yield was mathematically processed with the dispersion analysis.

Results

The results showed that treatment of potato tubers and double spraying of plants during the growing season with the *Humate Green OK* had a positive effect.

The use of *Humate Green OK* for growing potatoes ensured significant **increase of the yield from 1 m²**: on average, 1.13kg or 21% more in comparison with the control (Picture 1).



Control Humate Green OK
Photos 1-2: Harvest of potatoes 'Madara' from 1 m²

On average, from **one potato plant**,

- using *Humate Green OK* - 8 tubers were obtained with a total weight of 0.73 kg,
- in control variant - 10 tubers with a total weight of 0.60kg,

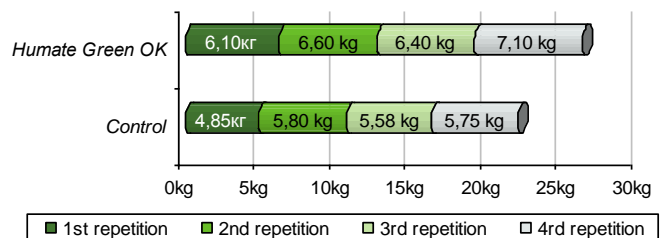
It should be noted that, in the variants with the use of *Humate Green OK* tubers were more adjusted by size and the average weight per tuber, amounted to 81-97 g in comparison with the control - 56-70 g (Picture 2).



Control Humate Green OK
Photos 3-4: Harvest of potatoes 'Madara' from one plant

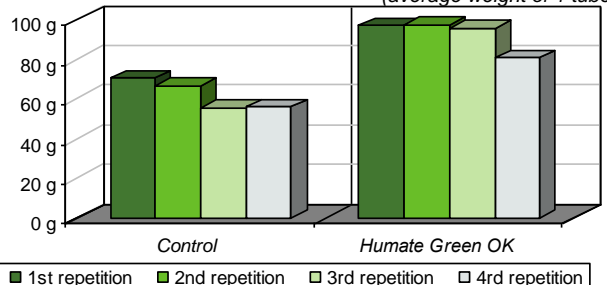
Picture 1

Harvest of potatoes 'Madara' from 1 m² in 4 repetitions (kg/m²)



Picture 2

Harvest of potatoes 'Madara' from 1 m² in 4 repetitions (average weight of 1 tuber)



Conclusion

The results of the demonstration experiment showed that the use of the both *Humate Green OK* in the potato cultivation is more effective and provides a substantial increase of the yield.