



inspired by nature

for the natural stimulation of plant growth

rootac[®] – trial results in potatoes

rootac[®] is a plant fortifier that strengthens resistance to abiotic stress factors and can thus improve crop yields.

There are many trial results from other countries. In order to illustrate the effectiveness in our climatic region, **rootac[®]** was applied to table potatoes in Lower Saxony.

rootac[®] was applied on 1 ha of an organic potato field with two applications by crop protection sprayer: before flowering and in the middle of flowering together with a copper treatment. The soil is a clayey sand and 4 x 25 l/m² of water was irrigated due to low rainfall.

For evaluation, 12 plots of 1 m² each were hand harvested every 20 m from the treated plot and from the untreated plot.

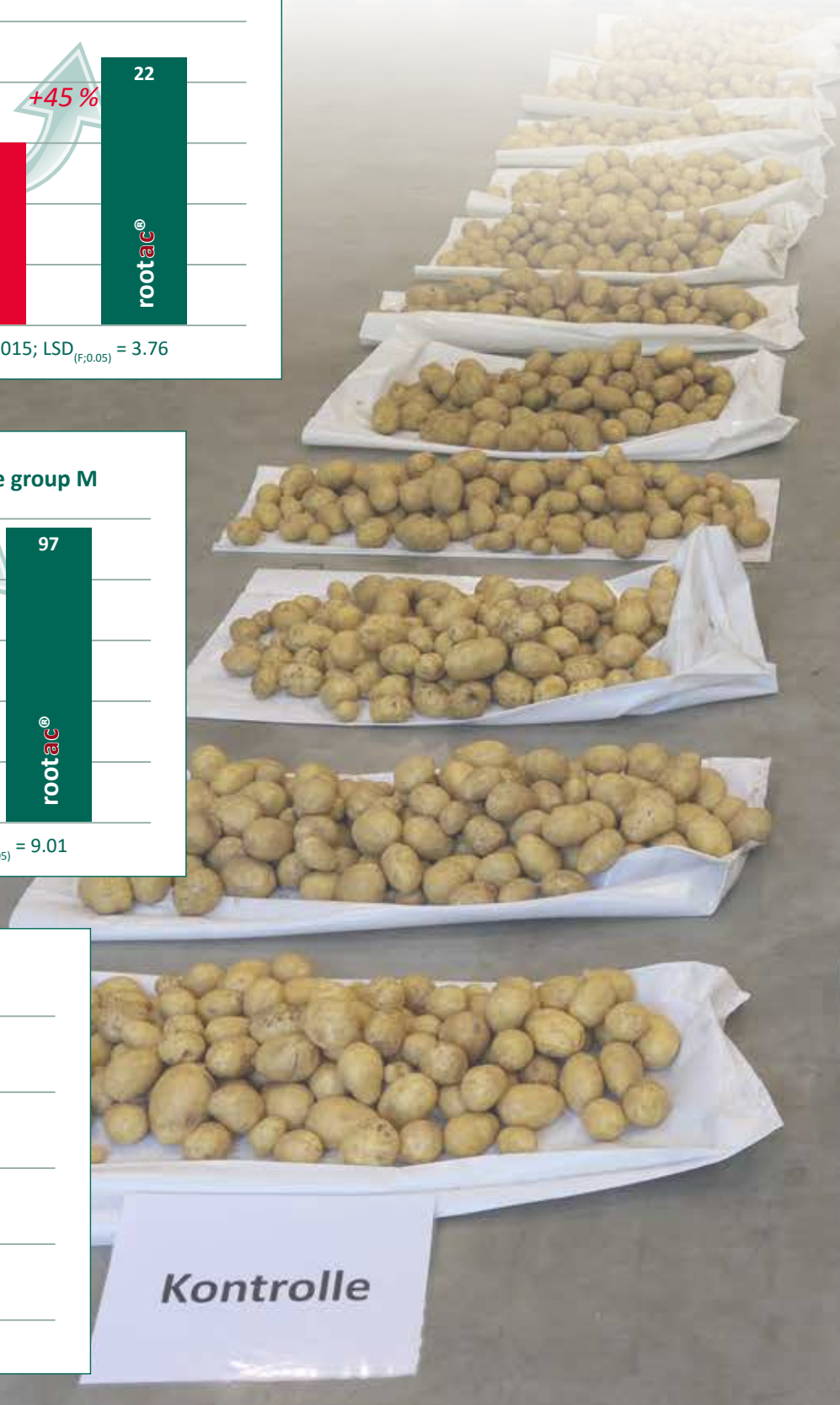
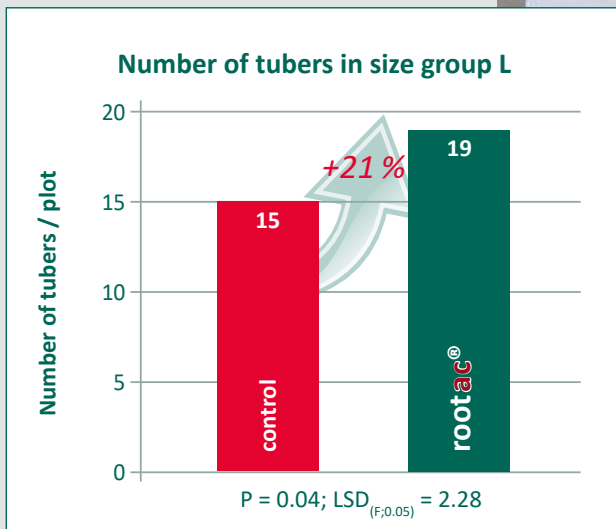
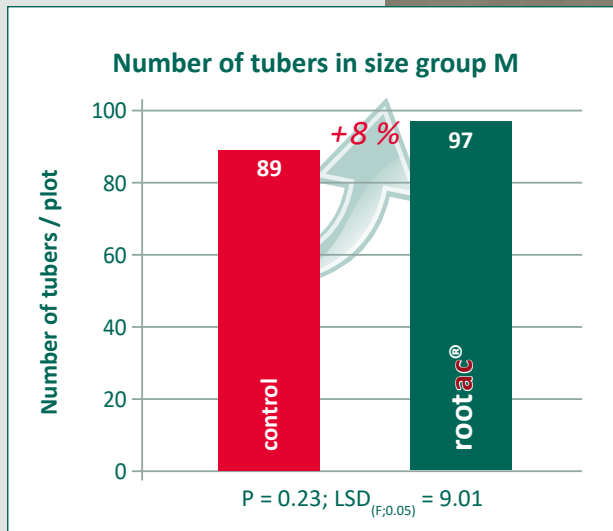
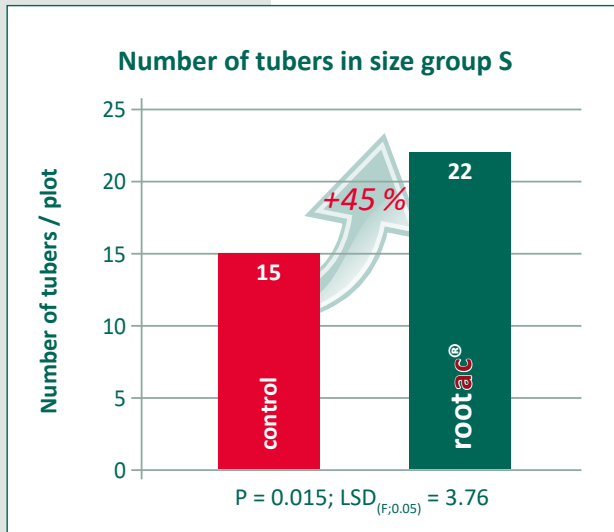
The harvested tubers were washed, sorted according to size (S < 35 mm; M 35 - 65 mm; L > 65 mm) and then weighed. Damaged, green or diseased tubers were sorted out.



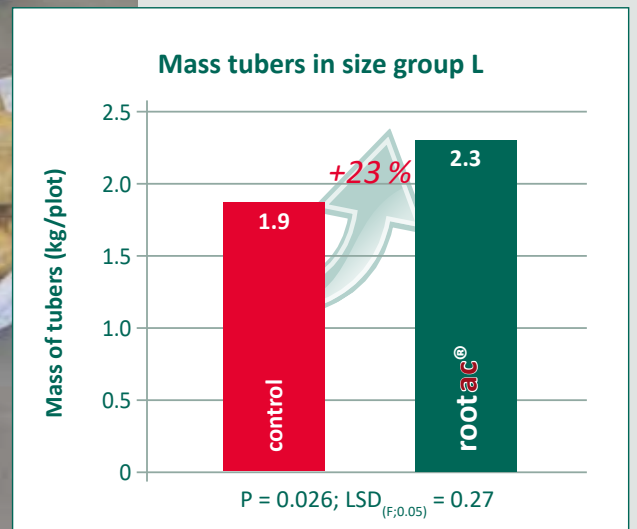
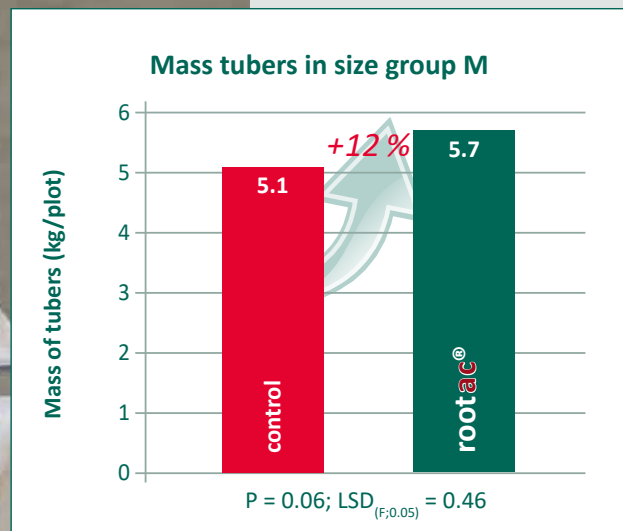
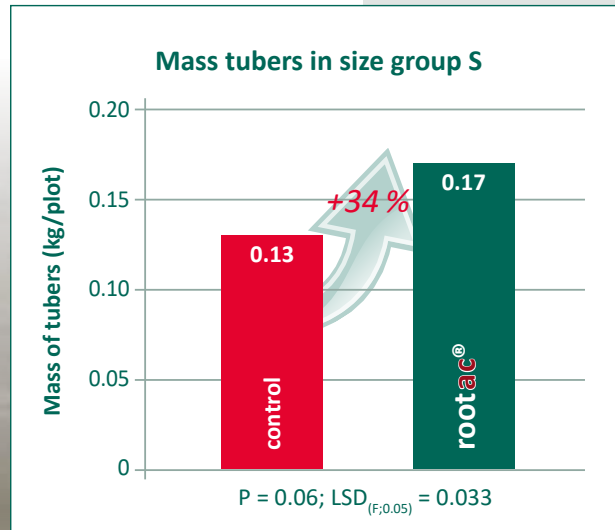


Results

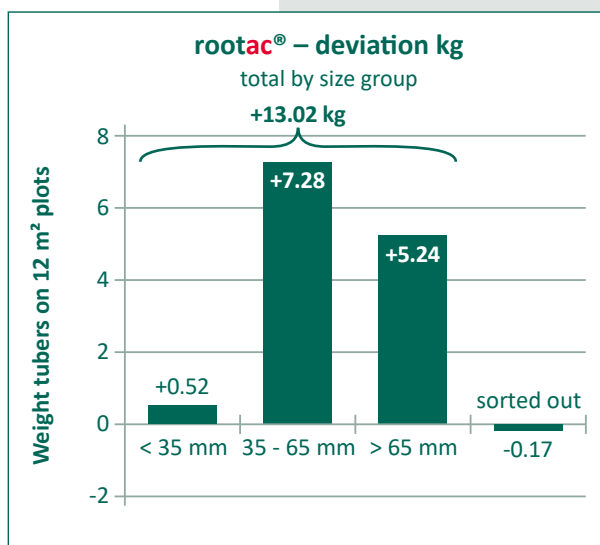
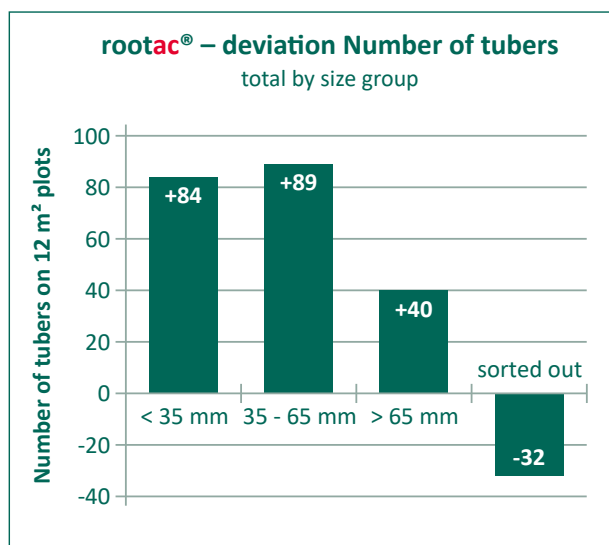
The number of tubers per plot where the plant was treated with **rootac**® was greater on average in all three classes.



The same applies to the mass (kg):



Overall (all plots added together), the distribution was as follows:



This results in an additional weight of 13 kg on the **rootac®** plots (12 m² in total).

This combined view of the results shows that in all saleable size groups both the number and the weight were increased by **rootac®**. Only in the group of out-sorted potatoes, both decreased. In this case, however, this is to be evaluated positively.

In total, about 13 kg more potatoes were harvested on the 12 m² evaluated in this trial. Extrapolated to one hectare (with 1/3 deduction for row spacing) the yield increased by about 8.58 dt/ha* due to **rootac®**. The costs for **rootac®** with 2 applications amount to 20.60 €/ha. With an average yield of 350 dt/ha for conventional and 220 dt/ha for organic, the return on investment is as follows:

	additional yield	producer price per dt <small>(week 43, Land&Forst and real sale)</small>	costs for rootac® treatment (per ha)	additional revenue through rootac® (per ha)	ROI (per ha)
industry potatoes	8.58 dt/ha	3.50 €	20.60 €	30.03 €	1:1.5
table potatoes	8.58 dt/ha	11.00 €	20.60 €	94.38 €	1:4.6
organic table potatoes	8.58 dt/ha	35.00 €	20.60 €	300.30 €	1:14.6

The costs for **rootac®** are in any case covered by the additional yield, even at low producer prices.

*The values listed are calculated values based on the experiment and not real numbers



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