



inspired by nature

for the natural stimulation of plant growth

rootac[®] – science and practical application

Winter wheat field report

An agricultural cooperative from Thuringia used **rootac[®]** on a winter wheat subplot in 2018. On a wheat field of 48 ha in total, the farm planted 4 trial strips with a total area of 6.8 ha. **rootac[®]** was applied 2 times at intervals of 6 weeks. The first time together with a growth regulator, the second time together with a fungicide. All other measures corresponded to the control plot.

The person responsible for crop production reports that the **rootac[®]** trial areas looked visually greener and fresher. This remained the case even as the water shortage progressed in the drought summer of 2018. Harvesting with a combine harvester with yield mapping revealed that the stand on the trial plot was more uniform and also had less yield variation. The yield on the trial plot was 83.27 dt/ha, 10 % higher than that of the control plot at 75.7 dt/ha. Differences in wheat quality were not investigated.

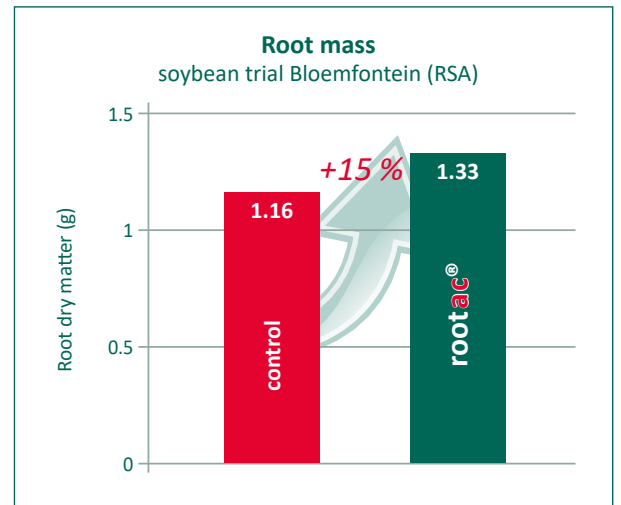
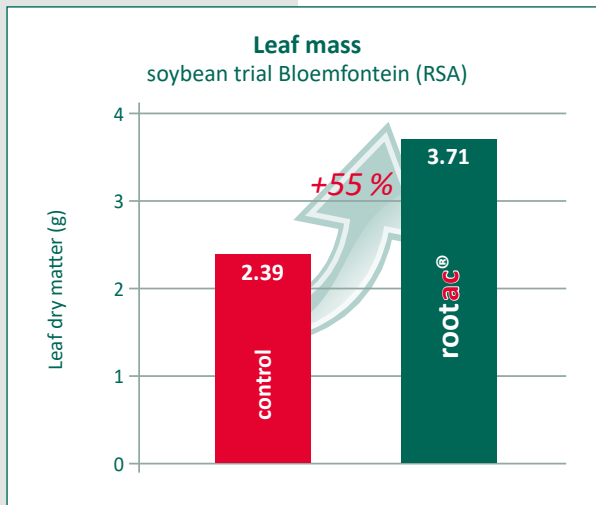
Based on the positive experience, the farm plans to test **rootac[®]** on further areas. Already in winter barley, **rootac[®]** was applied together with the first herbicide application in autumn 2018. Further **rootac[®]** applications are planned in rape, durum wheat and spring barley.





Leaf and root mass

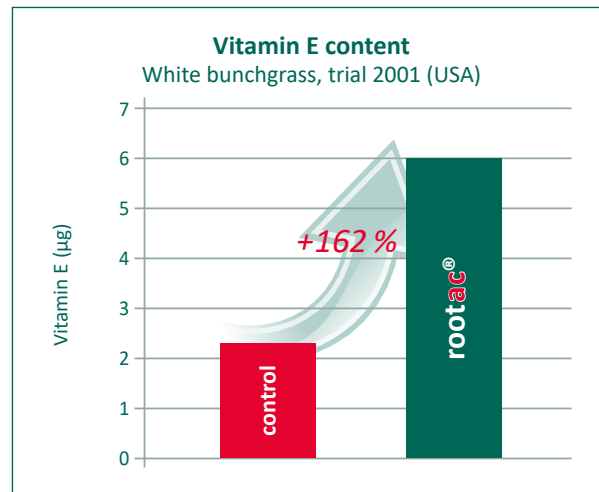
The use of **rootac**® in soybeans led to a significant increase in plant and root mass.



Stress 1 – vitamin E content

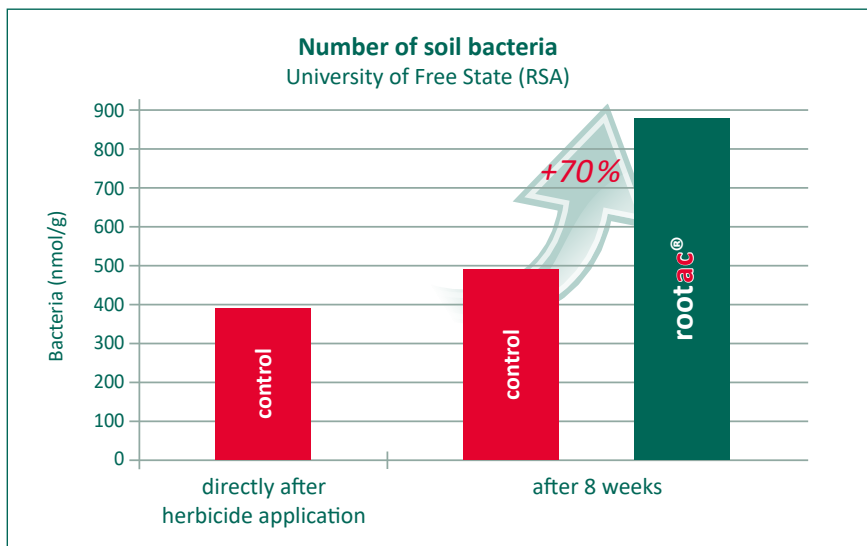
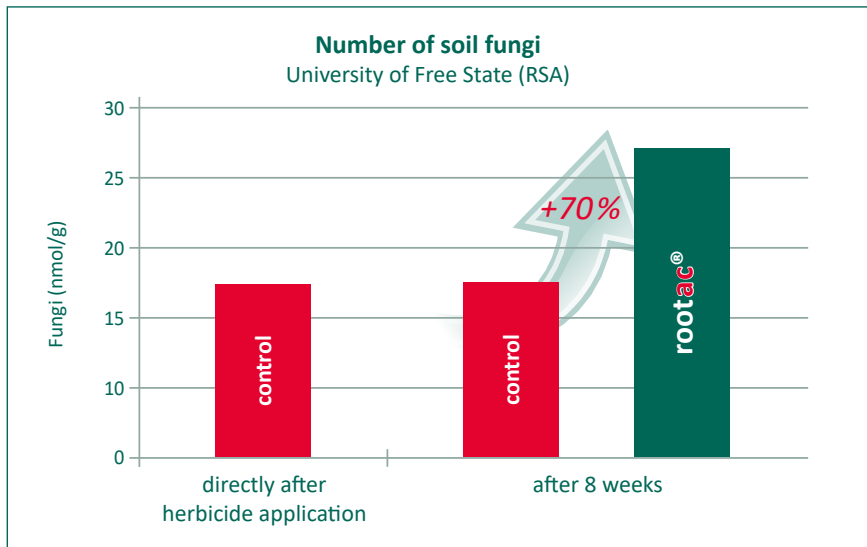
Stress creates free radicals in the cells. Vitamin E is consumed for “catching” the radicals.

If there is more vitamin E in the plant, there were fewer radicals, i. e. the plant easier endured the stress.



Stress 2 – effect in the soil after herbicide application

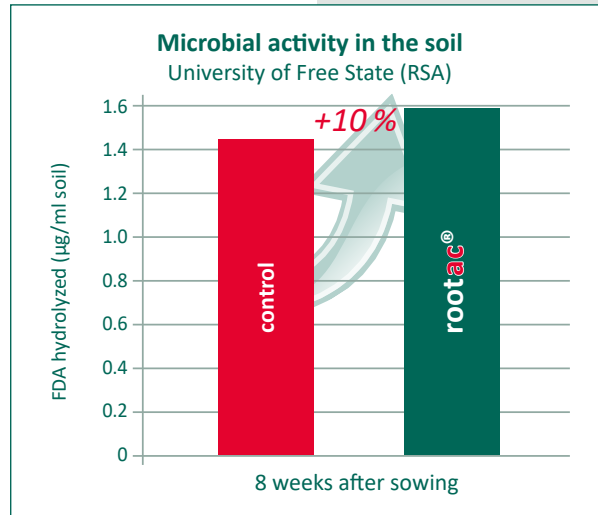
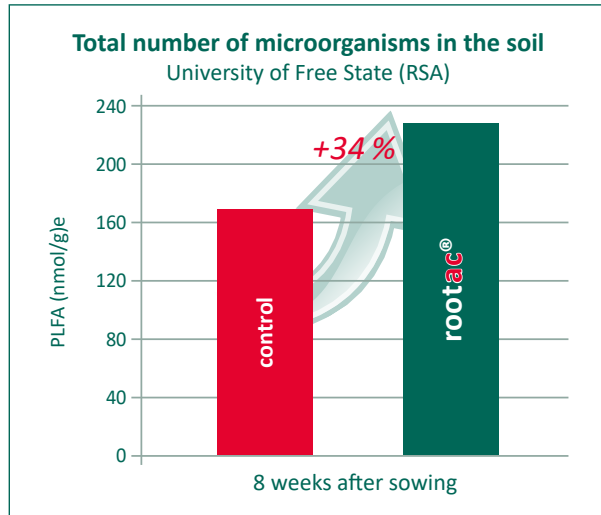
Both soil fungi and soil bacteria are 70 % higher 8 weeks after a herbicide application (= stress for the plant) with **rootac**[®] compared to the control.



Soil microorganisms after sowing

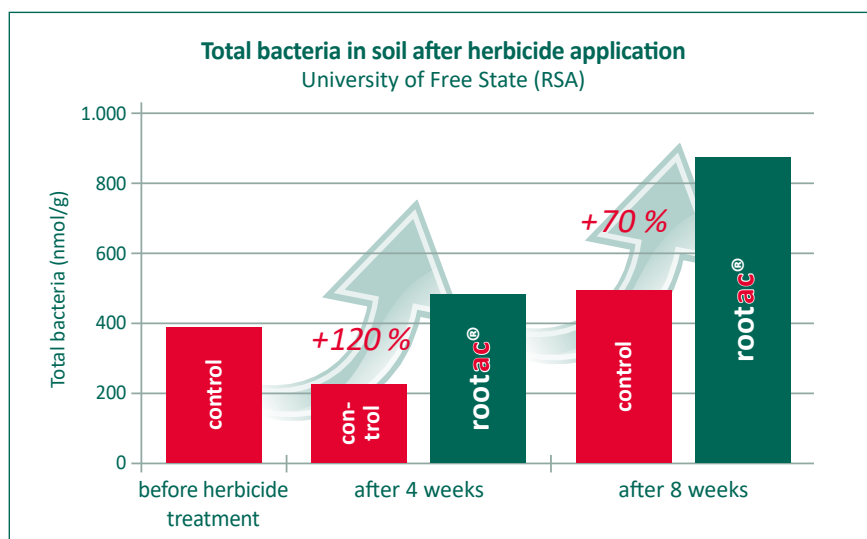
In this trial **rootac**[®] was added to the irrigation. After 8 weeks, the number of soil bacteria and their microbial activity were examined. The greater the activity of the soil bacteria, the better/intensively the plant can be supplied with nutrients.

Good soil health has a positive effect not only on the current crop, but also on the following crop!



Soil microorganisms after herbicide application

In a herbicide treatment, the influence of **rootac**[®] on soil bacteria was investigated after 4 and 8 weeks. 24 hours after sowing, "Wenner 700 S EC" (acetochlor 700 g/l, Dow Agrosiences) was sprayed in pre-emergence. 48 hours after sowing, **rootac**[®] was applied with irrigation (50,000 l/ha).



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