

PROTINUS

SEED NUTRITION PRODUCT

Because a healthy start can make a world of difference™

PROTINUS Treated Corn Seed Demonstrates Drought Tolerance

Wolf Trax® trials have shown remarkable results with the innovative PROTINUS™ Seed Nutrition Product on corn seed stressed by drought. Root length, projected root area, shoot weight and fresh weight of the plants were all significantly increased. Early nutrition and plant health, such as early emergence and greater root and shoot mass, contribute to optimal plant performance throughout the season.

PROTINUS is a scientifically formulated seed nutrition product that works with the seed to enhance the natural processes of nutrient uptake, promoting early plant health and nutrition. In addition, it is formulated with three key micronutrients: zinc, manganese and iron to deliver immediate micronutrient nutrition to the plant upon germination.

Wolf Trax recently completed a research trial on the effects of PROTINUS when used as a seed treatment on corn placed under drought conditions. Parameters measured were root fresh weight, shoot fresh weight, total plant fresh weight, root length and root projected area.

The Study:

Corn seed was treated with Apronmaxx® RTA® and then PROTINUS was applied tacky at a rate of 6 oz per 100 lbs of seed, and grown out in a growth chamber in a low nutrient, high pH light soil mix. The untreated check was treated with Apronmaxx® RTA® and seeded.

The corn was watered to the two-leaf stage and then allowed to dry past the wilt point. Data was collected at 7 days after emergence.

Results:

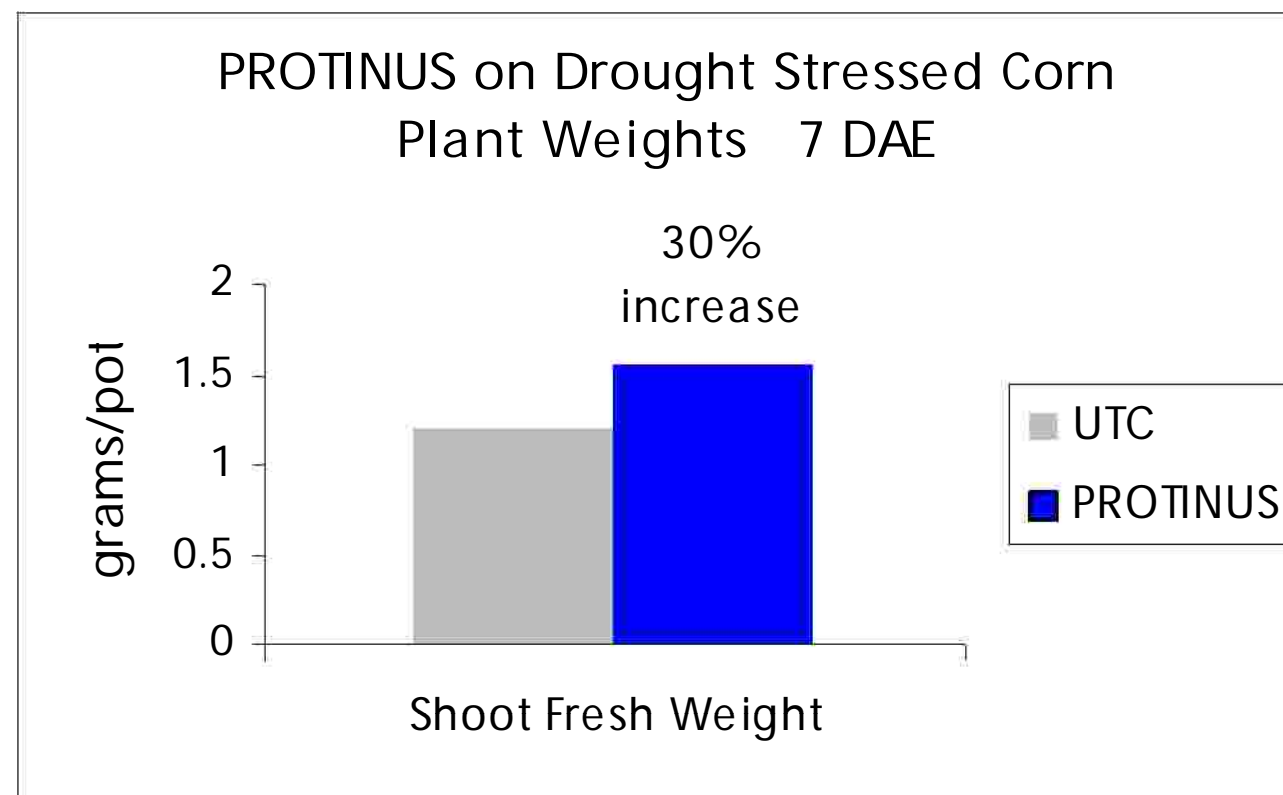
The early plant health benefit of PROTINUS treatment on drought stressed corn is evident. The corn plants were much larger above and below ground.

- There was a visible difference between PROTINUS treated plants at seven days after emergence versus the untreated check (see image on next page).
- Total fresh weight and shoot fresh weight were significantly higher ($p < 0.05$) in the PROTINUS treated plants, with a slight increase in the root fresh weight.
- In addition, root length and projected root area were significantly ($p < 0.05$) enhanced in the PROTINUS treated plants.

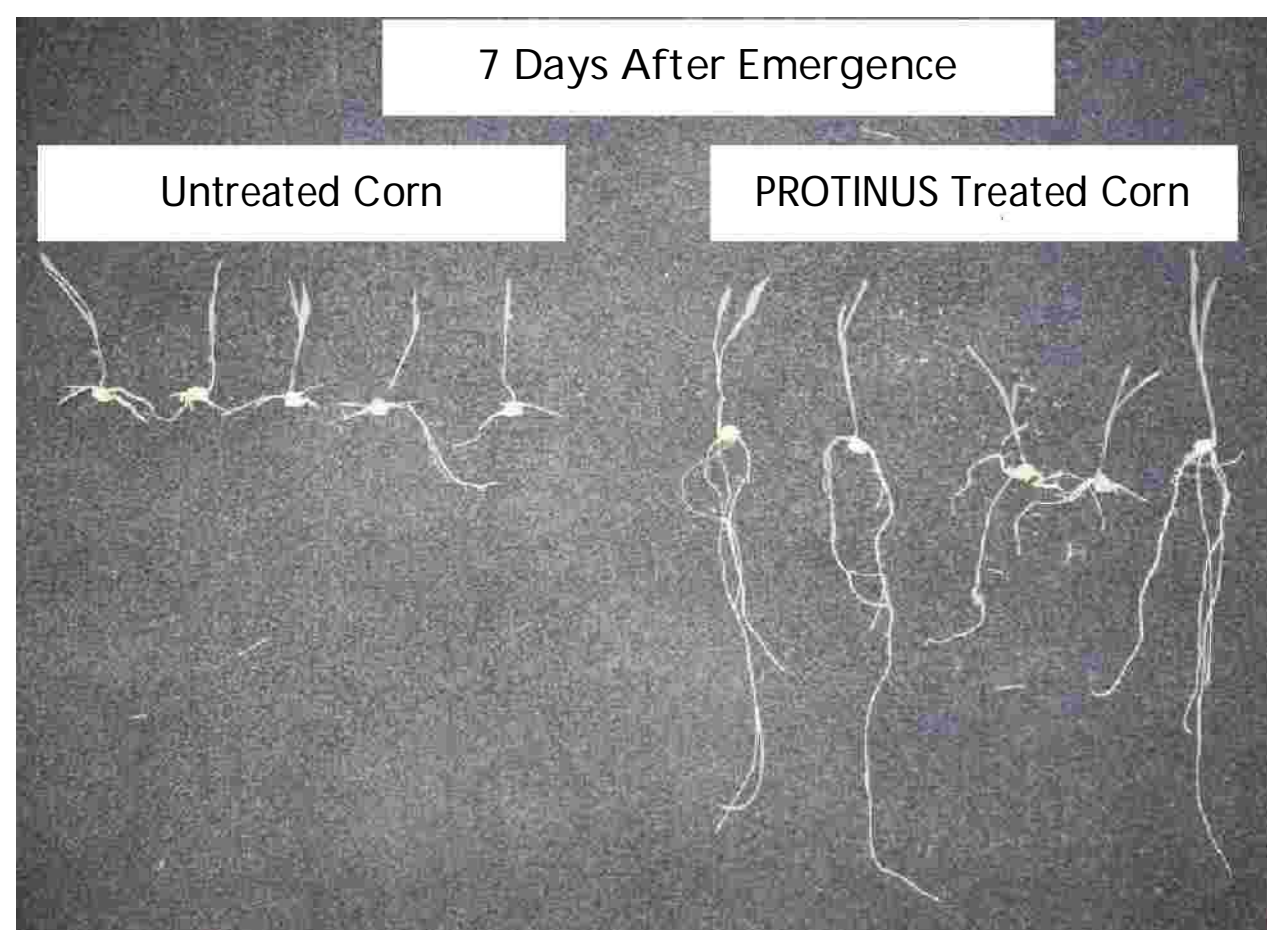


The early plant health benefit when PROTINUS is treated onto corn seed under drought stress is evident.

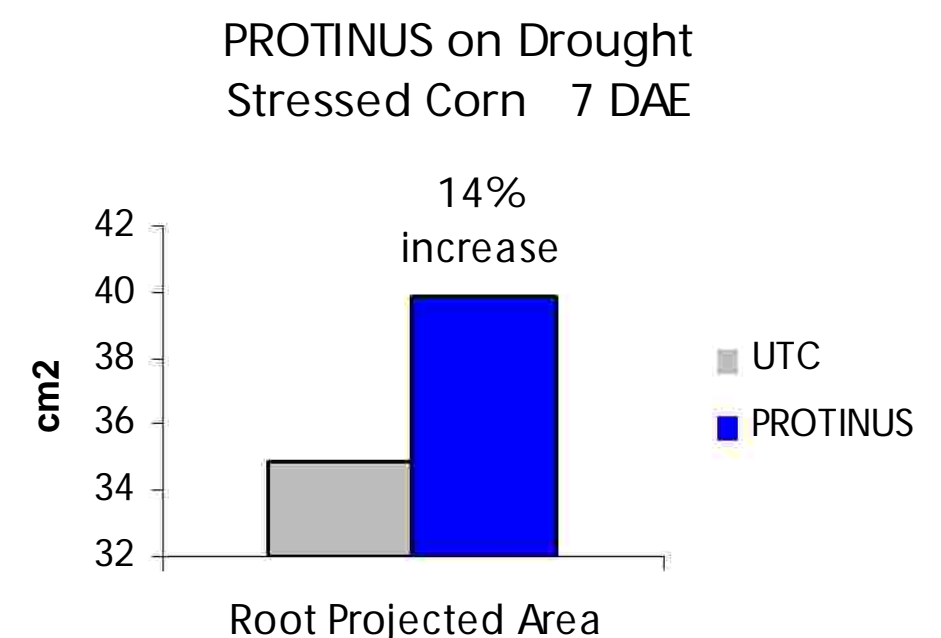
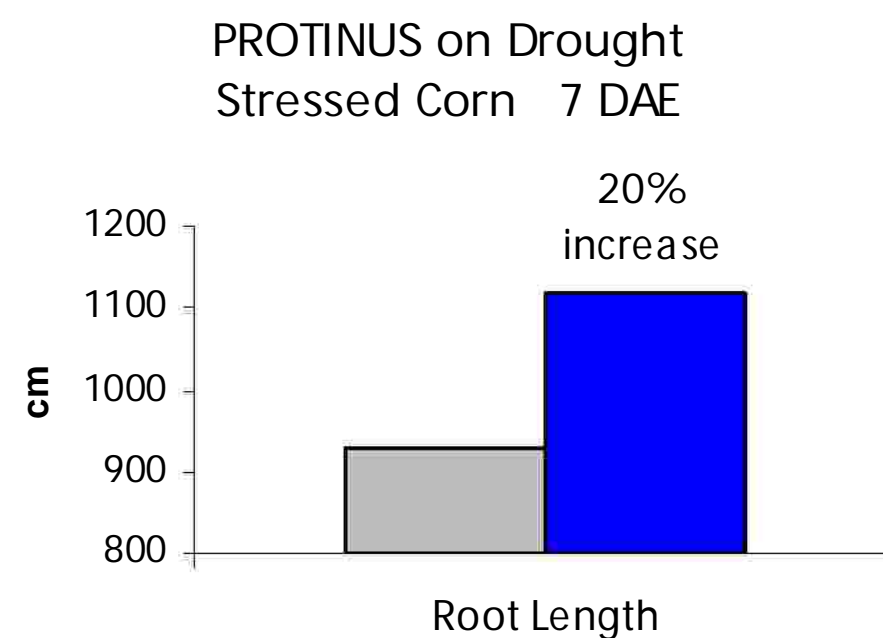
PROTINUS appears to enhance the plants' ability to withstand the drought stress.



PROTINUS increased shoot fresh weight by 30% (statistically significant at $p < 0.05$).



PROTINUS treated plants on the right showed significantly more root development at 7 days after emergence than the untreated plants on the left.



Root length and projected root area were significantly enhanced in the PROTINUS treated plants versus the untreated check. (statistically significant at $p < 0.05$)

Summary:

Getting plants off to an early, healthy start is critical to ensure the plant is able to reach its full genetic potential. This trial indicates that PROTINUS enhances the plants ability to withstand drought stress early in the crops life.

For more information about PROTINUS, please call 204 237-9653, or visit our website www.protinus.org.



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