



Why Some Fungi are a Root's Best Friend

Tubers and bulbs rely heavily on their root systems (rhizome), more so than other plants, because they grow underground. Therefore, it is extremely important for root vegetables to have healthy and strong rhizomes. Some tubers and bulbs, such as carrots, onions and garlic, require mycorrhizae to grow optimally⁽¹⁾. Mycorrhiza is a symbiotic relationship between fungi and roots. The microscopic fungi latch onto the roots and effectively extend them, allowing them to access nutrients and water that are otherwise unavailable to plants. For many tubers and bulbs, the presence of a robust mycorrhizal network indicates a healthy root system and, in turn, a more prosperous crop.

Groundwork BioAg has developed a line of mycorrhizal inoculants called Rootella® that offers numerous benefits to tuber and bulb growers, such as:

- Yield increase
- Resilience to stress, such as flooding and drought
- Fertilizer savings, notably phosphorus
- Eco-friendly, suitable for use in organic farming

Rootella® Application on Tubers and Bulbs

Rootella® P (powder) and Rootella® F (fine powder) are the most appropriate products for tubers and bulbs. Rootella® P may be applied as a dust or as a dry in-furrow application. Rootella® F can be suspended in water and sprayed on tubers or bulbs or applied as a wet in-furrow application.



⁽¹⁾ Baum, C., El-Tohamy, W., & Gruda, N. (2015). Increasing the productivity and product quality of vegetable crops using arbuscular mycorrhizal fungi: a review. *Scientia Horticulturae*, 187, 131-141. <http://groundworkbioag.com/wp-content/uploads/2015/07/Rootella-Applicable-Crops.pdf>



Rootella™ Results with Tubers and Bulbs

Groundwork BioAg has conducted numerous successful trials around the world on various tuber and bulb crops. Following are some notable results:

Onions

■ Over three seasons, Kibbutz Kalia in Israel have been treating onion sets with Rootella® P with positive results. In the second season, for instance, Mata Hari variety onions boasted an average 35.3% yield increase in comparison to untreated controls, and there was a 9% increase with the Vulcan variety.

Carrots

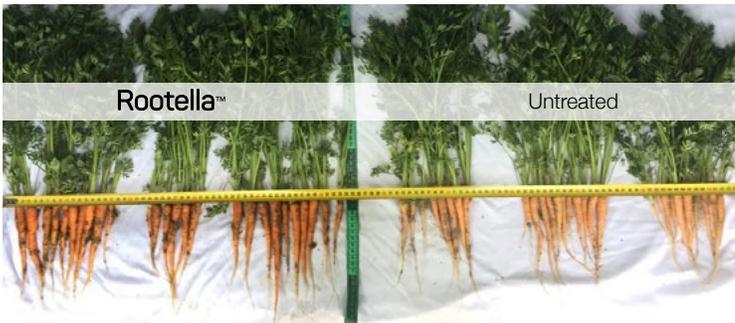
■ Rootella®-treated carrots in-furrow at Nir Yitzchak, Israel, showed an average yield increase of 10.9% compared with untreated carrots.

■ Rootella® also bore successful results in Kibbutz Bee'ri, Israel, where a replicated plot trial showed a 16% yield increase.

Potatoes

■ A potato trial conducted by REDEBEL in Belgium on Bintje variety potatoes treated with Rootella® in-furrow, showed a 7% increase in yield over the untreated potatoes (statistically significant).

■ A semi-commercial trial at Yacham Farms, Israel, showed an 8% yield increase using Rootella® P on Mozart variety potatoes.



Above: Rootella®-treated organic carrots in Kibbutz Sa'ad, Israel, show less variability in carrot size and more developed foliage than untreated control.

Right: Rootella® P-dusted Kennebec variety potatoes at Ivy Tech College in Columbus, IN, USA, yielded 100 pounds, whereby untreated potatoes weighed 47 pounds.



To find out which Rootella® product is right for your farm please contact us.



Groundwork BioAg, Ltd.
27 Hashahar St., Moshav Mazor 7316000, Israel
+972-77-502-0806 | +1-888-964-0685 (US)
info@rootella.com

GW180201 09/19

