

# RIZOCYN

## Safe transport from the nursery to the field

The root system is responsible for some of the most important functions of the plants, such as the support of the development of the shoot, the absorption of water and nutrients by the soil and their transport in the upper part of the plant. Plant vigour, resistance of plants against adverse environmental conditions and pests and high yield of crops all require the existence of a large and healthy root system. Plants with robust root system utilize more efficiently water and nutrients, overcome more quickly transplant shock and achieve a safe and immediate establishment in the soil.



**RIZOCYN** is a natural biostimulant, special for the rapid growth of a voluminous and robust root system of plants cultivated in the greenhouse or in the open field. It is composed of 100% natural organic ingredients and benefits not only the plants but their whole ecosystem creating optimum conditions for the growth of strong and high yield crops. It contains natural growth factors (cytokinins, auxins, gibberellins), vitamins (including C and riboflavin-B2), L-amino acids, carbohydrates (monosaccharides and polysaccharides), humic and fulvic acids and micronutrients (Fe, Mn, Cu, Mg, Zn, Ca, B, S).



### BENEFITS

- Promotes the growth of the root in all types of seedlings.
- Assists in overcoming the transplant shock and also ensures a quick and safe establishment in the soil for all transplanting plants.
- Assists with the penetration of the roots even in concrete soils.
- Increases the cell divisions of the root.
- Fortifies the seed germination.
- Contributes to the creation of highly productive plants with increased resistance to diseases.
- Improves the structure of the soil and supplements its organic matter which is consumed due to intensive cropping.
- Increases the cation exchange capacity of the roots.
- Contributes to the better aeration of the root.
- Increases the population of the beneficial soil microorganisms.

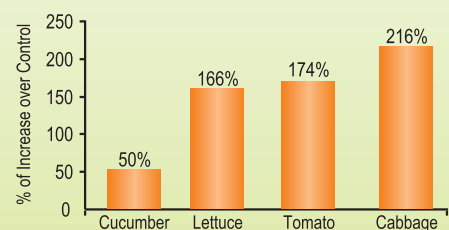
Nursery grown seedlings need a really good start in order to be properly developed. The application of **RIZOCYN** in the nursery results in plantlets developing a vigorous root system capable of producing healthy, highly productive plants with enhanced resistance to the various adverse conditions which they may encounter (transplanting, shipping). Furthermore, **RIZOCYN** increases the reproduction rate of the plant cells and as a result seedlings are ready for transplanting in a much shorter period of time. In this way the production capacity of the nurseries is increased and so is the income of the nursery producer.

One of the most critical stages of the crop is the transplanting of the plants from the nursery to the field and their establishment there. In this stage plants are subjected to an intense stress known as transplant shock, which may cause growth delay, infections by pathogens and losses of plants. **RIZOCYN** is the ally of the growers in the transplanting stage and ensures the quick establishment of the plants in the soil, the reduction of time which is needed for the adjustment of the crops in the soil, the decrease of the infection rate of plants by pathogens and last the minimization of the losses during transplanting. In addition, the use of **RIZOCYN** offers plants the energy they need in order to overcome the unfavourable environmental conditions (frost, heat, drought) that they may encounter through their period of growth leading to successful and highly productive crops with high yields for the growers.

### TRIAL RESULTS

From trials conducted by the Agricultural University of Athens in 2005 in the Research Center of NAGREF in Agrinion on cooperation with the Laboratory of Agronomy of the Agricultural University of Athens on vegetable seedlings grown with the use of float system, it was indicated that the use of **RIZOCYN** increases significantly the length and weight of the root system. In addition the application of **RIZOCYN** increased the weight of the upper part of the plant and the leaf surface area. Furthermore, seedlings treated with **RIZOCYN** reached transplanting stage much sooner compared to plants treated with chemical fertilizer.

Increase of the length of the root system

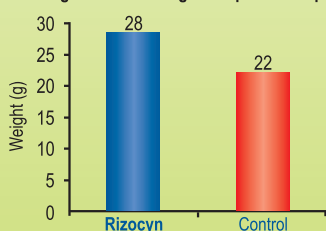


The application of Rizocyn increased significantly the length of the root system in all the crops of the trial.



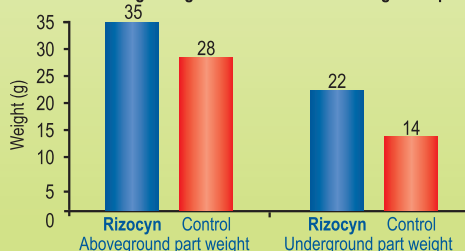
Lettuce seedlings

Weight of the aboveground part of the plants



The application of Rizocyn in lettuce increased the weight of the underground part by 27%

Average Weight of the under and aboveground part



The application of Rizocyn in cucumber increased the weight of the aboveground part by 25% and the underground part by 57%



Cucumber seedlings

Produced by



	CROP	APPLICATION RATE	APPLICATION-RESULTS OF APPLICATION
TOMATO		Nursery: 1-2 l/1,000 l of water Open field: 10 l/ha Greenhouse: 20 l/ha	Apply in the nursery, at transplanting and 10 days later. <i>Rizocyn in tomatoes creates plants with vigorous root system which contributes significantly to the increase of the resistance of plants against transplant shock which is translated into early production of higher yield.</i>
CUCUMBER		Nursery: 1-2 l/1,000 l of water Open field: 10 l/ha Greenhouse: 20 l/ha	Apply in the nursery, at transplanting and 10 days later. <i>Cucumbers are plants extremely susceptible to transplanting stress. Rizocyn fortifies the toughness of cucumbers against transplant shock and minimizes its negative impacts on young plants.</i>
PEPPER-EGGPLANT		Nursery: 1-2 l/1,000 l of water Open field: 10 l/ha Greenhouse: 20 l/ha	Apply in the nursery, at transplanting and 7-15 days later. <i>The application of Rizocyn in peppers and eggplants contributes to the development of a healthy root system which allows the immediate and safe establishment of the plants in the field making high yield more likely to happen.</i>
ZUCCHINI		Nursery: 1-2 l/1,000 l of water Open field: 10 l/ha Greenhouse: 20 l/ha	Apply in the nursery, at transplanting and 7-10 days later. <i>Zucchini are often affected by fusarium wilt which causes significant economic losses to the grower. Rizocyn creates a robust root system which is more capable of surviving the pathogen infections.</i>
OTHER VEGETABLES		Nursery: 1-2 l/1,000 l of water 10 l per ha or 0.25-0.5 ml per plant	In transplanting crops apply in the nursery and at transplanting, in the rest of the crops apply right after the emergence of the plants. <i>The application of Rizocyn in vegetables creates plants with voluminous root system which can survive the stress caused by transplanting, environmental conditions and various pests.</i>
POTATO		Nursery: 1-2 l/1,000 l of water Dipping: 250 ml per 100 l of water 2 <sup>nd</sup> application: 10-20 l per ha	Apply prior to sowing by dipping the potato seed and through fertigation right after planting. <i>The use of Rizocyn in potatoes maximizes the yield by increasing the number of the tubers per plant and their size.</i>
STRAWBERRY		Nursery: 1-2 l/1,000 l of water 20 l per ha	Apply at transplanting or at latency break and 1 week later. <i>Strawberries are being subjected to extreme environmental conditions due to their period of planting. Rizocyn reduces the negative impacts from these stressful conditions and in the same time enhances the productivity of the plants.</i>
WATERMELON		Nursery: 1-2 l/1,000 l of water Open field: 1-2.5 l/ha Greenhouse: 2.5-5 l/ha	Apply in the nursery and at transplanting. <i>Watermelons are usually planted early and as a consequence they are exposed to extreme weather phenomena such as hail and very low temperatures. Rizocyn maximizes the resistance of the plants against these phenomena and reduces the losses of plants.</i>
MELON		Nursery: 1-2 l/1,000 l of water Open field: 2.5-5 l/ha Greenhouse: 5-10 l/ha	Apply in the nursery and at transplanting. <i>The application of Rizocyn in melons creates a vigorous root system which supports highly productive plants that produce high yield crops.</i>
VINEYARD		Nursery: 1-2 l/1,000 l of water Dipping: 250 ml per 100 l of water 2 <sup>nd</sup> application: 10-20 l per ha	Apply in the nursery, at planting of the cuttings through dipping of the roots or through fertigation after planting. <i>Rizocyn in contrast to chemical rooting products is an organic product that does not create residues and has the same or even higher efficiency than chemical IBA and NAA.</i>
CITRUS		Nursery: 1-2 l/1,000 l of water Dipping: 250 ml per 100 l of water 2 <sup>nd</sup> application: 10-20 l per ha	Apply during the planting of the tree seedlings by dipping the roots or after planting through fertigation. Additional application: when there are very low temperatures. <i>The treated with Rizocyn young citrus trees have more robust root system and more chances to bloom.</i>
OLIVE		Nursery: 1-2 l/1,000 l of water Dipping: 250 ml per 100 l of water 2 <sup>nd</sup> application: 10-20 l per ha	Apply during the planting of the tree seedlings by dipping the roots or after planting through fertigation. Additional application: when the temperature is very low. <i>Rizocyn assists olive trees to develop a vigorous root system in a very short time and to have a greater resistance against environmental stress.</i>
OTHER TREES		Nursery: 1-2 l/1,000 l of water Dipping: 250 ml per 100 l of water 2 <sup>nd</sup> application: 10-20 l per ha	Apply during the planting of the tree seedlings by dipping the roots or after planting through fertigation. Additional application: when the temperature is very low. <i>During the transplanting of tree seedlings many scars are formed in the roots of the trees. Rizocyn assists in the rapid healing of these scars and in the reduction of the time between planting and first fruit bearing.</i>