

TARAVA SUPER ABSORBENT

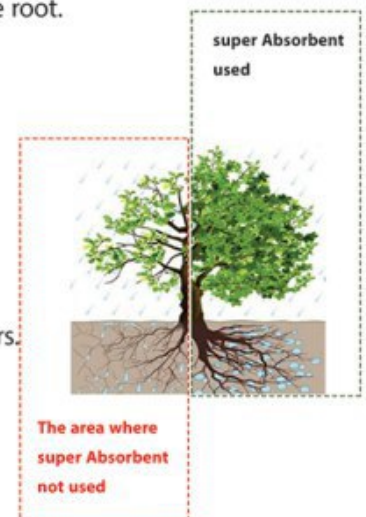
Introduction: Superabsorbent polymers with the presence of their cross-linked are able to absorb and retain extremely large amounts of water relative to their weight. The use of this material causes to avoid wasting water dramatically as well as preserve water in the soil for a long time without any re-irrigation. Due to production process technology and also Nano-particles used in their structure, this Tarava Super Absorbent has more high quality and property compared with other similar materials. These properties cause to absorb water better and also increase productivity of agricultural products efficiently.



- Tarava-200
- Tarava-220
- Tarava-300
- Tarava-330

The advantages of applying Tarava super Absorbent

- Water storage capability in soil and diminishing water-consumption up to 50%-70%.
- Increasing productivity till 10%-30% because of retaining water and fertilizer close to the root.
- Avoid wasting of ground-water resources.
- Protecting the environment against drought.
- Prevent evaporation of water inside soil, especially during summer season.
- Increasing air flow inside the soil and improving soil properties.
- Rapid growth and increasing of plant life.
- Decreasing the required fertilizer consumption for plants. Its Life span is between 5-7 years.



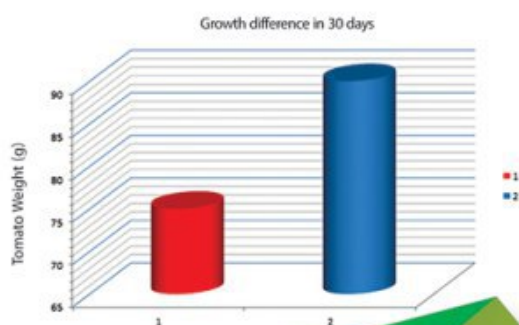
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The Specification Table of Super Absorbent

| Item | Specifications | Tarava-200 | Tarava-220 | Tarava-300 | Tarava-330 |
|------|--|--------------|---------------------|--------------|---------------------|
| 1 | Appearance | White Powder | White Micro granule | White Powder | White Micro granule |
| 2 | Mass density(g/lit) | 0.85 | 0.8 | 0.85 | 0.8 |
| 3 | PH | 7-8 | 7-8 | 7-8 | 7-8 |
| 4 | Humidity amount | Less than 8% | Less than 8% | Less than 8% | Less than 8% |
| 5 | Total monomer remaining (ppm) | < 400 | < 400 | < 150 | < 150 |
| 6 | Environmental compatibility | compatible | compatible | compatible | compatible |
| 7 | Maximum stability in soil content(Year) | 5-7 | 5-7 | 5-7 | 5-7 |
| 8 | Particle size (Micron) | 200-800 | 1000-2000 | 200-800 | 1000-2000 |
| 9 | Free absorption rate of water without ion (g/g) | 500 | 470 | 370 | 350 |
| 10 | Absorption rate under water load without ion (g/g) | 190 | 170 | 140 | 120 |
| 11 | Average water absorption time (minute) | 10 | 15 | 12 | 16 |



Tarava impact on product result

To determine the effect of using Tarava, it was planted the tomato bushes in two pots with the identical conditions. We used Tarava super absorbent for only one of these pots. After one month, we could observe the Tarava impact so that the tomato weight in the pot with Tarava was 20% more than the same in the pot without Tarava

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Tarava Super Absorbent Application



For Fruit Trees

Perhaps we can say that the most important application of Tarava Super Absorbent is in gardens with fruit trees. It is very significant to use this product for diminishing water-consumption, increasing product amount, more rapid growth and increasing life span of a tree in a way this product is being used for fruit trees in the developed countries.



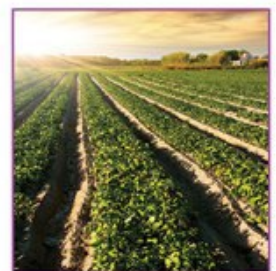
For Vegetables and Crops

It is very common to use Tarava Super Absorbent for planting vegetables and crops. It is very important reason to use it why not only decreases water-consumption but also causes to increase the product amounts impressively. The usage rate and also increasing productivity depend on the type of product and it should be consulted by our company advisers.



For Dry Farming

The lack of irrigation control is one of the dry farming dilemmas which it will double up farming in slopping filed. When Tarava Super Absorbent is used in dry farming, the water of rain will accumulate and causes to provide water for soil and product during the shortage of raining.



For Non-productive Trees

In order to increase the irrigation period, we prominently use Tarava Super Absorbent for non-productive trees. This capability is very precious for the trees which are far from irrigating and are not possible to irrigate simply.



For Green Spaces, Lawns, Golf Courses

There are myriads of green spaces and lawns in modern urban areas which it is generally necessary to irrigate them in short period. Due to the dilemma of water shortage in our country, it is very essential to use a method that decrease the water-consumption in this regard. Using of this polymer causes to reduce impressively water-consumption for green spaces, especially lawns.



For Moving Seedling

The super absorbent is also used for moving seedling. For this aim, it is covered the seedling root by this polymer through different methods and then moved to another place. It can be moved at least 2000 treasury seedling with 1 kg amount of Tarava powder,



For Hydroponics

In this method, it is added 3-5 gr. of Tarava to 1 ltr. of Planting bed which is mixed with Perlite, Coco peat, Peat moss such a way that Tarava is attached to the lower substrate and covered it with the above mentioned materials in minimum 5 cm.



The effective parameters in the amount and method of Tarava Polymer use

- ▶ Agricultural Type (Tree, seed,...)
- ▶ farming Type (drying, irrigating,...)
- ▶ How to use Polymer (injection or consumption)
- ▶ Soil components (clay, sand ,
- ▶ Tree or plant age



How to use Tarava Super Absorbent

There are two methods to use the super absorbent: Dry and Hydrogel.

Instructions to the dry powder

Surface Diffusion Method

The super absorbent can be distributed on the soil surface or mixed with mineral and organic fertilizers. After distributing, they will be sent to the soil depth (in minimum 5 centimeters) by plowing tools. After mixing process, the irrigation will be done extensively which should take several hours until saturates the soil. Tarava particles will absorb the water after one day and are ready to act physically and chemically.

Planting-hole Method

In this method, it is taken the soil around the plant root and mixed with the recommended Tarava amount well and then poured around new seedling root. Also, the 5 centimeters of hole surface will be filled with the pure soil (without super absorbent).

Usage Method with Revita Machine

Revita injection nozzle is a new machine which can connect to a compressor in order to inject Tarava dry granule around the tree root area. This device injects Tarava powder to the desired depth of soil (between 20 – 120 cm) via air pressure and set the powder close to the root without any root damage.

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Instructions to the Hydrogel method

Hydrogel means mixing super absorbent powder with water. There are several providing steps: pour some water in a big vessel such as a barrel and add some required Tarava powder gradually and stir frequently. Then leave behind the mixture about 15-30 min. The Tarava gel will be ready during this time. This method will be used in dry and semi-dry areas because they have more advantages rather than other methods.

Planting-hole Method

In this method, it is taken the soil around the plant root and mixed with the suitable Tarava gel amount well and then this mixture of soil and hydrogel will be poured around new seedling root in the hole. The 5 centimeters of hole surface will be filled with the pure soil (without Tarava) and then is done the first irrigation.



Tarava Hydrogel Injection Method with Biolift Machine

Biolift is a machine which can inject liquids and hydrogel around the tree root area. This device with air pressure set Hydrogel to the desired depth of soil (between 20 – 100 cm) close to the root without any root damage which causes to increase air circulation inside soil and around the root.



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