The Groasis waterboxx- using natural principles

- Capillary: in each soil is capillary water. As soon as the sun shines on the soil, the capillary dries up. The *Groasis* waterboxxprevents this. Do a test at home in your garden: lift a stone during the hottest days and look at the difference between the soil besides the stone and under the stone. Under the stone the soil is wet.
- Rain: almost every place on Earth has rain. Even in the middle of the Sahara it is 50 mm per year. That is 50 litre per m2. In most of the so called deserts or savannahs it is around 250 mm. That is 250 litre per m2. The problem of this rain is that it falls in 2 days and it evaporates within a week. So the problem is not a lack of water but the capture and distribution of the water over a year period. The *Groasis* waterboxxcaptures this rainwater and distributes it via an ingenious standalone system over the year period to the tree.
- Condensation: everywhere in the world where there is a minimum of relative humidity and surfaces are able to get colder than the air temperature, there is condensation. Two examples: 1) if you are cooking in winter and the warm air of your room touches the cold glass of the windows they will be wet. In Summer this phenomenon does not happen. 2) if you walk with glasses from the outside where it is cold into a warm place, your glasses will be covered with condensation. This is the phenomenon that the *Groasis* waterboxxuses: during the night the temperature of the surface is able to drop lower than the surrounding air due to radiation. Due to the temperature difference between the surface of the *Groasis* waterboxxand the air, the air is locally cooled down below its dew point. Now the air condensates at the surface of the *Groasis* waterboxxand it gets wet. Because of its design which stimulates the production and collection of the condensation, the *Groasis* waterboxxproduces condensation daily. So the *Groasis* waterboxxdoes NOT only collects dew, but also enhances the generation of it. To conclude: the *Groasis* waterboxxproduces on an artificial basis condensation that develops against its cold surface. Dew is the condensation of air humidity that develops when warm air is crimping.
- Distribution: the produced and collected water is distributed in small daily dosages throughout the year or even for a longer period, to the plant.
- Avoid evaporation: the biggest loss of water is evaporation. That is why irrigation via tubes or sprinklers are so ineffective. The *Groasis* waterboxxcovers the place where the tree is planted. Therefore the capillary cannot evaporate and the distributed water neither. This means that the *Groasis* waterboxxstimulates a 100% effective use of the added water. Compare this to irrigation: only between 10 to 20% of the added water is really used, the rest evaporates.
- Use of capillary: in nature seed is spread by grazing animals and birds. The seeds are sown ON TOP OF the soil. This is not a coincidence! In nature coincidence does not exist, everything has its reason. The manure pastes the seed to the soil. In this way the capillary makes the seed humid, stimulating it to put a small root directly into the soil, giving it direct access to the available capillary humidity allowing it to further grow. The *Groasis* waterboxxcopies this process: it does not disturb the soil and therefore maintains the existing capillary structure of the soil. Without capillary the soil would dry out to dust and erode.
- Temperature balancing: the buffer of water in the *Groasis* waterboxxfunctions as an equalizer of the soil temperature. Avoiding extreme temperatures stimulates growth.