# Agriculture

More of what helps ...

Increase yields from 10%-30% + Increase water absorption in soil Increase bio-availability of water and nutrients to plants Increase oxygen concentration Improve soil pH Increase flow Increase weight and size of product Increase shelf life of produce Increase seed germination



Less of what hurts...

Reduce water use up to 30% Remove salinity in soil within the first year Prevent and remove scaling Reduce total dissolved solids Reduce fertiliser and pesticide needs Reduce disease in livestock and animal breeding Reduce disease in aquaculture industry Reduce electrical bills Reduce energy and wear on pumps that move the water



Why You Get the Benefits...

When applied to normal water, the magnetic field created by the H2O ENERGIZER restructures the water molecules into very small water molecule clusters, each made up of six symmetrically organized molecules. This hexagonal cluster is recognized by the cell as "bio-friendly" due to its hexagonal structure and inability to transport toxins, and easily enters the passageways in plant and animal cell membranes. The result provides maximum, healthy hydration with less water.

Aside from restructuring water molecules into "micro-clustered" water, a magnetic field also breaks down minerals into smaller particles, which makes them more bio-available to the plant cells, and the results are dramatic...

Maximum hydration of healthy water with a greater uptake of minerals results in: greater yields larger and better end product

earlier maturation longer shelf life healthier plants a reduction of the amount of water required fertiliser and pesticide use is reduced

Magnetic water can be used to increase crop yields, induce seed germination and benefit the health of livestock. It is believed that magnetic water used for irrigation can improve water productivity (Duarte Diaz et al., 1997), and has been shown to use 20% less water with the same results as non-treated water on turfgrass (Olds College for TurfGrass Management, Canada; MacKenzie, Johb, Plantje, 2014), thus conserving water supplies for the expected future global water scarcity.

Magnetically treated water also can increase the levels of CO2 and H+ in soils comparable to the addition of fertilisers. Cleaning agents have an increased effectiveness when combined with the power of magnetic water, and the amount of cleaner used can be reduced by one-third to one-fourth (Kronenberg, 1993).

#### Chuck Dees, S & S Produce, Mendota, CA

"In my thirty years of farming, I haven't seen corn like this. The crops are more vigorous and healthy and more productive than any in the past. We got 100 more boxes of corn per acre using the Omni Enviro system."



Magnetized water has been reported to triple seedling emergence of wheat (Hilal and Hilal, 2000). Reina et al. (2002) reported a significant increase in the rate of water absorption and an increase in total mass of lettuce when treated with magnetized water.

Chickpea plants irrigated with magnetized water grew taller and heavier than plants irrigated with tap water (Hozayn and Qados, 2010). The authors attribute this stimulation to an increase in photosynthetic

pigments, where the magnetic water induces cell metabolism and mitosis meristematic cells in pea, lentil and flax (Belyavskaya, 2001). Additionally, it is believed that new protein bands are formed in plants that are treated with magnetized water and that these proteins are responsible for increased growth (Hozayn and Qados, 2010). Magnetized water has been linked to increases in photosynthetic pigments, endogenous promotors, total phenol and protein biosynthesis in plants. (Qados and Hozayn, 2010 and Shabrangi and Majd, 2009).

Further reading: Magnetic treatment of irrigation water: Its effects on vegetable crop yield and water productivity.

### **Eliminate and Prevent Scaling**

Magnetic treatment of saline irrigation water can be used as an effective method for soil desalinization.



The application of a magnetic field on water decreases the hydration of salt ions and colloids, having a positive effect on salt solubility, accelerated coagulation and salt crystallization.

Field experiments showed that sandy loam soil pots irrigated with normal highly saline water of an electrical conductivity value of 8.2 mmohs/cm retained salts, compared to pots irrigated with magnetised saline water.

The study showed that magnetic water increased leaching of excess soluble salts, lowered soil alkalinity and dissolved slightly soluble salts (Hilal and Hilal, 2000).

Water becomes degassed in the process of being magnetised, which increases soil permeability, which leads to an increase in irrigation efficiency (Bogatin et al., 1999). In addition to soil permeability, magnetic water interacts with the structural calcium in cell membranes, making the cells more permeable. The reduced surface tension observed in magnetic water results in better infiltration of water and a reduction in water and chemical use. (Goldsworthy et al., 1999)

Since the magnetic structuring breaks all minerals into smaller particles, salt in the soil is broken down by the structured water, causing it to sink deep into the soil away from plant roots, and wash away. The desalinization happens quickly over a season, creating much healthier plants, greater yields and better final product. Since the hexagonal water molecule cluster won't allow the bonding of minerals to it, magnetically structured water removes scaling from pipes and won't allow new scaling to take effect.

The Omni Enviro H2O ENERGIZER is a simple flange containing powerful, specific inductance magnet tubes that restructure the water and minerals passing through them into a more fulfilling and productive bio-available form..



#### **Field Examples**

Omni Enviro Water Systems are adaptable to every irrigation system used on today's farms. Every farm is unique, so please consult with us on how to maximize your water productivity before installation.

Below you will find a few examples of the Agricultural H2O ENERGIZER in varying irrigation systems.

3" H2O ENERGIZER Ag System installed in sprinkler irrigation:



6" H2O ENERGIZER System installed in drip irrigation in pistachio field:



10" H2O ENERGIZER Ag System installed at pump after filtration:



24" H2O ENERGIZER Ag System installed in flood/ditch irrigation:



# Research



# Structured Water

Optimal healthy DNA is surrounded, and fully hydrated, by a matrix of water that is structurally different from tap water. Under high powered microscopes, the water, when frozen, forms six sided, hexagonal shaped, ring structures. These were determined to receive and transmit electromagnetic energy, that is, frequency vibrations that power every cell function and structure. Magnets affect the bonding angle between the hydrogen and the oxygen atom in the water molecule. Magnetized water causes the hydrogen-oxygen bond

angle within the water molecule to be reduced from 104 to 103 degrees. This in turn causes the water molecule to cluster together in groups of 6-7 rather than groupings of 10-12 and higher. The smaller cluster leads to better absorption of water across cell walls. Dr. Michael Lam, MD in his study on magnetized water, reports that there have been numerous reports from those drinking magnetized water on a daily basis of people being cured of many chronic degenerative disease such as renal stones and arthritis.

#### International Research

Omni Enviro Water System's technology has been accepted to the prestigious Elsevier International Peer Review based out of The Netherlands in 2009.

Magnetic Treatment of Irrigation Water: Evaluation of its Effects on Vegetable Crop Yield and Water Productivity.

#### Crops

Magnetic treatment of irrigation water: Its effects on vegetable crop yield and water productivity

Elsevier International Peer Review (Snow peas)

The Effect of Magnetic Water on Growth of Chick-Pea Seeds (Chick Peas) Crop Results Using Omni Enviro's Water Systems (2008) (Various crops) Germination of grass seeds subjected to stationary magnetic field Static Magnetic Field Influence on Elements Composition in Date Palm

#### **Fire Departments**

NSW Fire Department Marin County Fire Department

#### Animals

The Effects of Magnetically Treated Water on the Performance and Immune System of Broiler Chickens (poultry) The Effect of Magnetic Water on Poultry The effect of magnetic field on permeability of egg shells (fish) Effect of Magnetic Water on Male Rabbits

## Scale

Non-Chemical Technologies for Scale and Hardness Control Magnetic Treatment of Water Prevents Mineral Build-up Effects of magnetic field on calcium carbonate precipitation in static and dynamic fluid systems

# Physics/Science of Magnetism

Exposure of Irrigation and Drinking Water to a Magnetic Field with Controlled Power and Direction

Effects of magnetic field on the crystallization of CaCO3 using permanent magnets

# Articles

Magnetic Water Treatment Demystified The Science Behind Magnetic Water Conditioning Magnetic Treatment on Pool Water Blood Flow Effects in Magnetic Resonance Imaging