



NANO CATALYTICAL INSTANT WATER CONVERTER (NCIWC)

An environmental friendly water treatment solutions

AGRICULTURAL SECTOR

The **NCIWC** water systems make water more productive by increasing its bioavailability to plant cells. It delivers more oxygen and nutrients to the plant while reducing scaling, harmful salts. The increase in nutrient solubility creates healthier plants and greater yields. The NCIWC water systems produce more plant for less water—a powerful boost for more profitable farming through NCIWC.

The NCIWC breaks down minerals into smaller particles making them more bio-available to the plant cells. The bottom line results are dramatic: maximum hydration of healthy water with greater uptake of minerals results in greater yields, larger and better end product, earlier maturation, longer shelf life, and healthier plants. It allows a reduction of amount of water needed, as well as reduced fertilizer and pesticides.

Since the NCIWC 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. The desalinization happens quickly over a season, creating much healthier plants, greater yields, and better final product.

When hard water is sprayed on crops if that water contains calcium salts then as water evaporates so salts are left behind. In many cases calcium salts will be the main salts left around the roots of a plant. When fresh water is sprayed on the roots through the irrigation system that calcium residue left from previous sprayings acts as a barrier to water and health enhancing salts entering the plant and this restricts both the plants growth and also the crop yield.

NCIWC is a unique catalytic water treatment Technology – The NCIWC gives healthy plants better crop yields and can also lead to a lower water requirement to achieve the desired crop growth results.

Main Advantages in agriculture:

- Increases flow through all irrigation lines
- Increases water absorption and retention in soil
- Increases bioavailability of water and nutrients to plants
- Increases seed germination & Improves crop uniformity
- Increases oxygen concentration
- Improves soil conditions, Improves plant vigor and quality
- Increases yields minimum 50%
- Helps prevent hard water scale and corrosion
- Reduces friction in pumps and energy use
- Reduces water use 10%-30% & removes salinity in soil within first year



Benefits for crops:

1. The water from the out let of the converter reduces the alkalinity and thereby the salinity of the water gets removed and the water absorbs into soil faster.
2. The osmosis of the soil gets increased and the water absorbs faster to the roots of the soil.
3. The consumption of the water required for the plant gets reduced and the water pump running shall come down and there by the power saving comes.
4. The chlorophyll of the leaves i.e. the greenish color improves well and the yellowish fading shall never appear on the leaves.
5. The crop production and the yield get increased by more than 60% of the normal crop yield.
6. The plant always keeps the minimal water required at the roots.
7. In drip irrigation the converter water never allows any scale formation and no choking occurs at any delivery point.

Agricultural Landscaping Solutions :

Efficient water use worldwide is essential to achieve water sustainability. Sensible irrigation plans and system maintenance can reduce water consumption making sustainable water use in agriculture more likely. Scale in systems reduces efficiencies both in water and energy use. Scaled systems increase the energy required to pump water through the system. Humidifier elements with scale build up require more energy and scaled nozzles require cleaning to prevent blockage. NCIWC offers solutions that prevent scale build up; this keeps systems working at their optimal levels conserving water and energy.

Irrigation Systems (system and Nozzle protection) :

- Agriculture
- Farm Houses
- Nurseries
- Green House Plantations



Issues :

- Calcium Carbonate scale can collect inside of pumps, lines, emitters and sprinkler heads causing blockage and premature failure.
- Calcium Carbonate scale collects on leaves and plant roots, slowing down Photosynthesis and nutrient intake.
- Hard water requires larger amounts of chemicals, fertilizers to be used. Calcium Carbonate also promotes the growth of bacteria.

An example of an irrigation installation

Center pivots usually have to be replaced every 10 to 15 years due to corrosion. The prevention of scale accumulation within the system will extend the life and efficiency of the center pivot, piping and nozzles.

Without treatment, irrigation using hard water delivers calcium carbonate to the crop in its calcite state which can form a coating on the roots and the leaves, like putting a coating of sunscreen on plant. This prohibits the plant from receiving the maximum benefit from the water, minerals, fertilizers and pesticides. The use of NCIWC helps the crop grow to its full potential. Also the defoliant, used at the end of the growing season to stop the plant growth and prepare the plant for harvest, will be more effective. All of these steps and functions of growing the crop are very costly. The NCIWC will help reduce that cost to maintain the crop, increase yield and protect the equipment to deliver the water, fertilizer and other nutrients to the plant.

