

ECOFLOW^M

Catalytic Water Conditioner

A G R I C U L T U R A L



Save Money

Save Water

Save Energy

Save Equipment

No Maintenance

No Electricity

No Chemicals



Made in U.S.A.



Manufactured Exclusively in the U.S.A. by:

www.ecoflow.com

Morrill
INDUSTRIES, INC.



Water Conditioning for the 21st Century
Eco-Friendly • Maintenance Free • 10 Year Limited Warranty

The maintenance-free Ecoflow Agricultural Catalytic Water Conditioner installed inline on your water delivery system from Surface Water, Well, or Commercial Supply will deliver conditioned water to your farm or agricultural facility.

A G R I C U L T U R A L

- *Please Note: The Ecoflow is not a “water filter”.*
- *The Ecoflow breaks down various Chloride particles which consist of Calcium, Magnesium, Boron, Sodium.*
- *It does NOT require electricity, chemicals or maintenance.*
- *With all Agricultural Systems Pre - Filtration will be required prior to the installed position of the Ecoflow.*
- *All chemicals should be added to the water system after the Ecoflow Conditioner.*

HOW DOES THE ECOFLOW WORK?

The Ecoflow is a Catalytic Water Conditioner, a new innovation in water conditioning. The foundation of the Ecoflow is the scale controlling media made from ceramic-metallic rare earth materials.

It is actually a “Catalytic Converter” installed into your irrigation water line, which converts hard water elements (Chlorides) in the form of calcium, magnesium, sodium, and boron into neutralized nano - particles that goes into solution and passes through your irrigation system.

The Ecoflow helps to remove and control hard water elements from forming on the interior of your irrigation lines, emitters, micro sprinklers, and other water related equipment.

Sizes Range from 2” - 16”
Flow Ranges 70 GPM to 4250 GPM

THE ECOFLOW CATALYTIC PROCESS:

1. Polarization:

In the first stage, water passes into the unit through flow modulators that polarize the water stream along with the materials contained within it. This action formats the water so that the following process can impact the water stream more completely.

2. Oxidation Reduction (Redox Process):

The propensity and ability for water to scale and harden through oxidation is reduced as water flows over the Nano-Technology developed “ceramic media” that contains a matrix of minerals and rare earth elements.

3. Ionization:

As the water stream passes over the “ceramic media”, the electron fields of the materials within the water stream overlap with the electron fields of the materials contained within the “ceramic media”. The exchange of ions is encouraged and enhanced.



QUALITY MANUFACTURED IN THE U.S.A.

Ecoflow Catalytic Water Conditioners are manufactured in the United States and are a one-time purchase with no moving parts to wear out or replace. They use no electricity, no chemicals, and require no maintenance.

Each unit comes with a 10 year limited warranty against defects in material and craftsmanship under normal use for which it was intended.

Standard industrial sizes range from 2” through 16” stainless steel construction.

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APPLICATIONS OF THE ECOFLOW CATALYTIC WATER CONDITIONER:

- Prevents and eliminates hard water scale and corrosion on all water related equipment from pivot systems to drip lines, emitters, sprinkler heads, irrigation pumps and water lines.
- Improves percolation and eliminates standing water in your fields by breaking up compacted soil layers. Soil profiles are significantly improved.
- Water use is reduced as much as 15% or more along with reduced pumping and water delivery costs.
- Reduces Fuel or Electrical costs by reducing water usage.
- Improves pump efficiency by providing “wetter” water through piping systems.
- In soils with high chloride concentrations, plants have difficulty growing. The Ecoflow treats this condition by pushing the chloride loads deeper into the soil layers, allowing the plants to thrive in a more suitable environment.
- Increases fine root growth which improves the plants intake of water and nutrients; therefore providing healthier plants.
- With better nutrient intake, the need for fertilizers are reduced.
- Reduces heat stress on plants.
- Plants and seeds germinate sooner and more completely.
- The need for gypsum and acid is reduced or eliminated.
- Dissolves impurities within the soils with each irrigation.
- Hard water spotting and overall maintenance to walls, walkways, fences, farm equipment or any other surface that comes into contact with the water, is reduced. (Iron staining may require specialized filtration).
- Helps control and reduce algae growth in water retention areas. i.e. lagoons or water tanks.
- Increases savings in labor, equipment replacement, and repair costs.
- Through continual testing and research we are discovering new applications for the Ecoflow Catalytic Water Conditioner.



Please contact your local dealer or company representative for a free quote and evaluation.



WHY SHOULD I BUY AN ECOFLOW CATALYTIC WATER CONDITIONER FOR MY FARMING OPERATION?

1. The Ecoflow Catalytic Water Conditioner Lowers Chloride Levels in Root Zone Soils.

- Chlorides in the form of Calcium, Magnesium, Sodium, and Boron lowers the plant's ability to intake water through the root system which is known as (chemical drought) and may also damage (burn or kill) the plant when deposited directly on plant foliage.
- Expect chloride levels to be lowered by 30-40 percent when using the Ecoflow Catalytic Water Conditioner.

2. Lowers Scale Build Up.

- Scale consists of chlorides in the form of calcium, magnesium, sodium, and boron. These are the same materials that cause problems in the plants root zone.
- Stops scale build-up on drip emitters and micro sprinklers.
- Reduces maintenance cost from plugged drip emitters and micro sprinklers.

3. Saves Water and Lowers Water Cost.

- If you are buying metered water or pumping your own water, you will save a minimum of 15% of your water cost.
- Agricultural crops irrigated with the Ecoflows treated water will use a minimum of 15% less water than best practiced irrigation methods.

4. Increases Nutrient Intake.

- Using an Ecoflow Catalytic Water Conditioner will allow your crop to absorb nutrients faster through the root system; therefore reducing the amount of nutrients needed from best practices for equal crop production.

5. Increase Soil Percolation Rate.

- Ecoflow treated water will percolate at a minimum 40% faster rate than nontreated water.
- This equates to deeper soil penetration, minimal standing water, and minimizing water loss due to evaporation.

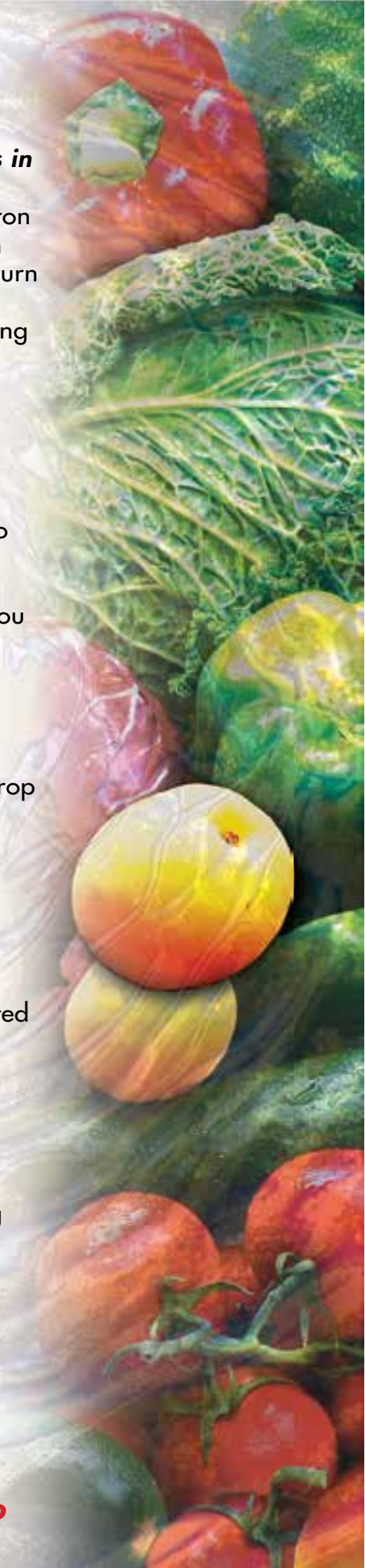
6. Lowers Pumping Cost.

- With a 15% water saving, pumping costs will also drop by 15% plus.

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INDEPENDENT LABORATORY TESTING PROVES ECOFLOW EFFECTIVENESS!

SOIL PERCOLATION TEST DATA

ECOFLOW CATALYTIC WATER CONDITIONER -VERSUS- UNTREATED WATER

The percolation rates on Graphs 1 and 2 are the results of a one year percolation test (Oct 29,2009 - Oct.12,2010) provided by the Center for Irrigation Technology (CIT), California State University in Fresno, CA. Please review the entire test report to understand how the data was compiled.

GRAPH ONE: Shows the initial irrigation and resulting percolation rates. The result of the initial irrigation shows that the treated (Ecoflow) and untreated water percolates through the soil at about the same rates.

GRAPH TWO: Shows the end of the irrigation and the resulting percolation rates. The graph indicates the percolation rates with treated (Ecoflow) water at the higher tension rates (hard, dry and tight soils) has increased significantly while the untreated water percolates at an average of 20% less than the rate of the initial test.

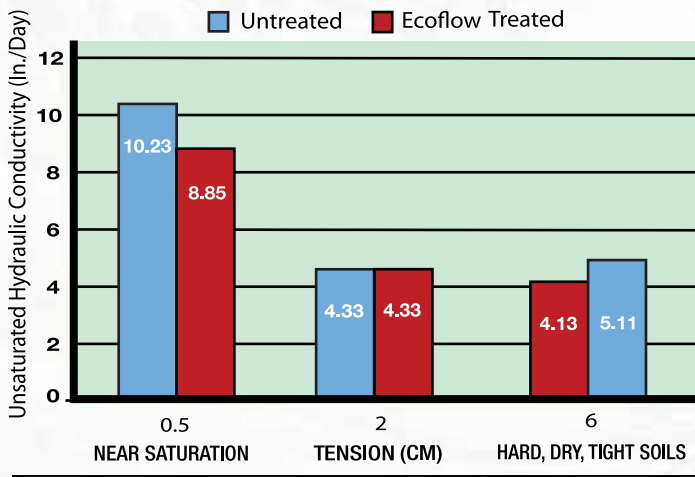
The increased soil percolation rates resulting from the use of an Ecoflow Water Conditioner allow deeper soil percolation, less evaporation of irrigation water, and a minimum of 15% - 20% or more reduction in water requirements for the same irrigation needs.

IN LAYMAN'S TERMS: 6cm tension is hard, dry, tight soils. 2cm tension is dry and tight soils. .05 cm tension is soils at near saturation. It is important to understand that crops are not irrigated to near total saturation. NOTE: The test soils are very low in chlorides and therefore showed no changes in electro-conductivity.

GRAPH ONE

START OF TRIAL - OCTOBER 29, 2009

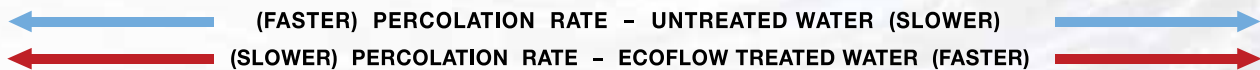
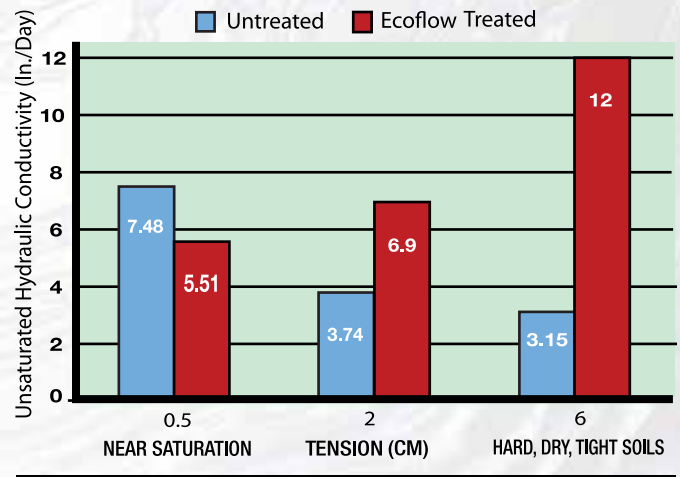
THE CENTER FOR IRRIGATION TECHNOLOGY (CIT)
California State University, Fresno
Percolation Rates of Untreated vs. Ecoflow Treated Water



GRAPH TWO

END OF TRIAL - OCTOBER 14, 2010

THE CENTER FOR IRRIGATION TECHNOLOGY (CIT)
California State University, Fresno
Percolation Rates of Untreated vs. Ecoflow Treated Water



PRELIMINARY REPORT DATED JANUARY 31, 2011
Water Moves Faster Micro-Pore Flow is Achieved
(Hard, Dry, and Tight Soils) Preliminary Report
Diganta D. Adhikari David F. Zoldoske

SUBMITTED TO:
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