

# Importance of Water Quality

## **Why study irrigation water?**

Learning about irrigation water will never go out of style. Unlike the knowledge we gain with agri-chemicals, which are constantly changing and eventually become obsolete. The knowledge of water chemistry will be an issue that you are always going to have to deal with.

## **Water Quality**

If you are having problems with both the quality and yield of your crops, maybe you should be looking at your irrigation water. Water is the life blood of any crop. Nutrients are only available to your crops when they are dissolved in the soil solution. Irrigation water is the “solvent” that dissolves nutrients into the soil solution to make them available for your crops.

Anything that interferes with the ability of irrigation water to infiltrate the soil profile or restricts plant uptake will limit nutrient availability. Before you spend thousands of dollars on “band-aid” approaches, pay attention to your irrigation water quality!

You may find that you can eliminate problems with nutrient deficiencies by making simple adjustments to the irrigation water chemistry. Soils will tend to take on the characteristics of your irrigation water.

If your irrigation water has a high pH and loaded with sodium and bicarbonates, your soil is in danger of becoming more like the water that you are irrigating with. To know if you are experiencing any of these problems, you need to have a good water analysis report from a reputable lab.

## **Adding Gypsum To Irrigation Water**

Soil applied gypsum works for about three irrigation cycles and then it begins to leach out of the first inch of soil. Once soluble gypsum is leached out of the first inch, Mg and Na will again become dominant, and good soil structure is destroyed. Applying soluble gypsum through the irrigation system, is effective in keeping the soil open for water infiltration. Plants don't chew their food...they absorb it through their roots from the soil solution. If you can improve the movement of water, through the soil profile, then you can improve the efficiency and effectiveness of water, and how it performs its two essential tasks. Survival and Distribution.

## **Summary**

When you identify a symptom, look for the cause, then solve the problem. Water is seldom perfect. Develop a plan to correct the irrigation water quality problems.