

WATER, WATER EVERY WHERE...AND NOT A DROP TO DRINK

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A Gorgeous Sunset at Eastern Neck Island, Maryland

Samuel Taylor Coleridge penned the following line in “*The Rime of the Ancient Mariner*”

*“Water, water, every where, And all the boards did shrink;
Water, water, every where, Nor any drop to drink.”*

When I grew up as a kid I knew water as just that, water. Water was what I drank.

Water is what the cows drank and water is what the fish lived in down at the creek.

Since then I have come to realize there isn’t enough water to go around.

Water can’t be thought of as plain old water. We simply don’t have enough to go around anymore. I live in the middle of a very unusual lake system called The Finger Lakes[\[1\]](#). These lakes have been reported to be some of the cleanest lakes in the world at one time. While living here, I have had the opportunity to work with some very smart and wise professionals within the American Society of Agronomy to

provide guidance for the upcoming 4R Nutrient Management Specialty qualifications for the Tri-State Erie Watershed. It has been great experience. I got to learn much from professionals from all areas of the United States. I think the industry will benefit from this first step towards raising the level of education among the professional community of Certified Crop Advisers to allow those interested the opportunity to expand their knowledge in the use of fertilizer so that we apply it at The Right Source at The Right Rate, during The Right Time, at The Right Place. [2],[3],[4]

We are putting more attention on water quality and rightfully so. We have a combination of items all converging on the quantity as well as quality of the water we have. Water is like a family budget....or for those of us who pay attention to politics in the United States....our federal budget. You can only keep withdrawing so much for so long until the time comes that the money runs out. Such is the situation in several areas of the United States. Consider the need of folks in the Ogallala Aquifer[5]. After years of drawing out of this very large High Plains aquifer, it is becoming dangerously low. One key to helping conserve this precious resource is timely information for citizens and businesses within the perimeter of the aquifer. Those of us in agriculture are seeing some very powerful tools to add in the tool box to help us do a better job of making efficient use of this precious resource.[6],[7] My first introduction to drip irrigation came when I worked in the Lawn and Garden Industry in the 1990's. Drip hose, also called soaker hose, had come on the scene. I have used it with great success in my small orchard, garden, and vineyard. A few years later, this same technology began to be studied for large field use.[8] I remember having a session on the technology at the Mid-Atlantic Crop School more years ago than I can consider.

This technology competes against other irrigation systems like center pivots. The water use efficiency of Subsurface Drip Irrigation (SDI) is superior to a center pivot. However, the expense is substantially higher and there have been other limiting factors that until now had made its use limited. However, as water becomes more

limited the water savings will more than offset the added expense. Another very sensitive factor is service life. Studies would show that once we get past 15 years the difference in cost per acre becomes substantially less.[9] You may gasp and say, “Fifteen years! That’s a long time.” Sadly, tell that to the Ogallala Aquifer. It won’t give you any sympathy.

I believe we are also seeing a heightened awareness of the issue at the federal level as well. This past week the EPA announced very strong penalties with respect to water quality[10]. This, coupled with the issues at hand in the Great Lakes Watershed should serve as a harbinger of things to come. It will be more important than ever to make sure that we follow sound nutrient management guidelines that are prepared by trained professionals. If and when a potential review and penalty action would be taken against a farmer, the environmental insurance policy will stand to cover the costs of penalties. However, no business is in business to lose money. Rest assured, the insurance underwriter will do a thorough review of all parties, including the Certified Crop Adviser or Certified Professional Agronomist who wrote the plan. In such instances the legal liability may become contended by the carrier if the plan does not comply with regulations.[11]

Water and resource management will only become more of a concern as we move into the mid-21st century. We in the agriculture industry will need to be ready to meet the challenges that lie ahead.

[1] http://en.wikipedia.org/wiki/Finger_Lakes

[2] <http://www.nutrientstewardship.com/what-are-4rs>

[3] <http://www.circleofblue.org/waternews/2015/world/infographic-ohio-passes-farm-regulations-to-stop-lake-erie-toxic-algae/>

[4] <http://digitaled.agprofessional.com/May2015#&pageSet=5>

[5] <http://www.ogallala.ars.usda.gov/pdf/aboutogallala.pdf>

[6] <https://water.usgs.gov/edu/irmethods.html>

[7] <http://digitaled.agprofessional.com/May2015#&pageSet=8>

[8] <http://www.k-state.edu/sdi/reports/2000/campis.html>

[9] <http://www.k-state.edu/sdi/software/LammUsingCPSDI15.pdf>

[10] <http://yosemite.epa.gov/opa/admpress.nsf/0/12ec4eca30be9a5d85257e45006b4215>

[11] http://offices.ext.vt.edu/spotsylvania/programs/anr/FM_Liability_insurance.pdf