

THE TAPA QUARTERLY

The Newsletter of the Tennessee Agricultural Production Association

Hugh Savoy

A Lifetime of Service to Tennessee Agriculture

Dr. Hugh Savoy was awarded the **Outstanding Individual Award** before TAPA members at the July Annual Meeting and Agronomic Workshop in Gatlinburg. It was a well-deserved honor for this professor, known for his expertise in his field of soil fertility at the University of Tennessee.

Dr. Savoy's service to the Tennessee Agricultural Production Association and the Certified Crop Advisor (CCA) programs dates back to the beginnings of both organizations. He served as a TAPA board member representing Academia, Chair Elect, Chair, and now continues to serve as TAPA secretary. He is currently serving on the CCA board and is chair of the examination committee. Each year Dr. Savoy proctors the February CCA exam given in Nashville.

Congratulations, Dr. Savoy, for your service to Tennessee agriculture.



ISSUE 3

September 2013

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Dr. Hugh Savoy (left) receives the 2013 Outstanding Individual Award from TAPA president Larry Steckel.

UT Cotton Tour Sept. 4

The annual UT Cotton Tour is September 4, 2013 at the West Tennessee Research and Education Center in Jackson.

Registration: 8:30 a.m.
Tour begins: 9:00 a.m.

The program will end with lunch.

Pesticide recertification points and Certified Crop Advisor CEUs will be available.

Learn the latest in variety selection, irrigation, fertility, and pest management (weed, insect, disease).

The Rise of Irrigated Row Crops in West Tennessee and Our Aquifers

By Dr. David Verbree

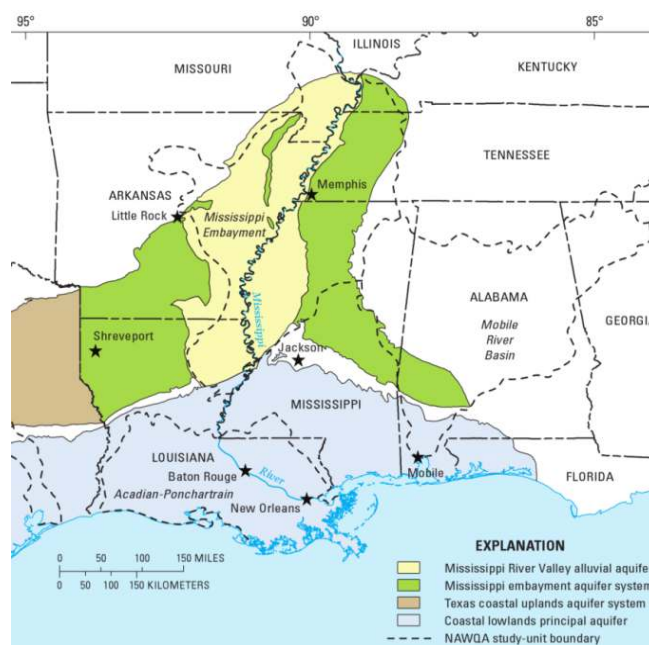
The Western counties of Tennessee account for over 79% of major row crop acreage in the state. From 2011 to 2012, irrigated acreage in W. TN increased from 3.4 to 4.9% of total acreage. An estimated 420 new irrigation systems are expected to be installed in 2013 in W. TN, which could increase irrigated acreage by an additional 50%. Despite these increases, TN withdrawals far less ground water for irrigation (3 million gallons per day) than neighboring states like Eastern Arkansas (6,500 billion gallons per day) and Mississippi (1,300 billion gallons per day).

Many view increased irrigation as an opportunity to boost agricultural productivity, reduce risk, and stabilize yields. Others fear of wells running dry, disputes over water rights, and rationing by municipalities as has been seen in other parts of the country. Indeed, the rate of ground-water depletion in some regions, like the Central Valley of CA and the High Plains of TX is alarming. However, W. TN receives over twice as much rainfall per year (51") than these other regions, albeit often ill-timed for optimal crop production. Further, the use of irrigation in W. TN is often limited to the hot and dry periods from mid-June through August in a "normal" year and as insurance for a drought year.

Most of W. TN gets its water from the Mississippi Embayment Aquifer System which is a series of overlying aquifers located under the Gulf Coastal Plain and folded up on the East and West ends like a stack of bowls. Memphis, with over 80% of the total ground water withdrawals in TN, is located in the middle and lowest point of the aquifer system. In this region, the shallowest aquifer (Upper Claiborne) is used primarily for irrigation and private wells whereas the deeper aquifer (Middle Claiborne or Memphis Sand) is used for the public water supply and industry. A majority of recharge for the deeper aquifer comes from rainfall on the outcropped areas which underlies a majority of agricultural land in W. TN, but it could take up to 100 years for rainfall on outcropped areas to reach the point of withdrawal. Since 1887, ground water pumping from the deeper aquifer by Memphis has created "cones of depression" or areas with lower hydraulic head. This has caused seepage of more brackish and possibly contaminated water from the shallow aquifer into deeper one that provides drinking water for the city. There are concerns that the increased adoption of irrigation in W. TN may worsen the situation.

Unfortunately, we do not yet have enough information to estimate the effect that increased irrigation in W. TN may have on our aquifer levels. Although we know the

current rates of withdrawal from municipal wells, we do not know the recharge rates of our aquifers. Drs. Brian Waldron and Dan Larsen at The University of Memphis Ground Water Institute have been conducting research to determine these recharge rates and we look forward to the publication of their findings in the next year or two. Regardless of their findings, we should be conservative in our use of irrigation by: 1) minimize irrigation during non-critical crop growth stages; 2) avoid runoff from over-irrigating hilly or poorly-drained ground -- learn to make use of sector control on newer pivots; 3) use no-till practices with good residue/cover crop management to reduce runoff and increase infiltration.



Mississippi Embayment Aquifer System
(Welch et al., 2009)

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News from the Hill

EPA Announcement Bearish on Corn

For all the attention being paid to the farm bill this year, it may not be nearly as important as what EPA did last week in announcing that it's likely to reduce the renewable fuel mandates in 2014. EPA said it will set the targets in 2014 based off the blend wall, or market limit, for 10% blends of ethanol. If EPA continues

to take that stance in future years and there's little sales growth in higher level blends of ethanol, then that corn-based ethanol has hit a ceiling, and that will have ramifications across agriculture, since it could lead farmers to scale back on corn acreage. With gasoline usage falling nationwide as cars become more fuel efficient,

there's little room for growth in ethanol usage unless more retailers start selling higher ethanol blends. There's little sign that is going to happen anytime soon.

Executive Briefing, August 12, 2013

EPA's McCarthy Touts High Level Administration Push for Climate Agenda

EPA Administrator Gina McCarthy is touting the fact that "every member" of President Obama's cabinet will be holding speeches and taking other steps to advance the administration's broad second-term plan to cut greenhouse gases (GHGs), while also working to adapt to what the officials see as signs of climate change already occurring.

"Every secretary is going to be out translating the language" of climate change for their constituents, McCarthy said in an Aug. 14 speech at the University of Colorado, Boulder, that framed climate change as "fundamentally an economic challenge" in which the right policies could cut GHG emissions without harming economic growth -- including the agency's pending GHG new source performance standards for future and existing power plants.

At the Colorado event, McCarthy spoke about the need to shift the public conversation away from the science on whether climate change is happening, but to focus on "innovative solutions" that will reduce GHG emissions while helping the economy.

"[Obama] said it is time to act, and he said that he wasn't going to wait for Congress but that he had administrative authorities, and it was time to start using those more effectively in a more concerted way," McCarthy said.

She added, "I am working for a president who gets it and is going to force the issue by taking action that is common sense."



InsideEpa.com, August 15, 2013

MoveOn to Launch GMO Labeling Push

A liberal advocacy group is making a push to get states and the federal government to require special labels on food containing ingredients that have been genetically modified.

MoveOn held events in 35 cities on August 9 to urge lawmakers to require

the disclaimers on food containing genetically modified organisms.

Two states, Connecticut and Maine, have passed laws requiring the labels, though both require neighboring states to pass similar laws before going into effect.

A bill in Congress, the Genetically Engineered Food Right-to-Know Act, has gained support in both chambers from a bipartisan group of lawmakers.

The Hill, August 9, 2013

A Time for Learning and Rekindling Friendships



Ag veterans Phil Reynolds and John Bradley gave industry updates.



Talking tobacco during a break: Manley Gilliam and Lawrence Goad



Speaker Justin Miller spoke about VRT Irrigation at our Agronomic Workshop.



Dan Smith and Terry Denton talk cotton production during a break.

Annual Meeting & Agronomic Workshop July 16-18, 2013 Gatlinburg, Tennessee



Harry Craft, Merlin Blackwood, and Lee Greer reflect on the good old days.



Mike Saxton's presentation draws a question from Guy Spence (L).



Speakers Todd Reed and Tim Prather were among our excellent speakers.



Kevin Knop and Joe Duck have been long-time supporters of TAPA.



Members of the winning team at our annual TAPA golf event (L-R):

Jeremy McKay, Dan Underwood, Joey Caldwell, Terry Kelley

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How Important is Zinc in Tennessee Crops? By Harry Craft

Zinc (Zn) is a micronutrient essential for plant growth and the reproduction process in many plant species. When the supply of plant-available zinc is inadequate, crop yields and grower profitability can be reduced. Deficiencies of zinc can occur in a variety of crops, including corn, cotton, soybeans, vegetables, pecans, and citrus fruits.

Zinc deficiency can produce visible symptoms of stress, including:

- Interveinal chlorosis (yellowing of leaves between the veins)
- Small and abnormally shaped leaves
- Stunting and rosetting (leaves form whorls on shortened stem)



In cases of moderate zinc deficiency, plants can often have greatly reduced yields without the obvious visible symptoms. These deficiencies may remain undetected for many years until soil or plant diagnostic tests are performed.

The soil conditions most commonly giving rise to inadequate zinc can include:

- Low total zinc content, such as sandy soils with low organic matter content
- Low pH, highly weathered parent materials
- Peat and muck
- Prolonged water-logging or flooded soils

Can Tennessee soils be deficient in this micronutrient? Yes! A spokesman for A & L Labs reported recently at the TAPA meeting that, of the state's soil samples tested, 76% showed medium or lower readings in zinc.

There are several materials sold as Zn fertilizers that can be soil- or foliar-applied. Dolomitic limestone, with its reliable source of magnesium, can also be a source for zinc. For example, dolomitic aglime from Tennessee Valley Resources (TVR), has been shown to contain 2-3 pounds of zinc per ton of lime, based on two lab sources in the Southeast. TVR aglime is a co-product of the zinc mining industry in Tennessee.

Harry Craft is sales agronomist for Tennessee Valley Resources, Inc.

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(2013-2014)**

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Message from the President

I would like for everyone to know that I consider it an honor to serve as president of TAPA for the coming year. I look forward to working with the board and with each of you to help TAPA grow and thrive.



We were pleased to see such a large turnout for our summer meeting. Many people worked very hard to make the meeting a success and we are grateful for their efforts. Please accept our thanks for your attendance. We hope the content was interesting, up-to-date, and beneficial with regards to the current trends in agronomy. I would be remiss if I did not thank Ron Akin, our new executive secretary, for the increased involvement from industry members. Ron did a great job of putting all the pieces together.

Recently, the membership was asked to vote on the possibility of moving to a different location for the summer 2014 meeting. The Gatlinburg location has certainly served us well in the past and we have enjoyed gathering in the beauty of the Smoky Mountains. However, the membership voted by a two to one margin to move the meeting to a middle Tennessee location. I am pleased to announce that we will gather at the Embassy Suites in Murfreesboro for our meeting next summer.

Terry Kelley

Become a Certified Crop Advisor!



Become a Certified Crop Adviser (CCA) with an accreditation exam, experience and a commitment to continuing education. Any individual whose education, experience, and career path is associated with the practice of agronomy should take the CCA exams. This includes college students, agronomists, salespeople, consultants, educators, and conservation personnel.

Join fellow agronomy professionals by starting the process to become certified and register for the February CCA exams. Registration opens October 7, 2013 for the February 7, 2014 examination date. Click on this link certifiedcropadviser.org/exams to learn more. The Tennessee exam is administered in Nashville.

Jaymie Seay

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Mark these important TAPA dates on your 2014 calendar. It's never too early!

TAPA CCA Workshop
WTREC
Jackson, TN
February 19, 2014

Annual Meeting & Agronomic Workshop
Embassy Suites
Murfreesboro, TN
July 29-31, 2014