

ASABE Quad City Section Newsletter

ASABE - The Society for Engineering in Agricultural, Food, and Biological Systems

No. 64

Winter 2017

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May the ASABE Quad City Section continue to be known as a source of innovation.

I encourage you to add the dates of the Upcoming Events section below, to your personal calendars and make a plan to be active within the Section. Please remember to send in nominations for award candidates as well as for the 2017-2018 officer slate.

As a reminder, be sure to thank our social hour sponsors the next time you see them. Mike Jendro has certainly done a very nice job maintaining supplier relationships for the Section. If anyone has ideas of potential sponsors to grow this pool, please contact Mike or myself, and we will see to it that they are sent a sponsor invitation packet.

From the Chair –I hope the New Year is finding you well. Our (mild) Section Winter meeting is now in our past as we look forward to the time of year when things begin to turn green.

I would first like to say I was extremely pleased to see the **50** members in attendance at our meeting. The technical sessions were very interesting and I want to thank both Jim and Venkat for being well-prepared and delivering interesting presentations. Our after-dinner speaker, Barrie, shared with us valuable insight of a glimpse to the future, looking from the past, for the agricultural outlook.

We have a great Section leadership team this year and I want to thank each and every one of our officers for their contributions in putting together our program and coordinating for our meeting.

I would also like to congratulate the 2017 AE50 award recipients which can be found in [ASABE's Resource magazine](#). Awards like these show the relevance of our Section within the nation's ranks.

At the heart of our Winter Meeting, lay the foremost reason in which we are all tied to the agricultural engineering profession. We are all well aware that the world's population is continuously rising at an alarming rate. However, to satisfy the world's food and water needs, there were two key takeaways from our final speaker I'd like to note. The first being that in order to meet grain production demands, we must utilize the Earth's remaining arable land in places like Russia and Africa. The second takeaway, comes in the realization that in order to expand the global agriculture economy into these new markets, we must take the current technology existing in \$400k machines and condense it into \$60k machines. That is our challenge as an American Society of Agricultural and Biological Engineers. In order to be a leading presence in agriculture, we must take the "neat" technology of today and make it a practical and wide spread application. Whether that is by making machinery more efficient via the use of

electrification or by genetically modifying foliage to boost yield; I look forward to continue this pursuit with you in 2017! – Chance Corum, 2016-2017 Quad City Section Chair

Winter Meeting Review The Winter Meeting was held on January 17th at the Thunder Bay Grille in Davenport with approximately 50 members and guests present. The meeting began with a technical session with two speakers.

The first speaker, Jim Shoemaker, an engineer with the John Deere Electric Drives Service Group, spoke on “Vehicle Electrification – Electric Drive Application Values for Off-Road Equipment”. Jim started his presentation noting the recent publicity of the European developed Deere electric drive tractor. Electric drive automobiles have maximum power requirements only when accelerating while a tractor needs to provide its maximum power on a continuous basis. Earlier electric drive efforts from Deere have included greens mower reel drives to eliminate the possibility of oil leaks, an electrically actuated active seat with improved isolation and lower power requirement than the previous hydraulic design, tractor electric power outlets, an electric drive planter unit allowing higher planting speeds and electric drives for its wheel loaders.

The second speaker, Venkatraman Srinivasan, a post-doctoral research associate at the University of Illinois, spoke on “[Soybean Leaf Reduction to Boost Yields](#)”. A mathematical model showed that soybeans grown under current and elevated CO₂ levels overinvest in leaves to the detriment of seed production. This prediction was tested in field trials in which a proportion of the emerging leaves were removed. This treatment resulted in a statistically significant 8 % yield increase. This was the first direct proof that a modern crop produces more leaf area than is optimal for yield. Breeding or bioengineering for lower leaf area could make a significant contribution to higher soybean yields.

The after-dinner speaker was Quad City Section Member Barrie Smith who spoke on “Factors Affecting Demand for Increased Agricultural Food Production”. For his presentation, Barrie revisited a study he and others in the Deere Product Planning

Department made in the 1980’s. Some of the points covered were continuing population growth particularly in China, India and Africa, the human desire to consume more calories than the minimum requirement, population growth as the main factor in reducing the available land area per person, large increases in fertilizer and pesticide use, increased use of the corn crop for ethanol production, yield disparities across countries, water availability as a cause of future conflict, climate change, and food storage losses at both the production and consumer levels.

Section Scholarships – The Quad City Section will be offering two \$500 scholarships this year. To see past recipients, click on the Local Recognition file at <http://qcesc.org/757-2/> .

Scholarship applications are available on the Section's website at <http://qcesc.org/asabe-awards/> . High school seniors as well as college students are eligible to apply. Alumni, be sure that your alma mater is represented by sending a copy of the application (or the link) to the Preprofessional branch at your school. If you know of a local high school senior interested in pursuing an agricultural engineering related degree, pass on the above link to them. The scholarship winners will be invited to our Quad City Section meeting on March 28th. Remember, applications are preferred in Word format submitted by email and must be received by March 13, 2017. – Cody Freehill, Scholarship Chair.

Section Awards – Nomination forms for the three Quad City Section awards (Young Member, Member and Outstanding Engineering Achievement) are also available at <http://qcesc.org/asabe-awards/> . Please consider nominating one of your colleagues for one of these recognitions. These awards will be presented at the annual Awards Meeting on March 28th. Nominations are due by March 1, 2017. Past recipients are listed in the Local Recognition file at <http://qcesc.org/757-2/>. – Dave Smith, Awards Chair

2017-18 Section Officers Needed - The Nominating Committee is looking for smart, energetic, professional members like you. We need leaders to provide your Section members with quality programs and services next year. Offices open are Chair-Elect, Treasurer, Secretary and three Nominating Committee positions. If you would like to serve as an officer or know of a qualified person to consider, let one of the members of the Nominating Committee know. Serving as an officer of the ASABE Quad City Section is an excellent way to develop your leadership skills while working with your peers to promote the engineering profession.

Nominating Committee Members can be reached at:

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Nominees will be announced at the March 28th Awards Meeting.

AE50 Recipients – The AE50 recognition program of ASABE's Resource magazine annually honors up to 50 of the most innovative products in the industries served by ASABE. The 2017 AE50 recipients are listed in the [January/February issue of Resource](#) and include four products related to the Quad City Section:

4400 Series Corn Head Stalk Roll Spirals – Case IH

C850 Commodity Air Cart – John Deere Seeding

MaxEmerge 5e Planter Row Unit – John Deere Seeding

500D Draper Platform – John Deere Harvester

Congratulations to all those involved with the introduction of these innovative products!

AETC 2017 The AETC will again feature technical sessions, continuing education seminars, technical committee meetings and plenty of opportunities for networking with colleagues in the machinery industry. The 2017 AE-50 awards will also be presented. See [AETC-2017](#) for more details.

AMC 2017 - The 32nd Annual Agricultural Machinery Conference (AMC) will again be held in Waterloo, Iowa. The Conference will be held April 25-27, 2017 at the Ramada Hotel and Five Sullivan Brothers Convention Center in downtown Waterloo. More information is available online at www.amc-online.org - Carol Plouffe, Chair-Elect and Quad City Section Representative to the AMC Planning Committee

Closing Notes



Joe Tejjido

Joe Tejjido, a long time ASABE Quad City Section member, passed away on Dec. 15. Joe received his B. S. degree in agricultural engineering from the University of Illinois in 1972. He started his career that year at International Harvester in East Moline in the Product Engineering Department. In 1977 Joe left IH and moved to the John Deere Harvester Works in East Moline. He spent his years at Harvester Works in the Product Development Center, designing and developing mechanical drive systems for combines and front end equipment. He reached the level of Senior Staff Engineer before retiring in April 2010.



Ron Pratt

Ron Pratt, retired John Deere Seeding engineer, died Dec. 21. An Iowa State graduate, Ron was an innovative planter design engineer for John Deere from 1963 until his retirement in 2001. Ron received the Quad City Section's Outstanding Engineering Achievement Award in 1984 for his design of a front folding planter frame.

The QCESC has gone to new software for their web site which includes the Section's web site which has a new address at <http://qcesc.org/asae/> . The new software will allow the Section to do its own updating of its site which should provide more timely communications to members.

Don't forget to cast your ballot in the ASABE national election. ASABE is again using electronic voting this year with voting closing on March 1st. See [2017 Candidates](#). Neal Stoffel, an engineer with Kondex, one of our Social hour sponsors, and a frequent attendee of our Section meetings, is a candidate for the Board of Trustees.

After the Winter Meeting, the Section had a balance of \$ 4,638.99 in its checking account and a certificate of deposit valued at \$ 2,380.05.

Upcoming Events - Check the Section's web site at <http://www.qcesc.org/ASAE> for the most recent information on the Section and the following events:

February 13-15, 2017

ASABE [Agricultural Equipment Technology Conference](#), Louisville, Kentucky.

February 23, 2017

Quad City Engineering and Science Council's 55th [National Engineers Week Banquet](#) , Putnam Museum, Davenport.

March 1, 2017

Deadline for applying for the Section's three local awards.

March 1, 2017

Deadline for voting in ASABE national election

March 9, 2017

Quad City Section Continuing Education Seminar – Off-Road Vehicle Dynamics given by David Smith, Deere & Company World Headquarters Auditorium

March 13, 2017

Deadline for applying for the Section's scholarships.

March 28, 2017

Quad City Section Awards Meeting

April 11, 2017 (tentative)

Quad City Section Spring Tour

April 25-27, 2017

[Agricultural Machinery Conference](#), Waterloo, Iowa

June 1-4, 2017

[ASABE 1/4 Scale Design Competition](#), Peoria, Illinois

July 16-19, 2017

ASABE [Annual International Meeting](#), Spokane, Washington

ASABE Quad City Section Officers 2016-2017

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Social Hour Sponsors

The following sponsors have committed to providing the beverages for the social hours at our meetings this year. Look for additions to this list in the next newsletter. Our thanks to Mike Jendro of Federal Mogul Deva for his work in organizing this much appreciated support activity.



[Timken Drives](#) is the world leader in USA manufactured chain products. Timken Drives delivers a complete line of superior quality precision roller chain, attachment chain, and engineered conveyor chains with over 100 years of advanced engineering knowledge and experience.



[Don Dye](#) is a leading manufacturer of pressed steel V-belt & flat idler drive pulleys for agriculture.



[GGB](#) is dedicated to provide global customers with high performance self-lubricating and prelubricated plain bearings for thousands of applications in scored of industries.



[Kondex](#) is a product design and manufacturing partner producing custom-designed metal components for agricultural, lawn and turf and other OEM partners including MacDon culminating in a joint [2014 AE50 award](#).



[Schaeffler Group](#) USA/INA is a leading manufacturer of bearings worldwide with company sales of €11.1 billion in 2012. Schaeffler has 76,000 employees in 50 countries in 180 locations comprising a worldwide network of manufacturing locations, research and development facilities, sales companies, engineering offices and training centers.



[Sears Seating](#) is the leader in the design and manufacture of suspension and non-suspension seating systems agricultural markets. Since 1855, we have built a reputation for highly innovative seating products that offer unparalleled comfort and durability.



[Superior Gearbox Company](#) has been manufacturing high quality gear drives for power transmission systems since 1975 including right angle, bevel, worm gear and spindle drives for various types of on and off-road applications.