



NAPB Newsletter

February 2014

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President's Comments

The 2013 meetings in Tampa were a fantastic way to kick-off my year as your NAPB President! Since the meetings “we” have been busy. As some of you are aware NAPB arose from the efforts of our sister-organization, the Plant Breeding Coordinating Committee (PBCC). This year the two organizations have successfully separated yet integrated ourselves thanks in large part to the efforts of PBCC’s current chair, Pat Byrne. So what are my plans for the remainder of my presidential term? Big picture, keep the organization on the course that your past-presidents put it on. These are exciting times as NAPB is still a very young and evolving organization. Most of the heavy lifting is really being done by the committees, my fellow NAPB executive members (Barry Tillman, David Francis, Seth Murray, Shelley Jansky, David Stelly) and our sister-organization PBCC’s executive committee (Pat Byrne, Jamie Sherman, Mike Gore, Allen Van Deynze). So what are “we” up to? Here is just a small sample of our activities and plans. Your new membership committee led by Donn Cummings has tasked themselves with creating membership value and growing the membership of NAPB. Your communications committee led by Wayne Smith has completed a web site survey and is now busy working on re-designing the NAPB web page and getting NAPB newsletters out. Your new advocacy committee led by Bill Tracy is focused on taking NAPB’s message to D.C. this spring. And your education committee

led by David Francis is busy getting the word out about the value of our profession. The graduate student working group led by Due Pauli is looking at keeping the graduate students engaged and connected throughout the year and is working with the NAPB/PBCC meeting committee to make the 2014 NAPB/PBCC annual meeting a great success. NAPB and PBCC are initiating the process of visioning and strategic planning as well as preparing for another successful annual meeting in Minneapolis. I hope to see all of you in August.

Events and Opportunities

R.F. Baker Plant Breeding Symposium at Iowa State University will be held Thursday, 6 March 2014 at the Iowa State University Alumni Center in Ames. The event is available via webinar. Details at http://www.plantbreeding.iastate.edu/Symposium_Main.html.

Plant Breeding for Drought Tolerance: Colorado State University will offer a three-credit, graduate-level, field-oriented course in Plant Breeding for Drought Tolerance, June 2-13, 2014. Additional information on the course content, format, cost, and registration is available at http://www.droughtadaptation.org/summer_course.html. For questions, please contact the Program Assistant, Kierra Jewell (Kierra.Jewell@ColoState.edu). Applications will be accepted through March 15, 2014 or until the class is full (20 students).

Graduate student fellowships available: Two Ph.D. and one M.S.-level USDA National Needs Graduate Fellowships are available at Colorado State University beginning in summer or fall of 2014. The Ph.D. fellowships carry a stipend of \$24,000/year for three years and the M.S. Fellow will receive a stipend of \$22,000/year for two years. Tuition expenses will be covered by the program. Please note that only US citizens and permanent residents are eligible for these fellowships. More information on this program and application process is available at <http://www.droughtadaptation.org/fellowships.html>

NCSU Plant Breeding Club Symposium will be held in the Multipurpose Room of the Hunt Library on NCSU Centennial Campus on 6 February 2014. Contact Jill Recker (jrrecker@ncsu.edu) or Dr. Charlie Stuber (cstuber@ncsu.edu) for additional information.

FY 2014 Agricultural and Food Research AFRI: Initiative Competitive Grants Program: http://www.nifa.usda.gov/funding/rfas/pdfs/14_afri_foundation.pdf

African Association of Plant Breeders (AAPB): Plant breeding colleagues in Africa continue efforts to establish a plant breeding association patterned after NAPB. Ann Mari Thro,

athro@nifa.usda.gov, is leading an effort to identify NAPB members willing to assist with the organization on several levels. The first item of interest is the development of the organization's constitution. Ann noted, "there is no job description, so it would be up to you, to be as active as you wish or simply 'come along side' to encourage." The main contact for the fledgling organization is Dr. John Derera at the University of KwaZulu Natal in South Africa (dereraj@ukzn.ac.za). Ann Maria is available for further questions and discussions.

Success Stories—Synthetic Hexaploid Wheat

Synthetic Hexaploid Wheat (SHW) is derived by the hybridization of a tetraploid (unusually) wheat and an accession of *Aegilops tauschii*, followed by chromosome doubling to convert the resulting triploid to a hexaploid. MCFadden and Sears first reported a success in deriving SHW in 1946. Much of the current work and utilization of SHW originated at CIMMYT in the 1980s, with an effort to find resistance to Karnal bunt. Following success in developing lines with such resistance via the use of SHW, an effort was initiated to further develop SHW that resulted in 1000 such lines by 2008. To develop these lines, *Ae. tauschii* accessions were screened and desirable phenotypic traits identified, followed by random hybridization with *Triticum turgidum* cultivars. Over 500 synthetic hexaploids were grown in both Obregon and El Batan centers that were scored for morphological, abiotic, and biotic characteristics. From these, 95 elite SHW were chosen as the elite set I and distributed among breeding programs in 2001. A second set of 33 SHW were identified as having resistance to leaf, stem, and stripe rust, along with other diseases, and distributed in 2002. These SHW provided genetic diversity comparable to the original landraces used before the green revolution but with the added benefits of higher yields, host plant resistance, abiotic stress tolerance and sometimes better end-use quality. Some of the variability found in these SHW lines derived from *Ae tauschii* includes resistance to: leaf and stem rust, strip rust, tan spot, karnal bunt, powdery mildew, Russian wheat aphid, green bug, Hessian fly, cereal cyst nematode, root lesion nematode, spot blotch, septoria tritici blotch, *stagonospora nodorum* leaf spot, barley yellow dwarf, and soil-borne wheat mosaic virus. Abiotic stress resistance has been reported as has improved rates of genetic gain when using the SHW as breeding material. CIMMYT's SHW have already been successfully used in wheat breeding around the world, especially by breeders working in areas where drought is persistent and yield potential is low such as areas of China, Australia, Africa, the Indian sub-continent, and South/Central America.

Join NAPB TODAY!

Would you like to join and support the National Association of Plant Breeders? To join, please go to <http://www.plantbreeding.org/napb/index.htm>, scroll down to "How to join/ Information for new member" and follow the links. Remember that you DO NOT have to be a member of any other professional organization to join NAPB. The tri-societies, ASA-CSSA-SSSA, are handling our membership database and email list server under contract to NAPB.

Nominate Breeders/Scientists/Students for NAPB Awards

Everyone is encouraged to consider colleagues and students for nomination for NAPB awards. Awards are made by NAPB in the following categories:

Lifetime Achievement Award: Recognizes an individual who has given distinguished long-term service to the plant breeding discipline in areas such as breeding/genetics research and publication, education (graduate or undergraduate training), extension outreach, and regional, national, and/or international leadership;

Early Career Scientist Award: Recognizes a young scientist who is active in the plant breeding field. Applicants should exhibit the ability to establish strong research foundations (experimental techniques, publications, etc.), to interact with multidisciplinary teams, and to participate in professional societies relevant to their discipline. The nominee must have obtained their Ph.D. after December 31, 2006 (for 2014 award);

Plant Breeding Impact Award: Recognizes an individual who has made significant advancements in the field of plant breeding, specifically in the area of applied cultivar and/or technology development. Public or private plant breeders whose improved germplasm or technological contributions have had a measurable impact on crop production are eligible to receive this award;

Graduate Student Poster Award: Recognizes an outstanding graduate student poster, both in content and delivery, which exemplifies breeding/genetics research. The winner will be expected to present their research topics at the next annual meeting.

Graduate Student Award: The Award recognizes an outstanding contribution by a graduate student.

4th Annual Meeting of the National Association of Plant Breeders

8th Annual Meeting of the Plant Breeding Coordinating Committee

“Breeding for Water Stress”

Minneapolis, MN August 5-7, 2014

Early Bird discount May 30, 2014

Program Summary

Tuesday, August 5th
Mixer at hotel

Wednesday morning, August 6th
General Session and Business Meetings

Wednesday afternoon,
Speaker session
Student poster introductions
Poster session 1

Thursday morning, August 7th
Tour - Syngenta Stanton, MN station

Thursday afternoon
Speaker sessions
Poster session 2

Thursday evening
Reception/Dinner
Plenary Speaker
NAPB/PBCC Awards

Friday morning, August 8th
University of Minnesota Field Day

Friday afternoon
Closing session
Graduate student workshop - Industry Breeder's Perspectives

Meeting Registration information to follow or check out at

www.plantbreeding.org

Hotel reservations: Minneapolis Airport Marriott

NAPB Rate is \$121 per night; Room block expires June 23, 2014.

- **To book your room**
 - **Web:** [NAPB Annual Conference](#)
 - **Phone:** Phone 800-228-9290 or 952-854-7441 ask for "NAPB Annual Conference"
- **Hotel Information**
 - **Web** -<http://www.marriott.com/hotels/travel/mspm-mn-minneapolis-airport-marriott/>
 - The Minneapolis-St. Paul International Airport (MSP) is a short distance from the hotel and will be the best option for those traveling by air
 - **Free shuttle** to/from the airport
 - **Call 952-854-7441 Ext 4122 for pickup**
 - If you are driving, the hotel address is

- 2020 American Boulevard, East Bloomington Minnesota 55425
- They offer **complimentary on-site parking**
- Free guestroom internet access for NAPB meeting attendees
- Conference rates available August 5-8, 2014 if you plan to extend your stay (call hotel directly)



Make a Vacation out of it! Explore Minnesota:

- ✓ **World Famous Mall of America – great shopping, restaurants & attractions**
Conveniently within walking distance or take the free hotel shuttle
 - <http://www.mallofamerica.com/>
- ✓ **Go canoeing, rent a bike or go for a walk around the Chain of Lakes in Uptown. Fun shopping and restaurants - 9 miles**
 - http://www.minneapolisparks.org/grandrounds/dist_cl.htm
 - <http://www.minneapolisparks.org/default.asp?PageID=4&parkid=235>
 - http://en.wikipedia.org/wiki/Uptown,_Minneapolis
- ✓ **Catch the Twins play the Padres at Target Stadium – 10 miles**
 - http://minnesota.twins.mlb.com/schedule/index.jsp?c_id=min#y=2014&m=8&calendar=DEFAULT
- ✓ **Walker Art Center & Sculpture Garden- 10 miles**
 - <http://www.walkerart.org/>
- ✓ **Valley Fair Amusement Park- 15 miles**
 - <https://www.valleyfair.com/>
- ✓ **Minnesota Zoo - 11 miles**

- <http://www.mnzoo.org/>

✓ **MORE- Visit Explore Minnesota :** <http://www.exploreminnesota.com/index.aspx>

If you need to print a receipt or make changes to your registration, please follow these steps:

- Login to one of the Tri-Societies websites. (www.crops.org)
- Click on My Account to the right of the search button.
- Click on My Account in the drop down menu.
- Click on My Transactions under My Account on the right hand side.
- Click on My Receipts on the left hand side.
- Choose the invoice for the NAPB Annual Meetings.

This will open a receipt for your current registration. You can print this as a receipt or make changes or additions to your registration.

The three options are:

Remove – This will remove the item.

Edit – You can update your profile information.

Add – You can add additional sessions.

Please direct comments and suggestions about the NAPB Newsletter to:

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