Spring Newsletter: April 2013



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NOMINATIONS FOR PLANT BREEDING AWARDS (3): At its homepage,

NAPB has announced that it is seeking nominations by April 30 for three Plant Breeding Awards.

- Early Career Award
- Lifetime Achievement Award,
- Plant Breeding Impact Award

For information on how to submit, please visit the <u>NAPB homepage</u>, or click on the ad hoc hyperlink for the <u>2013 Call for Plant Breeding</u> <u>Award Nominations</u>

Or paste one of the following URLs into your browser:

- <u>http://www.plantbreeding.org/napb/</u>
- <u>http://www.plantbreeding.org/napb/Awards/NAPB_awards_Call%20for%20No</u> minations_2013_Mar18ds-b.pdf

<u>2013 NAPB ANNUAL MEETING:</u> June 2-5, 2013 in Tampa - hosted by the University of Florida.

MEETING PROGRAM: A detailed program for the Annual Meeting was just released and can be found at the <u>NAPB website</u>, or a <u>Program-specific</u> <u>link (PDF document)</u>. It contains detailed information on speakers, topics, schedule and tours. If the hyperlinks above do not work, paste this address into your browser: <u>http://www.plantbreeding.org/napb/Meetings/2013/NAPB 2013 Annual Meeting</u> <u>Program 2013c29ds.pdf</u>

MEETING REGISTRATION:

- Early registration ends <u>April 30</u> !! (Non-students save \$100!!)
- To register go via the <u>NAPB website</u> or directly to the <u>ACSESS</u> <u>conference registration</u> website (NAPB hired ACSESS for this service). If the hyperlinks above do not work, paste one of them into your browser:
 - <u>http://www.plantbreeding.org/napb/Meetings/pbccmeeting2013.html</u> (or <u>https://portal.sciencesocieties.org/Conference/RegistrationProcessOverview.a</u> <u>spx?id=130</u>)

• Registration fees:

- \circ Professional
 - 1. \$350 before April 30, 2013
 - 2. \$450 after April 30, 2013
- Student \$150
- Wednesday Afternoon Optional Programs- NEW!!
 - When you register please note and select one of the excellent optional workshops or tour on Wednesday afternoon
 - 1. <u>Essential "Beyond the Science" Expertise for a Successful Plant Breeder,</u> facilitated by Kim Kidwell and Jamie Sherman

Becoming an extraordinary scientist requires more than simply mastering content and scientific skills. Industry leaders and potential employers expect excellent scientific results, as well as interpersonal, communication, management, leadership and team building skills. A panel will share *"Essential Expertise"* they require when hiring plant breeders. Join us to begin developing the skills you need *"Beyond Science"* to be successful. Contact: Jamie Sherman, jsherman@montana.edu for details.

 Storing and accessing data through cyberinfrastructure: identifying needs for the plant breeding community, facilitated by David Francis and Doreen Ware. The Workshop will examine existing infrastructure and identify what the needs and challenges are for data management and analysis in plant breeding. The workshop will follow the morning session talks which are aimed at providing an overview of the resources available through the iPlant Collaborative, examples of plant breeding databases, and examples of software developed by the Generation Challenge Program and the industry/public collaboration "The Virtual Lab in Plant Breeding". The afternoon session is intended to be plant-breeder driven, providing an opportunity for the NAPB community to share their needs with experts in cyberinfrastructure. Our goal is to identify existing issues in data workflow, identify common data structures and perceived gaps, examine the breeding community's desire to share analysis pipelines, and establish a working group to identify priority use cases and priority needs for tool development. Contact David Francis (francis77@osu.edu) for details.

 Tour the Dole-SunnyRidge blueberry and blackberry farm where SunnyRidge got its start. Growing from a 7 acre blueberry farm to an international grower and packager of blueberry, blackberry and raspberry, SunnyRidge (<u>About SunnyRidge</u>) was purchased by Dole Food Company in 2011 (<u>Dole buys SunnyRidge</u>). We will tour the farm where potential blueberry and blackberry cultivars are tested. Contact Barry Tillman (<u>btillman@ufl.edu</u>) for details.

ABSTRACTS FOR POSTERS AND ORAL PRESENTATIONS

• SUBMISSION DEADLINE: <u>April 30, 2013</u>.

 Registrants, especially students, are encouraged to submit a research poster, which will be displayed at the meeting. Guidelines:

http://www.plantbreeding.org/napb/Meetings/2013/Poster%20a nd%20oral%20presentations%20guidelines.pdf

• **COMPETITION FOR INVITED SPEAKER SLOTS (3):**

Advanced graduate students and post-docs are encouraged to compete for three 15-minute *invited* speaker slots. An ad hoc committee will rank eligible poster abstracts and select up to three winners. To be eligible, the presenting author must either be a graduate student or a post-doctoral researcher who earned his/her PhD between 2011 and 2013.

 <u>COMPETITION FOR BEST POSTER AWARDS (3)</u>: In addition to the oral presentation competition, there will be a poster competition at the meeting. An ad hoc committee will evaluate and acknowledge up to three outstanding posters with awards.

- INTRODUCE YOUR POSTER TO EVERYONE: Each poster presenter will be asked to give a <u>one-minute</u> oral summary during the meeting.
- In order to present a poster, the presenting author must do the following by April 30, 2013
 - 1. Register for the meeting
 - 2. Submit an abstract and a data sheet (see attachment)
 - 3. Receive an email indicating that the abstract has been approved

HOTEL RESERVATIONS:

- **Reserved now! Meeting rates available until May 13, only!** Attendees can call hotel directly to apply meeting rates for extended stays between 5/30 - 6/8.
- •
- To book your room
 - Web: <u>NAPB Annual Conference</u>
 - Phone: Phone 888-627-8261; ask for "NAPB Annual Conference"

• ATTENTION ALL USDA and other FEDERAL EMPLOYEES

- To book your room using the GSA rate (currently \$93)
 - 1. Web: <u>NAPB Annual Conference-Per Diem Block</u> (or 888-627-8261)
 - Government ID required at check-in
 - 2. Contact Barry Tillman, <u>btillman@ufl.edu</u> or 850-633-4082.
 - Hotel requires a list of all federal employees with dates of stay
 - 3. Exemption from state of Florida taxes requires a form available at hotel
- Hotel Information (<u>http://www.sheratonsuitestampa.com/</u>)
 - The Tampa International Airport (TPA) is a short distance from the meeting hotel and will be the best option for those traveling by air
 - 1. **Free shuttle** to/from the airport; 5:00am until midnight, every 20 min.
 - 2. Call Sheraton at 813-879-7196 for pickup
 - If you are driving, the hotel address is 4400 West Cypress
 Street, Tampa FL and the hotel offers complimentary parking
 - Free wireless internet for NAPB meeting attendees
 - <u>\$10 breakfast voucher</u> available at check-in
 - <u>Conference rates</u> available May 30 June 8, 2013 if you plan to extend your stay (call hotel directly)

New/non-traditional education opportunities in Plant Breeding:

1) Plant Breeding and Genomics (PBG) on eXtension publishes open access educational materials for plant breeders and students. Topic areas are broadly defined and include workflow and feature numerous computational approaches and crop-specific examples. Advanced tutorials demonstrate processes in plant breeding and genomics using a "How-to" demonstration that includes sample data and step-by step software specifics to support selfpaced learning. PBG also hosts a webinar series. The next webinar presentation, "How to investigate breeding priorities using socioeconomic methods", is scheduled for April 17th at noon ET. Attendance and registration for webinars is free. Follow these webinar links to register for the upcoming webinar and view archived recordings of past presentations: <u>http://www.extension.org/plant_breeding_genomics</u> and

http://www.extension.org/pages/60426/plant-breeding-and-genomics-webinar-series

2) Iowa State University: online Master of Science in Plant Breeding.

Professionals who would like to advance their careers now have access to the world renowned plant breeding program at Iowa State University without becoming a resident on-campus student. The Master of Science in Plant Breeding offers a rigorous, integrated curriculum taught by plant breeding faculty within the Department of Agronomy. The program offers fundamental skills in plant breeding, the study of advanced concepts such as genomic selection, and analysis of plant breeders as they are challenged by global society. The curriculum consists of 9 3-credit courses, and 3 credits of creative component, for a total of 30 credits. The program prerequisites include undergraduate coursework in algebra, chemistry, biology, statistics and crops/horticulture. Generally, students who have completed a degree from a College of Agriculture will meet the requirements. Students who do not have the undergraduate coursework will need to complete any missing prerequisites before starting the program. For more information, please visit http://agonline.iastate.edu/programs/master-science-plant-breeding or contact Dr. Thomas Lübberstedt, Department of Agronomy, phone: 515-294-5356 or thomasl@iastate.edu

3) Texas A&M University: online Master of Science and online Ph.D. in Plant Breeding

Master of Science in Plant Breeding (Non-Thesis Option)

The non-thesis option M.S. in Plant Breeding requires 36 hours of coursework, four of which are an internship activity at the student's present company or locale. This is considered a terminal degree for students who do not wish to pursue their education beyond the M.S. level. Courses will vary depending upon the student's career goals and current situation. Students

will work with a graduate advisor to determine which courses best suit their needs. A typical degree plan will include a variety of course work in plant breeding, molecular and environmental plant sciences, statistics, plant pathology, entomology, agricultural economics, business, and human resources and management.

• Master of Science in Plant Breeding (Thesis Option)

The thesis option M.S. in Plant Breeding requires 32 semester credit hours of course work and a thesis on original research. Student research can be completed at the student's location. An on-site Ph.D. scientist, educator, or supervisor who qualifies as an adjunct member of the Texas A&M graduate faculty must be available to serve as co-chair of the student's graduate advisory committee and be able to direct thesis research locally. Students will have an on-campus co-chair to oversee the academic aspect of their degree. Communication with committee members, examinations, and thesis defense will be conducted via the internet.

• Ph.D. in Plant Breeding

The Ph.D. in Plant Breeding requires 64 semester credit hours of course work beyond the M.S. and a dissertation on original research. Student research can be completed at the student's location. An on-site Ph.D. scientist, educator, or supervisor who qualifies as an adjunct member of the Texas A&M graduate faculty must be available to serve as co-chair of the student's graduate advisory committee and be able to direct thesis research locally. Students will have an on-campus co-chair to oversee the academic aspect of their degree. Communication with committee members, examinations, and dissertation defense will be conducted via the internet.

- For additional information on these distance degree propgrams, please visit <u>http://soilcrop.tamu.edu/academics/distance-education/</u>.
- 4) University of Nebraska-Lincoln: Plant Breeding and Genetics online certificate program. UNL's online Plant Breeding & Genetics Certificate Program instills a superior understanding of the cutting-edge technologies and methods used in plant breeding today. It can be taken by professionals for continuing education units, or anyone currently working in, or interested in working in agribusiness, seed production, plant biology or related fields. The certificate consists of 12 modules: 6 core modules plus 6 electives with topics ranging from crop and weed genetics to double haploids to pesticide resistance management to biometrical genetics. Created to meet both industry requirements and the needs of busy professionals, each module is interactive, comprehensive and self-paced. Faculty instructors utilize the latest online teaching tools and are actively engaged with participants. Developed by UNL's Institute of Agriculture and Natural Resources, this program's faculty members include plant geneticists, physiologists, ecologists, plant breeders and weed scientists. An interdisciplinary approach is used to address real-world production constraints and environmental issues related to agronomic and horticultural fields. Contact: Deana Namuth-Covert, PhD plbreedcert@unl.edu, http://agronomy.unl.edu/plantgenetics, Ph: (402)

909-0181. For more information and registration, please visit: <u>http://agronomy.unl.edu/web/agronomy/plantgenetics</u> and <u>https://cariregistration.unl.edu/CourseStatus.awp?&course=OPBGCPONLINE</u>

5) University of California-Davis:

- The UC Davis Plant Breeding Academy is a premium professional certificate program offered USA, Europe and Asia. Eight classes offered worldwide since 2006 were attended by 114 breeders from 26 countries, making UC Davis Plant Breeding Academy Employers appreciate the opportunity to provide their valued employees advanced training without disrupting their full-time employment. Participants attend six 6-day sessions over two years focusing on the basics of plant breeding, selection theory, statistics and quantitative genetics. The sessions take advantage of the expertise at major breeding centers. The instructors are internationally recognized experts in plant breeding and seed technology. The upcoming EPBA class 3 starts in October 2013. For more information on the curriculum, instructors, locations and dates, visit http://pba.ucdavis.edu/PBA in Europe/
- Seed Business 101: Field Crops. September 30 October 4, 2013 Guelph, Ontario, Canada. Attracting and retaining talented new employees is a critical challenge for the seed industry. The Seed Business 101 course was created, with input from industry executives, to accelerate the careers of promising new employees and young managers. By selecting and sponsoring employees to attend this course, companies acknowledge past performance and invest in accelerated professional development. The course also offers invaluable insights and perspective to seed dealers and companies offering products and services to the seed industry, including seed treatments, crop protection, seed enhancement and technology, machinery and equipment, etc. Instructors are Seed Industry Professionals with decades of experience. Register at http://sbc.ucdavis.edu/education/seed_business_fieldcrops.html. For more information and to sign up please contact Susan DiTomaso at scditomaso@ucdavis.edu or at 530-754-7333.
- Program Management for Plant Breeders course. Managing plant breeding and laboratory programs are becoming increasingly complex. A new course at UC Davis is designed to enhance management skills of plant breeders and technical leads. Professionals directing these programs in agricultural research, in agribusiness development and those from the public sector will benefit from attending this course. Topics include:
 - Understanding where your plant breeding or research program fits in the overall strategy of the organization. Establishing a vision and goal for your program and defining your key strategies and capacities.

- Understanding the financial aspects of your program. Management of budgets, expense control and tracking, capital project management and period reporting. Reading and understanding a financial statement and managing your resources within the goals of your organization.
- Leading and managing people towards a common goal. Understanding the principles of effective hiring, retention, evaluation, promotion, training, mentorship and motivation. Conflict resolution and handing difficult situations. Dealing with and embracing change and creating a culture of innovation.
- Creating effective and efficient programs. Understanding the principles of work flow, scheduling, safety, and legal compliance. Understanding Intellectual Property Issues, Contract issues, Treaties and Agreement.
- The next course is on September 17-19, 2013 at UC Davis. For more information go to: Program Management for Plant Breeders

6) The Plant Breeding Training Network

(http://passel.unl.edu/communities/pbtn) is an online community dedicated to providing education and training for students and professionals working in plant breeding careers. The materials, webinars, classes and interactions with colleagues in this environment are enabling a wider range of collaborations and efficient transfer of cutting edge research findings into the hands of the global plant breeding community. The PBTN was launched summer of 2011 as part of the Triticeae CAP funded through USDA NIFA. Additional funding through NSF and close collaboration with the Plant and Soil Sciences eLibrary have also supported this innovative project. The PBTN currently has 155 members from academia, industry and governmental agencies across the world. Four graduate level courses have been delivered, with instructors and students, located throughout the US, learning together in the cyber environment. Graduate students also gain "soft skills" such as leadership, through their involvement in committees, one of which has been to organize an ongoing webinar series. To join the PBTN and receive autoemailed announcements of upcoming events, go

to: <u>http://passel.unl.edu/communities/pbtn</u> and click the "Join Now" button found in the upper right corner of the home page. In addition, feel welcome to browse the materials currently on the site. Contact Dr. Deana Namuth-Covert (<u>dcovert2@unl.edu</u>) or Dr. Jamie Sherman for further information (<u>jsherman@montana.edu</u>).

We encourage providers of such opportunities/programs at other Universities to contact Maria Salas Fernandez at <u>mgsalas@iastate.edu</u> or (515)294-9563 and provide information to be included in future newsletters.

NAPB and Plant Breeding in the NEWS:

• A new Field of Science code for Breeding for USDA's CRIS database and REEport:

Beginning in April 2013, coincident with the arrival of NIFA's new REEport system for grant and formula project information, it will become **easier**, **quicker**, **and more accurate** to **locate information** about **plant**, **animal**, **insect**, **or microbe breeding** that is **funded or conducted by USDA**. A new classification code for breeding any organism will take effect on that date. Classification codes are the tools that allow users to classify and retrieve records in the current project reporting system, CRIS, and in the new REEport. Note that searching on the new code (Field of Science 1081) will produce limited results until it comes into general use on new records entering the database. Contacts for more information about the new code are: for researchers: A.M. Thro, <u>athro@nifa.usda.gov</u>, 202 401 6702 (plant breeding) and L. Matukumalli, <u>Imatukumalli@nifa.usda.gov</u> 202 401 1766 (animal breeding); and, for administrators and site administrators: B.Hewitt, <u>bhewitt@nifa.usda.gov</u>, 202 720 0747.

- Sorghum line release: A.B.Tx3363. Texas A&M AgriLife Research recently • released Tx3362, a black pericarp R line of grain sorghum (R.Tx3362). This was the first temperately adapted photoperiod-insensitive line that produces high levels of 3-DOA, 3-deoxyanthocyanin, which has been associated with health benefits such as slow and/or reduce digestibility, reduced cholesterol levels, high in antioxidants, anti-inflammatory properties, and anti-carcinogenic properties. In addition, the 3-DOA is more stable than common anthocyanins, making them uniquely valuable as natural food colorants. However, grain yields of R.Tx3362 are poor and when used as a pollinator on standard sorghum seed parents (which have either red, white or yellow pericarp color), the hybrids are all red with low 3-DOA concentrations, indicating that the black-seeded trait is recessive and producing a black-grain hybrid will require that both parents produce black-colored grain. To meet this requirement, Bill Rooney, Ostilio Portillo, and Chad Hays with the Texas A&M Agrilife Sorghum Breeding Program developed and released A.B.Tx3363 for use with R.TX3362 in order to maximize both grain yield and 3-DOA concentrations in their hybrids. This A-line seed parent has a black-pericarp and in hybrid combination with R.Tx3362, produces a hybrid with the same black grain and with high parent heterosis for grain yield. For more information on A/B.Tx3363, contact Bill Rooney at wlr@tamu.edu.
- Symposium on Breeding Technologies for Improving global crop production as part of the Plant Molecular Breeding symposium at UC Davis and sponsored by Pioneer. April 12th, 2012.
 Signup for webinar if you cannot attend. <u>http://plantmolbreeding.ucdavis.edu/</u>
- **Request for plant breeding success stories**. Public sector plant breeding serves the vital functions of training the next generation of plant breeders,

developing varieties for crops or cropping systems not economically attractive to the private sector, and generating basic information on genetic resources, new breeding approaches, and trait inheritance. Unfortunately, our government officials, university administrators, and the general public are not always aware of the successes of public plant breeding. Therefore, "Can you please provide descriptions of one or more successful plant breeding projects at your university?" These will be compiled and shared with USDA administrators, Congressional staff (if/when requested), non-profit organizations, and others who may be able to influence future support for plant breeding in the public sector. To be most effective, your success story should be: 1) concise (250 words or less), 2) Use language and terms understandable by the general educated public, 3) Include impact, such as number of acres, growers, or dollars affected, 4)Include a photo or other visual elements, 5) Describe the sources of funding, 6) Submit it by May 1. Thank you in advance for your contributions. Please send your response to Patrick, Byrne@colostate.edu, More information about the PBCC is available at

http://nimss.umd.edu/homepages/home.cfm?trackID=7536.

For questions or inquiries about NAPB or this newsletter, please contact Maria Salas Fernandez <u>mgsalas@iastate.edu</u>