National Association of Plant Breeders

NAPB

Improving Plants to Improve Lives

NAPB Newsletter

January/February 2015

Contents:

NAPB Update

Last year, a group of dedicated members worked together to create the first comprehensive strategic plan for the NAPB. A summary of our Vision, Mission, and Goals/Objectives comprises the bulk of this newsletter. Over the coming year, we will be discussing how to prioritize our Goals and Objectives and I encourage you to look for ways to support the NAPB Committees in implementing strategies to accomplish the goals. The NAPB Committees and their chair are a) Advocacy- Bill Tracy, b) Communications- Greg Berger, c) Education- Shelby Ellison, d) Membership- Don Jones, and e) Meeting- Jim McFerson.

Barry Tillman
NAPB President

Strategic Planning Update

The NAPB strategic plan has been updated. An excerpt of the new strategic plan's vision and mission statements are found below.

Vision

NAPB works to help create a future in which:

- Strong public and private sectors work independently and together to deliver varieties and improved germplasm to society.
- The value and importance of plant breeding to food security, quality of life, and a sustainable future are known and appreciated by the public.
- Plant breeding is viewed as dynamic, problem solving, and creative.

NAPB intends to become a recognized and valued advocate for plant breeding research and education, helping to guide and implement a cohesive national plant breeding agenda.

Mission

The National Association of Plant Breeders strengthens plant breeding to promote food security, quality of life, and a sustainable future.

To achieve this mission, NAPB:

- Facilitates unified representation of plant breeding
- Advocates for expanded capacity for public plant breeding
- Promotes and supports education of plant breeding professionals at all levels
- Educates the public about the value and contributions of plant breeding
- Supports membership through operations and governance

The National Association of Plant Breeders (NAPB) is a professional society composed of students, plant breeders and affiliated professionals in federal, state, commercial and non-government organizations. Although the focus of NAPB's efforts is in the US, plant breeding is a global enterprise; therefore, an important role for NAPB is to form global collaborations and NAPB welcomes international members. NAPB provides a space for those actively engaged or affiliated with plant breeding in all sectors to exchange ideas and work for the common good. NAPB strives to be a conduit of information about plant breeding to a variety of stakeholders.

NAPB Goals and Objectives

Goal	Objectives – 5-year	Possible Measures
Support for plant breeding: Increase support for plant breeding among decision makers in the public and private sectors	• Develop and implement process that enables NAPB leadership and individual members to 1) identify key concerns and issues, 2) determine whether to take action on them, 3) determine the action, and 4) identify members to take action. • Document the contribution of plant breeding to the public good in terms of the environment, climate change, food security, economic growth, and health that can be used to garner public support for plant breeding. • Initiate the development of a coherent national plan for plant breeding.	• Number of opinion or information papers produced • References to plant breeding in the Congressional Record • Number of federal legislators and executives attend NAPB meetings • Number of requests for NAPB input into policy and other decisions impacting plant breeding
Public plant breeding capacity: Increase public and private support for cultivar development and germplasm improvement in public institutions	• Identify and implement approaches for advocacy to governments, both NAPB advocating directly and supporting members in advocating. • Develop relationships with stakeholders to support plant breeding financially and through advocacy partnerships. • Create best management practices for public institutions regarding intellectual property protection and division of royalty returns to increase financial and institutional support of plant breeding. • Identify the conditions under which plant breeding programs thrive and develop best management practices.	• Number of public plant breeding positions • Number of public plant breeders given tenure based on plant breeding activity • Level of public funding of public plant breeding programs • Length of cycles of funding public plant breeding programs • Funding of national plant germplasm system • Amount of infrastructure for public plant breeding – land to do testing, support field technicians, and other support staff

Education of plant breeding professionals: Strengthen education for plant breeding professionals at all levels of experience	• Identify and disseminate best practices for plant breeding education to include experiential learning as well as improved curriculum with increased focus on graduating upper level students who are field-ready.
	• Explore and implement public-private collaborations to recruit and support training of plant breeders.
	  o Support for students – Expand public / private collaboration to provide support to plant breeding students for their training.
	  o Recruitment of students – Develop and begin implementing public-private partnership program for recruitment of students, which can be focused at the high school, college, or graduate levels.
	  o Life-long learning – Explore how to provide or support continuing education or certification.
		• Number of plant breeding students who graduate with masters and Ph.D.s field-ready – they know how to work in the field, are able to do the field work of plant breeding
		• Amount of financial support available to graduate students
		• Student access to information leading to opportunities to enter plant breeding
		• Amount of private sector funding for education in the form of fellowships, cooperative training, and grants

Goal	Objectives – 5-year	Possible Measures
Public awareness: Increase public awareness of plant breeding and what it contributes to the public good	• Increase frequency and quality of communications from NAPB to make more positive messages about plant breeding readily available for those seeking information by building on or enhancing existing efforts. o Enhance the web site and make it a top search hit for plant breeding. o Improve responses to media interest. o Enhance use of social media. o Get more plant breeding success stories in the media. • Investigate ways to implement a public awareness effort or campaign.	• Web site hits • Measures of effectiveness of social media • Number of plant breeding success stories in the media • Degree of public awareness of plant breeding • Number of pieces about plant breeding in the media and assessment of the perception of plant breeding
Membership: Strengthen and increase value provided to the membership	• Increase size and diversity of NAPB membership. • Improve member communications and implement ways for more members to be actively engaged in NAPB. • Expand member services. • Maintain and improve the annual meeting.	• Diversity of membership in terms of: gender, international, undergraduate students, young professionals, underrepresented plant species, changing agricultural practices and agro-ecosystems, universities, companies, underrepresented states or regions, associated scientific fields • Number of members actively engaged in NAPB • Member satisfaction with services and support • Annual meeting attendance and support • Participant satisfaction with annual meeting
Organization: Strengthen the NAPB organization	• Increase funding sources and revenue streams for NAPB. • Increase staffing capacity (through contracting, hiring, or other mechanism). • Explore strategy for organizational growth. • Further develop financial procedures.	• NAPB funding overall and from different revenue streams • Findings of financial audit • Revenue change relative to changes in staffing • Achievement of NAPB goals relative to changes in staffing

Events and Opportunities

2015 Annual meeting of the Southern Branch of the American Society of Agronomy in Atlanta, GA is being held February 1-3, 2015. Additional information is available at https://www.agronomy.org/membership/branches/southern.

2015 Iowa State University R.F. Baker Plant Breeding Symposium will take place on March 4, 2015 in Ames, IA. For more information please visit R.F. Baker Plant Breeding Symposium.

2015 Summer Workshops in Plant Breeding will be held May 18 -22 (Field Design and Analysis), June 1 – 5 (Marker Assisted Selection), and June 15 – 19 (Genome-wide Analysis and Selection) in Wooster, OH. For more information please visit http://www.oardc.ohio-state.edu/tomato/Research/Summer_Workshops/plant_breeding_summer_workshops.html or contact David Francis (francis.77@osu.edu).

2015 Crop Genomics Enable Crop Breeding and Improvement will be held May 18 – 21 in Huntsville, AL at the Hudsonalpha Institute for Biotechnology. For more information visit www.CROPSconference.org.

2016 5th International Conference on Quantitative Genetics (ICQG) will take place on June 12 – 17, 2016 in Madison, WI. For more information please contact Natalia de Leon (ndeleongatti@wisc.edu).

Join the Texas A&M Monthly Plant Breeding Bulletin Texas A&M distributes a monthly Plant Breeding Bulletin (http://soilcrop.tamu.edu/media/plant-breeding-bulletin/). Contact Wayne Smith at cwsmith@tamu.edu or LeAnn Hague at Leann.hague@tamu.edu if you would like to be added to the list serve.

If you have an upcoming event you would like to include in the NAPB newsletter, please send a description and link to any important information to Greg Berger (gberger06@gmail.com). Information will be included in upcoming newsletters.

Success Stories

Recurrent Selection for Root-knot Nematode Resistance Is a Powerful Method in White Clover

In 2014, Dr. Kenneth H. Quesenberry along with Anantha Acharya and David Wofford, developed the first known US white clover cultivar with improved tolerance to root-knot nematode. Susceptibility to root-knot nematode can be a factor contributing to stand decline of white clover in the southeastern USA. The objective of this breeding program was to select for root-knot nematode resistance in white clover starting with a base population of 'Osceola'. Approximately 1200 plants of Osceola were initially screened for resistance to the southern root-knot nematode and approximately 150 plants with reduced root galling were selected and intermated. Five cycles of phenotypic recurrent selection were conducted. The resulting population, UFWC5, was evaluated for response to six different root-knot nematode populations in greenhouse trials and for dry-matter yield under field conditions, and was ultimately released as 'Ocoee'. There were no differences in total seasonal dry-matter yields of Ocoee compared to Osceola. Ocoee had significantly lower root galling and egg mass production scores than Osceola to all nematode populations. This plant breeding success story highlights the power of phenotypic recurrent selection to overcome a major, real world production problem.

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(L) = Osceola root-knot nematode susceptible plant with numerous root galls.
(R) = Ocoee root-knot tolerant plant with healthy roots.

Do you have a plant breeding success story that you would like to share? If so, please send a brief description or a link to Greg Berger (gberger06@gmail.com). Success stories will be shared in upcoming NAPB newsletters.

Mark Your Calendars!

Join us July 27-30, 2015 for the 5th annual NAPB and 9th annual meeting of the Plant Breeding Coordinating Committee being held at Washington State University in Pullman, WA.

Please direct comments and suggestions about the NAPB Newsletter to:

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