

Incoming NAPB President
Wayne Smith

Welcome Letter: NAPB President Wayne Smith

The National Association of Plant Breeders completed another successful year under the leadership of past president Klaus Koehler. The organization has benefited greatly under his leadership and organizational skills. I solicit your help to continue the momentum as we seek to develop into a larger and effective professional organization.

I took a moment to look back over the accomplishments of the past few years for NAPB. We began as an outgrowth of the Plant Breeding Coordinating Committee and held our first meeting in Ames, IA in 2010. The organization incorporated as a scientific society in 2012, adopted governance and fiscal policies in 2013, and qualified as a scientific/educational organization with 501(c)3 tax status in 2014. The annual meetings have attracted over 200 registrants annually over the years with over 300 registering for the meeting in Davis, CA. This past year, under the leadership of Klaus Koehler, the organization continued to evolve as a scientific organization, creating collaborations with the American Seed Trade Association and the TriSocieties, participating in the Congressional Visits Day, and advocating for plant breeding.

I believe that we need to continue to evolve in several areas and hope to facilitate the discussion in the following areas.

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- Membership growth: we need to redouble our efforts to reach out to faculty and students not only at Land Grant Universities but also at other agricultural universities and especially underrepresented groups. We have resources that we need to utilize - including the PBCC state reps, GSWG, and the YPWG - in reaching out to all universities with plant breeding teaching and/or research programs. We need to be more proactive in reaching out to private industry plant breeders. The breeding companies and their professional staff can be a tremendous resource for the organization and particularly for the graduate students. I think that private industry is a fertile field for membership growth.
- We need to take another look at corporate memberships for private companies as a way to encourage them to allow participation by their plant breeders. I believe that if properly structured that such memberships would be a win-win for the companies and for NAPB.
- Establishment as a Scientific Organization: We need to explore additional ways to make our voice heard among policy and decision makers. One such avenue could be joining the Council for Scientific Society Presidents and expanding our organizational horizons. I'm sure that there are other venues where we can be of value to society and to agricultural security.
- Continue to work with ASTA and others to get the message and value of plant breeding to the general public.
- We need to begin a discussion about an endowment program to provide some reoccurring financial support for the organization. This will be a step that needs considerable, thoughtful discussion over the next few months.
- Our meetings are among the best meetings that I have the opportunity to attend and it has been fun to watch the annual meeting evolve over the years. I think that we have an opportunity to enhance the experience for graduate students by exploring ways to connect them to the professional world at the annual meeting. This might take the form of mock interviews, professional development opportunities, or soft skills needed for success with private industry or academia.
- And finally, can NAPB facilitate short term "internships" with companies in order to broaden the "graduate experience" of plant breeding graduate students. This could take the form of a one to three week experience of a cotton breeding graduate student, e.g., spending a few days during pollination or selection in a strawberry breeding program. Recruiting for such mini-internships could be a part of the connecting to the professional world that I mentioned above.

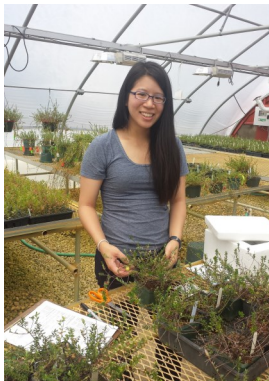
I'm grateful for the opportunity to serve as your president for the next year. It has been a joy to watch and participate in the development and growth of this organization over the past several years and I look forward with anticipation to seeing NAPB continue to grow and develop.

Wayne Smith

Special points of interest:

- NAPB President Wayne Smith outlines his priorities for the 2017-18
- Profiles of our 2017 award winners
- 2018 Meeting Info

1st Place: Stephanie Fong “Loci impacting malic and citric acid content in cranberry fruit



Stephanie Fong in her greenhouse

Stephanie is currently a PhD student at Rutgers University working on cranberry breeding with Dr. Nicholi Vorsa. She received a B.S. in Molecular, Cell, and Developmental Biology from the University of California, Los Angeles. Her current research focuses on dissecting the genetic basis of cranberry phytochemistry, including work on cranberry fruit acidity and health-promoting compounds such as flavonols.

Stephanie is our profiled graduate student this month; see page 3 for more info!

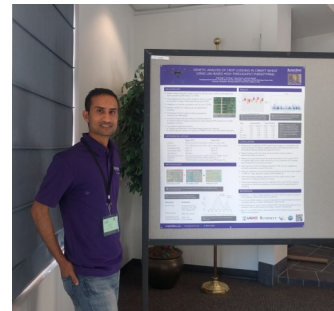
Fun fact: cranberries don't actually grow under water, we flood them for the winter to protect them and flood in the fall for harvest.

2nd Place: Daljit Singh “Genetic Analysis of Crop Lodging in CIMMYT Wheat Using UAV Based High-Throughput Phenotyping”

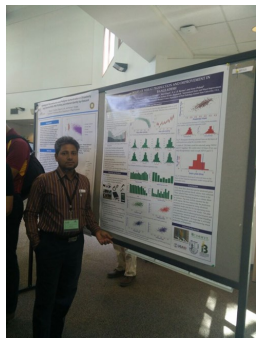
Use of UAVs (unmanned aerial vehicles) was a hot topic at the 2017 NAPB Meeting



Daljit is currently working on his PhD at Kansas State University under the supervision of Dr. Jesse Poland. His main research interest is to integrate novel phenotyping technologies with breeding workflows to achieve accelerated genetic gains. Before joining Kansas State, he went to Virginia Tech, where he got his Masters in crop physiology. He has a B.S. (Agriculture Hons.) with a major in plant breeding and genetics from Punjab Agricultural University in In-



3rd Place: Mohammad Makhlesur Rahman: “Scope of wheat production and improvement in Bangladesh



Mohammad is a PhD student working with Dr. Jesse Poland at Kansas State University, Manhattan, Kansas. He is originally from Bangladesh. He completed his B.S. (Honors) in Agriculture and M.S. in Genetics and Plant Breeding from Bangladesh Agricultural University, Mymensingh, Bangladesh. Now he has completed all the course works required for the PhD program at K-state and is conducting field research in Bangladesh with a view to introducing high throughput phenotyping and genomic selection approach in the national wheat breeding program in Bangladesh. Research results of the last two seasons showed that wheat in Bangladesh can be improved through applying genomics and phenomics tools.

Want to learn more? See all student poster abstracts on our website: [here.](#)



Dr. Robert E. Allan, USDA-ARS Research Geneticist and 2017 recipient of the NAPB Lifetime Achievement Award from a 1988 cover of Wheat Life.

Lifetime Achievement Award: Dr. Robert E Allan

This award, recognizing distinguished long-term service to the plant breeding discipline through research, teaching, outreach, and leadership, was given to Dr. Robert E. Allan, a USDA Agricultural Research Service Research Geneticist and Professor of Crops and Soil Sciences at Washington State University in Pullman WA.

Allan has served the wheat industry in many additional capacities, working with many wheat industry committees, including many years as secretary for the National Wheat Improvement Committee.

In 1952, Allan received a B.S. degree in Agriculture from Iowa State College, and M.S. and Ph.D. degrees from Kansas State College in 1956 and 1958 respectively. He served as a wheat geneticist for the USDA Agriculture Research Service in Pullman, WA from 1957 to 1996, working initially under the renowned wheat breeder, Orville Vogel.

Dr. Allen showed the inheritance of semi dwarf height in Norin 10 was controlled by 2 genes; they formed the foundation of the Green Revolution in wheat

Dr. Clark helped introduce the Cotton Candy® grape though his work in Arkansas and cooperative breeding in CA

Plant Breeding Impact Award: Dr. John Clark

This award recognizes an individual in the public or private sector who has made significant advancements in the field of plant breeding, specifically in the area of applied variety and/or technology development. The 2017 recipient is Dr. John R. Clark, Distinguished Professor of Horticulture at the University of Arkansas.

Since 1980 at the University of Arkansas, Clark has led research on blackberries, table grapes, wine/muscadine grapes, blueberries, and peaches/nectarines.

Clark has developed more than 50 cultivars of various fruits and has engaged colleagues in cooperative breeding activities throughout the United States and internationally. Along the way, as a colleague commented: "He has greatly internationalized the reach of the University of Arkansas fruit breeding program by establishing relationships with other public and private sector entities in Europe, North America, South America and Australia."



Dr. John R. Clark, recipient of the 2017 NAPB Impact Award, inspecting blackberry breeding

Early Career Scientist Award: Dr. Robert Duncan



Dr. Robert W. Duncan, Associate Professor, University of Manitoba, recipient of the NAPB 2017 Early Career Scientist Award.

This award recognizes a scientist in early stages of their plant breeding career who exhibits the ability to establish strong research foundations, to interact with multi-disciplinary teams, and to participate in relevant professional societies.

The 2017 recipient of the NAPB Early Career Scientist Award is Dr. Robert Duncan, Associate Professor at the University of Manitoba and leader of the Brassica Breeding Program. In his nomination package, Duncan was termed "a magnet and energizer for teams. His can-do personality moves through the group and makes him a natural leader for large teams with big vision and the energy to accomplish a vision."

Duncan was born and raised on a farm near Miami, Manitoba, Canada. He received a B.S. in Agronomy (2001) and his M.S. in Plant Pathology from the University of Manitoba (2003). He then attended the University of California, Davis for his PhD (2009), focusing on breeding for disease resistance in dark red kidney bean. Upon completion of his doctorate, he moved to Texas, where he served as an Assistant Professor and the State Wheat/Oilseed Specialist at Texas A&M University. In 2012, Duncan was recruited to the University of Manitoba to lead canola and rapeseed cultivar development, concentrating on improvements in seed quality, disease resistance, and several agronomic traits.



Dr. Ann Marie Thro, 2017 recipient of the NAPB Friends of Plant Breeding Award. Thro is National Program Leader for plant breeding and genetic resources in the National Institute for Food and Agriculture, USDA

Friend of Plant Breeding Award: Dr. Ann Marie Thro

This award was created to honor individuals whose career has not been involved in an active plant breeding program, but who, through their professional activities, have contributed significantly to the advancement of the plant breeding discipline.

This first recipient of this special merit award is Dr. Ann Marie Thro, National Program Leader for Plant Breeding and Genetic Resources at the National Institute for Food and Agriculture in the United States Department of Agriculture (USDA).

Commenting on her tenacity and dedication, one NAPB member said: "Ann Marie Thro is a longtime, enduring friend of plant breeding. Her background and experience have provided the foundation to be an effective spokesperson for plant breeding issues in academic and business groups as well as governmental, commercial and consumer settings"

Want to learn more?

Read the full press releases about our award winners

[here.](#)

Grad Student Profile: Stephanie Fong, PhD student at Rutgers University

Tell us a little about your background; where are you from, where else have you studied or worked?

Born and raised in Southern California, I also received my undergraduate degree from UCLA. During my time at UCLA, I worked on plant-microbe interactions. I then spent a year with the Chesapeake Conservation Corps in Maryland working on the impact of farm nutrient run-offs on algal blooms in the Chesapeake Bay before starting graduate school at Rutgers University.

What would you like to do after graduate school?

After graduate school, I am interested in becoming a fruit or vegetable breeder, either in the public or private sectors. My goal as a plant breeder is to increase the diversity and consumption of fruit and vegetables for a healthier world population and environment.

What would you like the public to know about plant breeding?

I would like the public to know that plant breeding is not exclusively GMO in the generally accepted sense. There is plant breeding that may incorporate GMO and plant breeding that is done completely without GMO. Also, plant breeding is not exclusive to solely conventional practices, you can have plant breeding for organic production as well. In the end, the goal of plant breeding research is to be able to feed and supply the growing world in changing times, which benefits everybody.

What is the biggest plant breeding challenge of our time?

A big technical challenge of plant breeding today is making sense of all the data we can achieve with next-generation sequencing and high throughput phenotyping. How can we most efficiently and effectively utilize all this data? However, I believe that the biggest plant breeding challenge of our time is the public's perception and public education on where our food comes from.



Stephanie Fong in cranberry field

Plant Breeding Program Story: Breeding Better Blueberries, Dr. Hamid Asrafi

Dr. Hamid Asrafi joined NC State more than 2 years ago and brought molecular breeding skills to NC State's blueberry breeding program. The focus of his breeding program is developing varieties that can be mechanically harvested without bruising. He is also working to improve firmness and crispness without sacrificing yield and at understanding genetic interactions between blueberry plants and fungal pathogens.

We look forward to seeing his varietal releases in the coming years!

Learn more on Dr. Asrafi's blog: <http://vacciniumatncsu.blogspot.com/>



Dr. Hamid Asrafi, Professor at NC State University and blueberry breeder

Stay in touch with NAPB!

Website: <https://www.plantbreeding.org/>



Have an idea for a future newsletter? Email the communication committee:

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NAPB: Improving Plants to Improve Lives

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

Our Vision: The NAPB works to help create a future in which 1) Strong public and private sectors work independently and together to deliver varieties and improved germplasm to society, 2) The value and importance of plant breeding to food security, quality of life, and a sustainable future are known and appreciated by the public, and 3) Plant breeding is viewed as dynamic, problem solving, and creative. The 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.

[Join us today!](#)

Thank you to our 2017 Annual Meeting Sponsors!

Diamond (\$10,000+)

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Gold (\$5,000)

Silver (\$2,500)

Bronze (\$1,000)



Join us for the 2018 Annual Meeting!

The 2018 NAPB Annual Meeting will be held from August 7-10, 2018 at the University of Guelph in Guelph, Ontario, Canada

More info: <https://www.plantbreeding.org/content/2018-annual-meeting>