NATIONAL ASSOCIATION OF PLANT BREEDERS AWARDS

National Association of Plant Breeders Honors Four Outstanding Scientists
The National Association of Plant Breeders (NAPB) has announced its awardees for outstanding accomplishments in four categories: Early Career Scientist, Lifetime Achievement, Public Sector Plant Breeding Impact, and Private Sector Plant Breeding Impact.

The 2023 NAPB awardees exemplify the very best in plant breeding research, education, outreach, and leadership. They model persistent dedication and a passionate devotion to applying their plant breeding skills and technical excellence to promote food security, quality of life, and economic resiliency for a sustainable future. They are committed to supporting the next generation of the plant breeding discipline. These outstanding professionals inspire plant breeders and scientists everywhere. The 2023 awardees are as follows:

Early Career Scientist Award: Dr. Amanda Hulse-Kemp, USDA-ARS
Lifetime Achievement Award: Dr. Jim Luby, University of Minnesota
Public Sector Impact Award: Dr. William Rooney, Texas A&M University
Private Sector Impact Award: Dr. Tabaré Abadie, Corteva Agriscience

Awards were announced at the NAPB annual conference, hosted by Clemson University, Greenville SC, 16-20 July 2023. The meeting attracted around 340 participants, including 140 students, and featured formal technical and scientific presentations, interactive workshops, field trips, and networking opportunities. It also included the annual meeting of the Plant Breeding Coordinating Committee (PBCC). All four NAPB awardees are invited to present talks at the next annual meeting, co-hosted in St. Louis by Bayer and the University of Illinois Urbana-Champaign, 21-24 July 2024.

About the NAPB and PBCC
Plant breeders develop new crop varieties that promote food security, quality of life, and economic resiliency for a sustainable future. The NAPB [http://www.plantbreeding.org] is a unique organization in the U.S., bringing together public and private sector plant breeders to share technical information, improve the efficiency and effectiveness of their programs, develop the next generation of scientists, disseminate information about plant breeding, and advocate for a cohesive national plant breeding agenda. The PBCC is a national public sector group of scientists that provides a forum for discussion and outreach on plant breeding [https://www.nrsp10.org/PBCC]

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National Association of Plant Breeders
EARLY CAREER SCIENTIST AWARD 2023

AMANDA HULSE-KEMP
USDA-ARS
Raleigh, North Carolina

The 2022 recipient of the National Association of Plant Breeders Early Career Scientist Award is Dr. Amanda Hulse-Kemp, USDA-ARS, Raleigh, NC. Dr. Hulse-Kemp is a Computational Biologist with the USDA-ARS Genomics and Bioinformatics Research Unit located in Raleigh, North Carolina on the North Carolina State University campus.

Dr. Hulse-Kemp’s current research revolves around developing high-quality genomes, genotyping technologies and tools to integrate into breeding programs to support predictive breeding strategies on nearly 20 crops. As her nomination letter stated: “Amanda has an amazing ability to work successfully in the laboratory, field, or classroom and to effectively communicate her message to a broad audience. She is already a leader in the 21st century and embodies all the traits we desire in an Early Career Scientist.”

Dr. Hulse-Kemp’s lab group of talented informatics researchers partners closely with a range of plant breeders. She is also the director of Breeding Insight OnRamp, an internal ARS project supporting technology translation into breeding programs and coordinates actively with the Cornell University Breeding Insight project. She currently serves as Chair of the Comparative Genomics and Bioinformatics Working Group in the International Cotton Genome Initiative, a consortium of global experts in cotton genomic research.

According to another nomination letter: “Dr. Hulse-Kemp has already become a “go to” person for organizing important community efforts to drive the integration of technological research advancements into cotton breeding. She has quickly become an exceptional leader in the domestic and international cotton research communities, specifically as an advocate and developer of tools for cotton breeding.”

Furthermore, as another nomination letter indicated: “Dr. Hulse Kemp is a leader in innovation with rigorous research and science-based solutions, not only developing novel strategies to integrate genetic diversity into plant breeding, but also communicating her work on an international stage while educating the next generation of scientists. Her focus on practical application and accessibility of tools is enabling the latest strategies to be implemented in staple crops and specialty crops by plant breeders.”
Dr. Hulse-Kemp has been a proud member of the National Association of Plant Breeders for over 10 years, starting as a graduate student. She obtained her Ph.D. from Texas A&M University working with Dr. David Stelly in cotton breeding and genomics. She then worked at UC Davis and Dr. Allen Van Deynze as a postdoctoral researcher in bioinformatic and integration of tools for enhancing breeding of vegetables and orphan crops.

Dr. Amanda Hulse-Kemp, recipient of the 2023 National Association of Plant Breeders Early Career Scientist Award, in the field with colleagues Jodi Scheffler, USDA-ARS (l) and Daniel Restrepo-Montoya, Universidad Nacional de Colombia (r).
Dr. Amanda Hulse-Kemp, recipient of the 2023 National Association of Plant Breeders Early Career Scientist Award, with her lab group (l-r): Mitanshu Reshamwala, Dr. Heather Manching, Prasad Kamath, Ashley Schoonmaker, Grant Billings, Dr. Amanda Hulse-Kemp, Dr. Keo Corak, Dr. Ash Yow.
Benjamin Kemp, rigorously evaluating blueberry germplasm in his backyard nursery with his mother, Dr. Amanda Hulse-Kemp, recipient of the 2023 National Association of Plant Breeders Early Career Scientist Award.
National Association of Plant Breeders
LIFETIME ACHIEVEMENT AWARD 2023

JAMES J. LUBY
University of Minnesota
St. Paul, Minnesota

The 2023 recipient of the National Association of Plant Breeders (NAPB) Lifetime Achievement Award is James Luby, University of Minnesota. As a faculty member in the Department of Horticultural Science, he has directed research in fruit crops breeding and genetics since 1982. As his nomination letter states: “Throughout his 41-year career at the University of Minnesota, Jim has had outstanding contributions in cultivar development, plant breeding research, undergraduate and graduate education and advising, and leadership in the horticultural plant breeding community.”

The emphasis of Dr. Luby’s program is to develop new cultivars that combine a great eating experience for the consumer with cold hardiness, disease resistance and other traits desired by producers. His research aims to determine the inheritance of important fruit and tree traits and identify important genetic loci and DNA markers for use in DNA-informed breeding. He has published over 150 peer-reviewed papers and book chapters, contributing to our understanding of variation in wild strawberry and genetics of important traits in apple, berries, and grapes. As another of his nomination letters highlighted: “Jim Luby has an impressive portfolio of outstanding accomplishments as an innovative fruit breeder with a keen eye for excellence complemented by practicality and eagerness to utilize new genetic and genomic-driven opportunities.”

Under his direction, the University of Minnesota fruit crops breeding program has introduced 30 cultivars of apple, grape, blueberry, strawberry, raspberry, pear and plum. Luby and his colleague David Bedford have developed several apple cultivars and worked with the University of Minnesota Technology Commercialization group to develop novel commercialization strategies in the U.S. and around the world.

Honeycrisp apple, designated the “State Fruit” of Minnesota by the Minnesota legislature in 2006, has become the 3rd largest variety in U.S. production with a wholesale value greater than $1B. ‘Honeycrisp’ and SweeTango® apples ranked #1 and #10 respectively in retail value in the US in 2021. Both cultivars are produced in several international production regions and Honeycrisp is being used globally in apple breeding programs.
Five wine grape cultivars developed in the program have enabled a cold climate wine industry of small, local vineyards and wineries across northern tier of the midwestern and eastern US. Blueberry cultivars developed by the team are the basis for local production in USDA Hardiness Zones 3-4. Luby participated in plant germplasm collecting expeditions in the U.S. and internationally focusing on wild apple (*Malus sieversii*) and native North American berry species. He is credited as a contributor of 1725 accessions of fruit and nut species to the USDA-ARS National Plant Germplasm System (525 currently available for distribution).

Dr. Luby grew up in Wisconsin and his education includes a B.S. degree in Crop Science from Purdue University and a Ph.D. in Plant Breeding from the University of Minnesota. He teaches students in plant breeding and fruit production courses. He has been active in graduate education, advising 15 PhD students, 14 MS students and 6 postdocs, and serving on 172 graduate advising/examining committees and as Director of Graduate Studies (or Assoc.) for Horticulture or Applied Plant Sciences graduate programs for 17 years.

As another of Dr. Luby’s nomination letters noted: “Jim is one of the most impactful fruit breeders of our time, whose lasting legacy will be the cultivars and germplasm he has advanced, students he has mentored, impactful publications, and service to the community.” Finally, concludes another: “Jim embodies just what it takes to be a successful plant breeder, including patience, discipline, intelligence, a great personality for interaction with others, along with a long-term view of what can be achieved with diligence and perseverance.”

Dr. Jim Luby, University of Minnesota, winner of the 2023 National Association of Plant Breeders Lifetime Achievement Award, engaging a youthful apple consumer at a fruit tasting event. Photo by Patrick O’Leary, Univ of Minnesota.
Dr. Jim Luby, University of Minnesota, winner of the 2023 National Association of Plant Breeders Lifetime Achievement Award, pollinating apples with his former graduate student, Seth Wannemuehler. Photo Sarah Kostick, Univ. of Minnesota.
National Association of Plant Breeders
PUBLIC SECTOR PLANT BREEDING IMPACT
AWARD 2023

WILLIAM L. ROONEY
Texas A&M University
College Station, Texas

Dr. William L. Rooney is the 2023 recipient of the National Association of Plant Breeders Public Sector Plant Breeding Impact Award. Rooney is a Regents Professor and the Borlaug-Bayer Chair in Crop Improvement in the Department of Soil and Crop Sciences at Texas A&M University. As one of his nomination letters highlights: “His impacts range from his influence on students in his class room to his and other graduate students to the sorghum producers in Texas to sorghum production and research globally. He truly has impacted mankind and deserves the recognition of those impacts by his fellow plant breeders.”

Dr. Rooney’s improvement program seeks to enhance the productivity and profitability of grain, forage and bioenergy sorghums. The objectives of the breeding position are to train graduate students in plant breeding, conduct research into the genetic control of important traits in grain, forage and bioenergy sorghums, and develop and release sorghum germplasm for research and commercialization purposes. Traits of emphasis include disease resistance, grain quality, agronomic productivity and adaptability.

Rooney has released numerous sorghum germplasm, lines and hybrids. These releases include the first commercialized bioenergy sorghum hybrids, a “black” grain sorghum hybrid used in the food industry as well as inbreds used as parents in the commercial grain and forage sorghum hybrids. His program has also focused on interspecific hybridization of sorghum which, over the years, has resulted in the identification of a male chemical gametocide effective not only in sorghum but also the production of sorghum/sugarcane hybrids and the introgression of ACCase resistance from johnsongrass to sorghum.

Noting his global impact, one colleague stated: “Dr. Rooney pioneered the concept of bioenergy sorghum and developed the first bioenergy sorghum breeding program in the world; he remains the world-wide expert in bioenergy sorghum. His program is also the world leader in specialty grain sorghum hybrids. Finally, he and his program are the world experts in interspecific and intergeneric hybridization methods in sorghum and their application in breeding and research.”

From this work, there have been numerous publications, but his most important and lasting impact is and will be the graduates of the program To date, he has served as chair of the graduate
advisory committee for 18 M.S. graduates, 23 Ph.D graduates and 13 graduates who completed both an M.S. and Ph.D. degree. The vast majority of these 54 scientists now work in crop improvement programs in private industry, as well as the public sector. While some have stayed in sorghum, many have settled in corn, soybean, wheat and other crops and these graduates are located not only in the U.S. but throughout the world.

Noting his impact on students, on colleague stated: “Dr. Rooney is a ‘plant breeders’ breeder’. I often hear graduate students and other attendees at his presentations talk about how they finally feel like they understand how a “real” breeding program works. His classes are no different, a favorite of nearly every student who wants to run an applied breeding program.”

Dr. Rooney earned his B.S. and M.S. degrees in Agronomy and Plant Breeding at Texas A&M University and his Ph.D. from the University of Minnesota.
Dr. William L. Rooney, Texas A&M University, the 2023 recipient of the National Association of Plant Breeders Public Sector Plant Breeding Impact Award.
Dr. Tabaré E. Abadie is the 2023 recipient of the National Association of Plant Breeders Private Sector Plant Breeding Impact Award. He is a Distinguished Research Laureate at Corteva Agriscience and is internationally recognized in the areas of plant breeding and genetic resources, making significant contributions in education, extension, outreach, and advocacy.

As his nomination letter states: “Over a 40-year career in plant breeding, Tabaré made significant contributions to the discipline through releases of widely used cultivars of wheat, technology innovation, and leadership. He developed innumerable human resources, the largest student professional network that stems from the Plant Sciences Symposia Series, and one of earliest industry implementations of molecular breeding at worldwide scale for major crops.”

Dr. Abadie is the founder and developer of the Plant Sciences Symposia Series, a student-driven program that includes more than 60 universities around the world, dedicated to advance higher education and empowering future plant scientists. He has mentored many students and professionals along his career and is a recognized advocate of inclusion, diversity, and equity.

In 2003 Dr. Abadie started a career in the private sector, where he conducted pioneering discovery and development research. Among others achievements, the group he belonged to was granted a patent for the first imaging system to phenotype maize ears using photometry technology (20110285844). This work later led to many other applications of imaging in modern plant breeding within Corteva, as well as in the public sector.

Starting in 2006, Dr. Abadie took full responsibilities to develop and lead the deployment of Molecular Breeding for several crops including maize, soybean and sorghum, worldwide. He led a team responsible for building human capacity and infrastructure, and an internal and external educational and career development environment to meet the needs of a research organization of 5000 people worldwide.
Dr. Abadie is originally from Uruguay, where he was a wheat breeder and university professor for more than 20 years before joining then Pioneer Hi-Bred International in Iowa in 2003. He obtained a B.S. in Agronomy from Universidad de la República, Uruguay (1982), did graduate studies at the University of Birmingham (UK) (1985) and the University of Minnesota, where he obtained a Ph.D. (1994), and was a post doc at UC Davis (1999-2001).

As another of his nomination letters highlighted: “Tabaré’ has many achievements, but his most important legacy to the world is the quality of the relationships with the people he inspired, trained, and mentored. His ability to communicate clearly, inspire and motivate deep questions and confront personal challenges, has positively directly influenced hundreds of his mentees in industry and academia. This has a multiplicative effect in many thousands of students, professionals, and leaders in the field of crop science. Tabaré has changed the world by innovative, committed, engaging, excellent extension education, and he is absolutely deserving of this award.”

Dr. Tabaré E. Abadie, Corteva Agriscience, the 2023 recipient of the National Association of Plant Breeders Private Sector Plant Breeding Impact Award.
Dr. Tabaré E. Abadie, Corteva Agriscience, the 2023 recipient of the National Association of Plant Breeders Private Sector Plant Breeding Impact Award, with colleague Jason Rauscher, who currently leads the Agriscience Plant Sciences Symposia Series.