

Seed Applied Technology



Digital Agriculture



Seed Health and Pathology







Breeding Systems

SST Seed Production Technology and Equipment Seed Science Foundation

Doug Miller | Seed Quality and Testing | SSF



 Proactive and integrated source of plant science expertise for the U.S. seed industry. - 501(c)(3) org



 Address seed and plant science challenges, encourage plant breeding education and seed research in support of the ever-changing needs of the global seed industry.



 Provide insight and recommend solutions that enable the U.S. seed industry to function with global effectiveness.

Board Structure & Governance



Goals

- Proactive research support, broad industry representation, relevant impact, build scientific connectivity, provide science advisory group to ASTA
- Composition
 - 13 members, 3-yr terms
 - Officers (5 board members)
 - Subject Matter Chairs (6 board members)
 - Research Investment and Communication Leads (2 board members)
 - 4 Ex-officio members from ASTA staff





- Six industry-relevant subject matter areas
 - Breeding Systems
 - Seed Health/Pathology
 - Digital Agriculture
 - Seed Quality and Testing
 - Seed Production Technology/Equipment
 - Seed Applied Technologies

Six Subject Matter Areas



- Breeding Systems:
- Seed Quality:
- Seed Production/Tech:
- Seed Health/Pathology:
- Digital Ag:
- Seed Applied Tech:

Sarah Smith (HMClause) Doug Miller (Illinois Crop Improvement) Clayton Osburn (Syngenta) Samantha Thompson (Bayer) Open Cecilia Chi-Ham



Seed Quality and Testing - SME

Subject Matter Expert Panel 5/3/2021





 To be an effective decision making tool seed testing must deliver an accurate assessment of the seed's viability, purity and identity based on a representative sample.



Seed Quality & Testing



Note...

- Seed Quality is assessed during testing
- Viability deficiencies range from physiological to physical, hidden to visible
- Purity deficiencies range from varietal to mechanical
- Seed Testing must deliver an accurate assessment of purity and performance
- Seed Quality can be improved through breeding, production-practices, and seed-applied technologies





- Basic Explore attributes in seed that have yet to be measured or correlated to seed quality.
- Applied Improving the state of the art in vigor, purity, trait and genetic testing
- Outreach Improve the decision-making abilities of seed professionals & consumers.

Seed Quality & Testing



• UC Davis

Xianming Duan

Sakata Seed America

Samantha Thomas

Bayer

John Mizicko

Eurofins BioDiagnostics

Amanda Patin

• SGS

Brent Reschly

• Syngenta

Jim Shearl

• JR Shearl & Associates

Doug Miller

• Illinois Crop Improvement





seedsciencefoundation.org



Our Goals

The intent of SSF research is to be dynamic and forward thinking. The SSF seeks to address the needs and opportunities within the seed industry.





