

### Plant Breeding and Genetics

*A paper in the series on  
The Need for Agricultural Innovation to  
Sustainably Feed the World by 2050*

#### ABSTRACT

The 47th session of plant breeding in America was held in a packed conference hall at the University of Nebraska-Lincoln. The meeting was held on the campus of the University of Nebraska-Lincoln, a location that is important to the history of plant breeding in America. The meeting was held in a packed conference hall at the University of Nebraska-Lincoln. The meeting was held in a packed conference hall at the University of Nebraska-Lincoln.



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## CAST Issue Paper 57

# Plant Breeding and Genetics

Released March 22, 2017

Co-chairs: P. Stephen Baenziger, University of Nebraska-Lincoln, and Rita H. Mumm, University of Illinois at Urbana-Champaign, Newark; Nine-member task force

### Release/Rollout

The task force cochairs, Dr. Stephen Baenziger and Dr. Rita Mumm, presented this paper to three audiences in Washington, DC—a National Coalition for Food and Agricultural Research (NC-FAR) Senate briefing for staffers, an NC-FAR “Lunch ‘n Learn” seminar for House staffers, and a presentation for stakeholders cohosted by the ASA, CSSA, and SSSA Science Policy Office.

- Sixty-one attended the hill seminars, and we had 56 registrants for the off the hill event.

### Press Release (results two weeks after release)

- Press release went to 9,805 e-contacts (4,306 media) resulting in 3,663 opens/interactions
- 303,670 headline impressions, and 208 total pickups on [press release through PRWeb](#).
- A sampling of sites where the release was picked up: Benzinga, Potato Grower, Seed Quest, Western Society if Weed Science Newsletter,

### Comments Received

- “I think it has helped the federal granting agencies to continue to support plant breeding grants and training opportunities.”
- “Positive comments from several ongoing and prospective graduate students regarding their decision to pursue a career in plant breeding.”
- Haven’t used the publication yet, “but probably will in a book chapter soon.”

### Follow-On Activities

- Video of Dr. Baenziger’s and Dr. Mumm’s presentation and slides posted on CAST website and YouTube [Click here to view](#). (825 views as of 3/20/2019)

### Paper Distribution

- Issue Paper Downloads—6 months after release: 5,488; 1 year: 15,578; 2 years: 23,309
- Ag quickCAST Downloads—6 months after release; 2,235; 1 year: 3,137; 2 years: 4,664
- Distributed over 600 copies of printed issue paper

*This 2-year report last updated 3/20/2019.*

## Indirect Paper Distribution

**CAB Direct** (abstract and link to paper)

<https://www.cabdirect.org/cabdirect/abstract/20173106645>

**Docplayer** (PDF is posted)

<http://docplayer.net/48284865-Plant-breeding-and-genetics-a-paper-in-the-series-on-the-need-for-agricultural-innovation-to-sustainably-feed-the-world-by-2050.html>

**Mafiadoc** (PDF is posted)

<https://mafiadoc.com/plant-breeding-and-genetics-council-for-agricultural-science-and-5982840d1723ddea5671e867.html>

**Plant Breeding Academy**, UC Davis (link to paper)

<http://pba.ucdavis.edu/News/>

**Researchgate** (PDF posted)

[https://www.researchgate.net/publication/315786485\\_Council\\_for\\_Agricultural\\_Science\\_and\\_Technology\\_CAS\\_T\\_2017\\_Plant\\_Breeding\\_and\\_Genetics--A\\_paper\\_in\\_the\\_series\\_on\\_The\\_Need\\_for\\_Agricultural\\_Innovation\\_to\\_Sustainably\\_Feed\\_the\\_World\\_by\\_2050\\_Issue\\_Paper\\_5](https://www.researchgate.net/publication/315786485_Council_for_Agricultural_Science_and_Technology_CAS_T_2017_Plant_Breeding_and_Genetics--A_paper_in_the_series_on_The_Need_for_Agricultural_Innovation_to_Sustainably_Feed_the_World_by_2050_Issue_Paper_5)

**Southern Crop Production Association**, March 22, 2017 (link to paper)

<http://www.southcrop.org/agricultural/plant-breeding-and-genetics/>

**WorldCat Libraries** (link to paper)

<http://www.worldcat.org/title/plant-breeding-and-genetics-a-paper-in-the-series-on-the-need-for-agricultural-innovation-to-sustainably-feed-the-world-by-2050/oclc/985357295>

**Yumpu** (PDF is posted)

<https://www.yumpu.com/en/document/view/58015296/plant-breeding-and-genetics>

## Articles and Web Mentions

**American Society of Agronomy and Certified Crop Adviser**, April 5, 2017

<https://www.agronomy.org/science-policy/sspr/#4974>

<https://www.certifiedcropadviser.org/science-policy/sspr#4974>

**Crop Science Society of America, Science Policy Report**, April 5, 2017

<https://www.crops.org/science-policy/sspr/2017-04-05/#4974>

**Horti Daily** (article and link to website)

March 23, 2017

<http://www.hortidaily.com/article/33299/New-whitepaper-on-Plant-Breeding-and-Genetics-now-available>

**Meridian Institute** (article and link to website)

March 22, 2017

[http://www.merid.org/en/Content/News\\_Services/Food\\_Security\\_and\\_AgBiotech\\_News/Articles/2017/Mar/22/CAST.aspx](http://www.merid.org/en/Content/News_Services/Food_Security_and_AgBiotech_News/Articles/2017/Mar/22/CAST.aspx)

**North Central Weed Science Society Newsletter**, Spring 2017

<http://ncwss.org/wp-content/uploads/Spring2017-newsletter.pdf>

**Weed Science Society of America, Washington Report**, June 15, 2017

*This 2-year report last updated 3/20/2019.*

[http://wssa.net/wp-content/uploads/Washington-Report-June-15\\_2017.pdf](http://wssa.net/wp-content/uploads/Washington-Report-June-15_2017.pdf)

*Western Society of Weed Science Newsletter*, Spring 2017

<https://www.wsweedscience.org/wp-content/uploads/2017-Spring-WSWS-Newsletter.pdf>

## Paper Citations

*Cell*, Volume 171, Issue 2, p470–480.e8, 5 October 2017

Daniel Rodríguez-Leal, Zachary H. Lemmon, Jarrett Man, Madelaine E. Bartlett, Zachary B. Lippman

*Engineering Quantitative Trait Variation for Crop Improvement by Genome Editing*

[http://www.cell.com/cell/references/S0092-8674\(17\)30988-1](http://www.cell.com/cell/references/S0092-8674(17)30988-1)

## Social Media

### Twitter -

[ **@Food\_Safety** ]: Plant Breeding and Genetics: The United Statesbased Council for Agricultural Science and Technology CAST has...

(10:47 am • 22 Mar 17)

[ **@PatentsBiotech** ]: New CAST Issue Paper “Plant Breeding and Genetics” – A paper in the series on The Need for Agricultural Innovation..

(5:16 am • 22 Mar 17)

[ **@AibrahimAmir** ]: @CASTagScience Excellent visionary statement by @Huskerwheat, @ritamumm et al outlining technologies needed for feeding the world by 2050!

(6:25 pm • 26 Mar 17)

[ **@AgBioWorld** ]: What is the role of plant breeding and genetics in feeding the humanity? Position paper by @CASTagScience

(3:48 • 24 Mar 17)

[ **@pammarrone** ]: New whitepaper on Plant Breeding and Genetics now available @CASTagScience

(7:04 am • 24 Mar 17)

[ **@AGreeAgPolicy** ]: New Paper: Plant Breeding and Genetics -- @CASTagScience #foodsecurity

(2:32 pm • 22 Mar 17)

[ **@plantdisease** ]: New @CASTagScience Issue Paper: #PlantBreeding & #Genetics with lead author

@Huskerwheat #PlantScience

(2:00 pm – 22 Mar 17)

[ **@agbiotech** ]: Plant Breeding and Genetics: New paper from @CASTagScience covering the science of plant breeding and genetics

(1:56 • 22 Mar 17)

[ **@FsAgbiotech** ]: Plant Breeding and Genetics @CASTagScience #Agriculture #foodsecurity #innovation

(1:32 pm • 22 Mar 17)

[ **@agbiotech** ]: At the @ASA\_CSSA\_SSSA DC offices for the launch of a new @CASTagScience issue paper. Facinating stuff about plant breeding and genetics

(12:02 • 22 Mar 17)

*This 2-year report last updated 3/20/2019.*

[ **@wheatgenome** ]: New @CASTagScience Issue Paper: "Plant Breeding and Genetics" w/ wheat geneticist @Huskerwheat as lead author  
(4:46 am • 22 Mar 17)

[ **@EversoleAssoc** ]: New @CASTagScience Issue Paper: "Plant Breeding and Genetics" with lead author @Huskerwheat  
(4:43 am • 22 Mar 17)

[ **@PhytoBiomes** ]: New @CASTagScience Issue Paper: "Plant Breeding and Genetics" with lead author @Huskerwheat  
(4:42 • 22 Mar 17)

[ **@VictoriaBroehm** ]: I've never met a #farmer who didn't want better life 4 his family, better crops thru #plantscience innovation @Huskerwheat @CASTagScience  
(8:12 am • 22 Mar 17)

[ **@VictoriaBroehm** ]: People deserve to be fed. Innovation in #plantscience is critical. @Huskerwheat @CASTagScience  
(8:11 am • 22 Mar 17)

[ **@VictoriaBroehm** ]: Dr Baenziger on #plantscience innovation: I worry about developed countries telling those in developing ones "no" @CASTagScience @UNL\_IANR  
(8:05 am • 22 Mar 17)

[ **@Info\_NBT** ]: #Plant Breeding and #Genetics. The Need for Agricultural Innovation to Sustainably Feed the World by 2050  
(9:50 am • 23 Mar 17)

[ **@Indigoag** ]: "Plant Breeding & Genetics" is the newest addition to @CASTagScience's series on innovation and #sustainability in #ag  
(9:57 am • 24 Mar 17)

[ **@MotiShmueli** ]: Plant Breeding and Genetics  
(9:32 pm • 26 Mar 17)

[ **@portulan** ]: New CAST Issue Paper: "Plant Breeding and Genetics" [http://ln.is/constantcontact.com/VTJaH ...](http://ln.is/constantcontact.com/VTJaH...)  
via #constantcontact  
(10:01 am • 27 Mar 17)

[ **@Engler4Mike** ]: New CAST Issue Paper: "Plant Breeding and Genetics" <http://conta.cc/2o0jkxE> via #constantcontact  
(4:04 am • 27 Mar 17)

[ **@ronnieogden56** ]: New CAST Issue Paper: "Plant Breeding and Genetics" - [cornerstonefineestates.com/new-cast-issue\\_](http://cornerstonefineestates.com/new-cast-issue_)  
(9:18 pm • 22 Mar 17)

[ **@gmo\_crops** ]: #GMO news: New CAST Issue Paper "Plant Breeding and Genetics"  
<http://ow.ly/QNWx50alM3d>  
(7:02 am • 22 Mar 17)

[ **@greenecosystem2** ]: New CAST Issue Paper: "Plant Breeding and Genetics"  
(6:49 am • 22 Mar 17)

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[ **@BioPortfolio**]: New CAST Issue Paper "Plant Breeding and Genetics"  
(6:34 am • 22 Mar 17)

[ **@CASTagScience**]: Plants play an important role in the diets of humans and animals...  
(12:58 pm • 13 Apr 18) <https://twitter.com/CASTagScience/status/984853365137002496>

**Facebook** –

[**International Wheat Genome Sequencing Consortium**]: New @CASTagScience Issue Paper: "Plant Breeding and Genetics" w/ wheat geneticist @Huskerwheat as lead author...  
(22 Mar 17)

[**Raskika Gujare**]: New CAST Issue Paper: "Plant Breeding and Genetics"  
(22 Mar 17)

[**Alkaline Diet**]: <http://www.prweb.com/releases/2017/03/prweb14134447.htm>  
(22 Mar 17)

[**CAST**]: CAST Seminar on "Plant Breeding and Genetics"--March 22 in Washington, DC  
(17 Mar 17)

[**CAST**]: Tomorrow--Attend a CAST Seminar on "Plant Breeding and Genetics"--March 22 in Washington, DC  
(21 Mar 17)

[**The American Phytopathological Society**]: New Council for Agricultural Science and Technology (CAST)  
Issue Paper: #PlantBreeding & #Genetics: <http://conta.cc/2o0jkxE> #PlantScience  
(22 Mar 17)

[**International Business and Technologies**]: #PlantBreeding and #PlantGenetics - #CAST's New #AgInnovation  
Paper Now Available #CropTechnologies #BigData #TechnologiesTransfer  
(23 Mar 17)