ASHEESH K. SINGH
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EDUCATION

2003-2007 Ph.D. University of Guelph, Plant Genetics and Breeding, Maize Breeding.
1998-2001 M.Sc. University of Saskatchewan, Plant Science, Barley Breeding.
1994-1998 B.Sc. Agriculture and Animal Husbandry, G.B Pant University.

APPOINTMENTS

2022-2024 C1 division of Crop Science Society of America, Chair-Elect (2022).
2021-2023 Associate Chair, Discovery and Engagement, Department of Agronomy, Iowa State University.
2020 Professor, (Soybean Breeding, Genetics, Genomics, Phenomics, AI applications), Department of Agronomy, Iowa State University.
2018-2022 Director of Graduate Education (Plant Breeding).
2018-2021 Associate Editor, Science Partner Journal Plant Phenomics.
2017-2020 Associate Professor, Department of Agronomy, Iowa State University.
Faculty member - Genetics and Genomics Program.
2013-2017 Assistant Professor, Department of Agronomy, Iowa State University.
2007-2013 Research Scientist, Durum wheat breeder (Permanent position), Agriculture and Agri-Food Canada. *12 months appointment: 100% research.*
2001-2002 Research Assistant, Crop Development Center, Univ of Saskatchewan (Barley and Oat breeding).

HONORS AND AWARDS

2021 CALS Team Award (Soynomics team), ISU.
2020 ISU Award for Mid-Career Achievement in Research.
2020 CALS Mid-Career Achievement in Research Award, ISU.
2020 Raymond and Mary Baker Agronomic Excellence Award, ISU.
2018 CALS team award (Plant Breeding Education in Africa), ISU.
2017 Faculty Fellow, Plant Sciences Institute, ISU.
2013 Faculty Fellow, R F Baker Center for Plant Breeding, ISU.
2013 Sustainable Futures Award, Agricultural Institute of Canada.
2013 Monsanto Chair in Soybean Breeding, ISU.
2000 T.C. Vanterpool Memorial Prize for Outstanding Student in Plant Pathology and Mycology, Runner-up, Canadian Society of Phytopathology.
1998 Vice-Chancellor's Gold Medal, College of Agriculture, G B Pant University.

SUMMARY OF CAREER FUNDING

- More than 60 competitive grants for research
- Total career funding in grants as PI or co-PI: >$100 million
- Total funding to AK Singh (AKS): >$15 million

$ Includes $US and $CDN; * best faith estimates.

SUMMARY OF PEER REVIEWED PUBLICATIONS

- **151 peer reviewed papers** in journals and conference proceedings.
  - 123 peer reviewed journal articles (published).
  - 28 peer reviewed conference full papers (including accepted)

SUMMARY OF PLANT BREEDING OUTPUTS

- Soybean (USA): Four varieties commercialized.
- 19 Invention disclosures made at ISU.
- Wheat (Canada): 39 cultivars received registration support, and 13 germplasm lines developed.

THREE MOST NOTABLE PUBLICATIONS (last five year)

- Singh AK, B Ganapathysubramanian, S Sarkar, A Singh. (2018). Deep learning for plant stress phenotyping: trends and future perspectives. Trends in Plant Science. 23(10): 883-898.
- Ghoshal S, D Blystone, AK Singh, B Ganapathysubramanian, A Singh, S Sarkar. (2018). Bringing consistency to plant stress phenotyping through an explainable deep machine vision framework. Proceedings of the National Academy of Sciences. 115(18): 4613–4618.
- Guo W, ME Carroll, A Singh, TL Swetnam, N Merchant, S Sarkar, AK Singh, B Ganapathysubramanian. 2021. UAS-Based Plant Phenotyping for Research and Breeding Applications. Plant Phenomics. Article ID 9840192.

TEXTBOOK

- **Singh DP, AK Singh, A Singh** (2021). Plant Breeding and Cultivar Development. Academic Press. ISBN: 978-0-12-817563-7. [https://www.elsevier.com/books/plant-breeding-and-cultivar-development/singh/978-0-12-817563-7]

INVITED PRESENTATIONS (National and International): 69, and >100 media engagements with magazines, radio stations, extension talks, national and international tours.

RESEARCH MENTORING AND SUPERVISION AT ISU (including former members): Undergraduates: >75; M.S. students: 10; Ph.D. students: 12; Post-Doctoral Fellows: 6; Professional and Scientific staff: 11.

COURSE LEAD: Principles of Cultivar Development (AGRON 521), Field Methods in Plant Breeding (AGRON 522)

NOTABLE SYNERGISTIC ACTIVITIES

- Associate Editor: Science Plant Phenomics (2018- 2021).
- Examples of service to the scientific community: International workshop on machine learning for cyber-agricultural systems; World Soybean Research Conference; Asia-Pacific Federation for Information Technology in Agriculture (AFITA), World Conference on Computers in Agriculture (WCCA) on Research Frontiers in Precision Agriculture; International Plant Phenotyping Symposium, Soybean Breeders Workshop, Crop Science Society of America.
- Served on numerous committees (institutional).
- Expert reviewer (grant proposals): 11 organizations (national and international).
- Expert ad-hoc (manuscript peer-review): 18 journals.
- Contributions to farm and national economy through product development: Commercially varieties developed by Singh (as main or co-developer) are grown in ~ 10 million acres each year (Source: Canadian Grains Commission).