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P. V. Vara Prasad

Director, Feed the Future Innovation Lab for Collaborative Research on Sustainable Intensification (SIIL)
 University Distinguished Professor, Crop Ecophysiology and Farming Systems (Agronomy Department)
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Google Scholar: [View Profile](#); Research Gate: [View Profile](#)

I. Education:

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| July 1999 | PhD (Agriculture): Crop Physiology
Department of Agriculture, The University of Reading, Reading, UK. |
| Nov. 1993 | MSc (Agriculture): Agronomy: First Class with a Gold Medal
Andhra Pradesh Agricultural University (APAU), Hyderabad, India. |
| July 1991 | BSc (Agriculture): First Class
Andhra Pradesh Agricultural University (APAU), Hyderabad, India. |

II. Employment and Professional Experience:

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| July 2016 to present | University Distinguished Professor, Crop Ecophysiology and Farming Systems |
| Oct. 2014 to present | Director, Feed the Future Innovation Lab for Sustainable Intensification |
| July 2013 to Jun. 2016 | Professor, Crop Ecophysiology |
| July 2009 to Jun. 2016 | Director, Great Plains Sorghum Improvement and Utilization Center |
| July 2009 to Jun. 2013 | Associate Professor, Crop Ecophysiology |
| Aug. 2005 to Jun. 2009 | Assistant Professor, Crop Ecophysiology
Agronomy Department, Kansas State University, Manhattan, KS, USA. |

Research, Leadership and Management: Conducting interdisciplinary research, knowledge sharing, and capacity building activities on sustainable intensification for improving food and nutritional security of smallholder farmers in Asia and Africa. Providing leadership and managing all activities of the USAID Feed the Future Innovation Lab for Collaborative Research on Sustainable Intensification (SIIL).

Research and Teaching Activities: Understanding crop responses to abiotic (water, temperature, nutrient, and global change factors) and biotic stresses, and changes in genetics and crop management practices. Main emphases are on understanding principles of yield formation and improving knowledge on responses of various physiological pathways and processes at the cellular, whole-plant, and canopy levels. Teaching activities include graduate-level courses in crop physiology and in crop ecology.

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| Jan. 2000 to July 2005 | Post-Doctoral Research Associate, Agronomy Department,
University of Florida, Gainesville, FL, USA. (Advisor: K.J. Boote) |
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Research Activities: Quantifying impacts of climate change factors (high temperature and elevated carbon dioxide) on physiological, growth, and yield processes of grain crops. Using and testing crop growth models to simulate the effects of climate change, disease incidence, fertilizer management, and improved crop management practices.

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| Nov. 1993 to Dec. 1995 | Research Associate, Department of Agronomy, APAU, Hyderabad, Andhra Pradesh, India. (Advisor: V. Satyanarayana, APAU) |
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Research Activities: Conducting field experiments designed to maximise yields in rice-peanut crop sequences through efficient use of resources. Designing and conducting field experiments to study the effects of abiotic stresses (drought and nutrient deficiencies); efficient use of inputs; cropping systems; integrated nutrient management; and integrated weed management.

III. Fellowships:

Elected Fellow (2016)	American Association for the Advancement of Science (AAAS).
Elected Fellow (2015)	Crop Science Society of America (CSSA).
Elected Fellow (2014)	American Society of Agronomy (ASA).

IV. Scholarships and Awards:

Irvin E. Youngberg Award (2017)	Higuchi Research Achievement Award, University of Kansas.
Martin & Ruth Massengale Lectureship (2017)	Crop Science Society of America.
FSLI – Fellow Cohort 13 (2017 – 2018)	Food Systems Leadership Institute.
Distinguished Faculty Award (2017)	Gamma Sigma Delta, The Honor Society of Agriculture, KSU.
Outstanding Scientist Award (2017)	Sigma Xi, The Scientific Research Society, KSU.
Outstanding Faculty Award (2016)	Dr. Ron and Rae Iman Award, KSU.
IMRF Excellence Award (2016)	International Multidisciplinary Research Foundation.
Outstanding Associate Editor (2016)	Crop Science, Crop Science Society of America.
Distinguished Graduate Faculty (2015)	Commerce Bank and W.T. Kemper Foundation Award, KSU.
Graduate Teaching Award (2015)	Excellence in Teaching, College of Agriculture, KSU.
LEAD 21 – Class X (2015)	Leadership for the 21 st Century, Land Grant Universities.
International Educator Award (2013)	Office of International Programs, KSU.
Outstanding Agricultural Scientist (2013)	Association of Agricultural Scientists of Indian Origin (USA)
Outstanding Research Award (2012)	Gamma Sigma Delta, The Honor Society of Agriculture, KSU.
President (2010 – 2012)	Association of Agricultural Scientists of Indian Origin.
Early Career Award (2009)	Gamma Sigma Delta, The Honor Society of Agriculture, KSU.
Young Scientist Award (2006)	Association of Agricultural Scientists of Indian Origin, USA.
Arthur Hosier Award (1998)	Travel Award, The University of Reading, United Kingdom.
Felix Scholarship (1996 – 1999)	Fully funded competitive scholarship for PhD studies, offered at the University of Reading (6 students selected from India).
ICAR – Scholarship (1995)	Research Scholarship, Indian Council of Agricultural Research.
NET Certificate (1995)	National Eligibility Test, Certified Agronomist/Teacher, ICAR.
PPIC Gold Medal (1994)	Potash and Phosphate Institute of Canada - Gold Medal for Best MSc research at Andhra Pradesh Agricultural University, India.
ICRISAT Scholarship (1991 – 1993)	Scholarship for MSc (Ag) from International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), India.
Government Scholarship (1991)	Government of Andhra Pradesh for MSc (Ag)
ICAR – Merit Scholarship (1987)	Indian Council of Agricultural Research (ICAR) for BSc (Ag).

V. Professional Memberships:

American Society of Agronomy (Since 1998); Crop Science Society of America (Since 2000); Soil Science Society of America (Since 2000); American Association for the Advancement of Science (Since 2011); Gamma Sigma Delta (Since 2006); Sigma Xi (Since 2009); International Society of Agricultural Meteorology (Life Member); Society for Millets Research (Life Member); World Association of Soil and Water Conservation (Life Member); Association of Agricultural Scientists of Indian Origin (Life Member).

VI. Editing and Reviewing of International Journals and Reviewing Grant Proposals:

<i>Associate Editor (2009 – 2018)</i>	Agronomy Journal
<i>Associate Editor (2011 – present)</i>	Journal of Crop Improvement
<i>Associate Editor (2016 – present)</i>	International Journal of Agricultural Sustainability
<i>Associate Editor (2016 – present)</i>	Frontiers in Plant Science – Abiotic Stress
<i>Editorial Board: (2009 – present)</i>	African Journal of Crop Science
<i>Editorial Board: (2006 – present)</i>	African Journal of Agricultural Research
<i>Editorial Board (2014 – present)</i>	Journal of Agronomy and Crop Science
<i>Associate Editor (2009 – 2016)</i>	Crop Science

Manuscript Reviewer: Reviewed >420 manuscripts for >75 different international peer-reviewed journals. Selected list of international peer-reviewed journals is given below:

Advances in Agronomy; African Journal of Agricultural Research; African Journal of Biotechnology; Agricultural and Forest Meteorology; Agriculture Ecosystems and Environment; Agronomy Journal; American Journal of Botany; American Journal of Horticultural Science; Annals of Botany; Australian Experimental Agriculture; Australian Journal of Agricultural Research; Biological Letters; Biologia Plantarum; Brazilian Journal of Plant Physiology; Carbohydrate Research; Crop Science; Current Opinion in Plant Biology; Communication in Biometry and Crop Science (CBCS); European Journal of Agronomy; Euphytica; Experimental and Environmental Botany; Field Crops Research; Functional Plant Biology; Global Change Biology; Indian Journal of Agronomy; Indian Journal of Plant Physiology; Journal of Plant Research; Indian Journal of Agricultural Sciences; International Journal of Plant Sciences; Irrigation Science; Japanese Journal of Agricultural Meteorology; Journal of Agricultural Science; Journal of Agronomy and Crop Science; Journal of Crop Improvement; Journal of Crop Production; Journal of Experimental Botany; Journal of New Seeds; Journal of Plant Nutrition; Nature (Climate Change); New Phytologist; Physiologia Plantarum; Planta; Plant and Soil; Plant Biology; Plant Breeding; Plant Cell and Environment; Plant Physiology; Plant Science; Proceedings of National Academy of Science; Science; Science Asia; Theoretical and Applied Genetics; World Journal of Agricultural Sciences; and more.

Manuscripts were reviewed for the following institutions: United States Department of Agriculture – Agriculture Research Service in Manhattan, Kansas; Gainesville, Florida; Bushland, Texas; Beltsville, Maryland; Fort Collins, Colorado; Athens, Georgia; Kansas State University; Mississippi State University; University of Florida.

Grant Reviewer: Reviewed >100 proposals for >10 different national and international funding agencies, including:

United States Department of Agriculture (USDA).
 National Institute of Food and Agriculture, USDA – USA.
 National Science Foundation – USA.
 United States Agency for International Development (USAID) – USA.
 Bill and Melinda Gates Foundation – USA.
 McKnight Foundation – USA.
 National Science Foundation – Chile.
 US – Israel, Binational Agricultural Research and Development Fund.
 UK – Biotechnology and Biological Sciences Research Council (BBSRC).
 National Science Foundation – Republic of Georgia.
 Indian Council for Agricultural Research – India.

VII. Committees / Professional Services:**National and International Organizations*****Crop Science Society of America (CSSA) / American Society of Agronomy (ASA) / USDA***

1. Member – CSSA Fellow Committee 2019 – 2020
2. Chair – Sustainable Intensification Community of ASA 2018
3. Chair Elect – Sustainable Intensification Community of ASA 2017
4. Past Chair – Crop Physiology (C-2) Division of CSSA 2016
5. Chair – Crop Physiology (C-2) Division of CSSA 2015
6. Chair – Nomination Committee for C-2 Division Officers 2015
7. Member – Nomination Committee for C-2 Division 2015 – 2017
8. Member – Nomination for President Elect Committee 2015
9. Chair Elect – Crop Physiology Division 2014
10. Chair – Martin & Ruth Massengale Lectureship – CSSA 2014
11. Member – Diversity in Agronomy, Crops and Soils 2006 – 2009
12. Member – Poster / Oral Student Presentation Awards 2008; 2009; 2010; 2013
13. Session Chair – Crop Physiology 2007 – 2014
14. Session Chair – Sustainable Agriculture 2012
15. Member – National Committee USDA – Photosynthesis 2006 – present

Association of Agricultural Scientists of Indian Origin

1. Member – Advisory Board 2013 – 2014
2. Past President 2013
3. President 2010 – 2012
4. Member – Nomination Committee 2012
5. Member – Awards Committee 2005 – 2007; 2009 – 2013

Other Universities and International Organizations

1. Doctoral Thesis Evaluator – University of Sydney 2017
2. Doctoral Thesis Evaluator – University of Queensland 2012, 2014
3. Doctoral Thesis Evaluator – Bhahayddin Zakaria University 2010, 2012
4. Doctoral Thesis Evaluator – University of Faisalabad 2010, 2011
5. Doctoral Thesis Evaluator – Sindh Agricultural University 2011
6. Doctoral Thesis Evaluator – Andhra University 2010
7. Doctoral Thesis Evaluator – Gomal University 2009
8. Doctoral Thesis Evaluator – Osmania University 2009
9. Member – International Society of Agricultural Meteorology 2005 – 2007
10. Member – Guide for Agricultural Meteorology Program 2007 – 2009

Kansas State University***Department of Agronomy – Kansas State University***

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| 1. Crop Production – Search Committee | 2012 |
| 2. Cropping Systems – Search Committee | 2012 |
| 3. Sorghum Geneticist – Search Committee | 2012 |
| 4. Plant Physiologist (USDA) – Search Committee | 2011 |
| 5. Sorghum Breeder – Search Committee | 2010 |
| 6. Weed Physiologist – Search Committee | 2009 |
| 7. Sorghum Breeder – Search Committee | 2007 |
| 8. Sorghum Geneticist – Search Committee | 2005 |
| 9. Promotion and Tenure Committee | 2012 – 2015 |
| 10. Faculty Mentoring Committee | 2009 – 2015 |
| 11. Computer Network and Web Advisory Committee | 2009 – 2012 |
| 12. Agronomy Seminar Committee | 2005 – 2012 |
| 13. Kids Field Day Committee | 2005 – 2012 |
| 14. Graduate Scholarship Committee | 2005 – 2015 |
| 15. Safety Committee | 2005 – 2015 |
| 16. Harvey County Experiment Field Advisory Committee | 2005 – 2012 |

College of Agriculture / Kansas State University

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| 1. Member – Dean / Director Search Committee | 2019 |
| 2. Member – University Distinguished Professor Committee | 2019 |
| 3. Member – UDP Graduate Student Award Committee | 2019 |
| 4. Member – Higuchi Research Achievement Award Comm. | 2018 – 2019 |
| 5. Member – Distinguished Graduate Faculty Award Comm. | 2016, 2017 |
| 6. Member – International Educator Award Committee | 2014, 2015, 2016, 2017 |
| 7. Member – Graduate Council | 2013, 2014, 2015 |
| 8. Member – Graduate Student Committee | 2013, 2014, 2015 |
| 9. Member – Executive Committee - Sigma Xi | 2013, 2014, 2015 |
| 10. Member – Graduate Student Award Committee | 2014 |
| 11. Member – African Agricultural Forum (Symposium) | 2010 |

VIII. Teaching/Graduate Student Mentoring and Training: 2006 through 2014

- Courses Taught:** AGRON 840, Crop Physiology (3 credits);
 AGRON 950, Advanced Crop Ecology (3 credits);
 AGRON 600, Problem in Crop Science (variable credits);
 AGRON 960, Topics in Crop Physiology and Ecology (variable credits).

Teaching Evaluation Scores: Scores in parentheses are out of a maximum of 5.0

Crop Physiology:	Teaching Effectiveness:	2007 (4.7); 2009 (4.4); 2011 (4.7); 2013 (4.8)
	Amount Learned:	2007 (4.5); 2009 (4.3); 2011 (4.4); 2013 (4.5)
Advanced Crop Ecology:	Teaching Effectiveness:	2008 (4.5); 2010 (4.8); 2012 (4.8); 2014 (5.0)
	Amount Learned:	2008 (4.8); 2010 (5.0); 2012 (4.7); 2014 (5.0)

Graduate Students and Research Scholars: Mentoring, Advising and Training

Total: >100 [*>60 Graduate Students (Major Advisor or Committee Member) and >40 Research Scholars*]

Major Advisor:**Current Faculty/Postdoctoral Associates / Research Associates / Visiting Scientists:**

1. Dr. Araya Berhe, Crop Simulation Modeling, Kansas State University, USA.
2. Dr. Zach Stewart, Farming Systems, Kansas State University, USA.

Current PhD Students:	Country of Origin;	Degree; and	Graduating Year
1. Ms. Regina Enniful	(Ghana)	PhD (Agronomy)	2018

Current MS Students:

2. Ms. Erin Thornburgh (USA) MS (Agronomy) 2018
3. Mr. Austin Hughes (USA) MS (Agronomy) 2018

Graduated PhD Students:	Country of Origin;	Degree;	Year;	Current Position
1. Dr. Huan Wang	(China)	PhD (Agronomy)	2017	Scholar, Industry
2. Dr. Jason Waite	(USA)	PhD (Agronomy)	2016	Agronomist, USDA
3. Dr. Kyle Shroyer	(USA)	PhD (Agronomy)	2016	Agronomist, Industry
4. Dr. Amal Ehtaiwesh	(Libya)	PhD (Agronomy)	2016	Faculty, University
5. Dr. George Mahama	(Ghana)	PhD (Agronomy)	2015	Scientist, Research
6. Dr. Sruthi Narayanan	(India)	PhD (Agronomy)	2015	Faculty, University
7. Dr. George Paul	(India)	PhD (Agronomy)	2013	Scientist, University
8. Dr. S. Subramanian	(India)	PhD (Agronomy)	2013	Research Scholar
9. Dr. Alassan Maiga	(Mali)	PhD (Agronomy)	2012	Scientist, Research
10. Dr. Rachel Opole	(Kenya)	PhD (Agronomy)	2012	Scientist, Research
11. Dr. Raymond Mutava	(Kenya)	PhD (Agronomy)	2012	Scientist, University
12. Dr. Troy Ocheltree	(USA)	PhD (Agronomy)	2012	Faculty, University
13. Dr. Gautam Pradhan	(Nepal)	PhD (Agronomy)	2011	Faculty, University

Graduated MS Students:	Country of Origin;	Degree;	Year;	Current Position
14. Ms. Matti Kuykendall	(USA)	MS (Agronomy)	2015	Research Scholar
15. Mr. Sory Diallo	(Mali)	MS (Agronomy)	2012	Scientist, Research
16. Mr. George Mahama	(Ghana)	MS (Agronomy)	2012	Scientist, Research

17. Ms. Sruthi Narayanan	(India)	MS (Agronomy)	2011	Doctoral Student
18. Mr. Raymond Mutava	(Kenya)	MS (Agronomy)	2008	Scientist, University
19. Mr. Grant Groen	(USA)	MS (Agronomy)	2008	Scientist, Industry
20. Ms. Sudha Pisipati	(India)	MS (Agronomy)	2008	Scientist, Industry

Postdoctoral / Visiting Scholars and Scientists and their Current Positions:

1. Dr. Maduraimuthu Djanaguiraman, Crop Physiologist, Tamil Nadu Agricultural University (3 years), India.
2. Dr. Patrick Kilby, Australian National University (Fulbright Scholar; 6 months), Senior Lecturer, Canberra, Australia.
3. Dr. Jintian Song, Agricultural Economist, Huazhong Agricultural University (Visiting Scholar; 6 year), Wuhan, China.
4. Dr. Ai-Qing Sun, College of Agronomy, Shandong Agricultural University (Visiting Scholar; 1 year), Shandong, China. (Co-Advisor Krishna Jagadish).
5. Dr. John Sunoj, Crop Physiologist, Indian Institute of Horticulture Research (2 years), India.
6. Dr. Hanafey F. Maswada, Assistant Professor, Faculty of Agriculture, Tanta University (Visiting Scholar: 6 months), Tanta, Egypt. (Co-Advisor Krishna Jagadish).
7. Dr. Shahniyar Bayramov, National Academy of Sciences of Azerbaijan (Fulbright Scholar, 6 months); Head of Laboratory, Department of Fundamental Problems Biological Productivity, Institute of Botany, Baku, Azerbaijan. (Co-Advisor Mithila Jugulam).
8. Ms. Vinutha Kanaganahalli, International Crop Research Institute for the Semi-Arid Tropics, India (60 days), Research Scholar, Sorghum Breeding, Hyderabad, India.
9. Winthrop Professor Zed Rengel, University of Western Australia (Senior Fulbright Scholar; 6 months), Professor, University of Western Australia, Perth, Australia.
10. Ms. Cheryl Quinones, International Rice Research Institute (6 months); Crop Physiologist, International Rice Research Institute, Manila, Philippines.
11. Ms. Laavanya Rayaprolu, International Crop Research Institute for the Semi-Arid Tropics, India (60 days), Sorghum Breeding, Hyderabad, India.
12. Dr. Utharasu Subramaniam, Tamil Nadu Agricultural University, India (1 year). Assistant Professor, Tamil Nadu Agricultural University, India.
13. Ms. Vimala Kanagarethinam, Crop Physiology, India (1 year). Scientist, India.
14. Dr. Rakesh Pandey, Indian Agricultural Research Institute, India (3 months). Senior Scientist – Wheat Physiology, Indian Agricultural Research Institute, New Delhi, India.
15. Dr. Parvez Sofi, Sher-e-Kashmir University, Jammu, India (Borlaug Fellow, 3 months). Associate Professor – Bean Breeding, Sher-e-Kashmir University, Jammu, India.
16. Dr. Arti Bhatia, Indian Agricultural Research Institute, India (15 days); Principal Scientist – Agricultural Climatology, Indian Agricultural Research Institute, New Delhi, India.
17. Dr. Sanjana Reddy, Directorate of Sorghum Research (15 days); Senior Scientist, Sorghum Breeding, Directorate of Sorghum Research, Hyderabad, India.
18. Dr. Tara Satyavathi, Indian Agricultural Research Institute, India (3 months); Principal Scientist, Millet Breeding, Indian Agricultural Research Institute, New Delhi, India.
19. Dr. Jyoti Kumari, National Bureau of Plant Genetic Resources, India (3 months); Senior Scientist – Wheat Breeding, National Bureau of Plant Genetic Resources, New Delhi, India.
20. Dr. Le Loan: (3 months, Borlaug Fellow). Lecturer, Nong Lam University, Vietnam.
21. Dr. Leena Diwakar: K-State (6 months); Researcher, Kansas State University, USA.

22. Dr. Satheesh Subramaniam, Tamil Nadu Agricultural University, India (1 year). Assistant Professor, University.
23. Dr. Sarma Mallabothala: Harvest Plus, Canada (6 months); Private Industry, Canada.
24. Dr. Roger Kanton: Savanna Agricultural Research Institute, Ghana (30 days); Associate Director, Savanna Agricultural Research Institute, Ghana.
25. Dr. Rachel Opole: Kenyan Agricultural Research Institute (Borlaug Fellow); Agronomist, Kenyan Agricultural Research Institute, Kenya.
26. Dr. Jianming Fu: USDA - ARS, Manhattan, USA (6 months); Plant Physiologist, USDA-ARS.
27. Mr. Amit Pradhan: Research Scholar, Mata Vaishnav Devi University, India (1 year); Scholar, Private Company, India.
28. Dr. Savanam S. Rao: Directorate of Sorghum Research, Hyderabad, India (4 months); Principal Scientist, Crop Physiology, Directorate of Sorghum Research, Hyderabad, India.
29. Dr. Gautam P. Pradhan: Crop Physiologist, Nepal (1 year); Agronomist, North Dakota State University, USA.
30. Mr. Mohammed Mustafa, Kansas State University (1 year), Scholar, Private Company.
31. Mr. Abdoul Wahab Toure: Institute of Economic and Rural Development, Mali (2 months); Agronomist, Institute of Economics and Rural Development, Mali.
32. Ms. Eva Erdayani: Indonesian Institute of Sciences, Indonesia (3 months, Borlaug Fellow); Doctoral Student, Washington State University, USA.
33. Dr. K.B. Hebbar: Indian Council of Agricultural Research, India (3 months, Borlaug Fellow); Principal Scientist and Head, Division of Plant Physiology, Central Plantation Crops Research Institute, Indian Council of Agricultural Research, India.
34. Dr. K. Kannan: Indian Council of Agricultural Research, India (3 months, Borlaug Fellow); Principal Scientist, Soil and Water Management, Indian Council of Agricultural Research, India.
35. Dr. Sarvana Pandian: Tamil Nadu Agricultural University, India (1 month); Professor, Tamil Nadu Agricultural University, India.
36. Dr. Mamadou Doumbia: Institute of Economic and Rural Development, Mali (15 days); Retired - Director, Soil Testing Laboratory, Institute of Economics and Rural Development, Mali.
37. Dr. Jesse Naab: Savanna Agricultural Research Institute, Ghana (30 days); Scientist, WASCAL, Burkina Faso.
38. Dr. Sundeep Kumar: Banaras Hindu University, India (6 months); Principal Scientist, National Bureau of Plant Genetic Resources, New Delhi, India.
39. Dr. C. Udayasoorian: Tamil Nadu Agricultural University, India (2 months); Retired - Dean, Post Graduate Studies, Tamil Nadu Agricultural University, India.
40. Dr. James Pitchai: Tamil Nadu Agricultural University, India (2 months); Retired - Vice Chancellor, Bharathiar University, India.
41. Dr. Rishi Pal Singh: Birsa Agricultural University, India (20 days); Director, Seed Science Division, Bisra Agricultural University, India.
42. Ms. Sudha Pisipati, Kansas State University (6 months); Research Scholar, Private Company.
43. Mr. A. Masterodominca: University of Sao Paulo, Brazil (6 months); Scholar, Private Company.

Member of Advisory Committee:

Current PhD Graduate Students:

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|----------------------------------|----------------|-----------------|
| 1. Mr. Santiago Tamagno (Brazil) | PhD (Agronomy) | Graduating 2020 |
| 2. Mr. Balaji Pandian (India) | PhD (Agronomy) | Graduating 2020 |

3. Mr. Edwin Akley (Ghana) PhD (Agronomy) Graduating 2019

Current MS Graduate Students:

4. Mr. Issac Barnhart (USA) MS (Agronomy) Graduating 2020
 5. Mr. Osler Ortez-Amador (Argentina) MS (Agronomy) Graduating 2019
 6. Mr. Javier Fernandez (Argentina) MS (Agronomy) Graduating 2019

Graduated PhD Students:

1. Dr. Anuj Chilawal (India) PhD (Agronomy) Graduated 2019
 2. Dr. Brent Christenson (USA) PhD (Agronomy) Graduated 2018
 3. Dr. Guillermo Balboa (Argentina) PhD (Agronomy) Graduated 2018
 4. Dr. Abhishes Lamsal (Nepal) PhD (Agronomy) Graduated 2017
 5. Dr. Sridevi Betha (India) PhD (Agronomy) Graduated 2016
 6. Dr. Andrew Green (USA) PhD (Agronomy) Graduated 2016
 7. Dr. Sarah Battenfield (USA) PhD (Agronomy) Graduated 2016
 8. Dr. Iddrisu Yahaya (Ghana) PhD (Ag. Economics) Graduated 2015
 9. Dr. Joshua Jennings (USA) PhD (Agronomy) Graduated 2015
 10. Dr. Shyamal Talukder (Bangladesh) PhD (Agronomy) Graduated 2013
 11. Dr. Sivakumar Sukumaran (India) PhD (Agronomy) Graduated 2012
 12. Dr. Mary Joi Abit (Philippines) PhD (Agronomy) Graduated 2010
 13. Dr. Yared Assefa (Ethiopia) PhD (Agronomy) Graduated 2010
 14. Dr. Jung Lee (Korea) PhD (Plant Pathology) Graduated 2009
 15. Dr. John Frihauf (USA) PhD (Agronomy) Graduated 2009
 16. Dr. Kent Martin (USA) PhD (Agronomy) Graduated 2009

Graduated MS Students:

17. Ana Julia Azevedo MS (Agronomy) Graduated 2017
 18. Mr. Jonathan Broeckelman (USA) MS (Agronomy) Graduated 2016
 19. Ms. Bailey McHenry (USA) MS (Agronomy) Graduated 2016
 20. Mr. Joseph Hong (China) MS (Plant Pathology) Graduated 2016
 21. Ms. Randi Clark (USA) MS (Agronomy) Graduated 2016
 22. Mr. Edwin Akley (Ghana) MS (Agronomy) Graduated 2015
 23. Mr. Devin Mangus (USA) MS (Ag. Bio. Engg) Graduated 2015
 24. Mr. Nathan Keep (USA) MS (Agronomy) Graduated 2013
 25. Mr. Bandigou Diawara (Mali) MS (Agronomy) Graduated 2012
 26. Mr. Hugo Remaury (USA) MS (Ag. Economics) Graduated 2012
 27. Mr. Frank Maulana (Malawi) MS (Agronomy) Graduated 2011
 28. Mr. David Cruz (Columbia) MS (Plant Pathology) Graduated 2011
 29. Ms. Sruthi Narayanan (India) MS (Agronomy) Graduated 2011

30. Mr. Kyle Shroyer	(USA)	MS (Agronomy)	Graduated 2010
31. Mr. Kentaro Takamatsu	(Japan)	MS (Elect. Engg.)	Graduated 2009
32. Mr. Levi Walker	(USA)	MS (Agronomy)	Graduated 2009
33. Ms. Laurene Smith	(USA)	MS (Agronomy)	Graduated 2008
34. Mr. Michael Duff	(USA)	MS (Agronomy)	Graduated 2007
35. Mr. Chris Pachta	(USA)	MS (Agronomy)	Graduated 2007
36. Mr. Souley Soumana	(Niger)	MS (Agronomy)	Graduated 2007
37. Mr. Phani Mallacheruvu	(India)	MS (Civil Engg)	Graduated 2007
38. Mr. Ganesh Nagiseti	(India)	MS (Civil Engg)	Graduated 2007
39. Mr. Corey Roozenboom	(USA)	MS (Agronomy)	Graduated 2006

IX. Research and Education Grants; and Gifts (Since 2006): ~ \$70 million

Secured **>\$ 80 million in grants** (>\$ 62 million **as Principal Investigator, PI**) and **\$ 8 million in donations**.

Number of Total Grants Funded: >150 (>\$72 million). Complete list available at the end of this CV.

Number of Grants Funded as PI: >92 (out of 115 total submitted as PI; ~82% success); >\$62 million.

Selected 10 Large Grants (>\$300,000) Funded from National and International Research Projects as PI.

1. **Prasad PVV**, Pierzynski GM, Lilja N. Sustainable Intensification Innovation Lab (SIIL). Feed the Future Collaborative Research on Sustainable Intensification. USAID. Amount: \$50,000,000; 2014 – 2019.
2. **Prasad PVV**, Jagadish SVK, Fritz AK, Mengel DB. Developing and enhancing heat tolerance in wheat using genomics, molecular and physiological tools. USAID. Amount: \$460,000; 2013 – 2017.
3. **Prasad PVV**. Improving barley and wheat germplasm for changing environments. USDA – NIFA, \$730,000; 2010 – 2015.
4. **Prasad PVV**, Staggenborg SA, Dalton TJ, Dhuyvetter K, Rice CW, Presley D, Garrett K, Jumpponen A, Selfa T, and Lilja N. Sustainable Agricultural and Natural Resource Management (SANREM) – Collaborative Research Support Program, USAID - SANREM, \$1,350,000; 2009 – 2015.
5. **Prasad, PVV**, Staggenborg SA, Minton E, Baltensperger D and Misra S. Great Plains Sorghum Improvement and Utilization Center (GPSIUC). USDA – CSREES, \$930,668; 2010 – 2011.
6. **Prasad, PVV**, Staggenborg SA, Minton E, Baltensperger D and Misra S. Great Plains Sorghum Improvement and Utilization Center (GPSIUC). USDA – CSREES, \$482,128; 2009 – 2010.
7. **Prasad PVV**, Staggenborg SA and Mengel DB. Integrated soil, water and crop management for improving productivity in sorghum and millet based systems. International Sorghum, Millet and Other Grains (INTSORMIL) – Collaborative Research Support Program, USAID, \$348,500; 2007 – 2012.
8. **Prasad PVV** and Staggenborg SA. Integrated research in Mali – Decrue sorghum; and integrated graduate training in Mali. USAID – Mali Mission, \$723,420; 2008 – 2013.
9. **Prasad PVV**, Yu J, Roozeboom K, Tesso T and Vadlani P. Screening sorghum germplasm for abiotic stress tolerance and biofuel production. Kansas Grain Sorghum Commission, \$325,000; 2008 – 2014.
10. **Prasad PVV**, Schapaugh WT. Improving heat and drought tolerance in soybean. United Soybean Board, \$300,000; 2011 – 2014.

Gifts (Donation): \$8 million - Harold and Olympia Lonsinger Sustainability Research Farm (2017) – White Paper Authors: P.V.V. Prasad and G.M. Pierzynski (in collaboration with KSU Foundation and College of Agriculture).

X. Selected Research Accomplishments:

Main research accomplishments include (a) quantified impacts of abiotic stresses (particularly drought, high temperature stress, and elevated carbon dioxide) on grain crops (e.g., rice, wheat, sorghum, millets, soybean,

dry bean, and peanut); (b) improved understanding of mechanisms associated with abiotic stress tolerance; (c) identified physiological tools to determine drought and high temperature tolerance; (d) screened germplasm collections for tolerance to drought and/or high temperature stress; and (e) developed and extended sustainable crop production practices for improving resource use efficiency and productivity of grain crops. More specific items are listed below:

Sorghum:

Knowledge: Characterized sorghum germplasm for traits related to drought and heat tolerance (Mutava et al. 2011. Field Crop Res. 123:10-18) and improved the understanding of the physiological basis of variation (Gholipour et al. 2010. Field Crop Res. 119: 85-90; Ocheltree et al. 2014. Funct. Plant Biol. 41:25-36; Djanaguiraman et al. 2014. Environ. Exp. Bot. 100: 43-54; Riar et al. 2015. Environ. Exp. Bot. 115: 58-62; Prasad et al. 2015. Front. Plant Sci. 8: 820).

Impact/Outcome: Improved understanding of drought and heat stress and opportunities to breed for tolerance.

Wheat:

Knowledge: Identified genetic variability in wheat and wild species for high temperature stress and drought stress, identified tolerant sources and developed understanding of the mechanisms of tolerance (Pradhan et al., 2012. Crop Sci. 52:292-304; Funct. Plant Biol.39:51-59). Wheat lines with increased expression of EF-Tu protein showed higher temperature tolerance (Ristic et al. 2008. J. Plant Physiol. 165:192-202; Bukovnik et al. 2009. Funct. Plant Biol. 36:234-241; Ristic et al. 2009. J. Exp. Bot. 60: 4003-4014; Prasad et al. 2011. J. Agron. Crop Sci. 197: 430-441; Pradhan et al. 2012. Crop Sci. 52: 292-304; Pradhan et al. 2012. Func. Plant Biol. 39: 51-59; Kumar et al. 2012. Euphytica 186: 265-276; Prasad and Djanaguiraman 2014. Func. Plant Biol. 41: 1261-1269; Pradhan and Prasad 2015. PloS One 10: e0116620; Narayanan et al. 2015. J. Agron. Crop Sci. 201: 206-218; Narayanan et al. 2016a. Plant Cell Environ. 39: 608-617; Narayanan et al. 2016b. Plant Cell Environ. 39: 878-803).

Impact/Outcome: Identified opportunities for improving high temperature tolerance and gene transfer.

Soybean:

Knowledge: High temperature caused premature leaf senescence leading to decreased photosynthesis and seed mass (Djanaguiraman et al. 2010. Funct. Plant Biol. 37:1071-1084). High temperature stress caused oxidative damage, leaf, chloroplast and pollen structural/anatomical changes, leading to lower photosynthesis and contributing to lower pod set (Djanaguiraman et al. 2011. Exp. Environ. Bot. 70:51-57; Djanaguiraman et al. 2011. Crop Sci. 51:2125-2131; Djanaguiraman et al. 2013. Crop Sci. 53:1594-1604; Djanaguiraman et al. 2013. J. Agron. Crop Sci. 199:171-177; Keep et al. Crop Sci. 56: 122-131).

Impact/Outcome: Improved understanding of high temperature stress response.

High Temperature Tolerant Genotypes:

Knowledge: Identified genotypes that were tolerant to high temperature stress in groundnut (Craufurd et al. 2003. Field Crop Res.80:63-77; Kakani et al. 2002. Plant Cell Environ.25:1651-1661), rice (Prasad et al. 2006. Field Crop Res. 95:398-411), wheat (Ristic et al. 2008. J. Plant Physiol. 165:192-202), and sorghum (Djanaguiraman et al. 2014. Environ. Exp. Bot. 100:43-54).

Impact/Outcome: Identified genotypes can be used for breeding for high temperature tolerance.

Interactions of High Temperature and Carbon Dioxide:

Knowledge: Quantified season-long effects of high temperature stress at ambient and elevated carbon dioxide concentrations in dry bean (Prasad et al. 2002. Global Change Biol.8:710-721), peanut (Prasad et al. 2003. Global Change Biol. 9:1775-1778), and sorghum (Prasad et al. 2006. Agric. For. Meteorol. 139:237-251). Demonstrated that there are no beneficial effects of elevated carbon dioxide on reproductive processes and yield at high temperatures.

Impact/Outcome: Improved understanding of interactions and opportunities to refine response functions in crop simulation models.

Twelve Selected Papers (Original Research Articles) as First Author, Citations and Knowledge Gained:

1. **Prasad PVV**, Boote KJ, Allen LH Jr., Sheehy JE, Thomas JMG. 2006. Species, ecotype and cultivar differences in spikelet fertility and harvest index of rice in response to high temperature stress. *Field Crop Res.* 95:398-411. (Times Cited: >605).
Knowledge: This was the first paper to compare various species of rice and show their relative tolerances to high temperature stress.
2. **Prasad PVV**, Boote KJ, Allen LH Jr, Thomas JMG. 2006. Adverse high temperature effects on pollen viability, seed-set, seed yield and harvest index of grain sorghum (*Sorghum bicolor* L.) are more severe at elevated carbon dioxide due to high tissue temperatures. *Agric. For. Meteorol.* 139:237-251. (Times Cited: >300).
Knowledge: This was the first paper looking at the responses of a short statured sorghum hybrid to season-long exposure to the interaction of high temperatures and elevated carbon dioxide.
3. **Prasad PVV**, Boote KJ, Allen LH Jr., Thomas JMG. 2002. Effects of elevated temperature and carbon dioxide on seed-set and yield of kidney bean (*Phaseolus vulgaris* L.). *Global Change Biol.* 8:710-721. (Times Cited: >215).
Knowledge: This paper showed that elevated temperature decreased pollen viability, seed-set, and grain yield of dry beans under both ambient and elevated carbon dioxide levels.
4. **Prasad PVV**, Pisipati SR, Mutava RN, Tuinstra MR. 2008. Sensitivity of grain sorghum to high temperature stress during reproductive development. *Crop Sci.* 48:1911-1917. (Times Cited: >200).
Knowledge: This paper identified the most sensitive stages to high temperature stress in grain sorghum.
5. **Prasad PVV**, Craufurd PQ, Summerfield RJ. 1999. Fruit number in relation to pollen production and viability in groundnut exposed to short episodes of heat stress. *Ann. Bot.* 84:381-386. (Times Cited: >185).
Knowledge: This paper showed that there were strong negative relations between temperatures (day and/or night) and most reproductive traits (flower numbers, fruit-set, pollen production, and pollen viability).
6. **Prasad PVV**, Pisipati SR, Ristic Z, Bukovnik U, Fritz AK. 2008. Impact of high nighttime temperature on growth and yield of spring wheat. *Crop Sci.* 48:2372-2380. (Times Cited: >165).
Knowledge: The paper quantified the impact of high nighttime temperature on spikelet fertility, grain number, grain weight, and grain yield.
7. **Prasad PVV**, Boote KJ, Allen LH Jr., Thomas JMG. 2003. Super-optimal temperatures are detrimental to reproductive processes and yield of peanut under both ambient and elevated carbon dioxide. *Global Change Biol.* 9:1775-1787. (Times Cited: >165).
Knowledge: This paper showed that elevated temperature decreased pollen viability, seed-set, and grain yield of dry beans under both ambient and elevated carbon dioxide levels.
8. **Prasad PVV**, Pisipati SR, Momcilovic I, Ristic Z. 2011. Independent and combined effects of high temperature and drought stress during grain filling on plant yield and chloroplast EF-Tu expression in spring wheat. *J. Agron. Crop Sci.* 197:430-441. (Times Cited: >150).
Knowledge: The paper quantified and demonstrated that combined effects were more damaging than individual effects on physiology and yield.
9. **Prasad PVV**, Craufurd PQ, Summerfield RJ, Wheeler TR. 2000. Effects of short episodes of high temperature on flower production and seed set of peanut (*Arachis hypogaea* L.). *J. Exp. Bot.* 51:777-781. (Times Cited: >135).
Knowledge: This paper was the first to demonstrate that high temperatures during the first half of the day were more critical for fruit-set in groundnut.
10. **Prasad PVV**, Craufurd PQ, Summerfield RJ. 1999. Sensitivity of peanut to timing of heat stress during reproductive development. *Crop Sci.* 39:1352-1357. (Times Cited: >125).

Knowledge: This paper showed that successful fruit-set in peanut was mostly determined by the temperature stress during floral development.

11. **Prasad PVV**, Craufurd PQ, Kakani VG, Wheeler TR, Boote KJ. 2001. Influence of high temperature during pre- and post-anthesis stages of floral development on fruit-set and pollen germination in peanut. *Aust. J. Plant Physiol.* 28:233-240. (Times Cited: >115).

Knowledge: This paper showed that floral buds of peanut were most sensitive to high temperature at stages coinciding with micro-sporogenesis and pollination and fertilization.

12. **Prasad PVV**, Craufurd PQ, Summerfield RJ. 2000. Effect of high air and soil temperature on dry matter production, pod yield and yield component of groundnut. *Plant Soil* 222: 231-239. (Times Cited: >90)

Knowledge: This paper was the first to demonstrate that high air and soil temperature were mostly additive.

Scholarship in Research and Extension in an International Context of Food Security:

Africa: Conducted active research and education programs in several countries in West Africa (Ghana, Mali, Niger, and Mali) and East Africa (Kenya). These projects were funded through USAID Collaborative Research Support Programs (now called Feed the Future Innovation Labs). These programs are focused on development, testing, and transfer of technologies that improve profitability of smallholder farmers through adoption of improved and sustainable crop, soil, and water management practices. Activities were focused on cereal (sorghum, millet, and maize) and legume (cowpea, peanut, and soybean) based cropping systems and use of sustainable agricultural practices (cover crops, crop rotation, tillage, integrated nutrient management, and residue management). Research has shown that use of tied ridges, contour ridges, and water conservation practices can improve yield by 100%. Micro-dose fertilizer increased grain yield by >70%. Crop rotations increased productivity by >30%. Minimum tillage increased net profits by >20%. Use of integrated fertilizer practices helped enhanced productivity of major cereals crops. Application of phosphorus fertilizer increased productivity of cereal and legume crops by >50%. Overall, the package of practices developed through this research increased productivity of smallholder farmers in selected villages by >50%. These research results were featured in regional news media outlets (including television and newspapers). Through a separate project funded through the USAID - Mali Mission, research was conducted on decrue sorghum (sorghum grown in receding water in lakes and rivers) in northern Mali, which is one of the poorest and most food insecure regions of the world. This crop was very important for the food security of this region. The project was implemented in remote areas of Timbuktu, Kidal, Gao, and Mopti. Research was done in farmers' fields. This was the most comprehensive research and technology transfer project conducted on decrue sorghum in the Sahel. Sorghum genotypes were identified that were suited for this region, and a package of practices was developed to enhance yield and minimize the impact of pests and diseases. Improved practices were able to double the grain yield of decrue sorghum in northern Mali.

Asia: Conducted active research programs in India funded through USAID (2014-2018) on developing climate resilient wheat genotypes with heat and drought tolerance. This project was implemented in collaboration with Washington State University and several partner institutions in India. The goal of this project was to develop and release high temperature tolerant wheat genotypes for Southeast Asia. In addition, three USAID - CGIAR and US Universities linkage grants were obtained to improve climate resiliency of millets, sorghum, and rice. Two from ICRISAT (International Crop Research Institute for the Semi-Arid Tropics, India) on aspects of high temperature and drought tolerance in pearl millet and salinity tolerance in sorghum. A third from IRRI (International Rice Research Institute, Philippines) was to understand mechanisms associated with high temperature tolerance in rice. These projects involved scientist and student exchanges.

In 2014, received one of the largest single research grants (\$50 million) from USAID to Kansas State University on Sustainable Intensification (Feed the Future Sustainable Intensification Innovation Lab). This grant is focused on research and capacity building activities in Africa (Senegal, Burkina Faso, Tanzania, and Ethiopia) and Asia (Bangladesh and Cambodia) that deal with aspects related to sustainable intensification and food and nutrition security of smallholder farmers. Established Center of Excellence for Sustainable Agricultural Intensification and Nutrition at the Royal University of Agriculture in Cambodia with support from USAID-Cambodia Mission.

XI. Professional Achievements:**Specific Research Achievements:**

- Established an internationally reputed crop ecophysiology research and teaching program with state of the art facilities (growth chambers, rain-out shelters, and heat tents), and equipment for screening genotypes for abiotic stress tolerance and understanding mechanisms associated with tolerance.
- Quantified responses to interaction of climate change factors (temperature, water, and carbon dioxide) in various crops (dry beans, peanut, sorghum, and rice).
- Quantified impact of high temperature stress on various biochemical, physiological, and yield processes in various grain crops. Some of these responses are being used to improve crop simulation models.
- Determined sensitive stages of crop development to high temperature stress in various crops (peanut, sorghum, wheat, millet, and soybean).
- Screened several germplasm collections of wheat, sorghum, millet, soybean, and peanut for high temperature and drought tolerance and identified tolerant lines.
- Improved understanding of mechanisms associated with tolerance or susceptibility to abiotic stress (high temperature or drought) in various grain crops (wheat, rice, sorghum, pearl millet, finger millet, soybean, dry bean, peanut, and canola).
- Developed high-throughput physiological and biochemical tools to screen genotypes for drought and high temperature tolerance in grain crops under field and controlled environment conditions.
- Research featured in several national and international media out (newspapers, radio, and television).
- Conducted high impact research. Research articles have been cited >8,800 times, with h-index of >48, i-10 index of >120; both of these indices reveal impact of research publications.
- Secured >\$70 million (about \$58 million grants as PI, and \$8 million gift) to support research and teaching programs from local, national, and international agencies (e.g. commodity commissions, USDA, USAID and gifts).
- Principal investigator of the largest federal competitive research grant that KSU ever received (\$50 M).
- Instrumental in securing \$8 million worth in-kind donation to establish Harold and Olympia Lonsinger Sustainability Research Farm at KSU. One of the largest donation to College of Agriculture at KSU.
- Highly successful in grant funding. Submitted >180 proposals of which >150 were funded (>92 as PI; and >82% success rate of funding).
- Published >175 peer-reviewed articles in highly reputed journals and >35 book chapters.
- Published >250 abstracts and gave >160 presentations at international meetings (including >90 invited talks) in 35 different countries (e.g. US, Ghana, Mali, Niger, Egypt, Morocco, Kenya, Ethiopia, El-Salvador, Mexico, Indonesia, Philippines, Vietnam, India, Australia, South Africa, China, Hong Kong, UK, Netherland, Germany, Italy and more).
- Trained >40 visiting scientists from >15 different countries.
- Recruited >25 graduate students as major advisor with full funding to support their research programs.
- Graduated 20 students (13 PhD and 7 MS) as major advisor and >34 as committee member.
- Received several awards from university, professional societies, including Fellow of the American Society of Agronomy (ASA), Fellow of the Crop Science Society of America (CSSA), and Fellow of the American Association for the Advancement of Science (AAAS).

Specific Teaching / Training Achievements:

- Developed and taught two graduate-level courses: Crop Physiology (AGRON 840) and Advanced Crop Ecology (AGRON 950).

- Average student teaching evaluations (TEVAL) of 4.7 out of 5.0 over the last nine years at KSU.
- Obtained perfect 5 out of 5 TEVAL in all categories for teaching AGRON 950 during spring 2014.
- Integrated research into teaching and developed discussion-based course (AGRON 950).
- Major Professor for a total of 23 graduate students (9 MS and 14 PhD).
- Committee member for a total of 45 graduate students (26 MS and 19 PhD).
- Trained >40 scholars from 15 countries across the world, who hold prominent positions.
- Mentored students to achieve career goals and achievements. All graduated students are employed in academia, national research organizations, or private industry (based on their preference).
- Several graduate students (R. Mutava, G. Pradhan, G. Paul, G. Mahama, S. Narayanan, H. Wang, and M. Kuykendall) received awards for their research, oral or poster presentations (at regional, national, and international meetings/conferences/workshops, including the CSSA and ASA).
- Research of several graduate students was highlighted and featured in the CSSA – International News Letter (for example G. Pradhan, S. Narayanan, and G. Mahama).
- Received international educator award from KSU; excellence in graduate teaching award from the College of Agriculture at KSU; and Distinguished Graduate Faculty Award (Commerce Bank) from KSU.

Specific Service and Leadership Achievements:

- Served as chair and organized several symposiums at national and international conferences and workshops (e.g. ASA; CSSA; and USAID programs).
- Serving/served on editorial boards of 8 different international journals.
- Served as Director of Great Plains Sorghum Improvement and Utilization Center (2009 – 2016).
- Served at KSU in several Departmental, College and University Committees.
- Served as President of the Association of Agricultural Scientists of Indian Origin.
- Peer-reviewed >420 manuscripts for >75 different international journals.
- Reviewed >100 grant proposals for various national and international funding agencies.
- External evaluator for >10 doctoral dissertations from four different countries.
- Judge at various international conferences for awards to students and researchers.
- Competed LEAD-21 Class X program (Leadership Program for Land Grant Universities).

XII. Impact of Research:

In addition to the direct impact of the research on producers and researchers, research impact is often measured by the number of citations of research articles published by an author in databases.

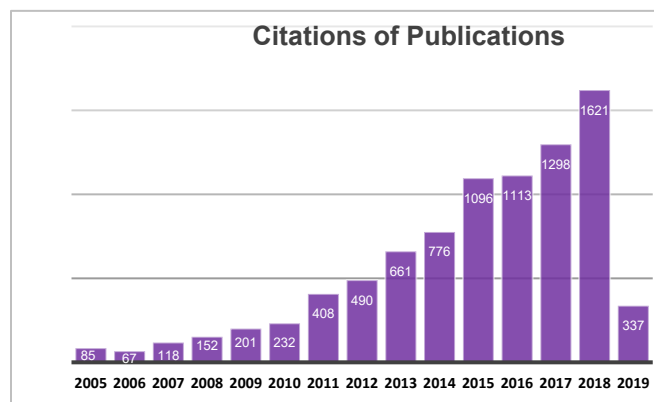
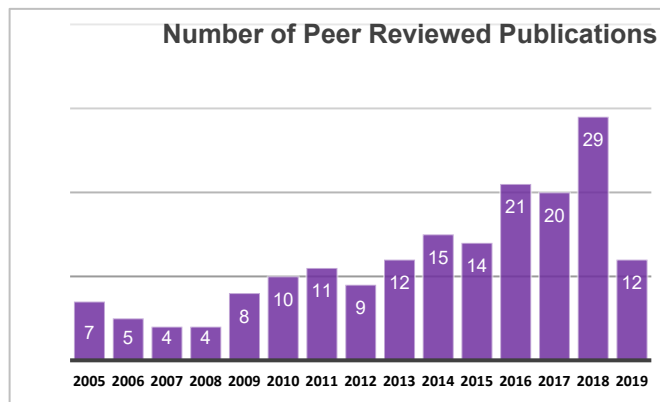
Google Scholar: Publications by author: >250 Total number of citations: >8,880
*h-index (Hirsch index): >48 **i-10-index: >122

*h-index is the largest number of papers that a scientist has that have received at least that number of citations. h-index is indicative researcher's productivity. **i-10-index is the number of publications with at least 10 citations.

For recent data, follow the website links below:

Google Scholar: <https://scholar.google.com.au/citations?user=AvfPGxgAAAAJ&hl>
Research Gate: https://www.researchgate.net/profile/P_V_Vara_Prasad
Researcher ID: <http://www.researcherid.com/rid/B-3835-2012>
ORCID: <http://orcid.org/0000-0001-6632-3361>

Number of publications (journal articles and chapters) and citations from **January 2005 to December 2018**.



XIII. Complete List of Publications:

Published: Journal Articles:>174; Chapters: >34; Abstracts:>250; Reports:>70; Presentations:>120 (Invited:>90)

Published Refereed Articles in International Journals

1. Hansel DSS, Shoup DE, **Prasad PVV**, Holshouser DL, Parvej R, Schwalbert RA, Ciampitti IA. 2019. A review of soybean yield when doubled cropped after wheat. *Agronomy Journal* 111: 1-9 (doi:10.2134/agronj2018.06.0371).
2. Djanaguiraman M, **Prasad PVV**, Kumari J, Rengel Z. 2019. Root length and root lipid composition contribute to drought tolerance of winter and spring wheat. *Plant and Soil* (doi:10.1007/s11104-018-3794-3).
3. Bheemanahalli R, Sunoj VS, Saripalli G, **Prasad PVV**, Balyan HS, Gupta PK, Grant V, Gill KS, Jagadish SVK. 2019. Quantifying the impact of heat stress on pollen germination, seed-set and grain filling in spring wheat. *Crop Science* (doi:10.2135/cropsci2018.05.0292)
4. Araya A, Gowda PH, Golden B, Foster AJ, Aguilar J, Currie R, Ciampitti IA, **Prasad PVV**. 2019. Economic value and water productivity of major irrigated crops in the Ogallala aquifer region. *Agricultural Water Management* 214: 55-63.
5. Araya A, **Prasad PVV**, Gowda PH, Afewerk A., Abadi B, Foster AJ. 2019. Modeling irrigation and nitrogen management of wheat in northern Ethiopia. *Agricultural Water Management* 216: 264-272.
6. Araya A, **Prasad PVV**, Gowda PH, Kisekka I, Foster AJ. 2019. Yield and water productivity of winter wheat under various irrigation capacities. *Journal of American Water Resources Association* 55: 24-37.
7. Perumal R, Tesso T, Kofoid KD, Aiken RM, **Prasad PVV**, Bean S, Wilson JD, Harold TJ, Little CR. 2019. Registration of six grain sorghum pollinator (R) lines. *Journal of Plant Registration* 13: 113-117.
8. Djanaguiraman M, Nair R, Giraldo JP, **Prasad PVV**. 2018. Cerium oxide nanoparticles decrease drought induced oxidative damage in sorghum leading to higher photosynthesis and grain yield. *ACS Omega* 3: 14406-14416.
9. Nayyar H, Sehgal A, Sharma KS, Siddique KHM, Kumar R, Bhogireddy S, Varshney RK, HanumanthaRao B, Nair RM, **Prasad PVV**. 2018. Drought or/and heat-stress effects on seed filling in food crops: impacts on functional biochemistry, seed yield and nutritional quality. *Frontiers of Plant Sciences* 9: 1705.
10. Foyer CH, Siddique KHM, Tai APK, Anders S, Fodor N, Wong F-L, Ludidi N, Chapman MA, Fergusson BJ, Considine MJ, Zabel F, **Prasad PVV**, Varshney RK, Nguyen HT, Lam H-M. 2018. Modeling predicts that soybean is poised to dominate crop production across Africa. *Plant Cell and Environment* 42: 1-5 (doi.org/10.1111/pce.13466).
11. Djanaguiraman M, Schapaugh WT, Fritschi FB, Nguyen HT, **Prasad PVV**. 2018. Reproductive success

- of soybean (*Glycine max* (L.) Merrill) cultivars and exotic lines under high daytime temperature. *Plant Cell and Environment* 42: 321-336.
12. Sehgal A, Sita K, Bhandari K, Kumar S, Kumar J, **Prasad PVV**, Siddique KHM, Nayyar H. 2018. Influence of drought and heat stress, applied independently or in combination during seed development on qualitative and quantitative aspects of seeds of lentil (*Lens culinaris* Medikus) genotypes differing in drought sensitivity. *Plant Cell and Environment* 42:198-211.
 13. Sofi PA, Djanaguiraman M, Siddique KHM, Prasad PVV. 2018. Reproductive fitness in common bean (*Phaseolus vulgaris* L.) under drought stress is associated with root length and volume. *Indian Journal of Plant Physiology* 23: 796-809.
 14. Priya M, Siddique KHM, Dhankar OP, Prasad PVV, Humnath Rao B, Nair RM, Nayyar H. 2018. Molecular breeding approaches involving physiological and reproductive traits for heat tolerance in food crops. *Indian Journal of Plant Physiology* 23: 697-720.
 15. Maswada HF, Djanaguiraman M, **Prasad PVV**. 2018. Response of photosynthetic performance, water relations and osmotic adjustment to salinity acclimation in two wheat cultivars. *Acta Physiologiae Plantarum* 40: 105 (doi.org/10.1007/s11738-018-2684-x).
 16. Boote KJ, **Prasad PVV**, Allen LH Jr, Singh P, Jones JW. 2018. Modeling sensitivity of grain yield to elevated temperature in the DSSAT crop models for peanut, soybean, dry bean, chickpea, sorghum and millet. *European Journal of Agronomy* 100: 99-109.
 17. Maswada HF, Djanaguiraman M, **Prasad PVV**. 2018. Seed treatment with nano-iron (III) oxide enhances germination, seedling growth and salinity tolerance of grain sorghum. *Journal of Agronomy and Crop Science* 204: 577-587.
 18. Green A, Friebe B, **Prasad PVV**, Fritz AK. 2018. Evaluating heat tolerance of complete set of wheat-*Aegilops geniculata* chromosome addition lines. *Journal of Agronomy and Crop Science* 204: 588-593.
 19. Narayanan S, **Prasad PVV**, Welti R. 2018. Alterations in wheat pollen lipidome during high day and night temperature stress. *Plant Cell and Environment* 41: 1749-1761.
 20. Ortez OA, Salvagiotti F, Enrico JM, **Prasad PVV**, Armstrong P, Ciampitti IA. 2018. Exploring nitrogen limitation for historical and modern soybean genotypes. *Agronomy Journal* 110: 2080-2090.
 21. Petty J, Benton TG, Bharucha ZP, Dicks LV, Flora CB, Godfray HCJ, Goulson D, Hartley S, Lampkin N, Morris C, Piersynski GM, **Prasad PVV**, Reganold J, Rockstrom J, Smith S, Thorne P, and Wratten S. 2018. Global assessment of agricultural system redesign for sustainable intensification. *Nature Sustainability* 1: 441-446.
 22. Hebbar KR, Rose HM, Nair AR, Kannan S, Niral V, Arivalgan M, Gupta A, Samsudeen K, Chandran KP, Chowdappa P, **Prasad PVV**. 2018. Differences in in-vitro pollen germination and pollen tube growth of coconut (*Cocos nucifera* L.) cultivar in response to high temperature stress. *Environmental and Experimental Botany* 153: 35-44.
 23. Godoy J, Gizaw S, Chao S, Blake N, Carter A, Cuthbert R, Dubcovsky J, Hucl P, Kephart K, Pozniak C, **Prasad PVV**, Pumphery M, Talbert L. 2018. Genome-wide association study (GWAS) of agronomic traits in spring planted north American elite hard red spring wheat panel. *Crop Science* 58: 1838-1852.
 24. Opole RA, **Prasad PVV**, Djanaguiraman M, Vimala K, Kirkham MB, Upadhyaya HD. 2018. Thresholds, sensitive stages and genetic variability of finger millet to high temperature stress. *Journal of Agronomy and Crop Science* 204: 477-492.
 25. Schwalbert R, Amado TJC, Horbe TAN, Stefanello LO, Assefa Y, **Prasad PVV**, Rice CW, Ciampitti IA. 2018. Corn yield response to planting density and nitrogen: spatial models and yield distribution. *Agronomy Journal* 110: 970-982.
 26. Varela S, Dhodda P, Hsu W, **Prasad PVV**, Assefa Y, Griffin T, Peralta N, Sharda A, Ferguson A, Ciampitti IA. 2018. Early-season stand count determination in corn via integration of imagery from unmanned aerial systems (UAS) and supervised learning techniques. *Remote Sensing* 10: 343.
 27. Araya A, Kisekka I, Gowda PH, **Prasad PVV**. 2018. Grain sorghum production functions under different irrigation capacities. *Agricultural Water Management* 203: 261-271.
 28. Djanaguiraman M, Boye D, Welti R, Jagadish SVK, **Prasad PVV**. 2018. Decreased photosynthetic rate

- under high temperature in wheat is due to lipid saturation, oxidation, acylation, and damage to cell organelles. *BMC Plant Biology* 18: 55.
29. Djanaguiraman M, Belliraj N, Bossmann S, **Prasad PVV**. 2018. High temperature stress alleviation by selenium nanoparticles treatment in grain sorghum. *ACS Omega* 3: 2479-2491.
 30. Djanaguiraman M, Perumal R, Jagadish SVK, Ciampitti IA, Welti R, **Prasad PVV**. 2018. Sensitivity of sorghum pollen and pistil to high temperature stress. *Plant Cell and Environment* 41: 1065-1082.
 31. Djanaguiraman M, Perumal R, Ciampitti IA, Gupta SK, **Prasad PVV**. 2018. Quantifying pearl millet response to high temperature stress: thresholds, sensitive stages, genetic variability and relative sensitivity of pollen and pistil. *Plant Cell and Environment* 41: 993-1007.
 32. Sun A, Somayananda I, Sunoj VSJ, Singh K, **Prasad PVV**, Gill K, Jagadish SVK. 2018. Heat stress during flowering affects time of day of flowering, seed-set and grain quality in spring wheat (*Triticum aestivum* L.). *Crop Science* 58: 380-392.
 33. Assefa Y, **Prasad PVV**, Foster C, Wright C, Young S, Bradley P, Stamm M, Ciampitti IA. 2018. Major management factors determining spring and winter canola yield in north America. *Crop Science* 58: 1-16.
 34. Guragain YN, **Prasad PVV**, Rao PS, Vadlani PV. 2017. Evaluation of brown midrib sorghum mutants as a potential feedstock for 2-3 butanediol biosynthesis. *Applied Biochemistry and Biotechnology* 183: 1093-1110.
 35. Sita K, Sehgal A, Hanumantharao B, Nair RM, **Prasad PVV**, Kumar S, Gaur PM, Farooq M, Siddique KHM, Varshney RK, Nayyar H. 2017. Food legumes and rising temperatures: effects, adaptive functional mechanisms specific to reproductive phase and strategies to improve heat tolerance. *Frontiers in Plant Sciences* 8: 1658.
 36. Araya A, Kisekka I, Xin L, **Prasad PVV**, Gowda PH, Rice CW, Andales A. 2017. Evaluating the impact of climate change on irrigated maize production in Kansas. *Climate Risk Management* 17: 139-154.
 37. Varela S, Assefa Y, **Prasad PVV**, Peralta NR, Griffin TR, Sharda A, Ferguson A, Ciampitti IA. 2017. Spatio-temporal evaluation of plant height in corn via unmanned aerial systems (UAS). *Journal of Applied Remote Sensing* 11: 03603-1-12.
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MS Theses of Graduate Students:

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2. Groene GA. 2008. Evaluation of sorghum and maize germplasm for post-anthesis drought tolerance. M.S. Thesis. Kansas State University, Manhattan, Kansas. (**Major Professor: P.V.V. Prasad**).
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1. **Prasad PVV**. 2018. Concepts of sustainable intensification for improved food and nutritional security. International Conference on Climate Change, Biodiversity and Sustainable Agriculture, 13 – 16 December, Jorhat, Assam, India.
2. **Prasad PVV**. 2018. Impact of climate change factors on productivity of food grain crops. 4th International Plant Physiology Congress, 2 – 5 December, Lucknow, India.
3. Djanaguiraman M, Prasad PVV, Kumari J, Rengel Z. Drought tolerance mechanisms of winter- and spring wheat genotypes associated with root length, lipid composition, and lipid saturation levels. 4th International Plant Physiology Congress, 2 – 5 December, Lucknow, India.
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5. Araya A, Gowda PH, **Prasad PVV**, Sharda V, Kisekka I, Andales A. 2018. Assessing corn (*Zea mays*) yield and water productivities as affected by irrigation frequency under variable allowable soil water irrigation triggers. Ogallala Water Annual Meeting, 29 November, Santa Fe, New Mexico, USA.
6. **Prasad PVV**. 2018. Role of land-grant and public universities in addressing global food and nutritional security: approaches to enhance excellence in research, education, learning and grantsmanship. Indian Agricultural Universities Association Gold Jubilee International Conference: Agricultural Education – Sharing Global Experiences, 25 November, New Delhi, India.
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8. Pierzynski GM, Stewart ZP, **Prasad PVV**, Middendorf BJ, Vipham JL. 2018. Prioritizing biophysical and socioeconomic factors enhancing soil fertility in sub-saharan Africa. Annual Meeting of ASA-CSSA, 04 – 07 Nov., Baltimore, MD, USA.
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14. Djanaguiraman M, **Prasad PVV**. Selenium nanoparticles decreases high temperature induced oxidative

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 23. **Prasad PVV**, Dixon J. 2017. Systems approaches for sustainable intensification: lessons learned and opportunities. TropAg 2017, 20 – 22 Nov., Brisbane, Queensland, Australia.
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36. **Prasad PVV**. 2017. Responses of food grain crops to changing environments. Annual Meeting of ASA-CSSA-SSSA, 22 – 25 Oct., Tampa, Florida, USA.
37. **Prasad PVV**, Djanaguiraman M, Rengel Z, Siddique KHM. 2017. Roots traits for enhancing drought tolerance in wheat: genetic diversity and mechanisms. International Conference on Roots and Rhizosphere Interactions, 9-13 October, Yangling, China.
38. **Prasad PVV**. 2017 Overview of feed the future innovation labs, strategic partnerships and future opportunities. 3rd World University Network Workshop – Climate Resilient Open Partnership for Food Security Annual Meeting, 7 – 8 October, Amherst, Massachusetts, USA.
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158. Mutava RN, **Prasad PVV**. 2011. Screening sorghum genotypes for canopy temperature using field based infra-red sensors. *Annual Meeting of ASA-CSSA-SSSA*, 16 – 19 Oct., San Antonio, Texas, USA.
159. Mutava RN, **Prasad PVV**, Staggenborg SA, Yu J, Roozeboom KL. 2011. Evaluating variability in water use efficiency of some selected genotypes. *Annual Meeting of ASA-CSSA-SSSA*, 16 – 19 Oct., San Antonio, Texas, USA.
160. Mutava RN, **Prasad PVV**, Staggenborg SA, Yu J, Roozeboom KL. 2011. Influence of drought stress on root growth and development of sorghum genotypes. *Sorghum Improvement Conference of North America*, 13 – 14 Sep., Stillwater, Oklahoma, USA.
161. Keep NR, Schapaugh WT, **Prasad PVV**, Boyer JE. 2011. Characterization of physiological parameters in soybean with genetic improvement in seed yield. *Annual Meeting of ASA – CSSA-SSSA*, 16 – 19 Oct., San Antonio, Texas, USA.
162. **Prasad PVV**, Boote KJ, Sinclair TR, Kirkham MB. 2010. Role of crop physiology in understanding mechanisms of yield formation under water and heat stress conditions. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
163. **Prasad PVV**. 2010. High temperature in sorghum – what are the possibilities, what do we know? *Australian Summer Grains Conference*, 21 – 24 June, Gold Coast, Queensland, Australia.
164. **Prasad PVV**, Djanaguiraman M. 2010. High temperature tolerance in sorghum. *27th Sorghum Research and Utilization Conference and the Great Plains Sorghum Research Conference*, 11 – 12 August, University of Nebraska-Lincoln Agricultural Research and Development Center, Mead, Nebraska, USA.
165. Mutava RN, **Prasad PVV**, Yu J, Kofoid KD, Tuinstra MR. 2010. Characterization of diverse sorghum genotypes for traits related to drought tolerance. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
166. Mutava RN, **Prasad PVV**, Roozeboom KL, Yu J, Staggenborg SA, Nippert J. 2010. Evaluating the effects of water stress on growth and development of grain sorghum roots. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
167. Mutava RN, **Prasad PVV**, Yu J. 2010. Response of sorghum roots to pre-flowering drought stress. *27th Sorghum Research and Utilization Conference and the Great Plains Sorghum Research Conference*, 11 – 12 August, University of Nebraska-Lincoln Agricultural Research and Development Center, Mead, Nebraska, USA.
168. Pradhan GP, **Prasad PVV**, Gill BS, Fritz AK, Kirkham MB. 2010. The independent and combined effects of drought and high temperature stress on physiological, growth and yield traits of synthetic wheat. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
169. Djanaguiraman M, **Prasad PVV**, Al-Khatib. 2010. Effect of selenium on leaf senescence and yield of sorghum grown under high temperature stress. *27th Sorghum Research and Utilization Conference and the Great Plains Sorghum Research Conference*, 11 – 12 August, University of Nebraska-Lincoln Agricultural Research and Development Center, Mead, Nebraska, USA.
170. Djanaguiraman M, **Prasad PVV**, Boyle DL, Schapaugh WT. 2010. Effects of heat stress during flowering on physiological and ultra-structural changes in soybean leaves and pollen grains. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
171. Djanaguiraman M, **Prasad PVV**, Boyle DL. 2010. Role of high nighttime temperatures and ethylene production on oxidative damage, lipid and sugar profiles in soybean pollen. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
172. Opole R, **Prasad PVV**, Staggenborg SA, Roozeboom KL. 2010. Effect of seeding rate and nitrogen fertilizer application rate on field performance of finger millet. *Annual Meeting of American Society of*

- Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
173. Opole R, **Prasad PVV**, Staggenborg SA, Roozeboom KL, Kirkham MB. 2010. Growth and management of finger millet in Kansas. *27th Sorghum Research and Utilization Conference and the Great Plains Sorghum Research Conference*, 11 – 12 August, University of Nebraska-Lincoln Agricultural Research and Development Center, Mead, Nebraska, USA.
 174. Opole R, **Prasad PVV**, Staggenborg SA, Roozeboom KL. 2010. Effect of seeding rate and nitrogen fertilizer application rate on field performance of finger millet. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
 175. Paul G, **Prasad PVV**, Staggenborg SA, Gowda PH. 2010. Climate change impact assessment and mitigation strategies: crop modeling using regional climate model data. *Kansas NSF EPSCoR Statewide Conference; Energy, Climate, and the Future: The Role of Kansas*, Oct. 4, University of Kansas, Lawrence, Kansas, USA.
 176. Paul G, Gowda PH, **Prasad PVV**, Howell TA, Staggenborg SA. 2010. An evaluation of SEBAL algorithm using high resolution aircraft data acquired during BEAREX07. *American Geophysical Union Fall Meeting*, 13 – 17 December, San Francisco, California, USA.
 177. Subramanian SK, **Prasad PVV**, Staggenborg SA, Yu J, Vadlani PV. 2010. Effect of different harvest time on sugar and juice yield of sweet sorghum. *Center for Sustainable Energy Annual Meeting*, 6 May, Kansas State University, Manhattan, Kansas, USA.
 178. Subramanian SK, **Prasad PVV**, Staggenborg SA, Yu J, Vadlani PV. 2010. Effect of different harvest time on sugar and juice yield of sweet sorghum. *27th Sorghum Research and Utilization Conference and the Great Plains Sorghum Research Conference*, 11 – 12 August, University of Nebraska-Lincoln Agricultural Research and Development Center, Mead, Nebraska, USA.
 179. Narayanan S, Aiken RM, Xin Z, **Prasad PVV**, Kofoid KD, Yu J. 2010. Canopy architecture and transpiration efficiency in grain sorghum. *27th Sorghum Research and Utilization Conference and the Great Plains Sorghum Research Conference*, 11 – 12 August, University of Nebraska-Lincoln Agricultural Research and Development Center, Mead, Nebraska, USA.
 180. Narayanan S, Aiken RM, Xin Z, **Prasad PVV**, Kofoid KD, Yu J. 2010. Canopy architecture and transpiration efficiency in grain sorghum. *Annual Meeting of American Society of Agronomy*, 31 Oct. – 03 Nov., Long Beach, California, USA.
 181. **Prasad PVV**, Pisipati SR, Momcilovic I, Ristic Z. 2009. Interaction of high temperature and drought stress on physiology and plant yield of spring wheat. *Annual Meeting of American Society of Plant Biology*, 18 – 22 July, Honolulu, Hawaii, USA.
 182. Djanaguiraman M, **Prasad PVV**, Al-Khatib K. 2009. Effect of selenium on leaf senescence of sorghum grown under high temperature stress. *Annual Meeting of American Society of Agronomy*, 1 – 5 November, Pittsburgh, Pennsylvania, USA.
 183. Djanaguiraman M, **Prasad PVV**, Al-Khatib K. 2009. Effect of 1-Methyl-cyclopropene on soybean flower and pod abortion under heat Stress. *International Symposium on Plant Hormone Ethylene*, June 21 – 25, 2009. Ithaca, New York, USA.
 184. Mutava RN, **Prasad PVV**, Kofoid KD, Tuinstra MR, Yu J. 2009. Evaluating of genetic resources for drought tolerance in grain sorghum. *Great Plains Sorghum Conference*, August 11 – 12, 2009, Amarillo, Texas, USA.
 185. Subramanian S, **Prasad PVV**, Staggenborg SA, Yu J, Vadlani PV. 2009. Effect of water stress during early seed-filling (milking) on sugar and juice volume of sweet sorghum genotypes in controlled environments. *Great Plains Sorghum Conference*, August 11 – 12, 2009, Amarillo, Texas, USA.
 186. Subramanian S, **Prasad PVV**, Staggenborg SA, Yu J, Vadlani PV. 2009. Evaluation of sweet sorghum germplasm for traits associated with improved sugar yield. *Center for Sustainability Energy Annual Conference*, May 05, 2009, Manhattan, Kansas, USA.
 187. Sukumaran S, Wu Y, Mutava RN, **Prasad PVV**, Bai G, Tuinstra MR, Tesso T, Yu J. 2009. Genomic mapping for drought tolerance in sorghum. *Annual Meeting of American Society of Agronomy*, 1 – 5 November, Pittsburgh, Pennsylvania, USA.
 188. Boote KJ, Allen LH Jr, **Prasad PVV**. 2009. Testing effects of climate change in crop models. *Annual*

- Meeting of American Society of Agronomy*, 1 – 5 November, Pittsburgh, Pennsylvania, USA.
189. **Prasad PVV**, Vadlani PV, Najundaswamy AK, Madl RL. 2008. Carbohydrate and ethanol production efficiency of grain sorghum. *Annual Meeting of American Society of Agronomy*, 3 – 9 October, Houston, Texas, USA.
 190. **Prasad PVV**, Stamm M, Godsey C. 2008. Impact of high temperature and drought stress on physiology and re-growth of winter canola. *Annual Meeting of American Society of Agronomy*, 3 – 9 October, Houston, Texas, USA.
 191. Gowda PH, Howell TA, **Prasad PVV**. 2008. Finger millet: An alternative forage crop for Southern High Plains. *Annual Meeting of American Society of Agronomy*, 3 – 9 October, Houston, Texas, USA.
 192. Allen LH Jr., Boote KJ, **Prasad PVV**. 2008. Impact of a 4.5-degree C increase of temperature and elevated carbon dioxide on MG II, III and IV cultivars of soybean. *Annual Meeting of American Society of Agronomy*, 3 – 9 October, Houston, Texas, USA.
 193. **Prasad PVV**, Pisipati S, Nagiseti G, Kirkham MB, Reddi LN. 2007. Application of metal oxide nanoparticles for phytostabilization of heavy metals in soil. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 194. **Prasad PVV**, Mutava R, Pisipati S, Tuinstra MR. 2007. Sensitivity of grain sorghum to short episodes of drought and/or high temperature stress. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 195. Mutava R, **Prasad PVV**, Tuinstra MR. 2007. Feasibility of using a chlorophyll fluorescence assay as a tool for screening the stay green trait in sorghum. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 196. Mutava R, **Prasad PVV**, Vos RJ. 2007. Genetic variation in germination rates and percentages of grain amaranth in response to temperature. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 197. Pisipati S, **Prasad PVV**, Kirkham MB, Rice CW. 2007. Influence of metal oxide nanoparticles on physiology, growth and yield of wheat. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 198. Pisipati S, **Prasad PVV**, Fritz AK, Ristic Z. 2007. Responses of spring wheat to high nighttime temperature during reproductive development. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 199. Subramanian S, **Prasad PVV**, Jeannotte R, Tuinstra MR. 2007. Physiological and biochemical responses of grain sorghum to foliar application of Glycine betaine under drought stress. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 200. Walker L, Schapaugh W, **Prasad PVV**. 2007. Genetic variability in heat tolerance of pollen germination in soybean. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 201. White P, Burton C, **Prasad PVV**, Rice CW. 2007. Effects of MgO and CuO nanoparticles on soil microbes and N cycling. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 202. Indraratne SP, Pierzynski GM, Baker L, **Prasad PVV**. 2007. Stabilization of heavy metals using nanoscale Fe-, Al- and Ti-Oxides. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 203. Aiken RM, Xin Z, Kofoed KD, Kirkham MB, **Prasad PVV**. 2007. Parsing components of transpiration efficiency in sorghum. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 204. White J, Hoogenboom G, Huda AKS, Kimball BA, Ottman M, **Prasad PVV**, Rosenthal W, Sanon M, Staggenborg SA, Traore S, Vaksman M, Vanderlip RL. 2007. Recent advances in CMS-CERES Sorghum model. Abstracts. *Annual Meeting of American Society of Agronomy*, 4 – 8 November, New Orleans, Louisiana, USA.
 205. **Prasad PVV**, Pisipati S, Nagiseti G, Kirkham MB, Reddi LN, Mulukutla R. 2007. Use of nanoparticles

- for phytoremediation of heavy metal contaminated soils. *International Conference on Nanotechnology: Science and Application – Nano Tech Insight*, 10 – 17 March 2007, Luxor, Egypt.
206. **Prasad PVV**, Boote KJ, Allen LH Jr., Thomas, JMG. 2006. Screening rice cultivars for high temperature tolerance. *Annual Meeting of American Society of Agronomy*, 12 – 16 Nov., Indianapolis, Indiana, USA.
207. Jain M, Funk A, **Prasad PVV**, Allen LH Jr, Boote KJ, Chourey PS. 2006. Impact of high temperature stress on carbohydrate metabolism in developing microspores of grain sorghum. *Annual Meeting of American Society of Agronomy*, 12 – 16 November, Indianapolis, Indiana, USA.
208. Naab JB, Boote KJ, **Prasad PVV**, Jones JW. 2006. Influence of fungicide and sowing density on growth and yield of two peanut cultivars. *Annual Meeting of American Peanut Research and Education Society*, 11 – 14 July, Savannah, Georgia, USA.
209. Allen LH Jr., Boote KJ, **Prasad PVV**, Thomas JMG. 2006. Searching for seed yield tolerance of soybean cultivars to high temperatures. *Annual Meeting of American Society of Agronomy*, 12 – 16 November, Indianapolis, Indiana, USA.
210. Kakani VG, Boote KJ, **Prasad PVV**, Craufurd PQ, Wheeler TR, Rao RCN. 2006. Using CROPGRO to simulate impact of high temperature stress on peanut. *Annual Meeting of American Society of Agronomy*, 12 – 16 November, Indianapolis, Indiana, USA.
211. Rozenboom C, Fritz AK, Ristic Z, **Prasad PVV**. 2006. Transferring heat tolerance in common bread wheat: characterizing the response of heat stress among contrasting RILs. *Annual Meeting of American Society of Agronomy*, 12 – 16 November, Indianapolis, Indiana, USA.
212. Jain M, Funk A, **Prasad PVV**, Allen LH, Boote KJ, Chourey PS. 2006. Effects of elevated high temperature growth conditions on sugar-to-starch metabolism in developing microspores in sorghum [*Sorghum bicolor* L. (Moench)]. *Annual Meeting of American Society of Plant Biology*, 5 – 9 August, Boston, Massachusetts, USA.
213. Ristic Z, Momcilovic I, Fu J, Bukovnik U, Fritz AK, Baber MA, **Prasad PVV**. 2006. Heat tolerance and relative levels of chloroplast protein synthesis elongation factor EF-Tu in wheat under heat stress conditions. *Annual Meeting of American Society of Plant Biology*, 5 – 9 Aug., Boston, Massachusetts, USA.
214. **Prasad PVV**, Vu JCV, Boote KJ, Allen LH Jr. 2006. Impact of water and temperature stress at ambient and elevated carbon dioxide levels on leaf photosynthesis and dry matter production in sorghum. *Biological Systems Simulation Conference*, 11 – 13 April 2006, Fort Collins, Colorado, USA.
215. **Prasad PVV**, Vu JCV, Boote KJ, Allen LH Jr. 2005. Effects of elevated carbon dioxide and temperature on leaf gas exchange, photosynthetic enzyme activities and growth of grain sorghum. *Annual Meeting of American Society of Agronomy*, 6 – 10 November, Salt Lake City, Utah, USA.
216. **Prasad PVV**, Vu JCV, Boote KJ, Allen LH Jr. 2006. Impact of water and temperature stress at ambient and elevated carbon dioxide levels on leaf photosynthesis and dry matter production in sorghum. *Biological Systems Simulation Conference*, 11 – 13 April 2006, Fort Collins, Colorado, USA.
217. Naab JB, **Prasad PVV**, Boote KJ, Jones JW. 2005. Response of early and late maturity peanut cultivars to sowing densities and fungicide application in Ghana. *Annual Meeting of American Society of Agronomy*, 6 – 10 November, Salt Lake City, Utah, USA. Abstract No: 329a.
218. **Prasad PVV**, Vu JCV, Boote KJ, Allen LH Jr. 2005. Effects of elevated carbon dioxide and temperature on leaf gas exchange, photosynthetic enzyme activities and growth of grain sorghum. *Annual Meeting of American Society of Agronomy*, 6 – 10 November, Salt Lake City, Utah, USA. Abstract No: 241-6.
219. Boote KJ, **Prasad PVV**, Allen LH Jr. 2005. Testing elevated temperature responses of the Cropgro-Peanut model with data from sunlit controlled-environment chambers. *Annual Meeting of American Society of Agronomy*, 6 – 10 November, Salt Lake City, Utah, USA. Abstract No: 132-4.
220. Allen LH Jr, Boote KJ, **Prasad PVV**, Thomas JMG, Vu JCV. 2005. Hazards of temperature on food availability in changing environments (Hot-Face): global warming could cause failure of seed yields of major crops. *Proceedings of The 7th International Carbon Dioxide Conference*, 25 – 30 September 2005, Washington DC, USA.
221. **Prasad PVV**, Vu JCV, Boote KJ, Allen LH Jr. 2005. Enhancement in leaf photosynthesis and up-regulation of Rubisco in the C₄ plant sorghum under elevated growth CO₂ and temperature occurs at

- early stages of leaf ontogeny. *American Society of Plant Biologists Annual Meeting*, 16 – 20 July 2005, Seattle, Washington, USA. Abstract No: 35.
222. Jain M, **Prasad PVV**, Allen LH Jr, Boote KJ, Chourey PS. 2005. Gene expression analyses of sucrose-to-starch metabolism during micro-sporogenesis in sorghum grown under high temperature conditions. *American Society of Plant Biologists Annual Meeting*, 16 – 20 July 2005, Seattle, Washington, USA. Abstract No: 162.
223. Allen LH Jr, Boote KJ, **Prasad PVV**, Baker JT, Gesch RW, Snyder AM, Pan D, Thomas JMG. 2005. Food security and agriculture: Impact of elevated temperature and carbon dioxide on pollination and yield of globally important seed grain crops. *The 16 Global Warming and International Conference & Expo (GWXVI)*, 19 – 21 April, New York, USA.
224. **Prasad PVV**, Boote KJ, Allen LH Jr. 2004. Impact of elevated temperature and carbon dioxide enrichment on growth, reproductive processes and yield of grain sorghum. *Annual Meeting of American Society of Agronomy*, 31 October – 04 November, Seattle, Washington, USA.
225. Naab JB, **Prasad PVV**, Boote KJ, Jones JW. 2004. Effects of fungicide and phosphorus application on peanut yields in on-station and on-farm trials in northern Ghana. *Annual Meeting of American Society of Agronomy*, 31 October – 04 November, Seattle, Washington, USA.
226. Boote KJ, Allen LH Jr., **Prasad PVV**, Baker JT, Gesch RW, Snyder AM, Pan D, Thomas JMG. 2004. Elevated temperature and CO₂ impacts on pollination, reproductive growth and yield of several globally important crops. *International Symposium on Food Production and Environmental Conservation in the Face of Global Environmental Deterioration*, 07 – 11 Sep. 2004, Fukuoka, Japan.
227. **Prasad PVV**, Boote KJ, Allen LH Jr. 2004. Temperature sensitivity of pollen viability, seed-set and seed yield of grain-sorghum (*Sorghum bicolor* L.) is adversely affected by growth at elevated carbon dioxide. *American Society of Plant Biologists Annual Meeting*, 24 – 28 July 2004, Orlando, Florida, USA.
228. **Prasad PVV**, Boote KJ, Waliyar F, Craufurd PQ. 2004. A mechanistic approach to predict pre-harvest aflatoxin incidence in peanut using CROPGRO-peanut model. *Biological Systems Simulation Group Conference Annual Meeting*, 8 – 10 Mar. 2004. University of Florida, Gainesville, Florida, USA. p. 2-3.
229. Naab JB, Tsigbey F, **Prasad PVV**, Boote KJ, Bailey JE, Brandenburg RL. 2004. Quantifying yield losses caused by leafspot disease on peanut in Ghana: a crop modelling analysis. *Biological Systems Simulation Group Conference Annual Meeting*, 08 – 10 March 2004, University of Florida, Gainesville, Florida, USA. p. 56-57.
230. Adomou M, **Prasad PVV**, Boote KJ. 2004. CROPGRO-Peanut model a tool to simulate growth and yield losses due to foliar diseases on peanut in Benin. *Biological Systems Simulation Group Conference Annual Meeting*, 08 – 10 March 2004, University of Florida, Gainesville, Florida, USA. p. 63-64.
231. **Prasad PVV**, Boote KJ, Allen LH Jr, Thomas JMG. 2003. Impact of elevated temperature and carbon dioxide on reproductive processes and yield of peanut. *Annual Meeting of American Society of Agronomy*, 2 – 6 November 2003, Denver, Colorado, USA.
232. Murthy VRK, **Prasad PVV**. 2003. Influence of tillage practices on seedling emergence of pigeon pea, soybean and castor. *Annual Meeting of American Society of Agronomy*, 2 – 6 November 2003, Denver, Colorado, USA.
233. **Prasad PVV**, Boote KJ, Thomas JMG, Allen LH Jr. 2003. Influence of soil temperatures on seedling emergence of peanut cultivars. *Proceedings of American Peanut Research and Educational Society Annual Meeting*, 07 – 11 July 2003, Clearwater, Florida, USA. Vol 35: 88.
234. Craufurd PQ, **Prasad PVV**, Kakani VG, Wheeler TR, Nigam SN. 2003. Heat tolerance in groundnut. *Proceedings of American Peanut Research and Educational Society Annual Meeting*, 07 – 11 July 2003, Clearwater, Florida, USA. Vol 35: 68-69.
235. Wheeler TR, Challinor A, **Prasad PVV**, Kakani VG, Craufurd PQ. 2003. Impact of change in mean temperature and variability on annual crops. *Promise Meeting on Monsoon Environments: Agricultural and Hydrological Impacts of Seasonal Variability and Climate Change*, 24 – 28 Mar 2003, International Center for Theoretical Physics, Italy.
236. **Prasad PVV**, Boote KJ, Allen LH Jr, Sheehy JE, Thomas JMG. 2002. Effect of elevated temperature and spikelet fertility and harvest index of rice genotypes. *Annual Meeting of American Society of*

- Agronomy*, 10 – 14 November 2002, Indianapolis, USA.
237. **Prasad PVV**, Murthy VRK, Boote KJ, Jones JW. 2002. Simulating growth and yield of peanut under present and future climate in Andhra Pradesh, India. *Biological Systems Simulation Group Conference / Workshop on Remote Sensing and Modelling Application in Natural Resource Management*, 10 – 13 March 2002, Mississippi State University, Starkville, USA. Report. p. 30.
238. Thomas JMG, **Prasad PVV**, Boote KJ, Allen LH. 2002. Seed germination and seedling vigor of kidney bean seed produced under elevated temperature and CO₂. *Sixty Second Annual Meeting of Soil and Crop Science Society of Florida*, 22 – 24 May 2002, Clearwater Beach, Florida, USA.
239. Boote KJ, Beg-Susich DM, Bennett JM, **Prasad PVV**. 2002. Evaluating CERES-Maize model for ability to predict growth and nitrogen uptake response to N fertilization. *Sixty Second Annual Meeting of Soil and Crop Science Society of Florida*, 22 – 24 May 2002, Clearwater Beach, Florida, USA.
240. **Prasad PVV**, Boote KJ, Allen LH Jr, Vu JCV, Thomas JMG. 2001. Effects of elevated temperature and carbon dioxide on photosynthetic and reproductive processes of kidney bean. *Annual Meeting of American Society of Agronomy*, 20 – 25 October 2001, Charlotte, North Carolina, USA.
241. Adomou M, Detongnon J, **Prasad PVV**, Boote KJ. 2000. Simulating growth and yield of peanut in Benin as affected by planting date, cultivar and disease. *Annual Meeting of American Society of Agronomy*, 5 – 9 November 2000, Minneapolis, Minnesota, USA. *Abstracts*. p. 62.
242. **Prasad PVV**, Boote KJ, Craufurd, PQ, Kakani, VG. 2000. Impact of high temperature stress on reproductive development and yield of peanut. *Annual Meeting of American Society of Agronomy*, 5 – 9 November 2000, Minneapolis, Minnesota, USA. *Abstracts*. p. 124.
243. **Prasad PVV**, Craufurd PQ, Kakani VG, Wheeler TR. 2000. Effect of high air temperature on fruit-set in peanut. *3rd International Crop Science Congress*, 17 – 22 August 2000, Hamburg, Germany.
244. Craufurd PQ, **Prasad PVV**, Kakani, Wheeler TR. 2000. Tolerance of high soil and air temperature in peanut. *3rd International Crop Science Congress*, 17 – 22 August 2000, Hamburg, Germany.
245. Kakani VG, **Prasad PVV**, Craufurd PQ, Wheeler TR, Summerfield RJ. 2000. Pollen responses to temperature in peanut. *3rd International Crop Science Congress*, 17 – 22 August 2000, Hamburg, Germany.
246. **Prasad PVV**, Craufurd PQ, Summerfield RJ, Wheeler TR. 1998. Sensitivity of fruit-set to heat stress in groundnuts (*Arachis hypogaea* L.). *Annual Meeting of the Society of Experimental Biology*, 22 – 27 March 1998, York, England. *Journal of Experimental Botany* 49: 30.
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248. **Prasad PVV**, Craufurd, PQ, Summerfield RJ, Wheeler TR. 1998. Sensitivity of fruit-set to high temperature stress in groundnut. *Annual Meeting of American Society of Agronomy, Abstracts*, 18 – 22 October 1998, Baltimore, Maryland, USA. *Abstracts*, 291.
249. **Prasad PVV**, Craufurd PQ, Summerfield RJ, Wheeler TR. 1998. Effects of hot air and soil temperature on pod yield of groundnut. p. 65-66. In: *Proceedings of First International Agronomy Congress, Environment and Food Security for 21st Century* (Eds I.P.S. Ahlawat and Surender Singh), 23 – 27 November 1998, Indian Society of Agronomy, Indian Agricultural Research Institute, New Delhi, India.
250. **Prasad PVV**, Satyanarayana V, Potdar MV. 1994. Integrated crop management strategies for correction of iron chlorosis in groundnut in Andhra Pradesh. p. 43 In: *National Symposium on Integrated Input Management for Efficient Crop Production*, 22 – 25 February 1994, Indian Society of Agronomy, New Delhi, India.
251. **Prasad PVV**, Shanti M. 1994, Rao PC. Increase in oilseed productivity through integrated weed management systems in Andhra Pradesh. p. 436-437. In: *Proceedings of National Seminar on Oilseed Research and Development in India - Status and Strategies*, 2 – 6 August 1993. Hyderabad, India.
252. **Prasad PVV**, Sharma SHK, Shanti M, Rao PC. 1992. Nutrient economy through weed management in crops in Andhra Pradesh. p. 12-13. In: *Proceedings of National Seminar on Development in Soil Science, 57th Annual Convention of Indian Society of Soil Science*, 26 – 29 November 1992, Central Research Institute for Dryland Agriculture, A.P., India.

XIV. Complete List of Competitive Grants Funded (Since 2006):**Summary of Competitive Funds Received:****Grand Total: ~ 62 million (~ 58 million as PI)**

Year 2006: \$ 166,500 (7 grants, 5 as PI);

Year 2007: \$ 607,442 (11 grants, 7 as PI);

Year 2008: \$ 984,420 (17 grants, 12 as PI);

Year 2009: \$ 2,200,973 (15 grants, 10 as PI);

Year 2010: \$ 3,051,560 (19 grants; 13 as PI);

Year 2011: \$ 1,239,721(16 grants, 10 as PI);

Year 2012: \$ 1,483,691 (17 grants, 13 as PI);

Year 2013: \$ 1,144,742 (12 grants, 10 as PI);

Year 2014: \$ 50,400,000 (8 grants, 6 as PI);

Year 2015: \$ 265,000 (5 grants, 1 as PI);

Year 2016: \$ 1,000,000 (8 grants);

Year 2017: \$ 507,672 (6 grants, 1 as PI);

Year 2018: \$ 430,000 (6 grants, 2 as PI).

Year 2006

1. **Prasad PVV**, Tuinstra MR, Kofoid KD, Aiken RM. 2006. Screening sorghum germplasm for drought and heat tolerance. Kansas Grain Sorghum Commission. Amount: \$23,000.
2. **Prasad PVV**, Tuinstra MR, Kofoid KD, Aiken RM. 2006. Assessing drought tolerance in grain sorghum. USDA – CSREES. Center for Sorghum Improvement. Amount: \$34,000.
3. **Prasad PVV**, Fritz AK, Martin TJ. 2006. Sprout resistance in hard white wheat. Kansas Wheat Commission. Amount: \$10,000.
4. **Prasad PVV**, Fritz AK, Martin TJ. 2006. Sprout resistance in hard white wheat. Kansas Crop Improvement Association. Amount: \$10,000.
5. Tuinstra MR, Claassen M, Gordon WB, Kofoid KD, **Prasad PVV**. 2006. Kansas Grain Sorghum Commission. Amount: \$67,500.
6. Aiken RM, **Prasad PVV**, Kofoid KD. 2006. Physiological basis for seed-set in grain sorghum under pre-flowering drought stress. USDA – CSREES: Ogallala Initiative. Amount: 20,000.
7. **Prasad PVV**. 2006. Faculty development awards. Multiple Sources. Amount: 2,000.

Year 2007

8. **Prasad PVV**, Tuinstra MR, Kofoid KD, Aiken RM. 2007. Screening sorghum germplasm for drought and heat tolerance. Kansas Grain Sorghum Commission. Amount: \$23,000.
9. **Prasad PVV**, Tuinstra MR, Kofoid KD, Aiken RM. 2007. Assessing drought tolerance in grain sorghum. USDA – CSREES, Center for Sorghum Improvement. Amount: \$32,942.
10. **Prasad PVV**, Fritz AK, Martin TJ. 2007. Sprout resistance in hard white wheat. Kansas Wheat Commission. Amount: \$11,000.
11. **Prasad PVV**, Fritz AK, Martin TJ. 2007. Sprout resistance in hard white wheat. Kansas Crop Improvement Association. Amount: \$11,000.
12. **Prasad PVV**, Staggenborg SA, Mengel DB. 2007. Integrated soil, water, crop management for

- improving productivity in sorghum and millet based cropping systems. USAID – INTSORMIL. Amount: \$348,500. (Five Years).
13. **Prasad PVV**, Staggenborg SA, Gowda P, Aiken R. 2007. Comparative performance of finger millet for improving forage quality for dairy livestock in water-limited Ogallala aquifer region. USDA – CSREES: Ogallala Initiative. Amount: \$26,000.
 14. Tuinstra MR, **Prasad PVV**, Claassen M, Gordon WB. 2007. Breeding grain sorghum for drought and heat tolerance. Kansas Grain Sorghum Commission. Amount: \$73,000.
 15. Yu J, Tuinstra MR, **Prasad PVV**. 2007. Improving drought tolerance in sorghum through association mapping. Kansas Sorghum Commission. Amount: \$30,000.
 16. Staggenborg SA, **Prasad PVV**, Gowda P. 2007. Understanding climate variability for improving management decisions. USDA – CSREES: Ogallala Initiative. Amount: \$35,000.
 17. **Prasad PVV**, Stamm M, Godsey CD. 2007. Examining shatter resistance and effects of spring re-growth in winter canola. USDA-CSREES – US Canola Growers Association. Amount: \$12,000.
 18. Tuinstra MR, **Prasad PVV**. 2007. Corn evaluation studies. Monsanto. Amount: \$5,000.

Year 2008

19. Little CR, **Prasad PVV**, Presley D, Roozeboom K. 2008. Influence of soils, nutrition and water relations upon charcoal rot disease process in Kansas. Kansas Soybean Commission. Amount: \$34,758.
20. **Prasad PVV**, Roozeboom K, Vadlani P, Yu J. 2008. Screening sorghum germplasm for abiotic stress tolerance and biofuel production. Kansas Grain Sorghum Commission. Amount: \$33,000.
21. **Prasad PVV**, Fritz AK. 2008. Drought and heat tolerance in wheat. Kansas Wheat Commission. Amount: \$28,000.
22. Yu J, **Prasad PVV**. 2008. Improving drought tolerance in sorghum through association mapping. Kansas Grain Sorghum Commission. Amount: \$60,000.
23. Price K, **Prasad PVV**, Staggenborg SA. 2008. Developing real-time crop sensing system to enhance stress tolerance screening. Kansas Grain Sorghum Commission. Amount: \$5,000.
24. Kofoid KD, Aiken RA, **Prasad PVV**. 2008. Breeding sorghum with higher yield and improved drought and cold tolerance. Kansas Grain Sorghum Commission. Amount: \$65,000.
25. **Prasad PVV**, Staggenborg SA, Gowda P. 2008. Understanding climate variability for improving management decisions. USDA – CSREES: Ogallala Initiative. Amount: \$47,000
26. **Prasad PVV**, Staggenborg SA. 2008. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL Associate Award - Mali. Amount: \$ 451,420. (Five Years).
27. **Prasad PVV**, Staggenborg SA. 2008. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL Associate Award – Mali – Training Component. Amount: \$ 30,000.
28. **Prasad PVV**, Yu J. 2008. Assessing drought tolerance and biofuel traits in sorghum. USDA – CSREES. Center for Sorghum Improvement. Amount: \$32,942.
29. **Prasad PVV**, Staggenborg SA, Vadlani PV. 2008. Characterization of bioenergy sorghum. KSU – Center for Sustainable Energy. Amount: \$12,500.
30. **Prasad PVV**, Fritz AK. 2008. Drought and heat tolerance in wheat. Kansas Crop Improvement Association. Amount: \$7,000.
31. **Prasad PVV**. 2008. USDA – Foreign Agricultural Service. Borlaug Scholarship. Amount: \$23,000.
32. **Prasad PVV**. 2008. Agronomy Research Gift. Valent Seeds. Amount: \$7,800.
33. **Prasad PVV**, Al-Khatib. 2008. Crop Physiology Gift. Agrofresh. Amount: \$ 120,000.
34. **Prasad PVV**. 2008. Visiting scholarship. Tamil Nadu Agricultural University. Amount: \$15,000.
35. **Prasad PVV**. 2008. International student support. College of Agriculture. Amount: \$20,000.

Year 2009

36. **Prasad PVV**, Staggenborg SA, Minton E. 2009. Great Plains Sorghum Improvement and Utilization Center. USDA – Special Grant. Amount: \$480,128.
37. **Prasad PVV**, Roozeboom K, Vadlani P, Yu J. 2009. Screening sorghum germplasm for abiotic stress tolerance and biofuel production. Kansas Grain Sorghum Commission. Amount: \$33,000.
38. **Prasad PVV**, Fritz AK. 2008. Drought and heat tolerance in wheat. Kansas Crop Improvement Association. Amount: \$7,000.
39. **Prasad PVV**, Staggenborg SA, Vadlani PV. 2009. Characterization of bioenergy sorghum. KSU – Center for Sustainable Energy. Amount: \$12,500.
40. **Prasad PVV**. 2009. Breeding and testing of new switchgrass cultivars for increased biomass production in Oklahoma, Texas, Arkansas and Kansas. US Department of Transportation. Amount: \$12,000.
41. **Prasad PVV**, Aiken RM, Xin Z. 2009. Enhancing crop productivity and water use efficiency of sorghum. USDA – CSREES: Ogallala Initiative. Amount: \$48,000.
42. Aiken RM, **Prasad PVV**, Burke J. 2009. USDA – CSREES: Ogallala Initiative. Amount: \$35,000.
43. Little CR, **Prasad PVV**, Presley D, Roozeboom K. 2009. Influence of soils, nutrition and water relations upon charcoal rot disease process in Kansas. Kansas Soybean Commission. Amount: \$34,758.
44. Yu J, **Prasad PVV**. 2009. Improving drought tolerance in sorghum through association mapping. Kansas Grain Sorghum Commission. Amount: \$60,000.
45. Ristic Z, **Prasad PVV**. 2009. Heat tolerance in genetically modified wheat. Kansas Wheat Commission. Amount: \$28,000.
46. Roozeboom KL, **Prasad PVV**. 2009. Update publication on growth, development and nutrient update of grain sorghum. United Sorghum Checkoff. Amount: \$26,590.
47. **Prasad PVV**. 2009. Agronomy Research Gift. Valent Seeds. Amount: \$4,000.
48. **Prasad PVV**. 2009. Agronomy Research Gift. Valent Bio Science. Amount: \$20,000.
49. **Prasad PVV**, Mengel DB. 2009. Center for Sorghum Improvement. Kansas Grain Sorghum Commission. Amount: \$50,000.
50. **Prasad PVV**, Staggenborg SA, Dalton TJ, Dhuyvetter K, Rice CW, Presley D, Garrett K, Jumponnen A, Selfa T, Lilja N. 2009. Improving soil quality and crop productivity through farmers tested and recommended conservation agricultural practices in cropping systems of West Africa. USAID – SANREM CRSP. Amount: \$1,350,000. (Five Years).

Year 2010

51. **Prasad PVV**, Staggenborg SA, Minton E. 2010. Great Plains Sorghum Improvement and Utilization Center. USDA – Special Grant. Amount: \$930,668.
52. **Prasad PVV**, Yu J, Tesso T. 2010. Screening sorghum germplasm for abiotic stress tolerance and biofuel production. Kansas Grain Sorghum Commission. Amount: \$52,000.
53. **Prasad PVV**, Fritz AK. 2010. Drought and heat tolerance in wheat. Kansas Crop Improvement Association. Amount: \$7,000.
54. **Prasad PVV**, Staggenborg SA, Vadlani PV. 2010. Characterization of bioenergy sorghum. KSU – Center for Sustainable Energy. Amount: \$12,500.
55. **Prasad PVV**. 2010. Breeding and testing of new switchgrass cultivars for increased biomass production in Oklahoma, Texas, Arkansas and Kansas. US Department of Transportation. Amount: \$3,094.
56. **Prasad PVV**, Staggenborg SA, Gowda PH. 2010. Statistical and spectral approaches to automate hot and cold pixel for selection for surface energy balance based evapotranspiration mapping. USDA – CSREES: Ogallala Initiative. Amount: \$45,000.

57. Yu J, Tesso T, **Prasad PVV**. 2010. Improving drought tolerance in sorghum through association mapping. Kansas Grain Sorghum Commission. Amount: \$60,000.
58. Staggenborg SA, Roozeboom KL, **Prasad PVV**. Development of forage harvester for research plots. Kansas Grain Sorghum Commission. Amount: \$10,000.
59. Tesso T, Yu, T, **Prasad PVV**. 2010. Breeding grain sorghum for improved dryland production. Kansas Grain Sorghum Commission. Amount: \$69,800.
60. **Prasad PVV**, Fu J. 2010. Heat tolerance in genetically modified wheat. Kansas Wheat Commission. Amount: \$28,000.
61. Shroyer JP, **Prasad PVV**, Staggenborg SA. 2010. Applied wheat research to improve cropping efficiency. Kansas Wheat Commission. Amount: \$24,191.
62. Roozeboom KL, **Prasad PVV**. 2010. Update publication on growth, development and nutrient update of grain sorghum. United Sorghum Checkoff. Amount: \$26,590.
63. Tesso T, Mengel DB, **Prasad PVV**. 2010. Study of genetic and physiological characteristics associated with improved nitrogen use efficiency and drought tolerance. United Sorghum Checkoff. Amount: \$41,500.
64. **Prasad PVV**, Staggenborg SA. 2010. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL Associate Award – Mali – Training Component. Amount: \$ 53,059.
65. **Prasad PVV**. 2010. Borlaug Fellowship Southeast Asia (Indonesia). United States Department of Agriculture. Amount: \$24,937.
66. **Prasad PVV**. 2010. Hosting Foreign Climate Change Scientists - Borlaug Program (India). United States Department of Agriculture. Amount: \$27,825.
67. Akhunov E, **Prasad PVV**. 2010. Improving barley and wheat germplasm for changing environments. United States Department of Agriculture - National Institute for Food and Agriculture. Amount: \$1,460,395. (Five Years).
68. **Prasad PVV**. 2010. Enhancing research facilities. Multiple Sources. Amount: \$125,000.
69. **Prasad PVV**, Mengel DB. 2010. Center for Sorghum Improvement. Kansas Grain Sorghum Commission. Amount: \$50,000.

Year 2011

70. **Prasad PVV**, Fritz AK. 2011. Drought and heat tolerance in wheat. Kansas Crop Improvement Association. Amount: \$7,000.
71. **Prasad PVV**, Yu J, Tesso T. 2011. Screening sorghum germplasm for abiotic stress tolerance and biofuel production. Kansas Grain Sorghum Commission. Amount: \$104,000.
72. **Prasad PVV**, Fu J. 2011. Heat tolerance in genetically modified wheat. Kansas Wheat Commission. Amount: \$28,000.
73. **Prasad PVV**. 2011. Breeding and testing of new switchgrass cultivars for increased biomass production in Oklahoma, Texas, Arkansas and Kansas. US Department of Transportation. Amount: \$3,094.
74. **Prasad PVV**. 2011. Borlaug Fellowship LEAP. United States Department of Agriculture. Amount: \$20,000.
75. **Prasad PVV**, Staggenborg SA. 2011. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL Associate Award – Mali – Training Component. Amount: \$ 103,000.
76. **Prasad PVV**, Staggenborg SA. 2011. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL Associate Award – Mali – Research Component. Amount: \$ 94,436.
77. Yu J, Tesso T, **Prasad PVV**. 2011. Improving drought tolerance in sorghum through association mapping. Kansas Grain Sorghum Commission. Amount: \$120,000.
78. Tesso T, Yu, T, **Prasad PVV**. 2011. Breeding grain sorghum for improved dryland production. Kansas Grain Sorghum Commission. Amount: \$69,800.

79. Tesso T, Yu, T, **Prasad PVV**. 2011. Breeding grain sorghum for improved dryland production. Kansas Grain Sorghum Commission. Amount: \$81,200.
80. Mengel DB, Tesso T, **Prasad PVV**, Yu J. 2011. Study of genetic and physiological characteristics associated with improved nitrogen use efficiency and drought tolerance. United Sorghum Checkoff. Amount: \$100,000.
81. Shroyer JP, **Prasad PVV**, Staggenborg SA. 2011. Applied wheat research to improve cropping efficiency. Kansas Wheat Commission. Amount: \$24,191.
82. **Prasad PVV**. 2011. Enhancing research facilities. Multiple Sources: Amount: \$60,000.
83. **Prasad PVV**. 2011. Enhancing research facilities. K-State Research and Extension. Amount: \$85,000.
84. **Prasad PVV**. 2011. Center for Sorghum Improvement. K-State Research and Extension. Amount: \$180,000.
85. **Prasad PVV**, Mengel DB. 2012. Center for Sorghum Improvement. Kansas Grain Sorghum Commission. Amount: \$50,000.

Year 2012

86. **Prasad PVV** and Fritz AK. 2012. Drought and heat tolerance in wheat. Kansas Crop Improvement Association. Amount: \$7,000.
87. **Prasad PVV**, Fu J. 2012. Heat tolerance in genetically modified wheat. Kansas Wheat Alliance. Amount: \$37,500.
88. **Prasad PVV**, Yu J, and Tesso T. 2012. Screening sorghum germplasm for abiotic stress tolerance and biofuel production. Kansas Grain Sorghum Commission. Amount: \$52,000.
89. **Prasad PVV**. 2012. Breeding and testing of new switchgrass cultivars for increased biomass production in Oklahoma, Texas, Arkansas and Kansas. US Department of Transportation. Amount: \$3,094.
90. **Prasad PVV**, Steward D, and Gowda PH. 2012. Developing database for ET in Kansas. USDA – CSREES: Ogallala Initiative. Amount: \$62,450.
91. **Prasad PVV** and Staggenborg SA. 2012. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL Associate Award – Mali – Training Component. Amount: \$ 74,000.
92. **Prasad PVV**, and Schapaugh WT. 2012. Development of soybean lines with improved drought and heat tolerance. United Soybean Board. Amount: \$243,640.
93. **Prasad PVV**, Tesso T, and Yu J. 2012. Enhancing drought and heat tolerance in sorghum. United Sorghum Checkoff Program. Amount: \$122,500.
94. **Prasad PVV**, Mengel DB, and Jugulam M. 2012. Integrated systems research in Mali – Decrue Sorghum. USAID – INTSORMIL. Amount: \$ 75,000.
95. Anandhi A, Rice CW, **Prasad PVV**, and Gowda PH. 2012. Analyses of extreme events in Western Kansas (Ogallala Aquifer Program) and its impact on agricultural production. USDA – CSREES: Ogallala Initiative. Amount: \$46,848.
96. Tesso T, Yu, T and **Prasad PVV**. 2012. Breeding grain sorghum for improved dryland production. Kansas Grain Sorghum Commission. Amount: \$83,200.
97. Yu J, Tesso T and **Prasad PVV**. 2012. Improving drought tolerance in sorghum through association mapping. Kansas Grain Sorghum Commission. Amount: \$57,250.
98. Rice CW and **Prasad PVV**. 2012. Hosting Foreign GRA - Borlaug Program (Vietnam). USDA – Foreign Agricultural Service. Amount: \$28,209.
99. **Prasad PVV**. 2012. Enhancing research facilities. Multiple Sources: Amount: \$386,000.
100. **Prasad PVV**. 2012. Center for Sorghum Improvement. K-State Research and Extension. Amount: \$150,000.
101. **Prasad PVV**. 2012. Agronomy Research Gift. Chromatin. Amount: \$5,000.

102. **Prasad PVV**, Mengel DB. 2012. Center for Sorghum Improvement. Kansas Grain Sorghum Commission. Amount: \$50,000.

Year 2013

103. **Prasad PVV**, Fu J. 2013. Exploring wheat germplasm for drought and heat tolerance. Kansas Wheat Alliance. Amount: \$30,000.
104. **Prasad PVV**. 2013. Understanding mechanisms of physiological and root traits for screening for drought tolerance in common bean. USDA - Borlaug Program (India). Amount: \$31,350.
105. **Prasad PVV**, and Schapaugh WT. 2013. Drought, heat and flood tolerant varieties for midwest and south: Building on success. United Soybean Board. Amount: \$134,142.
106. **Prasad PVV**, Gupta SK. 2013. Heat-tolerant pearl millet for increased and stable production in warmer environment. USAID - ICRISAT. Amount: \$20,000.
107. **Prasad PVV**, Yu J, and Tesso T. 2013. Improving yield potential of grain sorghum through drought and heat tolerance. Kansas Grain Sorghum Commission. Amount: \$52,000.
108. Vadlani P, **Prasad PVV**. 2013. Production of advanced biofuels from salinity tolerant brown midrib sorghum genotypes. USAID - ICRISAT. Amount: \$45,000.
109. Tesso T, **Prasad PVV**, Jugulam M. 2013. Developing genomic tools to facilitate drought tolerance and ALS resistance breeding in sorghum. Kansas Grain Sorghum Commission. Amount: \$57,250.
110. **Prasad PVV**, Jagadish SVK. 2013. Improving heat tolerance in rice. USAID - IRRI. Amount: \$20,000.
111. **Prasad PVV**, Fritz AK, Mengel DB. 2013. Developing and enhancing heat tolerance in wheat using genomics, molecular and physiological tools. USAID. Amount: \$460,000. (Five Years).
112. **Prasad PVV**. 2013. Enhancing research facilities. Multiple Sources: Amount: \$120,000.
113. **Prasad PVV**. 2013. Center for Sorghum Improvement. K-State Research and Extension. Amount: \$125,000.
114. **Prasad PVV**. 2013. Center for Sorghum Improvement. Kansas Grain Sorghum Commission. Amount: \$50,000.

Year 2014

115. **Prasad PVV**, Fu J. 2014. Exploring wheat germplasm for drought and heat tolerance. Kansas Wheat Alliance. Amount: \$45,000.
116. **Prasad PVV**, Yu J, and Tesso T. 2014. Improving yield potential of grain sorghum through drought and heat tolerance. Kansas Grain Sorghum Commission. Amount: \$52,000.
117. **Prasad PVV**, Upadhyaya HD, Vadez V. 2014. High temperature tolerance and association mapping in finger millet. USAID – ICRISAT. Amount: \$60,000.
118. **Prasad PVV**, Lilja N. 2014. BHEARD – Ghana – PhD Student. USAID. Amount: \$176,000.
119. **Prasad PVV**. 2014. Measuring morpho-physiological traits related to drought tolerance under field and conditions. USDA – FAS – Borlaug Program (India). Amount: \$29,890.
120. Morris G, Perumal R, Tesso T, **Prasad PVV**. 2014. Improved genomic mapping and marker assisted selection for cold tolerance in grain sorghum. Kansas Grain Sorghum Commission. Amount: \$79,000.
121. Jugulam M, **Prasad PVV**, Thompson C. 2014. Evaluation of sorghum genotypes for herbicide tolerance. Kansas Grain Sorghum Commission. Amount: \$60,000.
122. **Prasad PVV**. 2014. Enhancing research facilities. Multiple Sources: Amount: \$120,000.
123. **Prasad PVV**. 2014. Center for Sorghum Improvement. K-State Research and Extension. Amount: \$75,000.
124. **Prasad PVV**. 2014. Center for Sorghum Improvement. Kansas Grain Sorghum Commission. Amount:

\$50,000.

125. **Prasad PVV**, Pierzynski GM, Lilja N. Sustainable Intensification Innovation Lab. Feed the Future Collaborative Research on Sustainable Intensification. USAID. Amount: \$50,000,000; 2014 – 2019 (Five Years).

Year 2015

126. Jagadish SVK, Fritz AK, **Prasad PVV**. 2015. Strategies to develop wheat genotypes to beat post-flowering heat and drought stress. Kansas Wheat Commission. Amount: \$45,000.
127. Falalu H, Jagadish SVK, **Prasad PVV**. 2015. Improving pearl millet productivity for smallholder resilience to climate change in Niger. USAID – ICRISAT. Amount: \$30,000.
128. Jugulam M, **Prasad PVV**, Thompson C. 2015. Evaluation of sorghum genotypes for herbicide tolerance. Kansas Grain Sorghum Commission. Amount: \$30,000.
129. Jugulam M, **Prasad PVV**, Thompson C. 2015. Evaluation of sorghum genotypes for herbicide tolerance. United Sorghum Checkoff Program. Amount: \$30,000.
130. Jagadish SVK, **Prasad PVV**, Morris G, Perumal R. 2015. Physiological and genetic characterization of grain sorghum for enhancing terminal heat and drought stress resilience. Kansas Grain Sorghum Commission. Amount: \$55,000.
131. **Prasad PVV**, Pierzynski GM, Lilja N. 2015. Climate smart and sustainable intensification assessment of Rwanda. USAID – Rwanda – Mission. Amount: \$75,000.

Year 2016

132. Jagadish SVK, Fritz AK, **Prasad PVV**. 2016. Strategies to develop wheat genotypes to beat post-flowering heat and drought stress. Kansas Wheat Commission. Amount: \$45,000.
133. Falalu H, Jagadish SVK, **Prasad PVV**. 2016. Improving pearl millet productivity for smallholder resilience to climate change in Niger. USAID – ICRISAT. Amount: \$30,000.
134. Jugulam M, **Prasad PVV**, Thompson C. 2016. Evaluation of sorghum genotypes for herbicide tolerance. Kansas Grain Sorghum Commission. Amount: \$30,000.
135. Jugulam M, **Prasad PVV**, Thompson C. 2016. Evaluation of sorghum genotypes for herbicide tolerance. United Sorghum Checkoff Program. Amount: \$30,000.
136. Jagadish SVK, **Prasad PVV**, Morris G, Perumal R. 2016. Physiological and genetic characterization of grain sorghum for enhancing terminal heat and drought stress resilience. Kansas Grain Sorghum Commission. Amount: \$55,000.
137. Ciampitti I, et al.**Prasad PVV**. 2016. Corn management decision guiding website and mobile app. Kansas Corn Commission. Amount: \$39,350.
138. Rice, CW, **Prasad PVV**, Golden W, Lin X, Kisekka I, Schlegel A, Sanderson M, Aguilar J, Rogers D. 2016. WATER: Sustaining southern high plains agriculture through adaptive management to a declining Ogallala aquifer and changing climates. USDA – NIFA. Amount: \$650,000 (Four Years: 2016 – 2020).
139. Reyes M, **Prasad PVV**. 2016. Scaling up drip irrigation, conservation agriculture and rainwater harvesting for commercial vegetable home gardens to specially benefit women and youth. USAID – Guatemala – Mission. Amount: \$107,800.

Year 2017

140. **Prasad PVV**, Pierzynski GM, Stewart Z, Middendorf JB. 2017. Sustainable Soil Fertility Prioritization for Sub-Saharan Africa. International Fertilizer Development Center. Amount: \$200,000.
141. Reyes M, **Prasad PVV**. 2017. Scaling up drip irrigation, conservation agriculture and rainwater harvesting for commercial vegetable home garden to specially benefit women and youth. USAID –

- Horticultural Innovation Lab. Amount: \$138,322.
142. Jagadish SVK, Fritz AK, **Prasad PVV**. 2017. Strategies to develop wheat genotypes to beat post-flowering heat and drought stress. Kansas Wheat Commission. Amount: \$45,000.
 143. Jugulam M, **Prasad PVV**, Thompson C. 2017. Evaluation of sorghum genotypes for herbicide tolerance. Kansas Grain Sorghum Commission. Amount: \$30,000.
 144. Jagadish SVK, **Prasad PVV**, Morris G, Perumal R. 2017. Physiological and genetic characterization of grain sorghum for enhancing terminal heat and drought stress resilience. Kansas Grain Sorghum Commission. Amount: \$55,000.
 145. Ciampitti IA, et al. **Prasad PVV**. 2017. Crop management decision guiding website and mobile app. Kansas Corn Commission. Amount: \$39,350.

Year 2018

146. **Prasad PVV**, Pierzynski GM, Stewart Z, Middendorf JB. 2018. Sustainable Opportunities for Improving Livelihoods with Soils (SOILS) Consortium. International Fertilizer Development Center. Amount: \$200,000.
147. **Prasad PVV**, Reyes M, Stewart Z. 2018. Developing a highly productive and sustainable conservation agriculture production system for Cambodia and Myanmar. International Fertilizer Development Center. Amount: 100,000.
148. Middendorf B, **Prasad PVV**, Shuman C. 2018. International network-to-network (N2N) stakeholder collaboration workshop: solutions to accelerate research, leverage resources, and maximize synergies. National Science Foundation. Amount: \$100,000.
149. Reyes M, **Prasad PVV**. 2018. Center of Excellence – Reasmey Sophornna High School Undergraduate Scholarship - Cambodia. United Service Foundation Amount: \$10,000.
150. Reyes M, **Prasad PVV**. 2018. Promoting the adoption of conservation agriculture with trees in Guatemala. United Service Foundation Amount: \$15,000.
151. Stewart Z, **Prasad PVV**, Reyes M. 2018. CE SAIN Scholars: Increasing opportunities for Cambodian youth to pursue careers in agricultural extension. Epsilon Sigma Phi. Amount: \$5,000.