


Biographical Sketch

Ramesh Kanna Mathivanan

Field of Study:	Plant Breeding and Genetics	 Photograph
Name	Ramesh Kanna Mathivanan	
Date of Birth (DD/MM/YYYY)	07/11/1996	
Age on (1 April 2022)	25	
Contact No.:	+1(308) 765-6639	
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Educational Qualification:

	School/Board/College/University	Year of Passing	Percentage only*	CGPA
10 th Grade	Govt. higher secondary school, Maravamangalam, Tamilnadu.	2012	88.00	8.8/10
12 th Grade	Sambaviga hr.sec.school, Rahinipatti, sivagangai	2014	96.60	9.66/10
Bachelor's degree	Tamil Nadu Agricultural University (TNAU), killikulam, India	2018	76.5	7.65/10
Master's degree	Assam Agricultural University (AAU). Jorhat, Assam, India	2020	75.2	7.52/10

Area of interest

1. **Plant Breeding**
2. **Plant Genetics**
3. **Quantitative Genetics**
4. **Agriculture Biotechnology**
5. **Agricultural Statistics**

Skills and Abilities

1. Excellence in **R programming software for data analysis and data visualization. (R programming in data science)**
2. Excellence in Biometrical techniques such as **Designs of experiment, rank correlation, Statistical ranking, ANOVA, Genetic parameters, Correlation, Path analysis, Pooled analysis for series of experiment, hierarchical and non-hierarchical cluster analysis, Stability analysis, GXE interaction analysis, Diversity analysis and other basic biometrical techniques.**
3. Excellence in MS Word, MS Power point, MS Excel, and other statistics software (**OPSTAT**).

Achievements:

1. **ICAR-NTS fellowship** - Recipient of **ICAR** (Indian Council of Agricultural Research)- **National Talent Scholarship** for M.Sc. (Agri.) degree program in Plant Breeding and Genetics at Assam Agricultural University, Jorhat, India.
2. Qualified as a **Research scholar** in Panhandle research and extension center, Scottsbluff, Nebraska, USA.
3. Got **1st rank in MEXT** (Japanese government scholarship,2021) preliminary selection.
4. **HSS-Merit Scholarship** for B.Sc. (Agri) degree program, Tamil Nadu Agricultural University, Coimbatore, India

Research Experience

Research scholar-Panhandle Research extension center, University of Nebraska, Scottsbluff, Nebraska, USA, July-2021 to present.

1. PHENOTYPIC DIVERSITY ANALYSIS AND SEED QUALITY ANALYSIS ON FIELD PEA.
2. EVALUATION OF PEA VARIETIES ACROSS SITES OVER YEARS IN NEBRASKA.

Objectives:

- To identify high-yielding pea varieties across the state of Nebraska
- To identify high-yielding pea varieties for specific production regions (*) of Nebraska
- To identify high-yielding pea varieties for specific county within a region (*) of Nebraska

3. MORPHOLOGICAL DIVERSITY OF THE GLOBAL PROSO MILLET (*PANICUM MILIACEUM* L.) GERMPLASM.

- Assess the morpho-agronomic diversity among the 700 genotypes in the USDA gene bank.
- Determine the population structure based on the morpho-agronomic data.
- Identify genotypes with desired traits for the US High Plains.
- Develop core collection.

4. PRELIMINARY ASSESSMENT OF SALT TOLERANCE IN THE US PROSO MILLET (*PANICUM MILIACEUM* L.) GERMPLASM COLLECTION.

- Screening of germplasm for salt tolerance at germination stage.
- Evaluation of salt tolerance at seedling stage.

5. GERMINATION TEST FOR 322 USDA PSP (PEA SINGLE PLANT) COLLECTION.

Major advisor:

Dipak Santra, Ph.D.

Associate Professor (Alternative Crops Breeding Specialist)

President, International Broomcorn Millet Association

Department of Agronomy and Horticulture

University of Nebraska–Lincoln

Panhandle Research & Extension Center

4502 Ave I, Scottsbluff, NE 69361

(308) 632-1244 (work) / (308) 765-2324 (cell).

M.Sc in Plant Breeding and Genetics- Assam Agricultural University, Assam, India, October-2018 to January-2021.

- Evaluation of maize (*Zea Mays*) hybrids at high Plant density for important yield attributes.

Objectives:

- 1. To characterise maize hybrids at high plant density for important traits**
- 2. To determine genetic variation and related parameters for the traits**
- 3. To determine genetic correlation and causal relationship among the traits**

Paper published on this topic.

1. Assessment Of Maize (*Zea Mays* L.) Hybrids Across Spacings For Variability, Trait Association And Path Analysis in North eastern India.
2. Validation of Maize (*Zea mays* L.) Hybrids for the Study on Variability, Trait and Path Analysis.

Major advisor:

Nagendra Sarma Barua, Ph.D.

Professor,

Department of Plant Breeding and Genetics,

Assam Agricultural University

Jorhat, Assam, India,

B.Sc in Agricultural Science- Tamil Nadu Agricultural University (TNAU), Killikulam, India, August-2014 to June-2018.

- Project work on **Tissue culture in Banana** during July 2017-Dec 2017
- Project work on **Agronomy and Extension** during January 2017-June 2017
- Rural Awareness Work Experience in Agriculture for 3 months' program (RAWEP) during Aug.2016 to Oct. 2016

Paper published on this topic.

1. Optimizing The Effect of Plant Growth Regulators in Micropropagation of Banana Variety Monthan.

Seminar and Conferences (State/National/International):

Sl. NO	Title Of Abstract (Poster and oral presentation)	Conference Name
1	Morphological Diversity of the USDA Proso Millet (<i>Panicum miliaceum</i> L.) Germplasm. (Rituraj Khound, University of Nebraska-Lincoln, Scottsbluff, NE, Ramesh K Mathivanan , Agronomy and Horticulture, University of Nebraska-Lincoln Panhandle Research and Extension Center, Scottsbluff, NE, David Brenner, Agronomy Department, Iowa State University, Ames, IA and Dipak K. Santra, Department of Agronomy and Horticulture, University of Nebraska - Lincoln, Scottsbluff, NE)	2021 ASA, CSSA, SSSA Annual Meeting, Salt Lake City, UT, USA. Nov. 7-10, 2021
2	Seed Nutrients Analysis of the USDA Proso Millet (<i>Panicum miliaceum</i> L.) Germplasm. (Rituraj Khound, University of Nebraska-Lincoln, Scottsbluff, NE, Ramesh K. Mathivanan , Agronomy and Horticulture, University of Nebraska-Lincoln, Scottsbluff, NE, David Brenner, Agronomy Department, Iowa State University, Ames, IA and Dipak K. Santra, Department of Agronomy and	2021 ASA, CSSA, SSSA Annual Meeting, Salt Lake City, UT, USA. Nov. 7-10, 2021

	Horticulture, University of Nebraska - Lincoln, Scottsbluff, NE)	
3	<p>Yellow Pea (<i>Pisum sativum</i> L.) Varieties for High Seed Protein Quantity and Quality in Nebraska.</p> <p>(Dipak K. Santra, Department of Agronomy and Horticulture, University of Nebraska - Lincoln, Scottsbluff, NE, Saurav Das, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, Scottsbluff, NE, Ramesh K. Mathivanan, Agronomy and Horticulture, University of Nebraska-Lincoln, Scottsbluff, NE, Kaustav Majumder, Food Science and Technology, University of Nebraska-Lincoln, Lincoln, NE, Amit Mitra, Plant Pathology, University of Nebraska-Lincoln, Lincoln, NE and Bijesh Maharjan, Department of Agronomy and Horticulture, University of Nebraska-Lincoln, Lincoln, NE)</p>	2021 ASA, CSSA, SSSA Annual Meeting, Salt Lake City, UT, USA. Nov. 7-10, 2021
4	<p>Modern Breeding tools of Proso millet (<i>Panicum milliaceum</i> L.)</p> <p>R.Khound*, B.Zhao, Ramesh K. Mathivanan, Y. Shi, J. Schnable², and D. Santra¹</p>	ARD Annual Meetings, University of Nebraska, Lincoln.
5	<p>Optimizing The Effect Of Plant Growth Regulators In Micro-propagation Of Banana Variety Monthan</p>	<p>International e-conference on Genetics and Plant Breeding</p> <p>Research In Post Covid-19 Era at Meerut, India on 13-14th June, 2020.</p>
6	<p>Breeding Approaches For Combating Climatic Irregularities - A Review</p>	<p>International conference on Agriculture Graduate student Conference (2020)</p> <p>At (AGSC), TNAU, Coimbatore on 28th may, 2020.</p>
7	<p>Plant Genetic Control of Nodulation and Its Utilization in Nitrogen Fixation - A Review</p>	<p>The GASS National Research Video Webinar on “Hypothesis” conducted by Global Association of Social Sciences on 6th June, 2020.</p>

1. Attended **Nebraska water Conference** at Panhandle research extension center, Scottsbluff, Nebraska held during 16th August.

2. Participated in a Workshop on **Screening of Genetic Variants by TETRA –ARMS PCR**, held on 22nd January, 2019 in the Department of Genetic Engineering, SRMIST, Tamil Nadu.
3. Attended Conference at “**Indian Plant Science Congress**” held during 23-25 January, 2019 at SRMIST, Tamil Nadu.
4. Attended international Conference on “**International Conference On Climate Change, Biodiversity and Sustainable Agriculture (ICCBSA 2018)**” held during 13- 16 December, 2018 at Jorhat, Assam, India.
5. Attended workshop on “**Personality Development**” conducted by Agricultural college and Research Institute, TNAU, Coimbatore, India.

National and International Publications

Research Articles

I. Ramesh Kanna M*, Hiramani Barman¹, Kasireddy Sivasankarreddy¹, Dikshita Gogoi¹, T. V. Rao¹ and N. Sarma Barua¹. Validation of Maize (*Zea mays* L.) Hybrids for the Study on Variability, Trait and Path Analysis. *International Journal of Plant & Soil Science*. Pages:11. Article ID: 2021/IJPSS/ 71496. DOI: [10.9734/ijpss/2021/v33i2330744](https://doi.org/10.9734/ijpss/2021/v33i2330744)

II. Ramesh Kanna M.¹, N. Sarma Barua¹, K. K. Sharma¹, R. N. Sarma¹, R. Das², M. Barooah³, D. Sarma¹ and Dibosh Bordoloi¹. Assessment Of Maize (*Zea Mays* L.) Hybrids Across Spacings For Variability, Trait Association And Path Analysis in North Eastern India. *International journal of environment and climate change*. Pages: 21. Article ID: 2021/IJECC/73928. DOI: [10.9734/ijecc/2021/v11i1230605](https://doi.org/10.9734/ijecc/2021/v11i1230605)

III. Hiramani Barman, Nagendra Sarma Barua and **Ramesh Kanna M.** Assessment of inbreeding depression tolerance of local maize germplasm. Pages: 4. *Pharma Innovation* 2022;11(2):2995-2998.

<https://www.thepharmajournal.com/archives/?year=2022&vol=11&issue=2&ArticleId=11128>

IV. Ramesh Kanna M* And Mahaprabhu. Optimizing The Effect Of Plant Growth Regulators In Micropropagation Of Banana Variety Monthan. *J Pharmacogh phytochem* 2020;9(2):179-180.Pages:2

<https://www.phytojournal.com/archives/?year=2020&vol=9&issue=2&ArticleId=10854>

- V. Dikshita Gogoi and **Ramesh Kanna**. Evaluation of early inbred of maize on correlation, path, and Diversity analysis. **(TO BE PUBLISHED)**

Review Papers

- I. **Ramesh Kanna M***. Plant Genetic Control Of Nodulation And Its Utilization In Nitrogen Fixation - A Review. *International Journal Of Microbiology And Applied Scineces*, ISSN: 2319-7706 Volume 9 Number 2 (2020) . **Pages:13**

DOI: <https://doi.org/10.20546/ijcmas.2020.902.310>

- II. **Prastuti Bhattacharyya And Ramesh Kanna M***. Breeding Approaches For Combating Climatic Irregularities- A Review. *International Journal Of Microbiology And Applied Scineces*, ISSN: 2319-7706 Volume 9 Number 2 (2020). **Pages:16**

DOI: <https://doi.org/10.20546/ijcmas.2020.905.369>

Extension Papers

- I. **Ramesh Kanna M and Dipak Santra**. Evaluation Of Yellow Pea Varieties Across Sites Over Years in Western Nebraska. **(To be published)**

Book Chapters:

- **Rituraj Khound, Ramesh Kanna M and Dipak K. Santra**. Proso millet nutraceutomics and its significance in future nutritional security. **Book Name: Compendium of Crop Nutraceutomics**. Publisher: **Springer-Nature (To be published)**
- **Ramesh Kanna M* and Prastuti Bhattacharyya**. Genetic And Molecular Control Of Nodulation And Its Utilization In Legume-Rhizobium Interaction To Enrich The Biological Nitrogen Fixation. **Book Name: Organic Farming Practices and Sustainable Agriculture – Volume 2**. ISBN: 978-93-90217-02-1. Publisher: AkiNik Publications, New Delhi. **Pages:21**
- **Prastuti Bhattacharyya And Ramesh Kanna M***. Modern Plant Breeding And Climate Resilient Agriculture. **Book Name: Climate Change and Agriculture-Volume 2**. ISBN: 978-93-90217-02-1. Publisher: AkiNik Publications, New Delhi. **Pages:15**

Popular Articles

- **Ramesh Kanna M***. Mechanism of k-solubilizing bacteria for potassium use efficiency in agriculture soil. ISSN No.:2321-7405 VOLUME NO. 17, ISSUE NO.01 Publisher (*Reader shelf, 2020*). **Pages:3**
- **Ramesh Kanna M***. Plant root microbiome and its interaction with beneficial microbes. ISSN No.:2321-7405 VOLUME NO. 17, ISSUE NO.02 Publisher (*Reader shelf, 2020*). **Pages:3**
- **Ramesh Kanna M***. Challenges of the biosensor in the field of agriculture and their future aspects. ISSN No.:2321-7405. VOLUME NO. 17, ISSUE NO.03 Publisher (*Reader shelf, 2020*). **Pages:3.**

6. CERTIFICATE COURSES	
Course Title	Institute/Organisation
R programming in data science	Elysium Academy, India from March 2021 to May 2021.
CRISPR -cas9 advanced course (current research trends using CRISPR cas9 technology and the reason it is becoming one of the indispensable tools of Genetic Engineering)	Biotechnica, India on 14th june, 2020.
Molecular biology Techniques (molecular study, its mechanism, mode of applications and its future aspects)	Biotechnica, India on 18th may, 2020.
Research Design and data analysis using SPSS/R (Use statistical tool SPSS for analysis of data and interpretation of the output and to understand the basics of R)	Sri sri University, cuttack,orissa on 27th may, 2020.
Food irradiation-Technology, Application and good practices	Food And Agriculture Organization (FAO) And International Atomic Energy Agencies (IAEA) on 1st February, 2020.
An introduction to geology	open learn university on 26th January, 2020.
Introducing the environment: Ecology and ecosystem	open learn university on 27th January, 2020.

8.ATTENDED TRAINING PROGRAMMES

Sl. No	NAME OF TRAINING PROGRAMME
1	Rural Awareness Work Experience in Agriculture for 3 months' program (RAWEP) during Aug.2016 to Oct. 2016
2	Project work on Tissue culture in Banana during July 2017-Dec 2017
3	Training Programme on Organic Farming 2020

9.LIFE MEMBERSHIPS

SI NO	Society/Journal/Magazine/Organization	Membership ID
1	Member, Crop science society of America	805001
2	Member, Agronomy society of America	805001
3	Member, Soil science society of America	805001
2	Hong Kong Chemical, Biological & Environmental Engineering Society	203152
3	International Economics Development and Research Center (IEDRC)	90081431
4	Scientific and Technical Research Association (STRA)	STRA-M19568
5	Bitesize Bio Members	mp-txn-5edf95c14acdb

Personal Experience

- Supervised 14 undergraduate students from **NAHEP** (National Agricultural Higher Education project-India) program in Panhandle Research and Extension Center, University of Nebraska-Lincoln, Scottsbluff, Nebraska.
- Supervised undergraduate student of Agriculture for national level entrance examination (**ICAR**- Indian council of agriculture research) in the department of Plant breeding & Genetics and Plant biotechnology.

Declaration by the applicant

I **Ramesh Kanna M** do hereby declare that the information given in this application is true and correct to the best of my knowledge and belief. In case of any information given in this application proves to be false or incorrect, I shall be responsible for the consequences. I also declare that if any information provided by me is found false, my candidature may be rejected at any point of time. I will have to face punishment as per any provision of Law for the time being in force as well as the benefit availed of by me, or the benefit accrued to me shall be summarily cancelled.

Date: 05-31-2022

Place: Scottsbluff, Nebraska, USA.

M. Ramesh Kanna

Ramesh Kanna M