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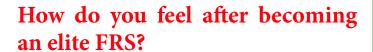


This impressive induction will make Prof. Varshney the fourth Indian agricultural research scientist to receive this fellowship in the history of Royal society fellow selection. The other three Indian agricultural scientists elected as FRS include Prof. BP Pal (elected in 1972), Prof. MS Swaminathan (elected in 1973) and Prof. Gurdev Khush (elected in 1995). But that's not the end for him, in this article we are publishing his interview to share with our readers what he aims in future and how he plan his future research objectives. In January 2021, we published an interview of

India's leading scientists Prof Rajeev Varshney on the occasion of achieving h- index of 100 by him (now has h-index of 120). At that time, he was the fourth Indian scientist and first Indian scientist in agribiotech field who had h-index more than 100. Our advisory Board member Prof Pandey (his current h-index is 129), an energy researcher and biotechnologist in July 2020 became the third Indian after Prof CNR Rao and Prof Kayanmoy Deb who crossed h-index 100.

How did you find out about the news of your inclusion in FRS fellow list?

I was taking an evening stroll with my wife when I received an email from The Royal Society on my phone mentioning that I have been elected as Fellow of the Royal Society. The email also stipulated that I could not share this info until after the 10th of May. In the first instance, I couldn't believe that the news was correct, but after reading it 2-3 times, I believed it to be true. My wife told me that it would be prudent to double check – just in case and that the email had come from the right source! However, when the Royal Society started to email more frequently to receive some additional info, I started to believe it. Eventually when they sent me their scheduled Press Release, further adding that I could share this news with my friends and family, I realised this was actually happening.



While I feel humbled and honoured to be on the list along with giants and eminent persons in various fields, I also feel a responsibility to contribute more and more to Agricultural Science. We would like to see us achieve the Sustainable Development Goals (SDGs), especially SDG2 within a stipulated amount of time.

I feel very pleased that I have received a huge amount of support from Murdoch University (from its top leaders, like Prof Andrew Deeks, Vice Chancellor; Prof Peter Davies, Deputy Vice-Chancellor; Prof Dan Murphy, Pro Vice-Chancellor), Research Development Corporations like Grains Research & Development Corporation (GRDC), HortInnovation, the Australian Council for International Agricultural Research, The Crawford Fund, Australian Research Council and others here in Australia.

Though I am now in Australia, I am very well connected with Agricultural Sciences- research and education in India through my role as International Chair in Agriculture & Food Security at Murdoch University, also, as alumnus of International Crops Research Institute



Fellowships of **Prof Rajeev Varshney**

- The Royal Society of London, 2023
- The African Academy of Sciences, 2022
- German National Academy of Sciences Leopoldina, Germany, 2016
- The World Academy of Sciences (TWAS), 2016
- American Association for Advancement in Sciences (AAAS), 2016
- Crop Science Society of America (CSSA), 2015
- American Society of Agronomy (ASA), 2018
- Indian National Science Academy (INSA), 2013
- Indian Academy of Sciences (IASc), 2019
- National Academy of Sciences, India (NASI), 2015
- National Academy of Agricultural Sciences, India (NAAS), 2010
- Indian Society of Pulses Research and Development, 2019 (Honorary Fellow)
- Arid Zone Research Association of India, 2019 (Honorary Fellow)
- Indian Society of Genetics & Plant Breeding, 2015



Photo: Prof Varshney with Shri Narendra Modi, Hon'ble Prime Minister of India – During the award presentation: Shanti Swarup Bhatnagar Award – Biological Sciences, the most coveted and prestigious award from Government of India in September 2016

for the Semi-Arid Tropics (ICRISAT). In addition as Foreign Secretary, National Academy of Agricultural Sciences, India (NAAS), Fellow of all science academies- Indian National Science Academy (INSA), National Academy of Sciences, India; Indian Academy of Sciences, and Honorary/Adjunct Professors with Ch Charan Singh University (CCSU), University of Hyderabad, Prof Jayashankar Telangana State Agricultural University (PJTSAU), and our MoUs with several organisations such as with CCSU, PJTSAU, Indraprastha University, Mahatama Phule Krishi Vidyapeeth, I have been keeping myself updated and contributing to various activities in agricultural science in India.

Are you looking next for Noble Prize?

Ah, I'm not looking for any such thing. The Noble Prize is not given in Agricultural Sciences, though I am aware that Norman Borlaug, an Agricultural Scientist, received a Noble for peace. However, I will continue to work for improving agriculture (including horticulture) for the agriculture industry in Australia, and for small-holder farmers in India and developing countries in Asia and sub-Saharan Africa. For sure recognitions such as FRS and others provides a boost and inspires us to take up our translational research activities on a large scale.

What is your current position and work at Murdoch University?

I am leading two centres as Director and serving Food Futures Institute as International Chair in Agriculture & Food Security. The Western Australian State Agricultural Biotechnology Centre, a collaborative research centre for agricultural research organisations in Western Australia, provides a state-of-the-art platform for undertaking biotechnology research (including genomics) to researchers. On the other hand, the Centre for Crop & Food Innovation is capitalising on new technologies and investments in crop agriculture. It provides both strength and depth to undertake research on major broad acre and horticultural crops to improve yield, and quality and enhance tolerance and protection from biological and environmental stresses, and encompasses cutting-edge R&D in crop Agri-Bio, Agri-Tech and Food Tech.

As mentioned above, in my role as International Chair, we are working with international agencies such as FAO, IAEA, ACIAR, CGIAR, and The Crawford Fund to continue working with researchers in developing countries in Africa and Asia to contribute to food and nutrition security.



Photo: Prof Varshney with Shri Yogi Adiyanath, Hon'ble Chief Minister, State of Uttar Pradesh, India and Shri Ram Naik, the then Hon'ble Governor, State of Uttar Pradesh – January 2018. Received Certificate and Honour for Outstanding Science Contribution - 2018 by Uttar Pradesh Government in January 2018

How will your achievements help India in the long run?

Science doesn't have boundaries- we have clearly seen how different countries can come together and the research carried out on vaccines for example, that was developed in some countries invariably helped people in other countries. The same applies to agriculture. For instance, my research group is developing genetic solutions for improving wheat, legume and horticultural crops for a range of agronomic, and abiotic stress tolerance traits by developing and deploying novel genomics and pre-breeding approaches such as pangenomics, haplotype cataloguing and functional genomics approaches. These genetic solutions are not restricted to just Australia; they will help to improve the crop productivity of wheat, legume and horticultural crops, all of which are central to Indian agriculture.

My existing research collaborations with ICRISAT, and ICAR, especially with ICAR- Indian Agricultural Research Institute, ICAR-Indian Institute of Wheat & Barley Research, ICAR- Indian Institute of Pulses Research, ICAR-Indian Institute of Millets Research, ICAR- Directorate of Groundnut Research and SAUs and other research organisations of CSIR and DBT are going to be very helpful. I would like to thank the Indian research leadership, from ICAR (including DG, ICAR- Dr Himanshu Pathak), DAC (Secretary- Shri Manoj Ahuja), DBT (Secretary - Dr Rajesh Gokhale), CSIR (DG- Dr N Kalaiselvi), DST (Dr. S. Chandrasekhar), Principal Scientific Advisor (Dr Ajay Sood) for providing the right direction to Indian agricultural science research.

Also, the science academies and related organizations such as NAAS (President- Dr Himanshu Pathak, Secretary- Prof KC Bansal), TAAS (Prof RS Paroda), or other senior science leaders such as Dr MS Swaminathan, Dr Trilochan Mohapatra, Prof Deepak Pental, Prof PK Gupta, Prof R B Singh, Prof SK Sopory, Prof Swapan Datta, Prof Anupam Varma, Dr Manju Sharma, Dr Renu Swarup, Dr PL Gautam and many others. All of these incredible science leaders are prioritising agricultural research and helping the government to develop and implement conducive R&D policies in India. I am very much sure that all these efforts and hard work of the scientists and farmers combined with the support from the private sector will contribute to doubling farmers' income. This was a challenge given by Hon'ble Prime Minister, Shri Narendra Modi, and will provide prosperous livelihood to farmers in India. My full support and commitment are there to contribute, whatever I can do, to Indian agriculture.

About The Royal Society

The Royal Society, is a learned society and the United Kingdom's national academy of sciences. Founded in 1660, it was granted a royal charter by King Charles II and today is the oldest continuously existing scientific academy in the world that unites the most eminent scientists, engineers and technologists from all over the world. The Royal Society's motto 'Nullius in verba' is taken to mean 'take nobody's word for it'. It is an expression of the determination of Fellows to withstand the domination of authority and to verify all statements by an appeal to facts determined by experiment.



Each year, the Fellows of the Royal Society elect up to 52 new Fellows and up to 10 new Foreign Members. Candidates must have made 'a substantial contribution to the improvement of natural knowledge, including mathematics, engineering science and medical science. Each candidate is considered on his or her own merits and can be proposed from any sector of the scientific community. Every effort is made to encourage nominations of women candidates and candidates from the emerging disciplines.

To date, there are approximately 1818 Fellows and Foreign Members, including up to 85 Nobel Laureates. Each year at least 52 Fellows and up to 10 Foreign Members are elected from a group of around 800 candidates who are proposed by the existing Fellows. Some prominent Past Fellows and Foreign Members of the Royal Society have included Charles Darwin, Lise Meitner, Albert Einstein, Dorothy Hodgkin, Elon Musk and Stephen Hawking.

What are your future plans with research?

As mentioned earlier, my research group is developing genetic solutions for improving wheat, legume and horticultural crops. We are developing climate-resilient crops with a higher crop productivity by developing and deploying novel genomics and pre-breeding approaches such as pangenomics, haplotype cataloguing, and genomic prediction including Artificial Intelligence, and Machine Learning approaches. We hope that these new approaches will accelerate crop improvement programs for developing better varieties to suit in target environments.

How has your work benefitted the common people?

My research work, while working at ICRISAT for 17 years, and now at Murdoch Uni, has enhanced the understanding of trait adaptation in target environments as well as improving the income of small-holder

Table: Key Indian Life Sciences Fellows of The Royal Society (1841-2023)

S. No.	Name of FRS	Year of Election
1	Sir Jagadish Chandra Bose	1920
2	Birbal Sahni	1936
3	Benjamin Peary Pal	1972
4	M S Swaminathan	1973
5	G N Ramachnadran	1977
6	Autar Singh Paintal	1981
7	Obaid Siddiqui	1984
8	Vulmiri Ramalingaswamy	1986
9	Coluthar Gopalan	1987
10	Gurdev Singh Khush	1995
11	Goverdhan Mehta	2005
12	Krishnaswamy VijayRaghavan	2012
13	Gagandeep Kang	2019
14	Rajeev K Varshney	2023

Box: About Prof Rajeev Varshney

Professor Rajeev K Varshney is an agricultural scientist, specialising in genomics, genetics, molecular breeding and capacity building in developing countries. He is engaged in discovering, developing and delivering innovative R&D solutions to tackle wicked problems facing global agriculture. Prof Varshney is currently Director, Centre for Crop & Food Innovation; Director, WA State Agricultural Biotechnology Centre, & International Chair in Agriculture & Food Security, Food Futures Institute, Murdoch University, Australia. Prior to joining ICRISAT, Prof Varshney served International Crops Research Institute for the Semi-Arid Tropics (ICRISAT) in various science, and research leadership roles including the last positions as Research Program Director-Accelerated Crop Improvement; and Director, Center of Excellence in Genomics & Systems Biology, a global agricultural research institute. He holds Adjunct/Honorary/Visiting Professor positions at 10 academic institutions in Australia, China, Ghana, Hong Kong and India.

Prof Varshney, in his research career spanning for >20 years, has made significant contributions to improving food security in Asia and Africa by creating genomic resources of major "orphan" tropical crops. He has developed and deployed DNA marker technologies for the identification of useful genetic variation in tropical crops. Prof Varshney, together with his team, has used these resources and technologies to identify genetic loci/candidate genes for drought and pest tolerances in key staple crops for sub-Saharan Africa and India. He has initiated and led major international programs that are creating and delivering superior crop varieties to some of the world's poorest farmers.

By serving several organizations in the science leadership/ management role for the past 16 years, Prof Varshney has supervised large international teams (up to 200 members) representing a range of diversity in ethnicity, nationality and gender. In these roles, Prof Varshney provided expertise in R&D management, product development, innovative ideas and promoted inclusive culture and inter-disciplinary and collaborative research ecosystem to team members for high-performance to develop and realize their potential as teams and individuals. His leadership efforts have led mainstreaming of genomics in crop breeding programs at many institutes in several countries including India, China, Ethiopia, Kenya, Malawi, Ghana, Mali, Burkina Faso. Prof Varshney has developed a large network comprising of 180+public and private sector research organizationsin>35 countries across six continents. Prof Varshney has worked with a range of stakeholders (policymakers, funding bodies) e.g. Ministers, Secretaries, Advisors, Vice-Chancellors, Directors and Presidents/ CEOs of several organizations in many countries. Prof Varshney has been successful to secure US \$90 million in funding as a PI/Project Coordinator and ca. US \$110 million by including as co-PI in the last 10 years.

With 20 books, 500+ publications including 20 papers in Nature journals (Nature, Nature Genetics, Nature Biotechnology, Nature EcolEvol, Nature Communications and Nature Plants), h-index of 120 and citations of >60,000 (GoogleScholar), Prof Varshney is a prolific author and a highly cited researcher during last seven consecutive years. He has been honored with elected and honorary fellowships from a dozen academies/ societies, the Royal, being key one and >20 prestigious awards from USA, Germany, China, India, Nepal, Vietnam, Philippines, UAE.

Prof Varshney is pro-active in science communication and knowledge dissemination. In addition to delivering 40 keynote talks and organizing several international conferences and training courses, Prof Varshney has presented research and novel concepts related to food and nutrition security in several high-level fora such as G8 Conference in the World Bank; Digital Design Agriculture Session chaired by Mr. Bill Gates; FAO Conferences, Mexico Malaysia; TEDx talk; Ministry of Agriculture, Government of India, etc. Prof Varshney's research and interviews have been published in many Indian/ International print and electronic media (including TV channels and Radio programs) e.g. The New York Times, The Economist, BBC, Forbes, SciDevNet, ISAAA, Food Technology, Cosmos, Down to Earth, The Times of India, Hindustan Times, The Hindu Business Line, Financial Express, Mongabay, Australian Broadcasting Corp, Doordarshan, E-TV, AP24X7, FM Radio, Biotech Express etc.



Photo: Prof Varshney is Director, WA State Agricultural Biotechnology Centre, Director, Centre for Crop & Food Innovation, and International Chair in Agriculture & Food Security at Murdoch University, Australia

farmers in developing countries. As a team leader and international coordinator, I led international teams of researchers to sequence the genomes of about 12 crops including pigeonpea, chickpea and pearl millet. Furthermore, we sequenced and analysed >3500 chickpea lines, ca. 1000 pearl millet lines, and 292 pigeonpea lines to deduce the centre of origin and migration route of these crops, as well as undertaking trait mapping.

The genetic analysis led to the identification of markers associated with 30 - 50 traits in these legume crops that enabled the deployment of molecular breeding. We trained >450 breeders from around the world to undertake genomics-assisted breeding. While working with breeders from India and several other countries on genomics-assisted breeding, we developed several improved lines. After rigorous agronomic evaluation, many of these lines were released for commercial cultivation. This includes a dozen improved varieties of chickpea, groundnut and pigeonpea in India and two drought-tolerant chickpea varieties in Ethiopia. Several other lines are in the advanced stage of varietal release pipelines in India, Ghana, Mali, and other countries.

As Principal Investigator for the Tropical Legumes projects, our efforts facilitated the release of 266 varieties, the production of 498,034 tons of seeds, adoption of improved varieties of legumes under a

5 million ha area producing about 6.1 million tons of grain worth USD 3.2 billion. By assuming 0.2 ha land per farmer, my leadership have benefitted 25 million lives in 15 countries of sub-Saharan Africa (Kenya, Ethiopia, Tanzania, Uganda, Malawi, Zimbabwe, Mozambique, Nigeria, Niger, Ghana, Burkina Faso, Mali and Senegal) and Asia (India and Bangladesh) (https://tropicallegumeshub.com/, https://shorturl.at/bmpVW). The socioeconomic impact of this work has been presented in an article, "A decade of Tropical Legumes projects: Development and adoption of improved varieties, creation of market-demand to benefit smallholder farmers and empowerment of national programmes in sub-Saharan Africa and South Asia in Plant Breeding" (https://shorturl.at/CEN03). In fact, The Royal Society recognised my research contributions as above by conferring fellowship (FRS) to me.

To whom would you want to address here for your achievements?

The Society has played a part in some of the most fundamental, significant, and life-changing discoveries in scientific history, but this could not have been achieved on my own – this has been a collaborative effort of my colleagues and collaborators while working at several organizations starting with Aligarh Muslim University, Ch Charan Singh University, IPK-Gatersleben (Germany),

Box: Key Awards received by Prof Varshney

- Shanti Swarup Bhatnagar Prize for Science and Technology by Government of India, 2015 (Honoured by Prime Minister, Mr. Narendra Modi). This award is dubbed as Nobel Prize of India
- Rafi Ahmed Kidwai Award, the top most agriculture science award from Government of India, 2020
- Guangdong Friendship Award by Government of Guangdong Province China, 2023.
- International Partnership and Technological Co-operation Award by Government of Shandong Province China, 2022
- Scientific and Technological Co-operation Award by Government of Guangdong Province China, 2020
- GD Birla Award for Scientific Research by KK Birla Foundation, India, 2018
- Prof. Lalji Singh Achievement Award by ADNAT, 2019
- Prof Jayashankar Lifetime Achievement Award by Prof Jayashankar Telangana State Agri Univ, 2019
- JC Bose Fellowship for the outstanding performance from the Science and Engineering Research Board, Department of Science and Technology, Government of India, 2018
- Certificate and Honor for Outstanding Science Contribution by Uttar Pradesh Government, 2018 (honoured by His Excellency, Governor and Hon'ble Chief Minister, Uttar Pradesh, India)
- One of the 40 Most Influential Foreign Experts" in the past 40 years of Shandong Province since the initiation of Reform and Opening Up policy by The Association for International Exchange of Talents in Shandong, Shandong International Talent Network, China, 2018
- Outstanding Faculty Research Award by Carrers 360, 2018 (honoured by Hon'ble Minister for Human Resource Development, Government of India)
- Qilu Friendship Awardby People's Government of Shandong Province, China, 2016
- Doreen Margaret Mashler Award, the most prestigious ICRISAT award by ICRISAT Governing Board, 2016
- Highly Cited Researcher by Thomson Reuters/ Clarivate Analytics, 2019, 2018, 2017, 2016, 2015, 2014
- Research Excellence India Citation Award by Thomson Reuters, 2015
- IPGI Science Leadership Awardby the International Peanut Genome Initiative, 2017
- The Illumina Agricultural Greater Good Initiative Award (US\$100,000 for lab), 2013
- Young Crop Scientist Award by Crop Science Society of America (CSSA), 2013
- NASI-Scopus Young Scientist Award by National Academy of Sciences, India & Elsevier, South Asia, 2010
- INSA-Young Scientist Medal by the Indian National Science Academy (INSA), 2008
- NASI-Young Scientist Platinum Jubilee Awardby the National Academy of Sciences, India (NASI), 2007

ICRISAT, and now Murdoch University. I am grateful to my colleagues and collaborators from Australia, India, Germany, and many countries in Asia, Africa, and America with whom I have had the opportunity to work with for around 25 years. In particular, and certainly here in Australia, Deputy Vice-Chancellor-of Research & Innovation, Professor Peter Davies has been incredibly supportive. This will leverage Murdoch University's reputation as a world-renowned Agricultural Science research institution.

Several agricultural science doyens like Prof Nor-

man Borlaug, Prof MS Swaminathan, Prof Gurdev Khush, Prof Jim Peacock, Prof Mike Gale, Prof Yuan Longping, have been my role models and inspiration and I would like to thank them, especially Prof Borlaug, Prof Swaminathan, and Prof Khush with whom I met and interacted and received their blessings and support. I would also like to mention contributions, support and blessings of some mentors such as- Prof PK Gupta, Prof Andreas Graner, Dr William Dar, Dr Peter Carberry, Prof Peter Davies, Prof Kadambot Siddique, Prof Peter Langridge, Prof Susan McCouch, Prof Mark Sorrells, Prof Roberto Tuberosa, Dr Jeff Ehlers, Prof

RS Paroda, Dr Trilochan Mohapatra, Prof Deepak Pental, Prof Swapan Datta, Dr Dyno Keatinge, Prof Jeff Bennetzen, Prof KC Bansal, Dr Nigel Poole, Dr Chike Mba, Dr Rachel Chikwamba, Prof Eric Danquah, Prof Ed Buckler, Prof Xu Xun, Prof Wazahat Hussain and many others, who played a key role in shaping my research career. I would like to mention my special thanks to Prof Mike Bevan and Prof Jonathan Jones,

who nominated me for the Fellowship of The Royal Society. Of course, my hearfelt thanks to my family-especially my wife, Monika for all her sacrifices and unconditional support, and my children- Prakhar and Preksha for their love and support, as much of my work has been rather time-consuming, but they are proud of me nonetheless!

Wishful Quotes from Eminent Scientists/ Science Leaders

On this special achievement many eminent scientists and science leaders around the world sent wishes to Prof Varsheny which I collected through social media posts and other means. Here I am compiling only some of them because it is impossible to include everyones' quote, otherwise they would cover the whole issue of this magazine. Some of the best quotes from scientists are as follows:

"His election was testament to a lifelong commitment to academic excellence." Professor Varshney embodies the philosophies Murdoch University was built on and continues to espouse today," he said. "Throughout his research he has kept a keen focus sustainability that has impacted the lives of some of the world's most vulnerable people." "He is a very fitting recipient of this high honour and we are very proud to have him as Murdoch's first Royal Society fellow."

Professor Andrew Deeks Murdoch University Vice Chancellor

"I am very happy to note that you have been elected as a Fellow of Royal Society. Kindy accept my congratulations and very best wishes on your well deserved accomplishment. A Fellow is someone, who makes an "original contribution." I wish you good health and much happiness."

Prof MS Swaminathan, FRS Father of Indian Green Revolution

"It is great to see FRS being bestowed to Prof. Varshney, who has not only excelled in science but also in its application to solve the downstream problem of food security and poverty alleviation in less endowed regions of the world."

Prof. Gurdev Khush, FRS, and the World Food Prize Awardee

"It is immense pleasure to see Dr Varshney has been conferred fellowship of the royal society. Dr Varshney has made seminal contributions in the area of genomics of different crops and enunciated the concept of genomics assisted plant breeding for the improvement of crops. Heartiest congratulations to him from me".

Padamshree Prof Sudhir Kumar Sopory, Emeritus Senior Scientist, ICGEB, New Delhi Former Vice Chancellor, JNU, New Delhi

"It is a great recognition for Indian agricultural science that an Indian agricultural scientist based on the work done in India has been recognised by the Royal Society, an apex learned body of the world."

Dr Himanshu Pathak, Secretary, DARE & Director General - ICAR "Congratulations, Rajeev! A great recognition of your quality research over many years. Murdoch has not had an FRS before, so certainly much to celebrate. Before 50 years old, we get our very first FRS."

Prof Peter Davies Deputy Vice Chancellor- Research Murdoch University, Australia

"Congratulations, Rajeev. So proud of you and privileged in my connection to you and your achievements. You are exceptional in science and in communicating".

Dr Peter Carberry, General Manager, Grains Research and Development Corporation, Australia; Former Director General, ICRISAT

"I am so proud of you, Rajeev! I remember well, I used to call you Einstein of Agriculture, and now you have truly joined the rank of Einstein by becoming FRS. You more than deserve this honor. Big congratulations! I am sure that there are many more such laurels waiting for you".

Dr William Dar, former Director General, ICRISAT & former Secretary, Agriculture, Government of the Philippines

"I am so much excited to note about Rajeev becoming FRS. I congratulate and rejoice with one of mentees at IPK. I look forward to see many more such laurels bestowed to you in coming years. Congratulations Rajeev!".

Prof Andreas Graner Executive Director, Leibniz Institute of Plant Genetics & Crop Plants Research, Germany (Post-doc supervisor, and mentor)

"It is difficult for me as a teacher to describe how thrilled I am feeling ever since Rajeev gave me this news. I don't think there will be many in the country whose student became FRS. During last more than 20 years, there would be not more than 5 or 6 Indians, who became FRS. Among these also there may be none, who never studied in UK or USA for

their PhD or as Post-Doc. Perhaps after Gagandeep Kang, became FRS in 2019, Rajeev is the only next Indian who became FRS. In the history of Indian Science, Rajeev will now be listed with MS Swaminathan."

Prof PK Gupta Emeritus Professor, Ch Charan Singh University, Meerut, (PhD supervisor, and mentor)

"Please accept my heartiest congratulations on being elected as FRS, so richly deserved. We are indeed very proud of your achievements and significant contributions to the agrisector."

Prof Ajay Sood, FRS, Principal Scientific Advisor, Government of India

"This is a well deserved rare recognition bestowed on you by the Royal Society and makes me feel very proud of your scientific achievements par excellence. May you be blessed with many more distinctions and laurels".

Padma Bhushan Dr RS Paroda, Chairman, TAAS and former Secretary, DARE and DG-ICAR

"A million congratulations on attaining this dizzying height, dear Rajeev! This honor is clearly well-deserved and hence unsurprising. Nonetheless, it is such a rare feat as to be utterly astounding. I am ever proud of you and your achievements, even as I look forward to celebrating the several more accolades that certainly await you in the future".

Dr Chikelu Mba, Team Leader, Seeds and Plant Genetic Resources, UN-FAO, Rome, Italy

"Congratulations Rajeev! This is an amazing honor for all your great work, you did at ICRISAT. We are proud of you. All the best for your continued success".

> Professor Prabhu Pingali, **ICRISAT Governing Board Chair,** Member of US National Science Academy, Cornell University, USA

"Wow! That is fantastic news, Rajeev. I am so thrilled for you! Great recognition of all your wonderful work over your career. Well done - truly well deserved. My heartiest congratulations".

Professor Peter Klinken AC FAHMS FTSE CitWA, Chief Scientist of Western Australia

"Warmest congratulations @rajvarshney. Your work is in the tradition of Benjamin Pearey Pal, M. S. Swaminathan, Gurdev Kush, and others while using current molecular methods. Wonderful work at @ICRISAT Hyderabad and now at Murdoch".

Prof K Vijay Raghavan, FRS, Former Principal Scientific Advisor to PM and Former Secretary, DBT, Government of India

"Hearty congratulations Rajeev! What an achievement! Your untiring work has been rewarded. In recent history, no one can match your contributions in agricultural science. Keep going strong. Sky is the limit! I am immensely proud of you. May you stay healthy and blessed! Best wishes!"

Dr Trilochan Mohapatra, Chairperson, Protection of Plant Varieties and Farmers' Rights Authority, Government of India; and former Secretary, DARE and DG-ICAR

"Please accept our heartiest congratulations on being elected as a Fellow of the prestigious Royal Society and notably a fourth Indian Agricultural Scientist to be elected as FRS. It is a richly deserved recognition of your work and contributions towards food and nutrition security."

Prof Ashutosh Sharma, President, INSA

"Congratulations, Rajeev! No words can express my happiness after I hear this news. We in India are so delighted that our dearest friend and collaborator has got one of the most coveted global recognitions. As I have been saying since the early days we met - you are a rising star Rajeev! And soon you will be honoured with the remaining big prizes as you richly deserve them. Truly, you have taken the science of genomics to the next level, which has resulted in speedy development of nutritionally-rich, climate resilient crop varieties by efficiently applying genomics assisted breeding."

Prof KC Bansal, Secretary of NAAS, India & former Director, ICAR- NBPGR

"Royal Recognition! The Indian community in WA extends heartiest congratulations to Prof @ rajvarshney on being elected as a Fellow of the Royal Society of UK for his outstanding contributions to advancement of science. Indian Diaspora is proud of your achievements."

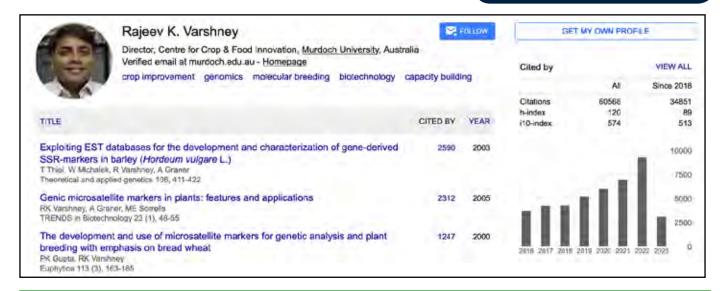
Hon'ble Amarjeet Singh Takhi, Consul General of India, Perth, Australia

"Congratulations Rajeev. Outstanding achievement. I am so excited to see my long-term collaborator and a good friend to joins the ranks of Stephen Hawking, Isaac Newton, Albert Einstein, Dorothy Hodgkin and Sir David Attenborough!"

Hackett Professor Kadambot Siddique, Director, UWA Institute of Agriculture, The University of Western Australia

"Congratulations on this very well deservedhonor!! I'm so happy to hear that you were elected as a FRS! It represents the highest form of recognition a scientist can hope for and we are all very proud and happy to know you and celebrate with you. Keep up the good work! You are still young and there is so much more to do!!!"

Professor Susan McCouch, Member of US National Academy of Sciences, Cornell University, USA



"Congratulations on this great achievement. This highest recognition in science is a result of your contributions and impact of your research and training in Africa and Asia. I am proud that I know you. Thanks for all your collaboration with WACCI"

Professor Eric Yirenkyi Danquah, Founder & Director, WACCI, Ghana; 2018 Laureate, The World Agriculture Prize; 2022 Laureate, The Africa Food Prize

"Congratulations Rajeev for being inducted as Fellow in the 'hall of fame' of science, the Royal Society of London. There are not many agricultural/crop scientists have been so recognised. It is well deserved and it is good that you are now based in Perth!"

Adj. Professor Neil C. Turner, AM, FTSE, FAIA, The University of Western Australia

"Many congratulations Rajeev. Keep on serving agricultural science with the same commitment and dedication".

Prof Swapan Datta Former DDG- Crop Science, ICAR Founder Vice Chancellor, Biswa Bangla Biswabidyalay, West Bengal

"Rajeev Varshney, FRS, a great, happiest and refreshing news. I proud to be your teacher. I can't express my feelings of joy and happiness. Actually speaking, it is due to your systematic, methodical approach, dedication, devotion and untiring efforts. HEARTIEST CONGRATULATIONS, & all the best for future."

Professor Wazahat Hussain, Former Chairman, Department of Botany, Aligarh Muslim University (teacher & mentor)

References:

- 1. Royal Society News, Exceptional scientists elected as Fellows of the Royal Society. https://shorturl.at/lquyD
- 2. Murdoch University News, Dream comes true for Murdoch University's first Royal Society Fellow. https://shorturl.at/gnsv8
- 3. Biotech Express Interview, Prof Rajeev K Varshney "The Youngest Indian Scientist (47)" who achieved an

h-index of 100 recently. https://shorturl.at/djrwU

- 4. Biotech Express News, Rajeev Varshney, India's third highest cited scientist joins Murdoch University Australia. https://shorturl.at/uzFW8
- 5. Biotech Express News, Prof Ashok Pandey become the third Indian scientist with h-index more than 100. https://shorturl.at/pwIM9

