



**Dr MS Swaminathan Award
for Leadership in Agriculture**
– A Compendium





Trust for Advancement of Agricultural Sciences (TAAS)

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New Delhi

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Progress Through Science

February, 2023

Trust for Advancement of Agricultural Sciences

Genesis

Trust for Advancement of Agricultural Sciences (TAAS) is an outcome of the 88th Session of the Indian Science Congress held under the General Presidentship of Dr RS Paroda at the campus of Indian Agricultural Research Institute (IARI), New Delhi on 3-6 January, 2001. The theme of the Congress was “Food, Nutrition and Environmental Security”. In response of the vision statement by the then Hon’ble Prime Minister of India, Shri Atal Bihari Vajpayee, the Trust was established on 17 October, 2002 with its headquarters at the campus of Indian Agricultural Research Institute (IARI), New Delhi.

Vision

India becomes a prosperous agricultural country through a science-based crusade for elimination of poverty, hidden hunger and malnutrition.

Goal

Harnessing the potential of agricultural science for the welfare of the people

Mission

Promoting growth and advancement of agriculture through scientific interactions and partnerships

Strategy

TAAS acts as a neutral and vibrant Think Tank for strengthening agricultural research and innovation for development (ARI4D).

It executes its programs and activities through collaboration and innovative partnerships with other national, regional and international organizations and networks. Its major strategic thrusts are: policy advocacy, technology transfer, information dissemination/knowledge sharing, human resource development/ capacity building.

Objectives

- To act as a Think Tank to deliberate on key issues relating to agricultural research and innovation for development (ARI4D) and influence policy decisions
- To organize workshops, conferences, brainstorming sessions, policy dialogues, seminars and special lectures on emerging issues and new developments in agricultural sciences
- To disseminate knowledge among stakeholders through publication of proceedings, strategy papers and policy briefs
- To recognize and award the scientists of Indian and foreign origin for their outstanding contributions towards Indian agriculture
- To facilitate scientific interactions and partnership building of non-resident Indian agricultural scientists with Indian scientists

Current activities

- Expert Consultations/ Brainstorming Sessions/ Symposia/ Conferences/ workshops/ Seminars on Important Themes
- Strategy papers/ Policy Briefs/ Success Stories
- Foundation Day Lectures/ Special Lectures
- Dr MS Swaminathan Award for Leadership in Agriculture

Dr MS Swaminathan Award for Leadership in Agriculture

The Trust for Advancement of Agricultural Sciences has instituted an Award titled “Dr MS Swaminathan Award for Leadership in Agriculture” in the honor of Dr MS Swaminathan. The prestigious award was instituted in 2004 with the objective to recognize life time contributions of eminent persons who have made global impact in the field of agriculture, including food security and sustainability of agriculture in India. The outstanding contributions of Dr MS Swaminathan towards agricultural renaissance of India are indeed very well known world-wide. A great visionary and crusader, he has been the main architect of “Green Revolution”. Dr Swaminathan is a staunch advocate of sustainable agriculture which would lead to “Evergreen Revolution”, necessary for ensuring future household food and nutritional security. In recognition of his outstanding contributions, he was awarded the first ‘World Food Prize’, the ‘Ramon Magsaysay Award’ and many other national and international honors. He has been acclaimed by the Time Magazine as one of the twenty most influential Asians of the 20th Century, one of the three from India – the other two being Mahatma Gandhi and Rabindranath Tagore. The TAAS has so far conferred ten (10) such awards in the past and the eleventh one will be conferred to Dr Shenggen Fan, Former Director General of the International Food Policy Research Institute (IFPRI), Washington DC in November-December, 2020. Details of distinguished recipients so far, are given on onward pages along with citations.

First Award : Dr Norman E Borlaug



The first award was given to Nobel Laureate for Peace

Dr Norman E Borlaug, the only agricultural scientist to have received this honor for his work on wheat improvement at the CIMMYT, Mexico.

His high yielding dwarf wheat varieties resulted in Green Revolution in India and other developing countries in mid-sixties when there was acute food scarcity. This award was presented to Dr Borlaug by the then Hon'ble President of India, Dr APJ Abdul Kalam on March 15, 2005 at Vigyan Bhawan, New Delhi

Citation

Dr Norman E Borlaug, an epitome of agricultural research and development, dedicated to the alleviation of world hunger and poverty, was born in Cresco, Iowa, USA on March 25, 1914. He received B.S. Degree in Forestry and the M.S. and Ph.D.

in Plant Pathology from the University of Minnesota, USA. In 1944, he was appointed as Geneticist and Plant Pathologist and assigned to organize and direct a Cooperative Wheat Research and Production Program in Mexico. Due to his dedicated efforts, the program became an outstanding success. It eventually made Mexico self-sufficient in wheat production by 1956 and laid the foundation for wheat improvement and increased production in other parts of the world. In 1963, Dr Borlaug became the leader of the Wheat Program of newly established International Maize and Wheat Improvement Centre (CIMMYT). In this position, he directed his efforts to wheat research and production problems in Asia. The high yielding, fertilizer-responsive, disease resistant and widely adapted dwarf wheat varieties developed by him laid the foundation for the 'Green Revolution' in various parts of the world, especially in India. He has been visiting India regularly since 1963 and has been a source of great inspiration to all Indian agricultural scientists and scholars. Dr Borlaug, Fellow of Science Academies of 15 countries, including the Indian National Science Academy and National Academy of Agricultural Sciences, India, has been conferred honorary doctorate degree by 51 Universities from all over the world. He is a recipient of numerous academic, scientific and civic awards. He is the only agricultural scientist in the world who received Nobel Peace Prize in 1970. Dr Borlaug currently denotes his time as a Senior Consultant to CIMMYT, as a Distinguished Professor of International Agriculture, Department of Soil and Crop Science, at Texas A&M University and as President of Sasakawa Africa Association. He also serves as ex-officio consultant on wheat research and production problems to many governments in Latin America, Africa, and Asia. Since 1980, he has been working hard to bring about a Green Revolution in Africa. In appreciation of his monumental contributions to Indian agriculture and for being a great motivating force to propel agricultural research for world food security, the Trust for Advancement of Agricultural Sciences, New Delhi, India has great pleasure in honoring Dr Norman E Borlaug with the 'First Dr MS Swaminathan Award for Leadership in Agriculture' on this Fifteenth day of March, 2005.

Second Award : Dr GS Khush



The second award was given to renowned rice breeder, Dr GS Khush, the recipient of world Food Prize, by the Hon'ble Prime Minister of India, Dr Manmohan Singh at Vigyan Bhavan, on October 9, 2006. Dr Khush, while working at the International Rice Research Institute (IRRI), Manila was responsible for the development of more than 300 high yielding rice varieties which gave tremendous boost to productivity of rice in rice growing countries, resulting in increased rice production in Asia.

Citation

Dr Gurdev Singh Khush, a world renowned plant breeder, has made enormous contributions to the development of more than 300 high yielding rice varieties that played significant role towards achieving 'Green Revolution'. A worthy son of a farmer, Dr Khush graduated

from the Government Agriculture College (now Punjab Agricultural University), Ludhiana in 1962. He joined the International Rice Research Institute (IRRI), Manila in 1967. In 1986, he was promoted as Principal Plant Breeder and Head, Division of Plant Breeding, Genetics and Biochemistry. He provided excellent leadership for the global rice improvement program benefiting millions of resource poor rice growers in the world. A semi-dwarf rice variety IR36, developed by him was one of the most widely grown rice varieties in the world during 1980s. IR64 developed during 1980s is the most widely planted rice variety in the world. Dr Khush is one of the most decorated agricultural scientists in the world. He received honorary Doctorate degrees from nine universities, including University of Cambridge, England. He is one of the five Indian scientists who have been elected to the membership of the Royal Society as well as US National Academy of Sciences. For his monumental contributions to rice improvement, he received Japan Prize (1987), the World Food Prize (1996), the Wolf Prize from Israel (2000) and the China International Scientific and Technological Cooperation Award (2001). He was honored by the Government of India with the prestigious “Padma Shri” Award in 2000. In India, Dr Khush has been actively involved in the development of plant breeding and agricultural biotechnology. He has been a member of the Scientific Advisory Committee (Overseas), of the Department of Biotechnology, Government of India, for over a decade. He worked closely with the Indian Council of Agricultural Research (ICAR) for enhancing human resource development for improving rice productivity in India. He retired from IRRI in 2002 and joined the University of California, Davis, as Adjunct Professor. The Trust for Advancement of Agricultural Sciences salutes this great son of India and takes pride in honoring Dr Khush with the prestigious Dr MS Swaminathan Award for Leadership in Agriculture’ on this Ninth day of October, 2006.

Third Award : Dr Surinder K Vasal



The third award was presented to Dr Surinder K Vasal, an accomplished maize breeder, by Prof. MGK Menon, Former Member, Planning Commission (now NITI Aayog) on May 3, 2008, at AP Shinde Auditorium, NASC Complex, New Delhi. Dr Vasal's work at CIMMYT, on maize, led to the development of protein rich maize, known as Quality Protein Maize (QPM), which has resulted in nutritional improvement of several million people in the developing world. In recognition of outstanding work, Dr Vasal received the World Food Prize in 1996.

Citation

Dr Surinder K Vasal is an accomplished plant breeder and geneticist whose work on maize led to the development of high quality protein maize (QPM). He, along with his colleague, Dr Evangelina Villegas shared the 2000 World Food Prize for their valuable contributions.

Dr Vasal was born in 1938 in Amritsar, India. He did Ph.D. in Genetics and Plant Breeding from the Indian Agricultural Research Institute, New Delhi. Dr Vasal began his career as a researcher in the Department of Agriculture, Himachal Pradesh and later worked as Maize Breeder at the Himachal Agriculture College. In 1967, Dr Vasal took up an assignment with the Rockefeller Foundation in Thailand to conduct research on maize in close collaboration with the National Corn and Sorghum Research Center of Kasetsart University. From there, he moved to the International Maize and Wheat Improvement Center (CIMMYT), Mexico in 1970 and supervised the high lysine maize program. He also held positions of Germplasm Coordinator, Head of Maize Research and Coordinator of Asian Regional Maize Program. Dr Vasal was honored to be the first distinguished scientist at CIMMYT. With the development of quality protein maize, the amino acid content in the diets of several millions has improved since 1990s. Quality protein maize germplasm, developed by Dr Vasal is now being used worldwide for developing QPM cultivars. Dr Vasal has developed important concepts and methodologies and released a large number of promising inbred lines for use by the maize researchers worldwide. In 1997, Dr Vasal took up a new role, leading CIMMYT's Asian Regional Maize Program in Thailand. He strengthened regional hybrid research activities and coordinated the Tropical Asian Maize Network (TAMNET). He specifically played an important role in human resource development by training hundreds of young scientists from the developing countries. Dr Vasal is a member of the American Society of Agronomy, the Crop Science Society of America (whose Presidential Award he won in 2000), and India's National Academy of Agricultural Sciences. He has received the 1996 International Service in Crop Science Award and the 1999 International Agronomy Award, in addition to accolades from the Governments/Institutions in Honduras, Peru, Panama, India, Vietnam, Bangladesh and a few other countries. He is also the recipient of Chinese Friendship Award of 2001. The Trust for Advancement of Agricultural Sciences takes pride in honoring Dr Vasal with the Third Dr MS Swaminathan Award for Leadership in Agriculture on this day, the 3rd May, 2008.

Fourth Award: Prof Rattan Lal



The fourth award in the series was given to Prof Rattan Lal, an eminent soil scientist from Ohio State University (OSU), for his outstanding contributions in the field of sustainable management of natural resources. His contributions have made great impact on food production through better soil management by the resource poor farmers of developing countries. This award was presented to Prof Rattan Lal by Dr Montek Singh Ahluwalia, Deputy Chairman, Planning Commission (now NITI Aayog) on August 11, 2009 at Dr BP Pal Auditorium, New Delhi.

Citation

Prof Rattan Lal is an eminent soil scientist. His scientific contributions have made profound impact on sustainable management of natural resources and world food production

among resource-poor farmers in the developing countries. He has conducted classical studies on watershed management and linked them to C-sequestration and climate change. He has liberally shared his research findings with other scientists, thus promoting effective soil management practices globally. His work has been recognized worldwide. Professor Rattan Lal has received numerous prestigious Awards including the 2007 Nobel Peace Prize Certificate and 2005 Norman



Borlaug Award. He has held several important positions in a number of professional societies. He was elected President of the prestigious Soil Science Society of America in 2006-2007. Professor Rattan Lal has authored 1375 research papers, including 13 books, which have received great admiration of the scientific community and comprise principal reference materials in soil science. Born on 5th September 1944 in Karyal, Punjab and educated at PAU and IARI. Professor Rattan Lal earned his Ph.D. from the Ohio State University in 1968. After working at IITA, Ibadan, Nigeria for 18 years, he joined OSU in 1987 as Professor of Soil Science. Since 2000, he holds the position of Director, Carbon Management and Sequestration Center, The Ohio State University, USA. Professor Rattan Lal continues to do excellent work in Soil Science. His main areas of interest are: Soils and Climate Change, Carbon Sequestration in Soils, Sustainable Management of Soils in the Tropics, Global Food Security, Soil Degradation and Management, and making agriculture as a component of solutions to environmental issues. The Trust for Advancement of Agricultural Sciences takes pride in honoring Professor Rattan Lal with the fourth Dr MS Swaminathan Award for Leadership in Agriculture on this day, the 11th August, 2009.

Fifth Award : Dr Sanjay Rajaram



The fifth award was presented to Dr Sanjay Rajaram, a distinguished wheat breeder. His work at CIMMYT led to the development of improved wheat varieties which have been released in more than 50 countries, including around 25 in India. These varieties have helped in increasing wheat production in many developing countries. This award was presented by Dr APJ Abdul Kalam, former Hon'ble President of India on December 10, 2010 at AP Shinde Auditorium, NASC Complex, New Delhi.

Citation

Dr Sanjay Rajaram is one of the most distinguished wheat breeders known for his valuable contributions globally. He led CIMMYT's wheat breeding program for over two decades. Under his leadership, the CIMMYT program made tremendous impact on

global wheat production. As wheat breeder, Dr Rajaram contributed towards the development of as many as 480 wheat varieties that have been released in 51 countries, and are grown on an estimated 58 million hectares worldwide.



Twenty-five of his varieties have so far been released in India. For this contribution, he has been honored with a number of national and international honors and awards. Using a novel approach of exploiting winter and spring wheat gene pools, together with shuttle breeding and mega environment testing, Dr Rajaram and his team developed outstanding cultivars with very high yield potential. Applying the concept of slow rusting, he developed wheat varieties with durable resistance to leaf rust, which invariably remained effective for more than 20 years. Dr Rajaram and his team also successfully incorporated blight resistance into modern wheat varieties. Dr Rajaram graduated with a B.Sc. degree in Agriculture from the University of Gorakhpur. He obtained his Masters in Genetics and Plant Breeding from IARI, and proceeded to do his Ph.D. in Plant Breeding from the University of Sydney, Australia. Dr Rajaram has authored/co-authored more than 400 research publications, including 110 papers in refereed journals, and mentored 700 young scientists from the developing world. He also guided 22 Masters and Ph.D. students. During his long career, he has served as Director of Wheat Research at CIMMYT, Director of ICARDA's Biodiversity and Integrated Gene Management Program, and consultant to a number of governments and international organizations. In 2009, he led a study in Egypt, the report of which is being used by the Egyptian Ministry of Agriculture to plan a major expansion of wheat production program. The Trust for Advancement of Agricultural Sciences takes pride in honoring Dr Sanjay Rajaram with the Fifth Dr MS Swaminathan Award for Leadership in Agriculture on this day, Saturday, the 18th December, 2010.

Sixth Award : Dr Mohan C Saxena



The sixth award was presented to Dr Mohan C Saxena, an eminent agronomist and crop physiologist whose work on food legumes at International Center for Agricultural Research in Dryland Areas (ICARDA) has enormously benefited the resource poor farmers in West Asia, North Africa, Central Asia (CWANA) and South Asia, particularly Bangladesh, India, Nepal and Pakistan. His seminal work has helped in increasing the pulse productivity in these countries. This award was presented by Dr Balram Jakhar, former Union Minister of Agriculture and H.E. the Governor of Madhya Pradesh on January 25, 2012 at Dr BP Pal Auditorium, IARI, New Delhi.

Citation

Dr Mohan C Saxena is an eminent agronomist and crop physiologist, whose work at the International Center for

Agricultural Research in the Dry Areas (ICARDA) on food legumes has enormously benefited the resource poor farmers in West Asia, North Africa, Central Asia (CWANA) and South Asia, particularly Bangladesh, India, Nepal and Pakistan. His work on managing drought, common in this region, resulted in the “Winter Sowing” technology for chickpea and lentils in the lowland Mediterranean areas of the West Asia and North Africa region, resulting in 50-60 per cent increase in crop productivity and water-use efficiency. This research was recognized through King Baudoin Award of the CGIAR for ICARDA and ICRISAT. He had served as leader of Legume Program, then as Director of Germplasm Improvement Program and also as Assistant Director General (ADG) at ICARDA for almost two decades. His support to Indian legume program, especially kabuli chickpea and lentil led to much greater benefits to resource poor farmers of India. Dr Saxena did Ph.D. in Agronomy at the Indian Agricultural Research Institute (IARI), New Delhi (1962), and Doctor of Science in Plant Nutrition from the University of Hohenheim, Germany (1965). After serving briefly at IARI and the Bhaba Atomic Research Center, he joined the GB Pant University of Agriculture and Technology, Pantnagar and undertook research on agronomy of warm and cool season pulses, particularly soybean. His work on soybean greatly helped in popularizing Soybean Production Technology in India. Dr Saxena’s research contributions and leadership have been widely recognized. A major laboratory at ICARDA is named after him for his accomplishments. He has been awarded Gold Medals by Indian Society of Agronomy and the Indian Society of Pulses Research and Development and Honorary Doctorates from three Universities. After his retirement from ICARDA, he has been appointed as a Visiting Professor at the Arid Land Research Center of the Tottori University, Japan. The Crop Science Society of America has recently given him a Lifetime Achievement Award by conferring an Honorary Membership of the Society. In recognition of his important contributions, Trust for Advancement of Agricultural Sciences (TAAS) has great pleasure in awarding Dr MC Saxena the Dr MS Swaminathan Award for Leadership in Agriculture on this day, Wednesday, the 25th January, 2012.

Seventh Award: Dr William D Dar



The seventh Dr MS Swaminathan Award for Leadership in Agriculture' was presented to Dr William D Dar by Dr K Kasturirangan, Member, Planning Commission (now NITI Aayog) on June 24, 2013, at Dr BP Pal Auditorium, IARI, New Delhi for his outstanding contributions towards food security and agricultural sustainability in Asia and Sub-Saharan Africa. The work done by him in the capacity of Director General, ICRISAT, has created considerable impact on resource poor farmers. Dr Dar is well known for his efforts to promote public-private partnership and for inclusive market oriented development (IMOD).

Citation

Dr William D Dar, Director General, International Crops Research Institute for the Semi-Arid Tropics (ICRISAT), Patancheru,

Hyderabad (Telangana) has made outstanding contributions towards food security and agricultural sustainability in Asia and Sub-Saharan Africa. His work has created great impact on the lives of resource poor farmers. Dr Dar has also actively promoted Public-Private-Farmer partnership linking strongly the end users with the National Agricultural Research System (NARS) as well as International Agricultural Research Centers (IARCs). Under his leadership, effective research collaboration has been established in areas like germplasm exchange, biotechnology, crop improvement, water conservation, capacity building, and policy reorientation. Dr Dar has had a distinguished career as an educator, agricultural scientist and able research administrator. Being a great promoter of regional cooperation, Dr Dar also served as Chairman of the Asia-Pacific Association of Agricultural Research Institutions (APAARI). Prior to joining ICRISAT, Dr Dar had served as Advisor to the President of the Philippines; Secretary, Department of Agriculture of the Philippines; Executive Director of the Philippine Council of Agriculture, Forestry and Natural Resources Research and Development (PCARRD); Director, Bureau of Agricultural Research (BAR), Department of Agriculture; and the Vice President (R&D) of Benguet State University, Philippines. In recognition of his significant contributions, Dr Dar has been honoured with a number of awards and degrees of Doctorate of Science. He also received the Life-time Achievement Award for his outstanding contributions in the field of pulses research from the Indian Society of Pulses Research and Development (ISPRD). Dr Dar is a champion of the poor. He successfully led ICRISAT into renaissance and excellence with a motto of "Science with a Human Face". His transformational leadership has turned ICRISAT into a forward looking institute, financially strong and producing scientific breakthroughs as public goods for greater developmental impact. His passion is to help alleviate the socioeconomic conditions of the poor living in the semi-arid tropics of Asia and Sub-Saharan Africa. In view of his outstanding contributions, the Trust for Advancement of Agricultural Sciences (TAAS) has great pleasure in awarding him the prestigious Dr MS Swaminathan Award for Leadership in Agriculture.

Eighth Award: Dr Thomas Lumpkin



*The eighth 'Dr MS Swaminathan Award for Leadership in Agriculture' was given to **Dr Thomas Lumpkin**, Former Director General of CIMMYT, Mexico on 28th September, 2015.*

Dr MS Swaminathan was the Chief Guest for the function. This award was conferred on him for his outstanding significant contributions in the field of agricultural research, education, development and administration, with particular focus on technology development, refinement and adoption of conservation agriculture in cereal and vegetable production systems of South Asia, ethnobotany and marketing systems.

Citation

Dr Thomas A Lumpkin has been at the forefront of guiding wheat and maize research for development (R4D) in the developing

world, particularly in India and across South Asia. His passion is for improving the livelihoods of smallholders in developing countries through science-driven technologies, enabling them to produce more food while using fewer resources and in a sustainable way to ensure a new Green Revolution. He has written numerous books and research articles on azolla, azuki bean, edamame, wasabi, global horticulture and approaches to alleviate malnutrition and poverty in the developing world. He is widely known among the CGIAR, international agricultural donor agencies and national agriculture systems in the developed and developing world for his leadership in agriculture, and for the reinvigoration of the International Maize and Wheat Improvement Center (CIMMYT) and the World Vegetable Center (AVRDC). As a leader in the oversight of the WHEAT and MAIZE CGIAR Research Programs (CRPs) since 2011 and 2012, respectively, Dr Lumpkin has made intensive contributions in deploying improved wheat and maize varieties in India through innovative public private partnerships. He has made an impact in the region through his strong emphasis and focus on input-use efficiency, precision agriculture for smallholders, adaptation to the changing climates in South Asia through effective integration of climate-resilient varieties, resource-conserving technologies and institutional innovations for sustainable intensification of wheat- and maize-based systems. His vision for a new Green Revolution and research combined with an in-depth knowledge of constraints faced by the smallholder farmers of South Asia prompted him to launch the Borlaug Institute for South Asia (BISA) in India, in close partnership with the Indian Council of Agricultural Research (ICAR). He had also been the founder Director General of BISA, concurrent with his duties as Director General, CIMMYT. Dr Lumpkin has been associated with a number of well known professional bodies. The Trust for Advancement of Agricultural Sciences (TAAS) has great pleasure in awarding Dr Thomas Lumpkin the prestigious “Dr MS Swaminathan Award for Leadership in Agriculture”.

Ninth Award : Dr Uma Lele



The ninth 'Dr MS Swaminathan Award for Leadership in Agriculture' was given to Dr Uma Lele, by Dr YK Alagh, Former Minister of State for Planning Science & Technology, Government of India on October 30, 2017 at Dr BP Pal Auditorium, IARI, New Delhi for her famous meta evaluation of the CGIAR and contributions towards issues related to food, agriculture and nutritional security and strong crusader of women's empowerment.

Citation

Dr Uma Lele is a highly accomplished agricultural economist known for her work on Food and Agricultural Development. She has over four decades of rich experience in research, operations, policy analysis and evaluation of development assistance. She has served in many capacities for different international



organizations such as the World Bank, FAO, CGIAR, IFAD, UNICEF, UNDP, Rockefeller Foundation and Bill & Melinda Gates Foundation. Her critical evaluation of the World Bank's Forestry Policy had led the Bank to revise its strategy to lay greater focus on poverty reduction besides conservation and use. Her famous Meta evaluation of the CGIAR led to the rethinking by the World Bank and other donors of CGIAR's role in meeting emerging new challenges wherein two of the original pillars of the CGIAR had been weakened over time: the rise of genomics and of intellectual property rights, mainly due to the increasing role of the private sector in agricultural research. Her other work which has received considerable recognition has focused on the substantial geo-climatic and institutional diversity, requiring development interventions suited to particular circumstances, and the need for capacity building with a focus on 'learning by doing' approach. A consistent underlying theme of her international work has been the divergence in the assumptions determining public interventions and the reality on the ground. Since her retirement from the World Bank, she has been contributing extensively towards issues related to food, agriculture and nutritional security. For India, her early work on foodgrains marketing in India had revealed that failures

in commodity markets were the results of poor infrastructure and public policy restricting cross border trade. Through comparative analysis of structural transformation, she has shown how Indian agriculture has been falling behind neighboring Asian and other large Latin American countries who started with similar or worse initial conditions. She conducted an independent external review of work of the MS Swaminathan Research Foundation (MSSRF) which formed part of the foundation's future strategy. The GCARD Road Map in 2010 was also an outcome of a technical report prepared by a team under her leadership. Dr Uma Lele is an ardent champion of capacity development, especially in developing countries. She had always been a strong supporter of women's empowerment and was actively involved in organizing the First Global Conference for Women in Agriculture (GCWA) held in New Delhi during 2012. To promote the cause of human resource development, she has set up a 'Mentorship Award' with the American Applied Economic Association and another 'Best Research Award on Gender in Development' with International Association of Agricultural Economists. Her work has been widely recognized through numerous awards and recognitions, especially for her innovative and analytical thinking. The Trust for Advancement of Agricultural Sciences has great pleasure in presenting the 9th Dr MS Swaminathan Award for Leadership in Agriculture to Dr Uma Lele.

Progress Through Science

Tenth Award: Dr John Dixon



The tenth award was given to Dr John Dixon, Former Principal Adviser, Australian Centre for International Agricultural Research (ACIAR), Australia by Dr Ismail Serageldin, Former Chairman, CGIAR and Vice President, World Bank on 13th February 2019 for his contribution in farming system's research towards conservation agriculture based sustainable intensification (CASI) in a wide range of irrigated, dryland and mountain farming systems

Citation

Dr John Dixon was till recently the Principal Adviser, ACIAR, Australia. Prior to this, he held senior positions in ACIAR, FAO, CIMMYT and other international organizations. He had a rich and long work experience in different regions in partnership with national systems while working in collaboration with several

international organizations. During his outstanding career of more than four decades, his greatest impacts have been in farming systems' research aiming at conservation agriculture based sustainable intensification (CASI) in a wide range of irrigated, dryland and mountain farming systems. Dr Dixon provided leadership in developing a model regional FARM program of FAO/UNDP on the implementation of Agenda 21 (from Rio Conference) in marginal areas of eight Asian countries. He also headed CGIAR System-wide Program on Participatory Research and Gender Analysis and fostered active international knowledge sharing on role of women in agricultural research for development.



Dr Dixon obtained his Ph.D. and Master of Economics as well as Master of Natural Resources from the University of New England, Armidale, Australia. He has authored a dozen books and manuals and about 100 journal and conference papers on diverse topics. He was selected as a Distinguished Alumni by the University of New England in 2017 and was elected

as a Fellow of the Australian Academy of Technology Science and Engineering in 2018. He is recipient of FAO AG Department Prize for Best Publication/ Website (FAO/World Bank Study of Global Farming Systems Trends and Emerging Priorities), 2001; Zayed Prize for Millennium Ecosystem Assessment, 2005; and Wheat Warrior Award, Crawford Foundation, for Contributions to Wheat Research, 2009. Dr John Dixon has made significant contributions in Asia and Africa by promoting the concept of Conservation Agriculture based Sustainable Intensification (CASI), for improving soil health and ensuring natural resource management (NRM) in the Indo-Gangetic Plains (IGP) involving India, Bangladesh and Nepal is outstanding. He has spearheaded



the ACIAR project on Sustainable and Resilient Farming Systems Intensification (SRFSI), being implemented by CIMMYT, which has revived the hope for scaling conservation agriculture through regional collaboration, as was achieved under Rice Wheat Consortium (RWC) in late 1990s. He launched CASI projects in 12 countries in Africa, South Asia and Southeast Asia. His untiring efforts have helped in building a Regional CASI Platform involving Bangladesh, India, Nepal and Pakistan. Overall, as a result of his sincere efforts and leadership, millions of smallholder farmers in many Asian and African countries are better off and the national systems are better prepared to work for conservation agriculture for sustainable intensification and contribute towards attaining SDGs by 2030. The Trust for Advancement of Agricultural Sciences has great pleasure in presenting the 10th Dr MS Swaminathan Award for Leadership in Agriculture to Dr John Dixon. February 13, 2019

Eleventh Award: Dr Shenggen Fan



The eleventh award was given to Dr Shenggen Fan, Former Director General of the International Food Policy Research Institute (IFPRI), Washington DC, USA by Dr K VijayRaghavan, Principal Scientific Adviser to Govt. of India on 30th November, 2021 for his major contributions in the area of transition economies and rural development in China, and ambitious program on good policy and nutritional security research in India as well as South Asia. His research also focused on analysis of the role of public and private investments in agriculture and in fighting against chronic poverty and hunger. He is a member of the Leadership Council of Compact 2025, an initiative for ending hunger and under-nutrition by 2025. In 2014, Dr Fan received the Hunger Hero Award from the World Food Program in recognition of leadership in fighting hunger worldwide.

Citation

Dr Shenggen Fan is an accomplished agricultural economist renowned not only as an author of widely cited journal articles and books but also as a global leader in agricultural and food policies. Through decades of research, he has been playing a crucial role in improving food and nutrition security in several countries and regions.

Dr Fan is currently the Chair Professor at the College of Economics and Management at China Agricultural University (CAU), leading a national innovation team on food economics and policy. Prior to joining CAU, Dr Fan served as Director General of the International Food Policy Research Institute (IFPRI) from 2009 to 2019. He joined IFPRI in 1995 as a research fellow, and conducted extensive research on pro-poor development strategies in Africa, Asia, and the Middle East, especially in China and India. He led IFPRI's program on public investment before becoming the Director of the Institute's Development Strategy and Governance Division in 2005.

Dr Fan's research covers a wide range of issues such as public investment, agricultural and rural development, transition economies, poverty reduction, food security and nutrition, and sustainable food systems. He has been engaged in the agricultural development strategy for developing countries throughout his career. The econometric model he developed to measure public investment and priorities in his early years has been set as a paradigm by international agencies such as United Nations and the World Bank and adopted by many developing countries in making policies to optimize public spending and eliminate poverty. As the Director General of IFPRI, he led a strong team of researchers to provide cutting-edge evidence-based research to develop policies towards transforming the food systems for human and planetary health. Dr Fan was awarded an honorary life membership of the International Association of Agricultural Economists (IAAE) in 2018 and became a Fellow of American Applied Economics Association (AAEA) in 2020.



In addition to academic achievements, Dr Fan champions food security and nutrition and innovative food systems through his leadership role on multiple global committees. He has been a member of the Lead Group for the Scaling Up Nutrition (SUN) Movement appointed by the former UN Secretary General Ban Ki Moon, and he served as the Chair, the Vice Chair, and member of the Food and Nutrition Council of the World Economic Forum from 2012 to 2018. He also serves as an adviser to many national governments on agriculture, food security, and nutrition related matters.

Dr Fan has made tremendous contributions to eradicate hunger and to ensure food security all over the world. He received the Hunger Hero Award from the World Food Program in recognition of his commitment to and leadership in fighting hunger worldwide in 2014. In 2017, Dr Fan received a highly prestigious Fudan Management Excellence Award in 2017 - a highly prestigious award, recognizing individuals who have made outstanding contributions in the field of management, is regarded as a “Nobel Prize for Management” in China.

As Director General, IFPRI, Dr Fan tried to build a very strong and ambitious program on good policy and nutritional security research in India as well as South Asia. The Trust for Advancement of Agricultural Sciences (TAAS) is pleased to bestow prestigious Dr MS Swaminathan Award for Leadership in Agriculture for the year 2020 on Dr Shenggen Fan for his life time outstanding contributions today on 30th November, 2021.

Twelfth Award: Dr Adel El-Beltagy



The twelfth award was given to Dr Adel El-Beltagy, Former Director General of International Center for Agriculture in the Dry Areas (ICARDA) by Dr K VijayRaghavan, Principal Scientific Advisor to the Government of India on 30 November 2021 for his life-time outstanding contributions in establishing a most modern genebank at ICARDA, Aleppo conserving the world's most valuable germplasm of arid land crops, including their wild relatives; and his continued support to conservation of agrobiodiversity; also for heading the CGIAR Program for the newly formed Central Asia and Caucasus Republics and for playing key leadership role in transforming their agricultural research systems.

Citation

Prof. Adel El-Beltagy had a long and an effective career in the national, regional and international agricultural research that changed the lives of many resource poor farmers in the dry areas of West Asia, North Africa (CWANA) and Central Asia and Caucasus (CAC) countries. He immensely contributed towards strengthening agricultural research in Egypt as Co-Chair of the Committee on Development of Egypt Agricultural Strategy for the 1990s with support of World Bank (WB). He also chaired the Committee on Sustainable Agriculture Development Strategy towards 2030 in Egypt. This led to the most productive cereal (rice and wheat) production systems coupled with improvement in the irrigation system and human resource development. These initiatives ensured food security for many Egyptians having small farm holdings.

As Director General of International Center for Agriculture in the Dry Areas (ICARDA) from 1995-2006, Dr Beltagy worked diligently to fulfil global research mandate for dry areas. He also headed the CGIAR Program for the newly formed Central Asia and Caucasus Republics and played key leadership role in transforming their agricultural research systems. He also established a consortium to rebuild agriculture in Afghanistan involving national and international partners (2002-2006).

He did help in establishing a most modern genebank at ICARDA, Aleppo conserving the world's most valuable germplasm of arid land crops, including their wild relatives. He has been a Member of the high level task force of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA), 2013-2016. As a Member of the CGIAR Genetic Resources Policy Committee chaired by Dr Swaminathan (1994-1999), and Vice Chair/ Member of Board of the Global Crop Diversity Trust (GCDT) (2007-2011), he continued to support conservation of agrobiodiversity.

As Chairman of Global Forum on Agricultural Research (GFAR) from 2006-2010, he worked with the regional fora to promote both food and nutritional security in the developing world. Dr El-Beltagy has also been a Fellow and Board Member of Third World Academy

of Sciences (TWAS) and has promoted South-South cooperation in bringing excellence in science. He also served as President of the Governing Board of the Centre for Advanced Mediterranean Agronomic Studies (CIHEAM) from 2011 to 2015. His overall efforts have left lasting impact on research and development of agriculture and food security in the CWANA & CAC region, and also the dry areas in South Asia, including India. These efforts for enhancing food and nutritional security and poverty alleviation in the developing world, in general, and in the dry areas, in particular, have been well recognized by a series of international and national awards.

The Trust for Advancement of Agricultural Sciences (TAAS) has great pleasure in presenting the prestigious Dr MS Swaminathan Award for Leadership in Agriculture for the year 2021 to Dr Adel El-Beltagy for his lifetime outstanding contributions today on 30th November, 2021.



Recent TAAS Publications

- National Symposium on Food, Nutrition and Environmental Security, 29-30 August, 2022 (December 2022).
- Reminiscences and Reflections, November, 2022.
- Resilience in Dairy Farming - A Success Story by Ms. Nikki Pilaian Chaudhary, November, 2022.
- National Dialogue on Innovations in Agricultural Extension: A Way Forward, 8-9 April, 2022 (September 2022).
- Towards Secure and Sustainable Agriculture - Strategy Paper by Dr. R.S. Paroda, August, 2022.
- Expert Consultation on Promoting Efficient Irrigation Technologies for Water Saving Across Scales and Sectors, 25 February, 2022 (May 2022).
- Expert Consultation on Accelerating Export of Seed Spices: Challenges and Opportunities - Proceedings and Recommendations, 22 November 2021 (January 2022).
- National Workshop on Bridging the Yield Gaps to Enhance Foodgrain Production: A Way Forward - Proceedings and Recommendations, 26 August, 2021 (December 2021).
- Report on Policies and Action Plan for a Secure and Sustainable Agriculture in Hindi, October, 2021.
- Youth as Advisory Agents, Input Providers and Entrepreneurs – Article by Dr. R.S. Paroda, September, 2021.
- Brainstorming Session on Regenerative Agriculture for Soil Health, Food and Environmental Security - Proceedings and Recommendations, 26 August, 2021.
- Stakeholders Dialogue on Enabling Policies for Harnessing the Potential of Genome Editing in Crop Improvement - Proceedings and Recommendations, 17 March, 2021 (June, 2021).
- Harnessing Genome Editing for Crop Improvement – An Urgency : Policy Brief, May, 2021.
- Accelerating Science-Led Growth in Agriculture: Two Decades of TAAS, May, 2021.

- A Road Map on Stakeholders Dialogue on Strategies for Safe and Sustainable Weed Management, January, 2021.
- Fish Farming in North India-A Success Story by Dr Sultan Singh, December, 2020.
- Dr MS Swaminathan Award for Leadership in Agriculture - A Compendium, October, 2020.
- A Road Map on Stakeholders Dialogue on Current Challenges and Way Forward for Pesticide Management, September, 2020.
- Biofertilizers and Biopesticides for Enhancing Agricultural Production - A Success Story by Dr Basavaraj Girennavar, June, 2020.
- A Road Map on Stakeholders Dialogue on Way Forward for the Indian Seed Sector, June, 2020.
- National Dialogue on Land Use for Integrated Livestock Development – Proceedings and Recommendations, 1-2 November, 2020.
- A Road Map on Efficient Land Use and Integrated Livestock Development, February, 2020.
- A Road Map on Policy Framework for Increasing Private Sector Investments in Agriculture and Enhancing the Global Competitiveness of Indian Farmers, December, 2019.
- Crop Biotechnology for Ensuring Food and Nutritional Security - Strategy Paper by Dr J.L. Karihaloo and Dr R.S. Paroda, December, 2019.
- Horticulture for Food and Nutritional Security - Strategy Paper by Dr K.L. Chadha and Dr V.B. Patel, October, 2019.
- Urgency for Scaling Agricultural Innovations to Meet Sustainable Development Goals (SDGs) – Strategy Paper by Dr R.S. Paroda, April, 2019.
- Tenth Foundation Day lecture on “Can India Achieve SDG 2 – Eliminate Hunger and Malnutrition by 2030” by Dr Prabhu Pingali, Professor in the Charles H. Dyson School of Applied Economics and Management at Cornell University, January 24, 2019.

- Motivating and Attracting Youth in Agriculture - Strategy paper by Dr R.S. Paroda, November, 2018.
- Regional Conference on Motivating and Attracting Youth in Agriculture (MAYA) - Proceedings and Recommendations, August 30-31, 2018.
- Road Map on Motivating and Attracting Youth in Agriculture (MAYA), November, 2018.
- Brainstorming Meeting on Harnessing Intellectual Property to Stimulate Agricultural Growth – Proceedings and Recommendations, July 27, 2018.
- Women Empowerment for Agricultural Development - Strategy Paper by Dr R.S. Paroda, May, 2018.
- Policy Brief on Agricultural Policies and Investment Priorities for Managing Natural Resources, Climate Change and Air Pollution - April, 2018.
- Livestock Development in India - Strategy Paper by Dr A.K. Srivastava, Member, ASRB & Trustee, TAAS, February, 2018.
- Strategy for Doubling Farmers' Income - Strategy Paper by Dr R.S. Paroda, February, 2018.



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Progress Through Science



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