Appendices

Awards and Other Honours Received by M.S. Swaminathan

National Awards

1. *Shanti Swarup Bhatnagar Award* (1961)—for outstanding contributions to the Biological Sciences.
2. *Birbal Sahni Medal* of the Indian Botanical Society (1966) —for outstanding contributions to Applied Botany.
3. *Padma Shri* (1967).
4. *Silver Jubilee Commemoration Medal* of the Indian National Science Academy (1971) for outstanding contributions to Genetics and Agricultural Research.
5. *Padma Bhushan* (1972).
6. The National Investment & Finance Investors' Weekly's *Man-of-the-Year Award* (1973).
7. *Barclay Medal* of the Asiatic Society (1978) for outstanding contributions to Genetics.
8. *Moudgil Prize* (1978) for significant contributions to Standardization and Quality Control of the Bureau of Indian Standards.
9. *Borlaug Award* (1979)—instituted by Coromandel Fertilizers Ltd., for 'Evolving a strategy for agriculture rooted in science, but tempered by a concern for ecology and human values'.
10. *Meghnad Saha Medal* of the Indian National Science Academy (1981).
11. *Rabindranath Tagore Prize* of Visva Bharati University (1981).

12. *R.D. Misra Medal* of the Indian Environmental Society (1981).
13. *Krishi Ratna Award* (1986)— for 'devotion to the cause of Agro-Sciences, and for being the benefactor of the farming community', instituted by the Bharat Krishak Samaj / World Agriculture Fair Memorial Trust Society.
14. *Padma Vibhushan* (1989).
15. *Dr Sir J. C. Bose Medal*, awarded by the Bose Institute, Calcutta (1989).
16. *Lal Bahadur Shastri Desh Gaurav Samman* (1992).
17. *Pt. Jawaharlal Nehru Birth-Centenary Award* of the Indian Science Congress Association (1992).
18. *Charles Darwin International Science and Environment Medal* (1993).
19. *Dr B. P. Pal Medal* (1997)—for unique contributions to agricultural research and development, instituted by the National Academy of Agricultural Sciences, India.
20. *V. Gangadharan Award* (1997)—for outstanding contributions to National Development.
21. *Dr B. P. Pal Memorial Award* of the Indian Science Congress Association (1998).
22. *Shatabdi Puraskar* in the field of Agricultural Sciences of the Indian Science Congress Association (1999).
23. *Legend in His Lifetime Award*, World Wilderness Trust (1999).
24. *Professor Pran Nath Mehra Memorial Award* (1999)—for most outstanding contributions to India's Green Revolution.
25. *Asutosh Mookerjee Memorial Award* for 1999–2000 of the Indian Science Congress Association (2000).
26. *Indira Gandhi Prize for Peace, Disarmament and Development* (2000).
27. *TNAU Best Alumnus Award for the Millennium 2000*, for outstanding contributions in the field of Agriculture and Environment (2000).
28. *Archbishop Benedict Mar-Gregorios Foundation Puraskar*, (2000).
29. *Millennium Scientist Award* of the Indian Science Congress Association (2001).
30. *Lokmanya Tilak Award*, Lokmanya Tilak Smarak Trust, Pune (2001).
31. *Indira Gandhi Gold Plaque* awarded by the Asiatic Society (2002) for significant contribution towards human progress.

32. *Lifetime Achievement Award* from Bio Spectrum (2003).
33. *Dupont-Solace Award* (2004) for contribution to the field of food and nutrition security.
34. *Raja Rammohan Roy Puraskar* (2005).
35. *Technology Achievement Award* (2005).
36. *Karmaveer Puraskaar*, Nobel Laureates iCONGO Confederation of NGOs (2007).
37. *All India Management Association's Lifetime Achievement Award* (2007).
38. *Distinguished Global Thinker Award*, Institute for Integrated Learning in Management, New Delhi (2007).
39. *Lal Bahadur Shastri National Award* for Excellence in Public Administration, Academic Management (2007).
40. *Fifth Panampilly Prathibha Puraskar* (2012).
41. *GITAM Foundation Annual Award*, Visakhapatnam (2012).
42. *Indira Gandhi Award* for National Integration (2013).
43. *Yerarignar Award* (Icon of Farm Research) (2017) an award jointly constituted j by the Agricultural Scientific Tamil Society, New Delhi; the Tamil Nadu Agricultural University, Coimbatore; The Tamil Nadu Veterinary and Animal Sciences University, Chennai; and the Tamil Nadu Fisheries University, Nagapattinam.
44. *Bharath Shanthi Dhootha Award* (2017) World Peace Festival Society, Warangal, A.P.
45. *National Basava Krushi Award* (2018) Lingayat Panchamasali Mahapeetha, Mysore.
46. *Kerala Shastra Puraskaram* (2021), Kerala State Council for Science, Technology and Environment, Kerala.

International Awards

1. *Mendel Memorial Medal* of the Czechoslovak Academy of Sciences (1965)— for outstanding contributions to Plant Genetics.
2. *Ramon Magsaysay Award* for Community Leadership (1971)—in recognition of outstanding contributions as 'Scientist, educator of both students and farmers, and administrator, towards generating a new confidence in India's agricultural capability'.
3. *Bennett Commonwealth Prize* of the Royal Society of Arts, U.K. (1984)—for significant contributions to household nutrition security.
4. *Bicentenary Medal* of the University of Georgia, USA (1985)
5. *Award of the Association for Women in Development*, Washington, D.C., (1985)—for 'Outstanding contributions to activities which foster development for women'. (First recipient)
6. *Albert Einstein World Science Award*, World Cultural Council (1986).
7. *World Food Prize*, considered the equivalent of a Nobel Prize in the field of Food & Agriculture' (1987) (First recipient)
8. *Golden Heart Presidential Award*, Republic of the Philippines (1987)—in recognition of outstanding contribution to agriculture in the Philippines, including the proposal for the establishment of a national Rice Research Institute to work in partnership with IRRI.
9. *Commander of the Order of the Golden Ark* of the Netherlands (1990)—to honour special services rendered for the conservation of the flora and fauna of the world.
10. *The Tyler Prize for Environmental Achievement* (1991)—'in recognition of lifelong contributions to increasing biological productivity on an ecologically sustainable basis, and to promoting the conservation of biological diversity'.
11. *Honda Prize*, Honda Foundation, Tokyo (1991)—for outstanding services to the development of ecotechnologies in the field of agriculture.
12. *Charles Darwin International Science and Environment Medal* (1993).
13. *Asian Regional Award*, Asian Productivity Organization (1994)—for contributions to the improvement of agricultural productivity in Asia.

14. *UNEP-Sasakawa Environment Prize* (1994)—'for outstanding global contribution to the management and protection of the environment, and to conservation and sustainable development'.

15. *World Academy of Art and Science, Special Award* (1994) —for exceptional contributions to global civilization and leadership in thought that leads to action'.

16. *Global Environmental Leadership Award*, Climate Institute, Washington, D.C. (1995)—for encouraging village-level responses to environmental issues'.

17. *China's 'highest Award* (China Council for International Cooperation on Environment and Development Award) for International Co-operation on Environment and Development (1997)— for outstanding contributions to the lofty cause of environmental protection and development, and for signal accomplishments in the field of international co-operation'.

18. *Ordre du Merite Agricole de France* (1997)—created in 1883, to honour 'persons having rendered services of the highest quality to the cause of agriculture and its development and amelioration'.

19. *Henry Shaw Medal*, Board of Trustees of the Missouri Botanical Garden, St Louis, Missouri (1998)—'in consideration of important service rendered to humanity through emphasis on sustainability in agriculture'.

20. *The Volvo Environment Prize* (1999)—'for his achievements as a plant breeder and administrator which led to dramatic increases in crop yields, his international leadership in agriculture and resource conservation, his deep concern for the poor and disadvantaged, and his continuing research and leadership to ensure that they get the opportunities needed to develop in ways that enhance the natural environment on which they depend'.

21. *UNESCO Gandhi Gold Medal* (1999)—for 'outstanding work in extending the benefits of biotechnology to marginalized and poverty-stricken populations in developing countries, and in securing a sound basis for sustainable agricultural, environmental, and rural development'.

22. *Franklin Delano Roosevelt Four Freedoms Medal*, Franklin and Eleanor Roosevelt Institute and the Roosevelt Stichting (2000)—'for brilliant leadership that has established a goal for the new millennium—a hunger-free world, an international structure of co-operation among nations, a determination to use the miraculous technology of our times to help those in need, for dynamism and compassion that have given new meaning

to Franklin D. Roosevelt's commitment to a better world, where all nations will understand and strive for freedom from want'.

23. *Planet and Humanity Medal* of the International Geographical Union (2000) — for significant contribution to environmentally relevant issues.
24. *The Economic Times Awards for Corporate Excellence*—Lifetime Achievement (2002).
25. *Toda Award for Peace Achievement*, Japan (2004), for contributions to wide-ranging and inter-related concerns as the eradication of poverty, preserving regional ecosystems, promoting technological innovation and research for sustainable agriculture.
26. *Soka Gakkai Hiroshima Peace Award* (2005).
27. *The Crop Science Society of America, Presidential Award* (2005).
28. *Ordre Du Merite Agricole* (Commander of the Order of Agricultural Merit) France (2006).
29. *Sahametrei Medal of the Royal Government of Cambodia* (in the grade of Chevalier) (2006).
30. *Medalla Rectoral Universidad de Chile*, Chile (2009).
31. *Willa S. Cather Medal*, University of Nebraska-Lincoln, USA (2011).
32. *Living Legend of International Union of Nutrition Sciences*, Granada, Spain (2013).
33. *Honorary Fellow of Cambridge University*, UK, (2014).
34. *Governor General's Medallion* (2014)—for contributions to strengthening the relationship between Canada and India.
35. *The Swiss Indian Friendship Ambassador* (2017), 70 years of Swiss Indian Friendship.

Honorary Doctorates Awarded

Indian universities

1. The Sardar Patel University, Vallabh Vidyanagar (1970)
2. Andhra Pradesh Agricultural University, Hyderabad (1971)
3. The Andhra University, Waltair (1972)
4. The Haryana Agricultural University, Hissar (1973)
5. Gobind Ballab Pant University of Agriculture & Technology, Pantnagar (1974)
6. Jodhpur University, Jodhpur (1975)
7. Marathwada Krishi Vidyapeeth, Parbhani (1975)
8. Kumaon University, Nainital (1975)
9. Burdwan University, Burdwan (1976)
10. Agra University, Agra (1978)
11. Kerala Agricultural University, Trichur (1978)
12. Sri Venkateshwara University, Tirupati (1979)
13. University of Agricultural Sciences, Bangalore (1980)
14. Banaras Hindu University, Varanasi (1981)
15. Mahatma Phule Krishi Vishva Vidyalaya, Rahuri (1982)
16. Chandrasekhara Azad Agricultural University, Kanpur (1983)
17. University of Delhi, Delhi (1984).
18. University of Mangalore, Mangalore (1986)
19. University of Hyderabad, Hyderabad, (1987)

20. Assam Agricultural University, Jorhat (1988)
21. Tamil Nadu Agricultural University, Coimbatore (1989)
22. Rajasthan Agricultural University, Bikaner (1989)
23. Indian Agricultural Research Institute, New Delhi, (1989)
24. Pondicherry University, Pondicherry (1989)
25. Northeastern Hill University, Shillong (1991)
26. Punjab Agricultural University, Ludhiana (1994)
27. Indian Institute of Technology, Madras (1997)
28. Hemvati Nandan Bahuguna Garhwal University, Srinagar, Garhwal (1997)
29. University of Calcutta, Calcutta (1998)
30. Kakatiya University, Warangal (2000)
31. Dr Punjab Rao Deshmukh Krishi Vidyapeeth, Akola, Maharashtra (2001)
32. Gujarat Agricultural University, Ahmedabad (2002)
33. Shri Shivaji Loka Vidyapeeth, Kalyan (2002)
34. Bidhan Chandra Krishi Viswavidyalaya, West Bengal (2003)
35. Sher-e-Kashmir Agricultural University, Srinagar, Jamu & Kashmir (2005)
36. Shanmugha Arts Science Technology & Research Academy (SASTRA) (2005
37. Sathyabhama Deemed University (2005)
38. University of Kalyani, Mohunpur, West Bengal (2006)
39. N.D. University of Agriculture &Technology, Faizabad, (2006)
40. Indira Gandhi National Open University, Delhi (2007)
41. University of Mysore
42. Netaji Subhash Open University, Kolkata (2008)
43. Aligarh Muslim University, Aligarh (2009)
44. Padma Shri Dr D.Y. Patil University, Mumbai. (2011)
45. Indian Institute of Technology, Kharagpur. (2011)
46. Punjab University, Chandigarh. (2011)
47. Calicut University, Calicut (2012).
48. Viswa-Bharati, Shantiniketan, Desikottama (2012)

49. North Maharashtra University, Jalgaon (2013).
50. Dr D.Y. Patil Vidyapeeth, Pune (2013).
51. Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur, (2014)
52. University of Agriculture, Faisalabad (2014)
53. KIIT University, Bhubaneswar (2014)
54. Centurion University, Bhubaneswar (2014)
55. University of Dharwad, Karnataka (2015).
56. Birsa Agricultural University, Ranchi (2015).
57. Indian Institute of Science Education & Research (IISER), Kolkata (2015).
58. Uttar Bangal Krishi Viswavidyalaya, Pundibari, Cooch Behar (2017)
59. University of Mumbai, Mumbai (2017).
60. Indian Institute of Technology, Kanpur (2017)
61. Orissa University of Agriculture &Technology, Bhubaneswar, (2018).
62. ITM University, Gwalior (2018).

Universities abroad

1. University of Wisconsin, Madison (1983)
2. University of the Philippines, Diliman, Quezon City, (1984)
3. Asian Institute of Technology, Bangkok (1985)
4. Agriculture University, Wageningen, The Netherlands (1988)
5. Oregon State University, Corvallis, Oregon (1988)
6. University of Tuscia, Viterbo, Italy (1990)
7. University of Bologna, Italy (1992)
8. The Hebrew University of Jerusalem, Israel (1998)
9. University of Massachusetts, Boston, (2001)
10. University of Bonn, Germany (2002).
11. Soka University, Japan (2003)
12. Ohio State University, Columbus, Ohio, (2004)
13. Iowa State University, Ames, Iowa (2005)

14. University of Bari, Bari, Italy (2007)
15. Universidad de Talca, Talca, Chile (2009)
16. University of Alberta, Edmonton, Canada (2010)
17. McMaster University, Hamilton, Canada (2011)
18. University of East Anglia, Norwich (2012)
19. University of Nebraska, Lincoln, Nebraska, (2013)
20. Azerbaijan State Agrarian University, Ganja, Azerbaijan (2013)
21. University of Minnesota, Minneapolis, Minnesota, (2014)
22. Honorary degree of the Doctor of Science by the University of Agriculture, Faisalabad,Pakistan, 2014
23. McGill University, Montreal, Canada (2016)

Recognitions by Scientific Academies and Societies

National

1. Fellow of the Indian Academy of Sciences (1957)
2. Fellow of the Indian National Science Academy (1962)
3. Honorary Fellow of the National Academy of Sciences, India (1976)
4. General President, Indian Science Congress, Waltair (1976)
5. President, National Academy of Sciences, Allahabad (1988–90)
6. President, National Academy of Agricultural Sciences, New Delhi (1991–96)
7. Honorary Fellow, Indian Society for Plant Genetic Resources, New Delhi
8. Honorary Fellow of Association of Aquaculture (1998)
9. Honorary Fellow, Indian Society for Plantation Crops, CPCRI, Kasaragod (2000).
10. Fellow, Indian Academy of Entomology, Chennai (1999)

International

1. Honorary Fellow of Swedish Seed Association, Svalof, Sweden (1971)
2. Fellow of the Royal Society of London (FRS) (1973)
3. Foreign Associate, National Academy of Sciences of the United States of America (1977)

4. Foreign Member, All-Union Academy of Agricultural Sciences, USSR (1978)
5. Founding Fellow, Third World Academy of Sciences, Trieste, Italy (1983)
6. President, XV International Congress of Genetics, New Delhi (1983)
7. Foreign Member, Royal Swedish Academy of Agriculture and Forestry (1983)
8. Foreign Honorary Member, National Academy of Arts and Sciences, Cambridge, Massachusetts, (1984)
9. Foreign Fellow, National Academy of Sciences of Italy (Academia Nazionale delle Sciences della Dei XL) (1985)
10. Fellow of the Royal Society of Arts, London (1985)
11. Honorary Research Professor of the Chinese Academy of Agricultural Sciences (1987)
12. Honorary Research Professor in Genetics of the Chinese Academy of Sciences (1987)
13. Chairman, Executive Committee, International Network for the Promotion of Genetics (INProGen) in developing countries, under the aegis of the Third World Academy, Trieste, Italy (1987)
14. Fellow, European Academy of Arts, Sciences and Humanities, Salsburg, Austria (1988)
15. Chairman, Steering Committee, set up at the Asian and Pacific Development Centre, Kuala Lumpur, Malaysia, in June 1988, to plan for the Seminar on 'Public Policy Implications of Biotechnology for Asian Agriculture' in New Delhi in March,1989
16. Chairman, Steering Committee, set up in August 1988 at CIMMYT, Mexico, to organize the Third International Symposium on 'Genetic Manipulation in Crops' (1991)
17. Foreign Member, Russian Academy of Agricultural Sciences (1992)
18. Fellow, Bangladesh Academy of Sciences, Dhaka (1992)
19. International Member of the American Association for the Advancement of Science (1992)
20. Corresponding Member, Academia dei Georgofili, Italy (1994)
21. Fellow of the Linnaean Society of London (1994)

22. Fellow of the American Association for the Advancement of Science (1994)
23. Honorary Fellow of the Crop Science Society of America (1996)
24. Honorary Fellow of the American Society of Agronomy (1996)
25. President, XX World Poultry Science Congress, New Delhi, (1996)
26. Vice-President, XVIII International Congress of Genetics, Beijing (1998)
27. Fellow, Indian Society for Plantation Crops, Kasaragod, Kerala (2000)
28. Honorary Member of the World Innovation Foundation, Huddersfield, England (2002)

Honorary positions in international committees

1. Vice-Chairman, Technical Advisory Committee to the Consultative Group on International Agricultural Research (CGIAR), (1971–77).
2. Vice Chairman, Protein-Calorie Advisory Group of the United Nations (1972–77)
3. Chairman, Committee of the UN Conference on Desertification, Nairobi, Kenya (1977)
4. Chairman, United Nations Advisory Committee on Science and Technology for Development (ACSTD) (1980–83) and Chairman, Ad hoc Panel of Specialists of ACSTD on 'Integrated Application of Emerging and Traditional Technologies for Development' held at IRRI (1982)
5. President, International Federation of Agricultural Research Systems for Development (IFARD) (1976–83)
6. President, International Bee Research Association (IBRA) (1978–90)
7. Independent Chairman, FAO Council of the UN (1981–85)
8. Member, Scientific and Technical Advisory Committee, Tropical Diseases Research, World Health Organization (1983–85)
9. President, XV International Congress of Genetics, New Delhi (1983)
10. Co-ordinator, United Nations University Committee for the 10-year Evaluation, (1986)
11. Chairman, International Advisory Committee of the First International Symposium on 'Chromosome Engineering in Plants', Xian, China (1986)

12. Chairman, Keystone International Dialogues on Plant Genetic Resources (1988–91)
13. Andrew D. White Professor-at-Large of the Cornell University, Ithaca, New York (1989–95)
14. Trustee of the Ford Foundation (1989–97)
15. Chairman, The International Commission on Peace and Food (1989–94)
16. Chairman, Governing Board, Commonwealth Agricultural Bureau International (CABI), London (1991–94)
17. Founder Chairman of the Trustees of the Iwokrama International Centre for the Sustainable Management of Rainforests, Guyana (1992–99)
18. Member, China International Council for Sustainable Development (1992– 2002)
19. Chairman, Genetic Resources Policy Committee of the Consultative Group on International Agricultural Research (1994–2002)
20. Chairman, Global Board of Directors of the Hunger Project (1995–2000)
21. Trustee, Woods Hole Research Centre, Woods Hole, Massachusetts, (1999)
22. Chairman, High Level Panel of Experts on Food Security and Nutrition of the Committee on Food Security (CFS), Rome (2011–13).

Honorary positions in national and international organizations

1. Founder-Member and later Chairman of the Board of Trustees of the International Council for Research on Agro-forestry, Nairobi, (1977–82)
2. Founder-Chairman, Society for the Promotion of Wasteland Development, India (1982–86)
3. Chairman, Advisory Panel on Environment, Forestry, and Food Security of the World Commission on Environment and Development (1984–86)
4. President, International Union for the Conservation of Nature and Natural Resources (IUCN) (1984–1990)
5. Honorary Vice-President, World Wildlife Fund International (1985–87)
6. Trustee, World Resources Institute, Washington, D.C. (1985–94)
7. Chairman, Editorial Advisory Panel for World Resources Report (1986–98)

8. Trustee and Founding Member, Better World Society (1986–92)
9. President, International Society for Mangrove Ecosystems, Okinawa, Japan (1990–93)
10. President, Worldwide Fund for Nature, India (1989–96)
11. Chairman, Conference Bureau, International Conference on 'Environmentally Sound Coal Technologies: Policy Issues and Technological Options', Chennai, (1992)
12. Chairman, Commonwealth Expert Group, and the Board of Trustees, Iwokrama International Centre for Rain Forest Conservation and Development (The Commonwealth Rain Forest Programme in Guyana) (1989–99)
13. Honorary Advisor, *Global Biodiversity Assessment*, edited by V. H. Hey wood and R.T. Watson, published for UNEP by Cambridge University Press (1995)
14. Chairman, International Committee for the setting up a Global Institute for Co-operation in Water Management (1996–98)
15. Chairman, Biodiversity Commission, World Humanity Action Trust (1998– 2000)
16. Chairman of the Regional Steering Committee for the India-Bangladesh joint Project on Biodiversity Management in the Sundarbans World Heritage Site, (2001–2002) funded by the UN Foundation and UNDP
17. Chairman, Management Council, National Institute for Advanced Studies (NIAS), Bangalore (2001–13)
18. President of Pugwash Conferences on, 'Science & World Affairs' (2002–07)
19. Co-chairman with Pedro Sanchez of the UN Millennium Task Force on Hunger, a Comprehensive Global Action Plan for fighting poverty, disease, and environmental degradation in developing countries. (2002–05).
20. Chairman, Board of Trustees, Centre for Science and Environment, New Delhi (2003 -2015)
21. Chairman of the Task Force for a National Policy for Agricultural Biotechnology (2004–06).
22. Chairman, National Commission on Farmers. (2004–14).

National committees chaired by M.S. Swaminathan

1. Member, National Commission on Agriculture (1971–77)
2. Science Advisory Committee to the Cabinet, Govt of India (1980–82)
3. Expert Group on Perishable Agricultural Commodities (1981)
4. Taskforce for developing an Eco-development Plan for Goa (1982)
5. Working Group on Control of Preventable Blindness (1982)
6. Working Group on Control of Leprosy (1982)
7. Expert Group on Programmes for the Alleviation of Poverty (1980–82)
8. Task Force for Study of Eco-development in the Himalayan Region (1980– 82)
9. Committee for Development of Water Resources of the Western Ghats (1980–82)
10. Study Group on Fuel wood Requirements (1981)
11. National Biotechnology Board (1981–82)
12. Advisory Council of Scientists, Bharatiya Agro-Industries Foundation (BAIF) Pune (1988)
13. Member, Board of Agricultural Finance Corporation (1988)
14. Steering Committee for Environment and Forestry of the Planning Commission, Govt of India (1988–89)
15. Working Group on Agricultural Research and Education, for the formulation of the Eighth Five Year Plan (1990–95), and its Sub-working Group IV, on Rural Systems Research, and Sub-working Group VII, on Financial Resources for Agricultural Research and Education (1989)
16. Working Group on Conservation of Natural Resources and Sustainable Development, in the Planning Commission, Govt of Tamil Nadu, for drafting the Eighth Plan document pertaining to Forestry and Other Allied Sectors (1989)
17. Core Committee for the preparation of a National Environment Policy, Ministry of Environment and Forests, Govt of India (1989–90)
18. High Level Committee for the Review of the Central Ground Water Board (1989–90)
19. Core Committee on National Strategy for Conservation and Sustainable Development, Ministry of Environment & Forests, Govt of India (1990)

20. Tamil Nadu Council for Sustainable Livelihood Security (1990–95)
21. Chairman of the expert group for the preparation of a draft National Population Policy (1993–1994)
22. Chairman, Ranganathan Centre for Information Studies, Chennai (1993)
23. Chairman, Genetics Resources Policy Committee of CGIAR (1994)
24. Expert Committee set up by the Govt of Tamil Nadu for achieving Harmony between Coastal Agriculture and Aquaculture (1994)
25. Government of India Committee for Research on Agricultural Exports in the context of the World Trade Agreement (1994–97)
26. Committee to Restructure Agricultural Education (1996–97)
27. Government of India Committee on Remedying Regional Imbalances in Agriculture (1996–98)
28. Committee for drafting a National Biodiversity Act (1998)
29. Golden Jubilee Biotechnology Park for Women Society, Siruseri, Tamil Nadu (1999–-2000)
30. Biotechnology Board for Tamil Nadu (2000)
31. WTO Commission of Govt of Kerala (2000)
32. Chairman, Tenth Plan Steering Committee on Agriculture and Allied Sectors (2000–2001)
33. Chairman, Board of Trustees, National Foundation for India.
34. Chairman, Current Science Association, Bangalore (2001–06)
35. Chairman, Task Force for a National Policy for Agricultural Biotechnology (2004)
36. Chairman, Expert Group for a Review of Coastal Zone Regulation (2005)
37. Chairman, Task Group on Revamping and Refocusing National Agricultural Research System (2005)
38. President, Voluntary Health Services, Chennai
39. Vice-Chairman, State Planning Commission, Tamil Nadu
40. Chairman, National Institute of Advanced Studies, Bangalore
41. IGNOU Chair on Sustainable Development (2007)
42. Chairman, Expert Committee on the draft Coastal Management Zone (CMZ) Notification, constituted by the Ministry of Environment and Forests (2009)

43. Member of the ICAR Society (2010)

44. Member of the Committee on Science and Technology, Environment and Forests (2010).

45. Chairman, Advisory Committee of the Ministry of Environment & Forests and Member of the Leadership Council of 'Compact 2025'.

Postgraduate students guided by M.S. Swaminathan
at Indian Agricultural Research Institute, New Delhi, India.

1. B. Radhakrishnamurty (1956) 'Cytological studies in some species and hybrids of *Nicotiana*'

2. S. K. Jain (1956) 'Incidence and induction of pollen sterility in some crop plants' ; Indian Agricultural Research Institute, New Delhi, India

3. R. N. Mohanty (1956) 'Cytological effects of low levels of radiation of P32 in some cereals and legumes'

4. R. K. Mehta (1956) 'Induction and study of polyploidy in some fodder plants'

5. V. L. Chopra (1957) (i). 'Induction of pollen sterility in some crop plants' (ii). 'Induction of polyploidy in watermelons and muskmelons'

6. K. Shankaranarayanan (1957) 'Studies of the effects of antibiotics and other chemicals on growth of excised plant embryos in artificial media'

7. K. N. Subramanian (1958) (i). 'Studies in induced tetraploids of Berseem (*Trifolium alexandrinum* L.) and senji (*Melilotus indica* All.) with special reference to their cytological behaviour and seed setting' (ii). 'Cytogenetical studies in some economic grasses'

8. A. P. Choudhuri (1958) 'Studies in induced tetraploid of Berseem (*Trifolium alexandrinum* L.) and Senji (*Melilotus indica*)'

9. G. R. K. Sastry (1958) 'Mutation studies in wheat and cotton'

10. M. D. Upadhya (1959) 'Karyomorphological studies in some members of Triticinae'

11. Marioranjan Ray (1959) (i). 'Morphology and cytogenetics of some aneuploid derivatives of *Triticum aestivum*' (ii). 'Cytogenetical studies in Triticale'

12. P. Appa Rao (1959) (i). 'Studies on the induction of mutations in potato' (ii). 'Effect of X-irradiation and multiple crossing on fodder yield, meiosis and seed fertility in diploid and autotetraploid berseem'

MSc: IARI Postgraduate School

1. K. Gupta (1960) 'Studies on some factors governing differential response to chromosome doubling in some fodder plants'
2. P. R. Jagadees Prasad (1961) 'Mutation studies in potato, and effect of post- irradiation hypoxia on chromosome breakage'
3. T. Srinivas (1963) 'The effect of gene dosage on mutation rate in bread wheat
4. E. A. Siddiq (1964) 'Studies on the induction of polyploidy in maize and sorghum, and on the elimination of diploid cells in colchicine-treated maize.
5. L. P. Upadhaya (1964) 'Cytogenetical studies in hybrids between *Corchorus olitorius L*. and *C. capsularis L*. with special reference to trisomics'
6. Deepak Bastia (1965): 'Studies on chromosome structure as revealed by electron microscopy and induced chromosome aberration'
7. N. R. Bhagat (1965) 'Studies on induced polygenic variability in pure lines and the prepotency of the hybrids for various quantitative characters in barley'
8. David L. Krause (1967) 'Studies on the genetics and expression of vavilovoid characters in hexaploid wheat' (Canadian student)
9. M. A. Ismail (1969) 'Effects of different durations of pre-soaking on the frequency and spectrum of mutations by chemical mutagens in rice'
10. N. R. Bhattacharya (1970) 'Assessment and use of primitive cultivars of *Oryza saliva L*. in breeding'

PhD students

1. T. Natarajan (1958, University of Delhi) 'Cytogenetical studies in some crop plants with special reference to induction of mutations'
2. S. Bhaskaran (1959, University of Delhi) (i). 'Studies on the effects of mutagens on wheat and barley with special reference to the relationship between polyploidy and radio-sensitivity' (ii). 'Polyploidy and the genesis of the leguminous root nodules'
3. K. A. Patel (1959, Vallabhbhai Vidyapeeth, Anand) (i). 'Cytogenetical studies and mutation studies in tobacco' (ii). "Studies on cytogenetical effects of some vegetable and mineral oils'

4. D. Jagathesan (1960, University of Delhi) 'Studies on the induction of mutations in wheat and cotton'
5. R. Bhatia (1960, University of Delhi) 'Evaluation of utility of radiation-induced mutations in wheat breeding'
6. Satya Nirula (1961, IARI) 'The effects of ultraviolet pre-treatment and some biological factors on the frequency and spectrum of mutations induced by radiation in wheat and Sorghum'
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