



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

COLLEGE OF AGRICULTURE

COLLEGE OF FAMILY LIFE

DEPARTMENT OF
NUTRITION AND
FOOD SCIENCES
UMC 87

September 4, 1980

Dr. M. S. Swaminathan
Planning Commission
Yojana Bhavan
New Delhi, INDIA

Dear Dr. Swaminathan:

I am, herewith, enclosing two copies signed by Dr. (Mrs.) Thorne and me. As far as the nomination is concerned, the formalities are completed. However, I think it will be appropriate if you send me a dozen names of persons of high stature and their addresses, both in academic and research. Subsequently, I will write to them to write to me about you and your accomplishments both in research, teaching, and administration. I think it will be better for the persons such as the Director General of ICRISAT, and also Rice Station in Manila. It certainly will help if Dr. Borlang could write. Many researchers in the USA and Europe, know your work and commitments for not only India's welfare but of the world.

Please rush these names and their addresses so I can write to them, collect their letters, and attach them to your candidacy brochure.

Thus our nomination will be a strong and impressive one.

Please rush.

Best Wishes.

Sincerely yours,

A large, stylized handwritten signature in blue ink that reads "D. K. Salunkhe".

D. K. Salunkhe
Professor

eth

Enclosures

Nomination of Dr. M. S. Swaminathan
for Honorary Degree of Doctor of Science

from Utah State University

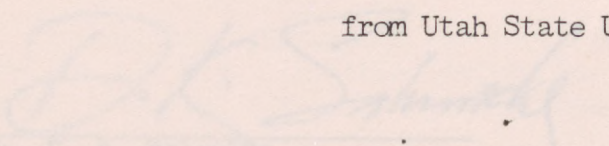
2

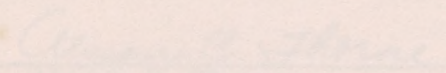
NOMINATION OF DR. M. S. SWAMINATHAN
FOR HONORARY DEGREE OF DOCTOR OF SCIENCE
FROM UTAH STATE UNIVERSITY

Nomination of Dr. M. S. Swaminathan
for Honorary Degree of Doctor of Science

Nominated by

from Utah State University


Dr. D. A. Schaller
Professor of Food Science
Department of Nutrition & Food Sciences
Utah State University
(Phone 720-2121)


Dr. Arthur C. Hanson
Lecturer
Department of Home Economics & Sociology
Utah State University
(Phone 720-2126)

UTAH STATE UNIVERSITY LOGAN, UTAH 84322

COLLEGE OF AGRICULTURE

COLLEGE OF FAMILY LIFE

NOMINATION OF DR. M. S. SWAMINATHAN

FOR HONORARY DEGREE OF DOCTOR OF SCIENCE

FROM UTAH STATE UNIVERSITY

Professor Keith L. Dixon, Chairman
 Honors, Degrees & Awards Committee
 Department of Biology
 Utah State University
 Logan, UT 84322

Dear Professor Dixon:

It is with great pleasure that I nominate Dr. M.S. Swaminathan, Chairman of the Planning Commission of India, for an Honorary Degree of Doctor of Science from Utah State University. I have known Dr. Swaminathan for over a quarter of a century.

Nominated by

Dr. D. K. Salunkhe
 Professor of Food Science
 Department of Nutrition & Food Sciences
 Utah State University
 (Phone 750-2121)

Dr. Alison C. Thorne
 Lecturer
 Departments of Home Economics & Sociology
 Utah State University
 (Phone 750-1568)



UTAH STATE UNIVERSITY · LOGAN, UTAH 84322

COLLEGE OF AGRICULTURE

COLLEGE OF FAMILY LIFE

DEPARTMENT OF
NUTRITION AND
FOOD SCIENCES
UMC 87

July 2, 1980

Professor Keith L. Dixon, Chairman
Honors, Degrees & Awards Committee
Department of Biology
Utah State University
Logan, UT 84322

Dear Professor Dixon:

It is with great pleasure that I nominate Dr. M.S. Swaminathan, Chairman of the Planning Commission of India, for an Honorary Degree of Doctor of Science from Utah State University. I have known Dr. Swaminathan for over a quarter of a century.

Dr. Swaminathan, throughout his education, was an outstanding scholar. He obtained his B.Sc. (Science) and B. Sc. (Agriculture) from Indian Universities and a Ph.D. from Cambridge University in England.

He was UNESCO Fellow to Wageningen University in the Netherlands and research associate at the University of Wisconsin, along with many other centers of learning throughout the world.

Dr. Swaminathan, after his education, declined several administrative positions and concentrated his energies in research to learning and growing more and better food for India. He and his fifty post-graduate students committed to the mission. However, the Government of India summoned him to administer the nation's agricultural program. He has and is doing superbly. As a result, in the last 10 years India did not import any food from any nation because of the dedication, hard-work, and determination of Dr. Swaminathan and his associates. Dr. Swaminathan received 12 honorary degrees from mostly Land Grant (agricultural) universities, primarily because he has done so much through these agricultural universities for India's self-sufficiency in food.

Dr. Swaminathan's contribution is not only recognized in India but also on the international scene; such as WHO, UNESCO, FAO, Protein-Calorie Group, and the President of the International Federation of Agricultural Research Systems for the Development. He has presided over many international and national organizations. They are too many to innumerate here.

He has widely published in basic and applied sciences over 200 scientific papers and guided over 50 post-graduate students for their Ph.D. dissertations.

July 2, 1980

To understand and appreciate day to day problems he took the challenge to be an extension officer in order to enable scientists to directly test and demonstrate the validity of their experimental findings in farmers' fields.

The following are recognitions he has received by scientific academies and societies:

Fellow of the Indian National Science Academy
Fellow of the Indian Academy of Sciences
Fellow of the National Academy of Sciences of India
Honorary Fellow of the Swedish Seed Association, Sweden
Fellow of the Royal Society of London (FRS)
Foreign Associate, National Academy of Science (USA)
Foreign member, All-Union Academy of Agricultural Sciences (USSR)
Mendel Memorial Award of Czechoslovakia Academy of Sciences for
the contributions to Plant Genetics and many others

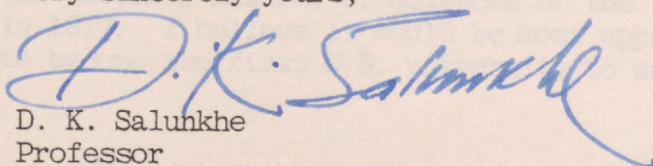
'In the words of Nobel Laureate' Dr. N.F. Barlaug sums up most aptly one of the major contributions of Dr. Swaminathan to the Indian and world food availability. "The Green Revolution has been of a team effort and much of the credit for its spectacular development must go to Indian officials such as Dr. Swaminathan".

While I was Vice Chancellor of Marathwada Agricultural University in 1975-76, it was my honor to confirm upon him an Honorary Doctor of Science degree. At the occasion I said,

"The invaluable contribution of Dr. Swaminathan to India's agriculture does deserve a richer honor than the modest tribute in offering the Doctor of Science degree from this University. He has been one of the most outstanding scientists whose gifted multi-faceted talents have been a great source of brilliant concepts which have broken ground in the vistas of agricultural sciences. His leadership in 'Green Revolution' has opened a historic chapter in the annals of the Indian Agriculture and has given stately shape and new interpretation to the advent of agriculture in India."

Professor Dixon, I herewith, whole heartedly request you, sir, and the members of the Honors, Degrees and Awards Committee that the humanitarian contribution of Dr. Swaminathan should be seriously and sincerely considered to award him the Doctor of Science degree. The reputation of Utah State University transcends the boundry lines of the state of Utah and the shores of the oceans of the United States of America.

Very sincerely yours,


D. K. Salunkhe
Professor



DEPARTMENT OF
HOME ECONOMICS AND
CONSUMER EDUCATION
UMC 29

July 14, 1980

To the Selection Committee on Honorary Degrees:

My husband, D. Wynne Thorne, served on the Board of Governors of ICRISAT (International Crops Research Institute for the Semi-Arid Tropics) from its inception until his death in February 1979. Also on the Board at the same time was Dr. M.S. Swaminathan. They became good friends and served on various ICRISAT committees together, including the program committee, and the committee for selection of a new director. I was in London with Wynne when the selection committee met there in 1976, and I spoke with Dr. Swaminathan then.

Wynne went several times a year to Hyderabad, India for ICRISAT meetings. I myself was there in 1975 and again in 1978, when I had the privilege of hearing Dr. Swaminathan speak at the dedication of the new farm technology center.

I am extremely impressed with Dr. Swaminathan's abilities, not only as a scientist, but as a warm person. After the 1978 Board meeting, Wynne and I planned to visit the state of Kerala. Dr. Swaminathan had grown up there and was eager for us to see it. He arranged for us to visit the fisheries experiment station at Cochin, and the cassava research center at Trivandrum, and to see various historical areas.

I am giving Wynne's materials on ICRISAT to the Merrill Library because they show how ICRISAT was born and its growth to the present, as well as containing various research reports. These materials also show Dr. Swaminathan's involvement.

As you will note in Dr. Salunkhe's description, Dr. Swaminathan has received honorary degrees from several universities in India. Both he and Wynne received honorary doctorates at the same time from Marathwada Agricultural University, Parbhani in 1976. Wynne recognized that India has an increasing number of well-qualified agricultural scientists and is making great strides in food production, and that Dr. Swaminathan has been a key figure in this progress.

The Royal Society of England made Dr. Swaminathan a Fellow in 1973 and the National Academy of Sciences of the U.S. made him Foreign Associate in 1977. I believe it would be most appropriate for Utah State University to become the first U.S. university to award him the honorary doctor of

July 14, 1980

science degree, because of his agricultural research, because of his concern for semi-arid agriculture, and because he encourages international cooperation. All three of these concerns are also concerns of our own University.

Because of my strong belief that this would be an appropriate action for our University to take, I am pleased to join Dr. Salunkhe in the proposal that Dr. Swaminathan be awarded the honorary doctorate of science at the USU Commencement in the Spring of 1981.

Sincerely,

Alison C. Thorne

Alison C. Thorne
Lecturer

la



Dr. M.S. Swaminathan, President of International Federation of Agricultural Research Systems for Development and Chairman of Planning Commission of India.

VITAE OF DR. MONKOMBU SAMBASIVAN SWAMINATHAN

1. Born on: August 7, 1925 in Kumbakonam in Tamil Nadu.
2. Father: Late Dr. M.K. Sambasivan, an eminent surgeon from Monkombu in Kerala State.
3. Education:
 - B.Sc. from Travancore University in 1944
 - B.Sc. Agriculture from the Coimbatore Agricultural College, Madras University, 1947
 - Associateship of the Indian Agricultural Research Institute, New Delhi, in Genetics and Plant Breeding in 1949
 - Ph.D. from the School of Agriculture, University of Cambridge, U.K. in 1952
 - UNESCO Fellow in Genetics at the Agriculture University at Wageningen, The Netherlands, during 1949-50 and Research Associate in Genetics at the University of Wisconsin, United States during 1952-53
4. Honorary Degrees - D. Sc. from:
 - The Sardar Patel University, Vallabh Vidyanagar in 1970
 - The Andhra University, Waltair in 1972
 - The Haryana Agricultural University, Hissar in 1973
 - The Andhra Pradesh Agricultural University, Hyderabad in 1973
 - G.B. Pant University, Pantnagar in 1974
 - Jodhpur University, Jodhpur in 1975
 - Kumaon University, Nainital in 1975
 - Marathwada Agricultural University, Parbhani in 1976
 - Burdwan University, Burdwan in 1976
 - Agra University, Agra in 1978
 - Kerala Agricultural University, Trichur in 1978
 - Sri Venkateshwara University, Tirupati in 1979
5. Professional Positions:
 - Assistant Botanist at the Central Rice Research Institute, Cuttack, 1954
 - Assistant Cytogeneticist (1954-56), Cytogeneticist (1956-61) and Director (1966-1972) at Indian Agricultural Research Institute, New Delhi
 - Director General, Indian Council of Agricultural Research and Secretary to the Government of India, Department of Agriculture, Research & Education (1972-March 1979)
 - Secretary to Government Delhi, of Agriculture & Rural Development, Ministry of Agriculture & Irrigation, New Delhi (April 1979 onwards)
6. Positions Held in Scientific/Professional Committees/Academies
 - Secretary, Indian National Science Academy (1969-72)
 - President, Indian Society of Nuclear Techniques in Agriculture & Biology ISNA (1971-77)
 - President, Indian Society of Agricultural Statistics (1972)

President, The Nutrition Society of India (1973-77)
 President, Indian Society of Genetics and Plant Breeding (1965 & 1975)
 President, Indian Society of Agricultural Economics (1977)
 President, Indian Society for Cotton Improvement (1975-76 and 1976-77)
 Chairman, Planning Commission Panel on Irrigated Farming
 Chairman, Planning Commission Panel on Dry Farming
 Member, CSIR Inquiry Committee
 Member, National Commission on Agriculture (1970-75)
 Chairman, High Level Committee to review the functioning of the Central
 Water and Power Research Station and Central Soils and Materials
 Research Station
 Chairman, Committee of Scientists for examining the data relating to
 the wholesomeness of irradiated potato, onion and wheat
 Chairman, Committee on Cooperative Training and Management
 Chairman, Committee on International Collaboration
 Vice Chairman, Technical Advisory Committee to the Consultative Group
 on International Agricultural Research constituted by the Food
 and Agriculture Organization of the United Nations, International
 Bank for Reconstruction and Development and the U.N. Development
 Programme (1971-1976)
 Vice Chairman, Protein-Calorie Advisory Group to the United Nations
 System (1972-1976)
 Chairman, Board of Trustees, International Council for Research on
 Agro-Forestry (1977 onwards)
 Member, Board of Trustees, International Maize and Wheat Research
 Centre, Mexico (1972-78)
 Member and Vice Chairman, Board of Governors, International Crop
 Research Institute for the Semi-Arid Tropics (1972 onwards)
 Vice President, Society for the Advancement of Breeding Research
 in Asia and Oceania (1977-1981)
 Chairman, International Scientific Committee constituted to review
 the research contributions of the International Rice Research
 Institute, The Philippines (1975)
 Vice President, International Congress of Genetics, The Hague (1963)
 Chairman, Committee of the Whole, U.N. Conference on Desertification,
 Nairobi, 1977
 Vice President, International Congress of Genetics, Leningrad (1978)
 Chairman, International Wheat Genetics Committee (1978-83)
 Member, Coordinating Committee, Rubber Research Institute of
 Malaysia (1978 onwards)
 President, International Federation of Agricultural Research Systems
 for Development (IFARD) (1979 onwards)

7. Research Publications:

Over 200 research papers in national and international journals

8. Teaching:

Has guided over 50 students in their Ph.D. dissertation work

9. Extension Education:

Developed the concept of "National Demonstrations" in 1964 in order
 to enable scientists to directly test and demonstrate the validity
 of their experimental findings in farmers' fields
 Demonstrated the concept of "Seed Village" in the village Jounti in
 Delhi State

10. Assistance in the Formulation of Development Projects:

Assisted in the initiation of the High-yielding Varieties Programme, Dry Land Farming Pilot Projects, Multiple Cropping Pilot Projects and the Intensive Cotton Development Programme

11. Recognition by Scientific Academies:

Fellow of the Indian National Science Academy (F.N.A.) (1962)
 Fellow of the Indian Academy of Sciences (F.A.Sc.) (1957)
 Honorary Fellow of the National Academy of Sciences, India (1976)
 Honorary Fellow of the Swedish Seed Association, Sweden (1971)
 Fellow of the Royal Society of London (F.R.S.) (1973)
 Foreign Associate, National Academy of Sciences of the United States (1977)
 General President, Indian Science Congress, Waltair (1976)
 Foreign Member, All-Union Academy of Agricultural Sciences, USSR

12. Scientific Awards:

Shanti Swarup Bhatnagar Award for contributions to Biological Sciences (1961)
 Mendal Memorial Award of the Czechoslovakia Academy of Sciences for contributions to Plant Genetics (1965)
 Birbal Sahni Medal of the Indian Botanical Society for contributions to Applied Botany (1966)
 Silver Jubilee Commemoration Medal of the Indian National Science Academy for contributions to genetic and agricultural research (1973)
 Barclay Medal of the Asiatic Society for contributions to genetics (1974)
 K.L. Moudgill Prize for contribution to standardization (1978)

13. Awards by the President of India:

Padma Shri (1967)
 Padma Bhushan (1972)
 Borlaug Award (1979)

14. Award for Community Leadership:

Awarded the Ramon Magsaysay Award for Community Leadership in 1971, in recognition of contributions as "scientist, educator of both students and farmers and administrator towards generating a new confidence in India's agricultural capabilities"

15. Major Scientific Contributions:

Has worked in collaboration with colleagues and students on a wide range of problems in basic and applied plant genetics over a period of 30 years. Among the more important contributions are:

elucidation of the origin and differentiation of potato species
 understanding the genetic relationships among wheat species
 accomplishment of difficult crosses in potato and jute species
 standardization of techniques for the induction of polyploidy (i.e.
 doubling the number of chromosomes) in several economic plants
 elucidation of the factors influencing the induction and recovery
 of mutations in high plants
 identification of the barriers to high yields in wheat and the
 initiation of the wheat breeding programme, involving the "Norin"
 dwarfing genes obtained from Mexico
 development of the concept of "Crop Cafeterias", "Mid-season Corrections
 in Crop Scheduling" and alternative cropping strategies for
 different weather conditions
 purposeful manipulation of genes in improving the yield, quality
 and stability of performance of several economic plants
 development of whole village watershed operational research projects
 based on principles of ecology and economics

16. Scientific Contributions of Dr. M.S. Swaminathan:

Dr. Monkombu Sambasivan Swaminathan, a distinguished Indian
 agricultural scientist was elected during 1977 as a Foreign Associate
 of the National Academy of Sciences, Washington, USA in expression
 of the Academy's "profound appreciation of his services to science".
 Dr. Swaminathan is the third Indian scientist to be honored by the
 National Academy of Sciences, one of the highest recognition of
 achievements in the scientific world. Dr. Swaminathan was earlier
 elected "for his contribution to the genetics and breeding of crop
 plants and his applications of agricultural science that have
 resulted in improved crop production" as a fellow of the Royal
 Society of London. He was also elected by the All-Union Academy
 of Agricultural Sciences of USSR as a Foreign Member. Thus, he
 has been honored by the leading learned Societies of U.K., USA,
 and USSR. Dr. Swaminathan has been similarly honored by the Indian
 National Science Academy, the Indian Academy of Sciences, the
 National Academy of Sciences of India and the Swedish seed Association
 of Svalof.

Dr. Swaminathan's research interests have been wide and extensive
 and he has been the leader of a productive school of research workers.
 Starting his research career at the Indian Agricultural Research
 Institute, New Delhi, in 1947, with a study of the inter-relationships
 in the genus *Solanum*, Dr. Swaminathan made an outstanding contribution
 to our understanding of the cytotaxonomical relationships in the
 tuber-bearing *solanums*. The extensive research carried out by
 him at Wageningen, Cambridge, and Wisconsin helped to elucidate the
 origin of the potato, *Solanum tuberosum*, the nature of the polyploidy
 in this important taxon and its interrelationship with related
 cultivated and wild species. Using new techniques he was able to
 obtain previously unsuccessful hybrids and transfer valuable
 characteristics into cultivars.

On his return to India, Dr. Swaminathan created a vigorous school of cytogenetics and radiation research. Under his leadership, several basic problems were elucidated such as the differentiation of hexaploid *Triticum* species, the relationship of *T. Zhukovskyi*, the origin of the dwarf coconut palm, the role of micro-mutations in species differentiation, the development of monosomic series in wheat and its utilization in napping genes in wheat. Using wheat, barley and rice as test organisms, the extensive studies of the School not only gathered considerable fundamental information about the process of mutation and factors controlling the phenomenon but helped to highlight (i) the potential mutagenic properties of some vegetable oils and (ii) the indirect effects of irradiating the culture medium on which the test organism, *Drosophila melanogaster* was raised. Such indirect effect later confirmed as several institutions led to the inclusion of genetic criteria in the assessment of the wholesomeness of articles of human consumption subjected to irradiation for prolonging their shelf-life.

As Head of the Division of Botany and later Director of the Indian Agricultural Research Institute, Dr. Swaminathan became convinced that the key to shattering the yield barriers in wheat lay in the dwarf, non-photosensitive plant types of the kind developed by Dr. Borlaug in Mexico. On Dr. Swaminathan's initiative, the Government of India invited Dr. Borlaug to visit India and review the wheat situation. This led to the obtaining of a wide range of dwarf wheat improvement programme designed to develop high yielding varieties of wheat suitable for Indian conditions and of a quality acceptable to the Indian consumers. In addition to direct introduction of varieties developed in Mexico and selection in advanced generation material from that country, Dr. Swaminathan initiated a programme of improving the stability of performance and consumer quality of the high yielding varieties both by hybridization with Indian varieties and by mutational rectification of specific defects such as replacing red grains of Sonora-64 and Lerma Rojo 64-A by amber grained Sharbati Sonora and Pusa Lerma. A dwarf *durum* wheat breeding programme was also initiated resulting in strains such as "Malavika". Dr. Swaminathan and his school have made important contributions in other crops also including the development of short duration, widely adapted high yielding strains of rice (Pusa-2-21) and scented (Basmati) type "Improved Sabarmati", improved cultures of jute derived from crosses of *Corchorus olitorius* and *C. capsularis*, obtained for the first time through a new technique involving grafting.

Realizing the importance of effectively bridging the gap between research results and their application on the farm, Dr. Swaminathan developed as early as 1964 the National Demonstration Programme which enabled scientists to demonstrate on cultivars fields the potential of the high yielding varieties of cereals and the optimum package of management practices. Those demonstrations had a very good impact on farmers of the new varieties and new practices, paving the way for the launching of the High Yielding Varieties Programme by the Government of India in 1966 and for the successful wheat revolution exemplified by the increase in wheat production by more than 200% within the short

period of a decade. Over the years, Dr. Swaminathan has developed these concepts further, resulting in the whole village watershed operational research projects sponsored by the Indian Council of Agricultural Research in 1975. An important contribution made by Dr. Swaminathan in this connection was the Seed Village Programme under which entire village communities were encouraged and assisted to develop into high quality seed producing centres.

Among the several honors and medals he has received, mention may be made to the Ramon Magsaysay Award for Community Leadership recognizing his multifaceted contribution as "scientist, educator of both students and farmers and administrator towards generating a new confidence in India's agricultural capability".

Dr. Swaminathan has given generously of his time for the development of science at the national as well as at the international levels. The invaluable contribution he has made to the Indian Society of Genetics and Plant Breeding as Secretary, President and Member of the Executive Committee is well known and widely appreciated. The great respect in which he is held by the Indian Scientific Community is clear from his election as an office bearer of several learned societies. He has been the President of the Nutrition Society of India and the Indian Society of Nuclear Techniques in Agriculture and Biology since 1972 and was elected in 1976 as the General President of the Indian Science Congress, in which capacity he gave a new purpose and significance to the annual sessions of the Congress by introducing the concept of a focal theme for each annual session. The annual session in 1976 over which he presided focussed on the extremely timely and relevant problems of "science and integrated rural development". He served as President at the Annual Session of the Indian Society of Agricultural Economics in 1977. In his Presidential Address entitled "Indian Agriculture at the Crossroads", he offered several useful suggestions for improving terrestrial and aquatic productivity.

Dr. Swaminathan's services have been equally in demand at the global level, where he played a very important role as Vice-Chairman of the Technical Advisory Group (TAG) to the Consultative Group on International Agricultural Research and of the Protein-Calorie Advisory Group of the U.N. In 1977, he was elected as Vice-Chairman of the Board of Trustees of the International Council for Research in Agro-Forestry. He is a Member of the Board of Trustees of CIMMYT, Mexico, and Board of Governors of ICRISAT, Hyderabad. In 1975, he served as the leader of the Review Mission, the first of its kind, set up by the Consultative Group on International Agricultural Research for assessing the quality and value of the scientific programmes of the International Rice Research Institute in the Philippines in order to assure the Consultative Group that the operations of the Institute are being carried out in line with the declared policies and to the full international standards expected. The Committee submitted its valuable and highly appreciated report in April 1976. At Dr. Swaminathan's initiative an International Group was convened in 1974 at New Delhi by TAC to review the biology of yield in grain legumes and to suggest methods of developing high yielding varieties of pulses. The high regard in which he is held by

geneticists around the world will be evident from his election as Vice-President of the International Congress of Genetics held in 1963 at the Hague and again as Vice-President of International Genetics Congress scheduled to be held in Moscow in August 1978. At the time of the celebration of the Centenary of the discovery of Mendel's laws of heredity in 1965, the Czechoslovakia Academy of Sciences conferred the Mendel Award on him.

He was elected Chairman of the Committee of the Whole Conference of the UN Conference on Desertification held at Nairobi in 1977 and in this capacity played an important role in finalizing an action plan for combating desertification.

Perhaps the following words of the Nobel-Laureate Dr. N.E. Borlaug sum up most aptly one of the major contributions of Dr. Swaminathan to the Indian and world food availability "The green revolution has been a team effort and much of the credit for its spectacular development must go to Indian officials, organizations, scientists and farmers. However, to you, Dr. Swaminathan, a great deal of the credit must go for first recognizing the potential value of the Mexican dwarfs. Had this not occurred, it is quite possible that there would not have been a green revolution in Asia".

17. This is a portion of the citation by Professor D. K. Salunkhe while he was Vice Chancellor (President) of Marathwada Agricultural University, at the Commencement Ceremonies awarding the Doctor of Science Degree to Dr. Swaminathan in 1976.

"The invaluable contribution of Dr. Monkombu Sambasivan Swaminathan to India's agriculture does deserve a richer honor than the modest tribute in offering the Doctorate by this University. His excellence in the field of Agriculture was marvelled at by scientists all over the world. He has been one of the most outstanding scientists whose gifted and multifaceted talents have been a great source of brilliant concepts which have broken grounds in the vistas of Agricultural Sciences. His leadership in the Green Revolution has opened a historic chapter in the annals of India agriculture and has given a stately shape and new interpretation to the advent of Agriculture in India."

During 1979, India faced unprecedented drought without any food imports. Dr. Swaminathan's contribution toward achieving agricultural growth with stability of production is widely acknowledged. His three-pronged strategy for fighting the problems arising from national calamities consists of:

- a. introduction of crop-life saving techniques and risk-distribution agronomy,
- b. introduction of contingency plans and mid-season corrections in cropping patterns according to weather patterns, and
- c. introduction of compensatory production programs in non-traditional areas and in non-traditional seasons.

Dr. Swaminathan has recently proposed a program for achieving freedom from hunger in India by 1989.

