LABORATORIUM
VOOR ERFELIJKHEIDSLEER DER
LANDBOUWHOGESCHOOL

Lijnbaanstraat 53,
WAGENINGEN. 15th May, 1950.

The Head,
Department of Exchange of Persons,
UNESCO, Paris.

Ref.No.EXP 162525-ID:mw.

Dear Mr.Carter,

I acknowledge with thanks the receipt of your letters of the 27th April and 9th May. I shall, soon after the termination of my Fellowship, send you my report on the lines indicated by you.

Please send me the report " Unesco Fellowships as seen through the reports of Unesco Fellows" at an early date.

With my best regards,

Yours sincerely,

M.S. Swaminathan

(M.S.Swaminathan)

TELEPHONE : KLEBER 52-00 TELEGR. : UNESCO PARIS

UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

ORGANISATION DES NATIONS UNIES POUR L'ÉDUCATION, LA SCIENCE ET LA CULTURE

19, Avenue Kléber, PARIS 16e

In your reply, please refer to :
En répondant, veuillez rappeler :
N° EXP/162048-ID:bn

30 May, 1950.

Dear Mr. Swaminathan,

I wish to acknowledge your letter, dated 15 May, and have pleasure in forwarding herewith a copy of the Unesco document - "Unesco Fellowships as seen through the Reports of Unesco Fellows".

Yours sincerely,

Ignazio Dandolo,
Acting Head, Exchange of
Persons Service.

Mr. M. S. Swaminathan,
Lijnbaanstraat 53,
Wageningen, (Netherlands).

M.S.SWAMINATHAN.

Lijnbaanstraat 53,
Wageningen.
4th September,1950.

The Director,
External Relations Section,
Ministry of Education,Arts and Science,
The Hague.

Dear Dr.Bender,

This is to inform you that I am completing my Fellowship work in this Country on September 14th and will be leaving this place for a short tour of other European countries on the 15th.I shall,in due course,send you a copy of my final report to the Unesco.

You can judge how much value I have attached to my stay in this Country from the fact that though at the time of my coming over here,I intended to stay only for 6 months,I have prolonged my sojourn to more than 8 months. I have had the privilage to come into intimate contact with a number of leading scientists in my field of specialisation, to get to know a number of leading private Plant Breeders and Breeding Organisations,to address a large number of scientific gatherings in different parts of this Country and to broadcast thrice over the International Services of the Radio Nederland on Dutch Agriculture and Animal Husbandry.In short,I have enjoyed a very valuable and pleasant time and the memory of my association with this beautiful Country and its kind and hospitable people will linger long in my mind.

I shall call on you at your Office the 8th or 9th to thank you for all the arrangements you had made for my stay and study in this Country and also to take leave of you personally,

With kind regards,

Yours sincerely,

M

M.S.SWAMINATHAN.

Lijnbaanstraat 53,
Wageningen.
Holland.
4th September, 1950.

The Head,
Department of Exchange of Persons,
Unesco, Avenue Kleber,
Paris.

Dear Sir,

This is to inform you that I am completing my Fellowship work in this Country on September 14th and will be leaving this place for a short tour of other European countries on the 15th. My permanent home address in India is "Kottaram", Gandhi Nagar, Kumbakonam, SI., India. I shall in due course send my final report.

During my stay in this country, I have had the privilage of coming into contact with a number of leading scientists in my field of specialisation, to get to know many leading private potato breeders and breeding organisations, to address a large number of scientific gatherings in different parts of the country and to broadcast thrice over the International Services of the Netherlands Radio on agricultural topics. In short, I have had a very useful time and have also throughout striven to live up to the ideals which Unesco has in mind while fostering the award of such Fellowships. I may also inform you that the first batch of Unesco-Netherlands Fellows has decided to form an association with a view to maintain our contacts with the learned men of this country in our respective fields of study. Finally, I should also pay a tribute to the excellent arrangements made by the Ministries of Education and Agriculture for my stay and study in Holland.

As a new Potato Breeding Institute has been started in India, I hope the knowledge I have gained here and which I hope to supplement by working for sometime with the Commonwealth potato collection at Cambridge, will find scope for full application. I recently rejected a big administrative job offered by the Govt. of India so that I will be able to dedicate myself fully to serve the cause of Indian Agriculture.

I take this opportunity to thank you for all the advice and help you have given in connection with my taking up this Fellowship.

With my best regards,

Yours sincerely,

M.S.S.

Talk broadcast on 7th July, 1950

## Plant Breeding and Crop Production.

( Script of the broadcast talk of M.S.Swaminathan, fellow of the United Nations Educational, Scientific and Cultural Organisation, to be delivered over the South-east Asia Section of the Radio Nederland, Hilversum.)

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The central problem in South-Asia today is production-both in agriculture and in industry. It is now generally recognised that if the rapidly increasing population in this region is to be fed adequately, there must be a progressive increase in total agricultural production. This can be brought about by three methods- by ~~in~~ bringing more land into agricultural use, preventing land going out of cultivation and increasing the level of productivity of the land at present in cultivation. All these have their contributions to make but it may be assumed that the bulk of the land at present idle in many parts of Asia occurs under conditions which are not inherently conducive to high levels of crop productivity or which require the spending of large amounts of money to bring an economic return. It is for this reason that the opinion is widely held that the more immediate and amenable solution is the raising of the level of productivity of the existing agricultural land.

Of all the scientific methods of increasing crop production, plant breeding is atonce the most successful and the least expensive from the point of view of the farmer. It is a very effective method of crop improvement as the betterment is effected within the plant itself. New and improved strains are known to give yield increases of 10% or more without making any demands on ~~his~~ the farmer's purse or skill. The Government of the United States reported to the Food and Agricultural Organisation of the United Nations in 1948 that improved varieties were largely responsible for the record wheat crop of 1947.

South Asia, though having half of the world's population and only one fifth of the earth's land surface depends overwhelmingly upon its own food production. Imports even of the magnitude of recent years provide only a fraction of the total food supplies of countries like China and India and in the case of India, it has been computed that the total deficit is only 10% of its requirements. It is hence that I firmly beleive that the production and cultivation of improved strains of crop varieties will play an important role in augmenting the agricultural output of these nations. In this connection, it may be of some interest to know what the Netherlands has achieved in the field of production of improved varieties by means of plant breeding.

It is now known that many of our cultivated crops have arisen either as mutations from wild ancestors or as polyploids as a result of hybridisation between primary species and subsequent chromosome doubling The origin of such plants in nature is limited to fortuitous circumstanc such as overlapping of speceis, synchronisation of flowering and hybridisation, chance or deliberate introduction of new species in the existing environment etc. However, nature works on a vast scale of time and space. But with the advance of our knowledge of the science of Genetics, which is a young and rapidly growing science basic to modern plant breeding, the process of production of improved types of farm, forest and fruit crops has been systematised and vastly facilitated. Recent knowledge regarding induction and utilisation of polyploids, wide crosses, mutants and hybrid vigour, arising from genetical researches have opened up new possibilities for a quicker synthesis of new and better crop varieties. The highly promising characteristics of the tetraploid rye produced by the Dutch scientists point out clearly the potentialities of the new tools available to the present-day plant breeder.

Yield potentiality is only one character in which a new variety may be superior to an old one and in practice higher returns may result for the grower by reason of several desirable features which a new variety may possess such as early ripening, greater disease resistance, better quality, stronger straw, and longer keeping power etc. While many agronomically useful genes such as these associated with yield and quality are found in cultivated plants, those which constitute hardiness, resistance to diseases, pests, frost and drought are met with in the wild relatives of crop plants and the breeder is constantly striving to incorporate these desirable characters into the plants under cultivation. Thus in the Netherlands, large scale work is in progress for the evolution of new strains of potato immune to many of the important diseases caused by insects, fungi and virus which at present take a large toll on the total yield of this crop. Work is also being done in other crops like wheat, flax etc.

Netherlands is one of the few countries which has recognised that the breeder of new varieties performs a very important social function and that his work has the right to be protected and supported by the Government. Inventors and artists are protected internationally by means of patent right, and copy right etc., which stimulates their activity. It has been clearly understood by the Dutch farmers that what the inventor is to industry, the breeder is to agriculture. I will now briefly enumerate

-the measures

the measures taken in this country to promote the production of new varieties and to ensure that only first rate seed and planting material from the best varieties are confided to the soil or exported.

A list of varieties of agricultural crops is published every year by a committee appointed by the Government for this purpose and any new variety whether produced by a foreign or a Dutch breeder can be entered in this ~~register~~ list. In January this year the 25th edition of this Varieties List appeared. This List which was originally only of a recommendatory nature became a legal document since the coming into operation of the Plant Breeders' Decree in 1941. This decree defines the legal position of the breeder and regulates the bringing into circulation of seeds and planting materials. The main features of this measure are firstly only those varieties that are placed on the List are eligible for inspection by the inspection service, called the N.A.K. by abbreviation of the Dutch name and secondly only the propagating material of field crops certified by the N.A.K. may be brought into circulation. By getting his variety entered into the Varieties List, the breeder or owner of his rights obtain the legal right of the breeder including among other things the right to compensation for certified seeds and tubers grown by others. The List of Varieties contains a synthesis of the data of accurate scientific research, the results of field experiments and the practical experience of the farmer. It emphasises the agricultural value and mentions both the merits and de-merits of a variety. Thus by describing in an objective way varieties of Dutch and foreign origin, it guides the farmer in the choice of a suitable variety. I am convinced that this system of registration of crop varieties has played no small a part in the ~~development~~ advancement of plant breeding in the Netherlands, because this List serves not only as a guide to the farmer, the N.A.K. and the seed trade but it is also of profound significance to the breeder. From the descriptions of the established varieties, he can draw conclusions as to the direction in which he has to search in order that his new creations may have a chance to be included.

The Plant Breeding Institute at Wageningen is the nerve-centre of all Dutch plant breeding activity. It is from the brain of a late revered Director of this Institute that the Dutch List of Varieties, from which similar lists in many countries have drawn their inspiration, had its origin. And it is to this Institute that the private breeders all over the country look for guidance and technical assistance. The efficient Inspection Service ensures that not only are good varieties produced but also only good seeds from such strains are sold within the country or export-

These are the measures which Netherlands has adopted with considerable success to ~~ensure~~ promote the production and propagation of improved seed. Plant Breeding is assuming an ever increasing importance in the improvement of agriculture in all countries and its importance to the Asiatic Nations, in many of which agriculture is the main industry, need not be emphasised. Most of these nations have the potential resources and the knowledge to utilise them. What is required is honest effort and with that there is no reason why we cannot suceed in our efforts to make two blades of grass grow where only one grew before.

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M. S. Swaminathan

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Talk broadcast on 21st July, 195

# Soil and Agriculture.

(Script of the broadcast talk of Mr.M.S.Swaminathan,Fellow of the United Nations Educational,Scientific and Cultural Organisation,to be delivered over Radio Nederland Wereldomroep)

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The Fourth International Congress of Soil Science is meeting at Amsterdam from July 24th to August 1st.Prominent Soil Scientists from all over the world will be attending it and the deliberations of the Congress will no doubt mark a milestone of our knowledge of soil scien̊e problems.I shall talk to you,after the termination of the Congress about what we did and achieved during the 7 days when we will be meeting and discussing technical problems of national and international interest.For the present,I shall only give a general idea of two of the topics on which eminent authorities will give lectures to the Congress.

Dr.T.Wallace of the University of Bristol,England,will address the Congress on the diagnosis of soil fertility by visual symptoms of crops.The applicability of the visual method for diagnostic purposes depends on the fact that plants suffering from deficiencies or excesses of mineral nutrients usually develop well defined and characteristic signs of these disorders in various organs,particularly in the leaves.The signs generally differ in any given plant for the various nutrient elements and the effects produced over a wide range of plants for a deficiency of any one element often show similar features.For example,nitrogen deficiency is characterised by thin, stiff and upright shoots;lack of side shoots,tillers and lateral buds and of flowers and fruits;small pale green leaves developing high orange,red and purple tints and early defoliation.Lot of work has been done in this field in several countries and in the Netherlands also work is in progress on the diseases caused in Apple,pear and cherry trees as well as in sugar beets due to a deficiency of zinc,copper, Manganeese,iron and calcium.By a proper diagnosis of the deficiency and

-- a suitable application

a suitable application of the required element,it is possible to control deficiency diseases.

The second general lecture to the Congress will be delivered by Dr.H.H.Bennett of the United States Soil Conservation Service who will talk on "Modern soil conservation".Conservation of the land from which we live by protecting it from erosion is one of the most urgent problems of our times-probably the most urgent especially in several parts of Asia.Erosion in nature is a beneficial process but the same process,accelerated by human mismanagement,has become one of the most vicious and destructive forces that have ever been released by man. What is usually known as 'geological erosion' is an universal phenomenon which through thousands of years has carved the earth into its present shape.Denudation is an early and important process in soil formation whereby the original rock material is continuously broken down and sorted out by wind and water until it becomes suitable for colonization by plants.Plants by the binding effects of their roots by the protection they afford against rain and wind and by the fertility they impart to the soil bring denudation almost to a standstill. Nevertheless,some slight denudation is always occuring.As each superficial film of plant covered soil becomes exhausted,it is removed by rain or wind,to be deposited mainly in the rivers ~~or~~ and sea and a corresponding thin layer of new soil forms by a slow weathering of the underlying rock.In this way an equilibrium is reached between denudation and soil formation so that unless this equilibrium is disturbed,a mature soil preserves a more or less constant deapth and character indefinitely.But this equilibrium is often disturbed by the activities of man.Cultivation,deforestation or the destruction of natural vegetation by grazing or other means,unless carried out in a planned manner,may so accelerate denudation that soil,which would normally be washed or blown away in a century,often disappears within a year or even within a day.But no human ingenuity can accelerate the

- soil renewing process

soil renewing process from lifeless rock to an extent at all comparabl to the acceleration of denudation. This man-fostered erosion is taking place in most of the countries of the world. In India, the foothills of the Himalayas are scarred by terrible erosion and in many other parts of the country, sheet erosion has been going on for centuries. Prolonged rather than excessive utilisation has ruined the lands round the headwaters of the Yellow river in China. In Indonesia and Japan, erosion does not occur to any great extent, although the topography and climate of both these countries produce conditions highly conducive to erosion, because the farmers there have, since a long time, been practising effective control measures The Phillipine islands have long suffered from erosion, which as in the case of India, has been prevented from becoming catastrophic by the people adopting terracing and shifting cultivation. However, it is a welcome sign that the people in all these nations have now become conservation conscious.

Soil conservation means using the land according to its capabilities and treating it according to its needs. To conserve the soil which sustains him and his livestock, a farmer should first of all find out what the land is best suited for, whether to grow grain crops, trees, grass or something else and put it to that use. It may be necessary to drain a field or irrigate another field. One field may have to be terraced or strip-cropped while it may suffice to contour an adjacent less sloping one. There should be a proper crop rotation scheme as well as a safe water disposal system for the farm. But true and lasting soil conservation means much more than building terraces on the hill sides, water ways down the depressions and dams in the gullies. It is not a job that can be done today and forgotten tomorrow. But it is, as Dr. Bennett has admirably put it, "a way of farming; it is a method of treating and handling the land-all the land of a farm; using all the tools needed to do the whole job, so that the farm will produce and keep on producing the things we need".

Because of the importance as well as the magnitude of the soil conservation problem,the Governments of the Asiatic Nations should,following the example of the United States,adopt effective and rigorous measures to prevent soil denudation.It can be said that the interest of the public in the permanent welfare of the land exceeds the interest of the owner,because of the different relationships with respect to the matter of permanency.In other words, rightful use of land calls for a reasonable adjustment between the inherent rights of the public and the legal rigts of the individual, based on the fact that an individual can use a tract of land for a life-time only,whereas the public-a nation- has an endless interest in the permanent productivity of the land,if the nation expects to endure.

We cannot afford to forget the fact that productive land is our base.Not only our prosperity but even our very existence will rest on the sustained productivity of our agricultural lands. To achieve the great task of bridging the gap between sufficiency and want,that now prevails in many contries in Asia,we must contribu what we can of mind,muscle and sweat.Then only we will be able to succesfully face the challenge of the growing needs of an increasing population and a diminishing supply of an already curtailed area of productive land.

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Talk broadcast on 4th August, 1950

# The Fourth International Congress of Soil Science.

By,

M.S.Swaminathan, B.Sc., B.Sc(Ag)., M.Sc., A.I.A.R.I.,
Member from India to the congress.

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~~Nearly~~ After a period of nearly 14 years, the International Congress of Soil Science was held again at Amsterdam between July 24th and August 1st. This Congress will remain for long in the memory of Soil Scientists not only because it was a great success and a large number of delegates from different parts of the globe attended it notwithstanding the prevalent unfavourable economic and political conditions but also because it marks the end of one era and the dawn of another in the field of international co-operation among Soil Scientists. During this session, it was decided to establish a new International Society of Soil Science with its aim being the fostering of all branches of Soil Science. The importance of such Societies and Congresses will be evident from a remark which a great American Inventor, Charles Kettering, made several years back, namely " the Scientist who keeps the doors of his laboratory shut locks out more than he locks in". The Congress also decided to co-operate with the Food and Agriculture Organisation of the United Nations in evolving a suitable international nomenclature with reference to Soil Science terms. Such a nomenclature will remove much of the confusion that prevails now by different scientists using different terms to convey the same meaning. It was also decided to hold the next Congress in Belgian Congo in 1954, so that the investigators from the temperate zones can get an idea of the tropical soil problems and conditions. I shall now say a few words about the social side of the Congress and then pass on to the scientific problems discussed and their practical implications.

The Congress was attended by about 600 delegates drawn from 38 nations. The Netherlands, United States and the United Kingdom contributed the majority of the Members and Asia was represented by a few delegates from Pakistan, Indonesia and India. The Dutch Minister for Agriculture and the Mayor of Amsterdam gave receptions to the Members of the Congress and as these were held at the Govt. Museum at Amsterdam, the Members had the opportunity to see and admire the famous paintings of Rembrandt and other Dutch artists.

There was a reception on the first day of our meeting in honour of Dr.D.J.Hissink of the Netherlands, whose name is well known in Soil Science circles throughout the world. His buoyancy and activity at such an old age as well as those of Sir John Russel, another veteran Soil Scientist present at the Congress gave inspiration and stimulation to the younger members. During the course of the Congress, a special session and exhibition were organised by the Netherlands Society of Soil Science to inform the Members of the work in progress in this country on soil science problems. Another important feature of the Congress is the various post-congress excursions to the different parts of Belgium and Holland, which provide an opprtunity for the scientists to get a more intimate knowledge of the soil problems and scientific methods in vogue in these two countries.

The success of the Congress was in a large measure due to the very elaborate and painstaking arrangements made by the Dutch Organising Committee under the dynamic leadership of Prof.Dr.C.H. Edelman, Director of the Soil Survey Institute at Wageningen. Thanks are also due to the Dutch Minister of Agriculture and the Mayor of Amsterdam for the keen interest they took in the activities of the Congress and for the receptions they gave to the Members. The Congress was opened by H.E.S.L.Mansholt, Netherlands Minister of Agriculture, who, during the course of his learned address, stressed the importance of maintaining a close relationship between theory and practice in matters relating to the soil and agriculture. In his presidential address to the Congress, Prof.Edelman cited examples of the role which history and the cultural practices of man have played in the moulding of soil characteristics. His address was remarkable both for its unorthodox style and for the originality of the ideas contained in it.

It will hardly be possible to give a survey in a few minutes of what was said and discussed by outstanding authorities in Soil Science during the course of 8 days. The topics discussed covered a very wide field, varying from purely theoretical aspects like those relating to Soil Physics to the ones of immediate practical importance like that of soil fertility and conservation. But even theoretical problems have a bearing on practical needs. For example, I will cite the studies concerning soil structure. Soil Structure refers to the arrangement of the ~~soil~~ solid particles in the soil profile. It is the arrangement of the particles, single or complex, which determines the size distribution of the pores and consequently the

- ease with which both water

ease with which both water and air move through the soil and which influences the capacity of a given soil to store moisture. It is hence that this property is of great ecological and agricultural significance. Even small increments in the water content of the soil during dry periods cause great returns. For example, in the U.S.A. increases in yield of as much as 150 bushels of potatoes per acre have been obtained with one or two applications of water aggregating only 4 to 6 inches a year. This shows what role controlled irrigation facilities will play in increasing the agricultural output in contries like India. The River Valley projects undertaken by the Government of India, on completion, will undoubtedly change the whole agricultural picture of the country and will ensure that Indian agriculture no longer remains a gamble in rain. ~~All lands with medium fertility and a sufficient supply of water~~ . Till that time, we should make the utmost use of the available water supply . All lands with medium fertility and a sufficient supply of water should be exploited to the maximum possible extent by means of a suitable application of fertilizers and green manures. For example, manuring of paddy with fertilizers in areas with lands of medium fertility and a good supply of water results in yield increases of 40 to 50 %. It is the duty of the Provincial Governments to see that the financial resources of the farmer do not become a limiting factor to the full utilisation of the possibilities opened up by scientific investigations.

It should be remembered that improved methods of cultivation and introduction of new plant varieties of higher yielding capacity can play their part in increasing crop production only if a sufficient supply of plant nutrients to cover the needs of the crops is provided. Nitrogen is one of the major plant nutrients. At present there is a deficit between the world requirements of nitrogenous fertilizers and their production. Apart from the synthetic Nitrogen industry, another source of supply is represented by the biological nitrogen fixation. This source can be better exploited by the introduction of legumes suitable for different climatic and soil conditions and the extended use of seed inoculation with effective bacterial strains. Further, the application of phosphates to the soil improves the growth of the legume in as much as this fertilizer has a stimulative action on the nitrogen fixing organism, resulting in a better nodule formation and luxuriant crop growth. I will also suggest that in tropical countries fodder trees of the leguminous type should be grown on a large scale

- as these will provide

as these will provide good fodder for the cattle and at the same time enrich the soil. Thus, when schemes for tree plantation are put into operation, as was done recently in India, the people should be advised to plant as far as possible only leguminous trees . We should realise the wisdom contained in the words which Aristotle uttered nearly 2000 years ago, namely "the soil is the stomach of the plant " and nurture and feed the soil with care and devotion so that it can produce and continue to produce food for us.

To all those who happen to be privilaged to work in the field of agricultural science, I will say only this much. Let us leave the lamentations over the past mistakes of farmers and the human race in general to the Historians, philosophers and preachers and as Scientists focus our attention on learning more about the various intricate and basic problems connected with the agricultural science in its diverse aspects. As our understanding of these problems increases, farming can be conducted on a sounder basis. As each phase of the picture becomes clearer, let us see that the information gained is passed on as quickly as possible to all those whose farming practices can be improved by it. By so doing, we will be offering our contribution to the solution of the problem of keeping man above want with respect to his prime need. The tasks that face us are heavy and many but following Longfellow's advice

" Let us then, be up and doing,
With a heart for any fate;
Still achieving, still pursuing,
Learn to labour and to wait. "

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Téléphone : KLÉber 52-00 - Télégr. UNESCO PARIS
19, AVENUE KLÉBER - PARIS XVI°

UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION

ORGANISATION DES NATIONS UNIES POUR L'ÉDUCATION, LA SCIENCE ET LA CULTURE

In your reply, please refer to :
En répondant, veuillez rappeler :
N° EXP 184078-ID:mw

September 8th, 1950

Dear Mr. Swaminathan,

Thank you very much for your interesting letter of 4th September. I am so pleased that your fellowship has given you the opportunity to meet so many Dutch scientists, and I am very interested in the fact that the Unesco-Netherlands fellows have decided to form an association, and I should be very pleased to have details of the basis on which this will be formed, as Unesco is always eager to play a part in such activities.

I am looking forward to receiving your final report, and please do not forget to send a copy to the Dutch Ministry of Education, Science and Culture.

If you pass through Paris I should be very happy to meet you.

With kind regards,

Yours sincerely,

William D. Carter
Head, Exchange of Persons Service

Mr. M.S. Swaminathan,
Lijnbaanstraat 53,
Wageningen,
Holland.

OFFICE OF THE PRESIDENT OF THE PHILIPPINES

**National Urban Planning Commission**

MANILA

Mr. M.S. Swaminathan,
Lijnbaanstraat 53,
WAGENINGEN.

April 12th 1950

Dear Sir,

Through the courtesy of the External Relations Department of the Ministry of Education at The Hague, I gained the information that for the year 1949-1950, five scholars from different countries were recipients of scholarships granted by the Netherlands Government. They are the following:

1. Prof. Dr. A. Swaryczewski, from Poland, Crystallography.
2. Mr. S. Swaminathan, from India, Agriculture.
3. Dr. Lubos Perek, from Czechoslovakia, Astronomy.
4. Dr. Fung Ki Fai, from China, Agriculture.
5. Mr. A.T. Alquinto, from the Philippines, Housing and City Planning.

Personally I feel certain that with all the courtesies and help extended by different entities of the Netherlands Government each of the above persons was or will be able to get the maximum benefit from his stay in Holland.

These fellowships sponsored by the Unesco for different foreign governments, beside being educational and cultural, also serve as fine media for fostering good-will and fellowship among nations; at the same time, the honor bestowed upon and the intellectual benefits accruing to the recipient of a grant cannot be underestimated.

In order to carry out further the interests and purposes of the Unesco may I take the liberty of broaching the idea, for your consideration, of forming a club, with the above-mentioned fellows as the nucleus, of all Netherlands Government Unesco Fellows.

There will not be any dues or fees and, obviously, due to great distances, no regular meetings. It is hoped, however, that sometime in the future we should be able to meet at a designated place to renew friendships and discuss accomplishments in our respective countries. The Club could be named "Society of Netherlands Unesco Fellows" or whatever we could agree upon. What do you suggest?

-Before-

Before continuing any further may I have the pleasure of hearing from you?

Very sincerely yours,

(Anselmo T. Alquinto)
Asst. to the Director

Kindly address reply in the care of:
Dr. C.A. van Peursen,
Ministry of Education,
THE HAGUE,
or to: Mr. Anselmo T. Alquinto,
National Urban Planning Commission,
Office of the President,
MANILLA.

M.S.Swaminathan.

The School of Agriculture,
Cambridge. U.K.
11th August, 1951.

The Head,
Department of Exchange of Persons,
UNESCO, Paris.

Ref.No.EXP 184o78-ID:mw.

Dear Sir,

I regret for the great delay in the despatch of my final report. As the general features of my Fellowship experience have already been communicated to you through my preliminary report, subsequent letters and personal call at your office, I decided to write to you again only after the publication of the results of the studies carried out during the tenure of the Fellowship. Reprints of three scientific papers as well as copies of broadcast talks delivered over the international services of Radio Nederland and the British Broadcasting Corporation are now enclosed. Copies of three more scientific papers which are under publication will be sent to you later. More copies of all these publications can be made available, if needed.

As indicated in my talk over the B.B.C., on the "Potato and the Indian food problem", I believe that the extension of potato cultivation in India will be one of the promising ways of bridging the growing gulf between food production and consumption in the country. Hence, the study opportunities afforded to me through the UNesco-Netherlands Fellowship will be of great value to my country.

My sincere thanks are due to the Netherlands Ministries of Education and Agriculture and the authorities of the State Agricultural University at Wageningen for the excellent arrangements they made for my stay and study in their country. I am also very grateful to you for all the kind help you gave me in connection with my taking up this Fellowship.

I have great faith both in the ideals of Unesco as well as in the practical results it is likely to achieve and as such, you can always draw upon my services in whatever matter I can be of any help. I shall try to keep in touch with you after I return to India.

With kind regards,

Yours sincerely,

M.S.Swaminathan.

Copy to: The Ministry of Education, Arts and Sciences, The Hague.

The Head, Secretariat
The Ministry of Education, Arts & Sciences
The Hague, Holland.

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Dear Sir,

I enclose herewith a copy of my final report to UNESCO and reprints of 3 scientific papers, embodying the results of the investigations I carried out at Wageningen during the tenure of the UNESCO — Netherlands Govt. Fellowship.

Kindly acknowledge receipt.

Yours sincerely,

26/9/51.

MINISTERIE VAN ONDERWIJS, KUNSTEN EN WETENSCHAPPEN

Bericht op schrijven van

NR. -- AFD. Buitenl. Betrekkingen.

Betreffende

Men gelieve bij het antwoord nauwkeurig het onderwerp, de dagtekening, het nr. en de afd. van dit schrijven te vermelden.

'S-GRAVENHAGE, December 18th 1950.

To Mr.M.S.Swaminathan,
c/o the School of Agriculture,
CAMBRIDGE.

Dear Mr.Swaminathan,

I thank you very much for your Christmas card. I, from my side, wish to convey to you my best wishes for Christmas and for the coming New Year. I hope that you will spend a valuable period in Europe and that after your return to your country you will keep a pleasant memory to the time you spent in Holland.
I express the wish that your visit has been one of the first of a long series of visits of people from your country to ours so that the understanding between East and West will find one of its concrete expressions in the links between both our countries.

Yours sincerely,

(Dr.C.A.van Peursen)

10938 - '50

MINISTERIE VAN
ONDERWIJS, KUNSTEN
EN WETENSCHAPPEN

'S-GRAVENHAGE, December 18th 1950

Dear Mr. Swaminathan,

I thank you very much for your kind wishes for Christmas and New Year which I cordially reciprocate. I do hope that you have pleasant recollections of your stay in this country and that your work in Cambridge may also be interesting and succesful.

Yours sincerely

J. Lemaire.

10663.'50

MINISTERIE VAN ONDERWIJS, KUNSTEN EN WETENSCHAPPEN

Bericht op schrijven van
25 September 1951.

NR 213381 AFD. B.B.

Betreffende final report.

Men gelieve bij het antwoord nauwkeurig het onderwerp, de dagtekening, het nr en de afd. van dit schrijven te vermelden

'S-GRAVENHAGE, October 11th 1951.

Mr. M.S. Swaminatham,
School of Agriculture,
CAMBRIDGE. U.K.

Dear Mr. Swaminatham,

I acknowledge receipt of your letter dated September 25th 1951 with enclosed copy of your final report to Unesco and reprints of three scientific papers, containing some of the results of the investigations carried out by you at Wageningen during the tenure of the Unesco Netherlands Government Fellowship.

I have read your publications with much interest and I have passed them on to the Head of the University Education Department of this Ministry.

The Head of the External
Relations Department,

(Dr. F. Bender).

10325 - 51

Téléphone : KLEber 52-00 BALzac 24-02 - Télégr. UNESCO PARIS
19, AVENUE KLÉBER - PARIS XVI

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION
ORGANISATION DES NATIONS UNIES POUR L'ÉDUCATION, LA SCIENCE ET LA CULTURE

In your reply, please refer to :
En répondant, veuillez rappeler :
N° EXP 250749-ID:mw

September 10th, 1951

Dear Mr. Swaminathan,

Thank you very much for sending me your final report, and the reprints of your broadcasts over the international services of Radio Nederland and the BBC. These papers have been submitted to the experts of the Department of Natural Sciences, Unesco, who are of the opinion that you have successfully completed a piece of research during the tenure of your fellowship.

I hope when you return to India that you will be able to use the experience you have gained in the Netherlands in your work. I am looking forward to receiving copies of the other scientific papers you mention in your letter, and I shall always be glad to hear from you and to send you any documentation of interest to you.

With kind regards,

I remain,

Yours sincerely,

William D. Carter
Head,
Exchange of Persons Service

P.S. In case you have already left England I am sending this letter to your home address.

Mr. M.S. Swaminathan,
"Kottaram,
Gandhi Nagar,
Kumbakonam,
South India.

TELEPHONE : KLEBER 52-00
BALZAC 24-02 - TELEGR. : UNESCO PARIS

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANISATION

ORGANISATION DES NATIONS UNIES POUR L'ÉDUCATION, LA SCIENCE ET LA CULTURE

19, Avenue Kléber, PARIS 16e

In your reply, please refer to :
En répondant, veuillez rappeler :
N° EXP/AE-mb-462.596

9th August 1954

Dear Mr. Swaminathan,

I am writing to you as the former holder of a UNESCO fellowship, to ask for your cooperation in a project we are conducting.

We are always anxious to learn of the subsequent careers of former UNESCO fellows, and are glad that so many of them take the trouble to keep in touch with us from time to time. However, we now intend to gather available information in a more systematic manner than hitherto concerning the achievements and activities of the holders of UNESCO fellowships during the first five years in which they were offered. Our object in so doing is partly to assess the contribution that the award of fellowships has made to the development of UNESCO's programme, and partly to discover, with your assistance, the ways in which the holders of present and future fellowships can be more effectively helped in their studies abroad.

This letter is therefore to inform you that Dr. J.D.N. Versluys, of the UNESCO South Asia Science Cooperation Office, New Delhi, will be getting in touch with you in the near future in connection with our project. Dr. Versluys has been provided with basic particulars on your fellowship.

I must emphasize that we are looking for nothing more than a short informal interview which can serve as the basis for the continuation of the relationship you had with UNESCO during your fellowship. There are no other obligations attached, either for you or for us.

We are looking forward to hearing of your fullest possible cooperation with Dr. Versluys in providing the information we are seeking.

Yours sincerely,

I. Dandolo
Acting-Head, Exchange
of Persons Service

Mr. Monkombu Sambasivam Swaminathan
"Kottaram", Gandhi Nagar,
Kumbakonam, New Delhi
INDIA

TELEPHONE : 48413 & 40910

TELEGRAMS : UNESCO, NEW DELHI

UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION
SOUTH ASIA SCIENCE CO-OPERATION OFFICE
C.S.I.R. BUILDING, OLD MILL ROAD,
NEW DELHI-2. (INDIA)

YOUR REF.

OUR REF. 1518/ORISSA

September 3, 1954.

Dear Dr. Swaminathan,

Thank you very much for writing to me about the information to be given regarding your experiences as a Unesco fellow. I had hoped to contact you here in New Delhi, but I now see that you are living in Cuttack. In fact, I do not suppose that I would be going there in the near future as I already paid a visit to the University in September, 1952. However, you may be coming now and then to Delhi to discuss the results of your research and that might provide us the opportunity of getting together. In case you do not plan to come to New Delhi, I should like to send you the questionnaire to fill it up. Will you let me know if you intend to come to New Delhi?

Yours sincerely,

(Dr.J.D.N.Versluys)
Social Science Officer.

Dr. M.S.Swaminathan,
Central Rice Research Institute,
CUTTACK-4 (ORISSA).

DR. M.S.Swaminathan.

Central Rice Research Institute,
Cuttack-4. (Orissa)
Dated the 13th September '54.

Dear Dr. Versluys,

I thank you for your letter No.1518/ORISSA dated September 3, 1954. It is likely I may visit Delhi in a month or two and as soon as my plans are more definite, I shall let you know the date and duration of my visit. We can then decide upon a mutually convenient time to meet.

With kind regards.

Yours sincerely,

(M.S.Swaminathan)

TELEPHONE : 48413 & 40910

TELEGRAMS : UNESCO, NEW DELHI

UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION
SOUTH ASIA SCIENCE CO-OPERATION OFFICE
C.S.I.R. BUILDING, OLD MILL ROAD,
NEW DELHI-2. (INDIA)

YOUR REF.

OUR REF. No. 1839/FELLOW. October 21, 1954.

Dear Dr. Swaminathan,

Thank you very much for your letter of the 13th September 1954. As you will probably arrive here in Delhi within a short time I should be happy to know when I may expect you.

With kind regards,

Yours sincerely,

(Dr.J.D.N. Versluys)
Social Science Officer.

Dr. M.S. Swaminathan
Central Rice Research Institute
Cuttack - 4. (Orissa).

TELEPHONE : 48413 & 40910

TELEGRAMS : UNESCO, NEW DELHI

UNESCO

UNITED NATIONS EDUCATIONAL, SCIENTIFIC AND CULTURAL ORGANIZATION
SOUTH ASIA SCIENCE CO-OPERATION OFFICE
C.S.I.R. BUILDING, OLD MILL ROAD,
NEW DELHI-2. (INDIA)

YOUR REF.

OUR REF. No. 1888/FELLOW. November 1, 1954.

Dear Dr. Swaminathan,

Thank you very much for your letter of 28th October 1954. It is really fortunate that you are now living in New Delhi. Would you be able to come next Monday, 8th November, at 3 p.m. ? I am looking forward to meeting you.

With kind regards,

Yours sincerely,

(Dr. J.D.N. Versluys)
Social Science Officer.

Dr. M.S. Swaminathan
Assistant Cytogemeticist
Division of Botany
Indian Agricultural Research Institute
New Delhi 12.