

Press release

THE NATIONAL INSTITUTE OF SCIENCES OF INDIA,
Bahadur Shah Zafar Marg, New Delhi

May 6 , 1969

Important:- For publication on May 7 , 1969 but
not before it.

For broadcast on May 6 , 1969 after
9.00 A.M.

"Drought and deluge" - Science must solve India's
chronic twin problems".

"Technology regardless of social aspects may
create difficulties".

Dr. Atma Ram's address to Symposium on drought.

New Delhi, May 6 , 1969 - "The twin problems, drought and deluge, have afflicted the Indian peasantry through centuries. Science thrives on challenge, the greater the challenge, the **more** intense is the scientist's zeal to accept it. Such **challenges** in the past have produced great scientific luminaries like Louis Pasteur, Michael Faraday, Edward Jenner and M. Visvesvaraya. To make the just started agricultural revolution, a permanent reality in our country, science must provide the means to fight the darts of drought. The tools of science and technology however should be applied after a careful action-reaction analysis and after full considerations of the prevalent social conditions. Technology when applied without regard to social aspects can create difficulties instead of solving any", said Dr. Atma Ram, President of the National Institute of Sciences of India in his welcome address to the Symposium on Drought organised by the National Institute of Sciences of India and inaugurated by Shri Jagjivan Ram, the Minister of Food and Agriculture.

Research results on Drought

"Researches done on drought in Israel, Australia and USA hold out the promise that science can find a solution to this complex problem. Researches done so far do not indicate that weather modification can aid in the solution of the drought problem. Scientists in a developing country like India should have economic and social good of the people as the goal before them. People expect material benefits from science and technology, and scientists bear the responsibility to meet peoples' expectations from science ", said Dr. Atma Ram.

Issued by the National Institute of Sciences of India,
Bahadur Shah Zafar Marg, New Delhi.

New Delhi,
May 6 , 1969.

(S.Mull)
Executive Secretary

Welcome Address by Dr. Atma Ram, President,
National Institute of Sciences of India to
the Symposium on "Planning for drought areas"
- May 6 , 1969.

The National Institute of Sciences of India, the premier science Academy of our country is deeply committed to the advancement of science and its application. One of the great tasks before the country is to achieve rapid economic progress. It is no more a matter of argument that in achieving this, science and technology play a crucial role. The history of the last two hundred years, and more particularly of the last five decades, bear ample testimony to man's exploration of nature and making use of the knowledge gained for his material advancement. For the scientists in a developing country like India economic goals are a very important social responsibility. Majority of people who go without adequate food, clothing and shelter expect material benefits from science, scientists therefore bear the responsibility to meet people's expectations from science. To justify the public money which science in India is receiving ungrudgingly from the people scientists, I think, should address themselves to the economic needs of the country, otherwise they may be weakening their case for public support. Fellows of the Institute have expressed a strong feeling that the scientific community should take a wider and deeper interest in helping the country overcome the consequences of food shortage and population growth. The National Institute of Sciences has, therefore, given priority to the problems relating to increasing food production. The Institute sponsors scientific Symposia, discussions and Summer Schools on problems of relevance to the Country. It is in pursuance of this goal that this Symposium on Planning for Drought Areas has been organised.

It was decided by the Council of the National Institute of Sciences last year that we should bring together leading scientists studying or associated with the problems of drought areas in a symposium so as to provide a forum for the interaction

of ideas and information. The Council requested Dr.M.S.Swaminathan a distinguished agricultural scientist and a Secretary of the Institute to serve as the Convener of this Symposium and organise it. It is our conviction that bringing together scientists of related disciplines and making their ideas interact would help in germinating new seeds of thought which could be translated into action.

We are particularly happy to have with us Shri Jagjivan Ramji to inaugurate this Symposium. I need hardly mention to this audience that his tenure as Union Minister for Food and Agriculture has been marked by a remarkable degree of progress in stabilising food production in the country and in reducing regional inequalities in the rate of agricultural transformation.

Shri Jagjivan Ramji has generated an air of self-confidence in our agricultural capability and since self-confidence is the primary requisite for success in any field of human endeavour, this is a great gain for our country. His pragmatic approach to problems and his great confidence in the ability of our scientists to accelerate the pace of progress of our agriculture have been primarily responsible for the progress made in recent years. On behalf of the National Institute of Sciences of India, I wish to welcome him very warmly in our midst and thank him for agreeing to spare some of his valuable time for being with us. The month of May for this Symposium is not a matter of accident. In my opinion, for a discussion on drought problems, May is a very suitable month. But please do not think for a moment that our hearts have also been affected by the subject matter of the Symposium.

I welcome the participants who have come from different parts of the country during this hot weather to take part in this Symposium. I wish to assure them that the National Institute of Sciences will try its very best to ensure that their labours do not go in vain and that the suggestions emerging from the discussions at this symposium reach the appropriate

agencies for action. I also wish to welcome the numerous guests and Fellows of the Institute who are here today.

During recent years, there has been almost a renaissance in research relating to problems of drought. Success of the research work carried out in countries like Israel, Australia and the United States seems to have stimulated the present widespread confidence that science can find a solution to the complex problems relating to the economic upliftment of the drought areas. The physical barriers of aridity and scarcity of resources would appear less formidable when one views the possibilities of more rational management and of technological advance. Disparate growth between areas of assured rainfall and those characterised by chronic deficiency of moisture would create more problems than are commonly visualised now.

There is a common belief that weather modification will provide a solution to the problems of drought areas. The research so far done, and I think some will be reviewed at this symposium, indicates that the scope for improving the economy of drought areas through artificial changes in weather are not very bright in strictly arid areas.

The tools of science and technology should be applied after a careful action-reaction analysis and in the context of social conditions. Technology when applied without due regard to social aspects can create difficulties instead of solving any problem. For example, the deep well pump at first appeared to be a panacea for the poverty problem in dry areas of the United States because it permitted the expansion of irrigated agriculture. However, it soon developed into a Pandora's Box and in many cases led to a rapid depletion of ground water and eventually to the abandonment of towns and farms. Such problems can be avoided if scientific and technological knowledge is combined with an appropriate policy of management, control and distribution of water. For doing this, planning has to be done on an integrated basis keeping in view the total needs of

a region. I hope this Symposium would help foster integrated thinking.

Science thrives on challenge, the greater the challenge the more intense is the scientist's zeal to accept it. Such challenges in the past have produced great scientific luminaries like Louis Pasteur, Michael Faraday, Edward Jenner, M. Visvesvaraya. India provides a stimulating challenge to scientists in the form of its chronic, twin problems of drought and deluge. These twin problems, drought and deluge, have afflicted the Indian peasantry through centuries. Here we are concerning ourselves with the problem of drought only. To make the just started agricultural revolution a permanent fact of life in our country, science must provide means to fight the darts of drought. I trust the discussions in the Symposium will not only produce ideas on drought but will generate the spirit in our scientists to accept the chronic problem of drought as a stimulating challenge to us.