

C

C 81/INF/9
November 1981

E

conference

FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS ROME

Twenty-first Session

Rome, 7 - 26 November 1981

THE FRANK McDougall MEMORIAL LECTURE
TO THE FOOD AND AGRICULTURE ORGANIZATION
BY HER EXCELLENCY
SHRIMATI INDIRA GANDHI
PRIME MINISTER OF INDIA

Rome, 9 November 1981

The hungry of the world owe much to Frank McDougall, who was one of those responsible for setting up this great organization. It is a privilege to deliver this lecture in his honour, specially in the presence of so many distinguished persons directly concerned with the planning and execution of agricultural programmes in various parts of the world. Frank McDougall was deeply conscious of global interdependence in agriculture. He lit the lamp and we have to guard the flame. I should also like to congratulate the Director-General, Dr. Edouard Saouma, on his re-election. We wish him success in his efforts for world food security.

Life and food are inseparable. As a hymn from India's ancient books of wisdom, the Upanishads, puts it,

From food are born all creatures that live on earth, afterwards they live on food and when they die they return to food.

The search for food is the foundation of all other quests. The wish for plenty - whether from hunt, catch or harvest - is easily mankind's oldest collective thought.

The earliest civilizations arose when hunter turned into farmer. Agriculture cradled culture. In my own country there are areas which have been under the plough continuously for several thousand years. By a strange quirk of fate these very lands where agriculture developed early now experience shortages of food and are even derisively referred to as basket cases.

One of our national songs describes India as a well-watered land, rich in fruit and dark-green with plant and foliage. History tells us how frequently it was subjected to famine. There is record of a twelve-year famine in Magadha not long after Alexander's expedition in the third century BC. In spite of my country's fabled riches, through the centuries, large numbers have known hunger. Foreign rule, with the outflow of resources, aggravated it. Mahatma Gandhi once said that to the poor, God can only appear in the form of bread. For me and many of my contemporaries, the final memory of foreign rule in India is the Great Bengal Famine in the early 1940s in which three million or more were allowed to die. We vowed never again to let this happen.

Free India can legitimately claim that in spite of many severe droughts, starvation has been prevented. To keep this promise we imported grain for many years. When I became Prime Minister in 1966 we were in the midst of drought and famine conditions. We cannot control the monsoon but I determined that we should be better prepared to meet any such future calamity. I remember vividly tracking the movement of every ship and train to know that food was actually reaching where most needed. This experience urged us to give the topmost priority to self-sufficiency in food. In the early seventies just when experts forecast irredeemable deficits, at last we became self-sufficient in grain. Apart from taking care of the normal grain requirement of 14 percent of the world's population, in 1979-80 India could overcome the century's worst drought which affected 38 million hectares of farmland and more than 220 million people in eleven major States. We have also been able to help some neighbours.

Since the mid-seventies we have had fairly large buffer stocks. But there is no room for complacency. Our self-sufficiency might not survive a series of droughts. But that it was achieved at all is a tribute to our national will, and the good sense and hard work of the Indian farmer and his readiness to take help from science and the administration.

A combination of factors has contributed to the doubling, or near trebling

of grain output - Jawaharlal Nehru's priority to agriculture in his planning strategy, his emphasis on an infrastructure of irrigation, power, scientific research and extension service, tenancy reforms which gave land rights to millions, and the networks of credit and marketing.

Food self-sufficiency was attained largely by mobilizing big and medium farmers. We were aware that the green revolution, as it has been called, exacerbated some problems in rural areas, especially the disparities between large and small farmers and tensions between landowners and labourers. But at that time our paramount objective was to be free of imports. Simultaneously, we drew up special programmes for small farmers to consolidate their gains in production by extending inputs to them and making their occupation viable. Indian experience has also discovered the significant fact that farm productivity is, by and large, neutral to the size of the farm. This is great news to all over-populated agro-based developing countries. We are also devising programmes of alternative employment to the landless. Our family planning campaign is another essential element for food self-sufficiency as well as for general enhancement of living standards. A fact which is not easily understood in Europe is that illiteracy did not come in the way of our farmers taking advantage of new knowledge. They have had a long tradition of learning from seeing and hearing.

Many were the critics within India and elsewhere who decried our strategy of development and accused us of advancing industry at the cost of agriculture. Agricultural development cannot be conceived in isolation from industrial development or of economic development in its totality. For the supply of inputs and the demand for outputs, agriculture depends on industry. The growth of agricultural productivity is conditioned by employment opportunities elsewhere, by the supply of non-land inputs at increasingly cheaper rates and the absorption of outputs at remunerative prices. In an attempt to quicken the pace of development, some countries diverted agricultural savings or surpluses to industry. This did help to augment industrial development significantly but kept down investment in agriculture. In India, where the majority of people live on agriculture, progressively higher investment must be made to

increase agricultural output and productivity over time. This is our policy, as can be demonstrated by the rates of agricultural investment in different Plan periods. The idea that agricultural development can be sustained by neglecting industrialization is equally erroneous. The two sectors are interdependent and the growth of the one is integrally linked with that of the other.

We, who follow Jawaharlal Nehru's strategy, are concentrating on building secure foundations of self-reliance. Currently, our emphasis is on:

- (i) Implementing schemes to lessen poverty, especially in backward areas and among the weakest sections of the population by development of the rural areas; generating employment and purchasing power; and transferring the productive assets of land and livestock to them;
- (ii) Promoting agricultural research which is suited to local conditions, and taking its benefits to the field through 'Lab to Land' and other programmes;
- (iii) Increasing agricultural production in all its aspects by enlarging the area under irrigation; more inputs, particularly credit, remunerative prices to farmers, and facilities for marketing, storage, processing and transportation; and
- (iv) A food management programme which involves adequate buffer stocks, proper storage, and an extensive public distribution system to make foodgrains available at assured prices to consumers all over the country.

We have long been aware of the relation between land reform and rural development. The old feudal order and colonial rule arrested social evolution, denying us many decades of progress. Soon after Independence, land reform became an area of priority. In the past, land ownership and tenurial rights were weighted against the poor and the weak. It has been

an uphill task to bring about the desired shifts in the ownership of land and livestock from the richer to the poorer sections. While not satisfactory, we have made significant progress in most parts, enforcing ceilings on land ownership and conferring security of tenure. Above all, we have succeeded in changing the old psychology of looking upon land as a status symbol and source of security rather than as an important means of production. Based on the land-man ratio, a uniform pattern of ceilings on land holdings, as low as between 50 and 80 acres per family, has been introduced and is in the process of implementation. These laws are being obeyed, not only administratively, but in the sense that the landlord community is reconciling itself to it. We are determined to complete this process and the distribution of surplus land soon. One of our States, the Punjab, which now has some of the most notable productivity levels in the world, was able to make such rapid progress after the introduction of new varieties of wheat and rice from 1967 onwards, mainly because it was endowed with three major basic prerequisites for the rapid adoption and diffusion of new technology - owner cultivation, rural communication and rural electrification.

Rural economy can be made more efficient by decentralizing production and by supporting marketing with centralized services in key areas. Our cooperative dairy movement, which began in Gujarat and has now spread to other parts, is an example of the high potential of human resources. Under the National Dairy Programme, known as "Operation Flood" which was launched in 1970, the number of village milk producers' cooperatives in India has risen from 1 500 to 12 000. Altogether some 1.6 million rural milk producers and their families participate. Recent studies show that more than half of these beneficiaries are landless labourers and marginal farmers who have less than 2 hectares of land. For these poor people, in particular, milk earnings are vital. Helped by their cooperatives, landless families can double their incomes by increased production and sale of milk. Moreover, milk brings daily income and is often collected directly by the women who actually tend the milch animals. This programme is now being expanded to cover 10 million farming families during the next five years. We are grateful to FAO and the World Food Programme for their support to this project, and hope to have

similar cooperative organizations in horticulture, aquaculture and agro-forestry. The collective strength of small farmers and fisherfolk will help them to mobilize more inputs and take bigger risks.

I have referred at some length to the Indian experience because I know it and to make the point that if a nation of 683 million can manage to feed itself, the challenge of hunger cannot be insurmountable. I do realize our shortcomings and how much more we have yet to do. Many problems remain - the challenge of disparities, the plight of the landless and the under-employed, the need for a more nutritious diet, and new and energy-conserving methods of food production. The higher production levels of the last few years have been achieved because of liberal inputs of energy. Agriculture, not only in India but everywhere, even in advanced countries, must learn to produce more with lesser inputs of energy, fertilizer or fuel-using farm machinery.

Viewing world agriculture, we find a shrinkage of food production over the last decade. This, with the rise in population and the levels of inflation in most countries, causes anxiety. The absolute number of underfed people is not diminishing fast enough. Indeed there are signs that it might be going up. And this at a time when the world as a whole has the knowledge, the technological means and the funds to eradicate want. Obviously our political and other institutions have not kept pace with capacities and expectations. Many individual nations also lack the means. That is the urgency of interdependence.

There has been interdependence through the centuries. The plants and genetic material of one country have travelled to or been consciously introduced in others. There are stimulating controversies as to which fruit or tree was imported from which country or continent. The latest example of this widespread trans-continental exchange is found in the agricultural research centres in India where hundreds of samples of seed of paddy, wheat, cotton, groundnut, etc. from far-off countries are being used to develop local strains giving them the characteristics and resistances required under local

conditions. The quest continues unabated wherein the most crucial input comes from the progressive farmers, big and small.

There has been trade in produce. In the colonial era interdependence took the form of the transfer of agricultural produce in large quantities and at low prices from the colonies to metropolitan countries. The emphasis was on the cultivation of agricultural raw materials necessary to feed the industries of colonial powers. Cotton, oilseeds, indigo (in earlier days) and plantation crops like coffee, tea, cocoa, rubber and spices were encouraged for their use. In the post-colonial era, producing countries have not been able to entirely change this pattern of dependence on marketing avenues. When crops are good, international prices fall. When crops are poor, the market is so manipulated that profits go to traders and middlemen, bypassing the producer. The share in world trade of weaker nations, particularly those with single-crop economies, is dwindling.

The incapacity to organize international trade in agricultural commodities which can sustain production and consumption everywhere is true of plantation and industrial crops, and also of foodgrains. The adoption of a new International Wheat Trade Agreement designed to guarantee the stability of the market and the availability of supplies has been thwarted. The world's major producers are unwilling to give up the advantages of so-called free market forces and the opportunity to use food as a political weapon. High prices are charged for essential agricultural inputs such as fertilizers and pesticides, taking them beyond the grasp of those who need them most. Discriminatory agricultural protectionism in industrial countries is as high as 700 percent for a number of processed agricultural products. An UNCTAD study of 46 items shows that a 50 percent liberalization could help developing countries to achieve trade expansion of \$3 billion or an increase of 35 percent over the 1977 value of these exports.

The committed targets of 10 million tonnes under the Food Aid Convention and of 500 000 tonnes under the International Emergency Food Reserve - themselves low compared to a minimum computed requirement of twice those

figures - are yet to be fulfilled, despite repeated exhortations in all relevant United Nations bodies. However, I am glad that the resources needed by the International Fund for Agricultural Development for its 1981-83 programme of work are in sight, and that the International Monetary Fund has established a "food facility" to allow compensatory drawings by countries with balance of payments difficulties because of the extra cost of food imports. This will give at least some relief to those developing countries which have periodical crop failures. Such gestures of assistance deserve appreciation, but the more important international programmes still do not have the needed support. The poor response to the plea of the World Food Programme for a contribution of one billion dollars for the 1980-82 period, the failure to meet the 0.7 percent of GNP target for development assistance, and the continuing delay to evolve a new Wheat Trade Agreement are all indices of reluctance to come to grips with some of the basic elements of global food security.

These trends make it imperative for developing countries to pursue the policy of collective self-reliance, especially in food security with the maximum determination and vigour. In the short run and in crisis situations, external assistance from affluent countries does help. But the increase of external investment or concessional financial facilities alone cannot be a lasting remedy for the ills of the developing world. Developing countries must do their utmost to attain self-sufficiency within the shortest possible time.

The growing awareness of the ecological interdependence of countries and the deepening energy problem will probably be the ultimate cementing factors in bringing the One World concept closer to reality. Experts believe that the steady increase of carbon dioxide in the atmosphere because of large amounts of fossil fuels being burnt may lead to changes of temperature early in the next century. Although the precise impact of such changes cannot yet be predicted, many experts feel that they may harm some of the highly productive farming regions of the Northern latitudes. This clearly indicates

that on considerations of ecological security, too, the edifice of effective food security needs to be global, encompassing the South and the North.

The productive capacity of land and water can be improved by man's action. Several rivers of sorrow can be converted into streams of wealth, by cooperation among countries sharing international rivers. The genetic resources of plants and animals constitute a common heritage and deserve to be conserved and utilized in a cooperative manner. The march of deserts and the destruction of the biological potential of land can be arrested in many cases through regional and international cooperation. Warnings through global and regional weather watch arrangements help to minimize damage to crops by weather fluctuations. Pests and pathogens do not respect political boundaries. Through coordinated action organized under the auspices of FAO, we have curbed locust invasions.

I believe that the equitable distribution of our conventional stocks of energy and the joint development of new and renewable sources test the enlightened will of nations to survive in comfort, harmony and dignity. Several countries which export oil have liquid gold under sterile sand. In 1979 six oil-rich countries in West Asia alone imported about 6 million tonnes of cereals, valued at about \$ 1.6 billion. Even this money goes to affluent countries. Meaningful cooperation between developing countries with untapped agricultural production potentials and oil-rich countries with surplus financial resources but with deficit food budget could make an enormous difference.

Agriculture is the most important source of renewable wealth. Where there is no shortage of land, biomass programmes can solve many energy problems. India cannot afford diversion of land to produce alcohol when a growing population has to be adequately fed. However, through intelligent and carefully planned social forestry programmes, we can produce the fuel, fodder and fertilizer for rural areas. For small farmers, the cultivation of horticultural crops is a desirable form of land use and improves nutrition and incomes. Deficiencies in post-harvest technology, however, deny the poor cultivator

proper returns from production. Social forestry and horticulture on every bit of vacant land is one way of harvesting considerable quantities of solar energy. This will be the real green revolution.

Every country should give greater attention to the preservation of forests. A 5000-year old Indus Valley seal depicts two thoughtless men pulling out two trees by their roots. From the centre springs a figure, the spirit of the tree, who with outstretched arms demands an ending to this destruction. We have a contemporary version of local women putting their arms around trees to prevent felling. There is an old adage in Kashmir that food will last so long as forests do. ("Ann poshi tele yeli poshi van" - Sheikh Nur-ud-Din Wali). The close relationship between food production and forestry is well known but generally ignored in practice. The pressure of industrialization, urbanization and the growing demand for agricultural products is causing reckless deforestation in many regions. Forest products for bona fide use, including timber for local housing, are becoming ever more inaccessible to the rural poor. The real energy crisis facing millions in developing countries is the scarcity of fuelwood. Scientific management of forest resources, with special care for watersheds and wildlife, will help the voiceless millions, and also ensure long-term national welfare.

The introduction of technologies without adequate understanding of their impact on employment and other social consequences leads to distress. People, more particularly rural women, are displaced from traditional occupations. Millions of our women earn their living through operations like selling fruits and vegetables, processing farm produce and drying and storing grains. They also usually look after the entire area of energy management based on the collection and utilization of agricultural and animal wastes and post-harvest technology. They are harmed by the imitation of energy-intensive and labour-displacing techniques which developed nations have introduced in post-harvest technology, which also make greater demands on energy.

Wherever it is beneficial, the latest technology should be adopted. There are many areas where technology and human labour do not compete for jobs

- satellite photography for resource mapping, climate prediction, also aerial seeding of forestry species in desert and hill areas. Techniques of capture and culture fisheries in inland waters and in the oceans can be improved. Modern systems of soil, plant and animal health care must be developed. The latest techniques of communication are essential. Computers to develop climate models will assist us in the introduction of alternative cropping strategies, contingency plans and compensatory production programmes in order to reduce the adverse impact of aberrant weather. Recent advances in genetic engineering and bio-technology are useful for a wide variety of purposes in agriculture, animal husbandry, fisheries and forestry. These and many other fields provide us opportunities to achieve quantum jumps in technological progress.

However, the latest technology in a developed country may not be best suited for a developing one. The needs of the country should determine the technology and from this standpoint, a whole vista of independent and original development of technologies opens up. Another important factor to be borne in mind is that developing countries cannot afford the often wasteful luxury of switching technologies too often, without giving a fair trial to any of them.

The absorption of technology is a matter not merely of calculating costs and benefits, prices of technology, costs of labour displaced or revenues of product achieved. Technology has an impact on society - the mode of living and the relationship between people and institutions. Technological change cannot be abruptly imposed. It has to be a process of evolution. However modern, however beneficial a technology, it has to fit in with indigenous culture and capabilities, and harmoniously transform tradition into modernity.

Planning for agricultural advance must necessarily be indigenous though guided by the global perspective. The starting point is the preparation of reliable and compact agricultural balance-sheets using modern techniques of resource surveys which are based on remote sensing and aerial mapping. Champions of appropriate technology would sometimes like developing countries

to confine themselves to obsolete technology. Obsolescence is as undesirable in developing nations as in developed ones.

A national food security system cannot wait to be led by any international body. A country's citizens are the responsibility of the government that claims their allegiance. Governments of the developing world have borne burdens unknown to the administrators of affluent societies. Much of the disparity and exploitation against which we struggle in the international sphere mocks us at home. There can be no enduring solution to hunger without ending social and economic inequality but our efforts are hampered by other competing values set by affluent societies who had not thought of or practised them in their own struggling period. The paucity of food supplies is in real terms only a part of immediate problems albeit a major threat to the future. Many of us are growing the food that we need but have not been able to reach it to every mouth. For a permanent impact, national food security must have an umbrella of social security.

The food security larder requires more than the periodic generosity of the rich: Hunger has to be tackled through conscious institutional reform within nations and between nations, and not just by overhauling technology or supplementing the supply of food. Technology is not a total answer nor will a change in it automatically change institutions. An effective world food security system must eliminate the institutional whims and vagaries that create artificial scarcity. They must ensure buffer stocks for unforeseen and unavoidable emergencies. We have very little positive control over nature but let us not be subordinated by our institutions.

The world has the technological capability and the financial resources necessary to eliminate hunger and malnutrition by the end of this decade. Only 3 percent of the current world cereal production is enough to eliminate hunger immediately. Yet we find the Freedom From Hunger Campaign launched by FAO at the initiative of its distinguished past Director-General, Dr. B.R. Sen, receiving little attention or support. The entire world faces

a monumental challenge to fight malnutrition and hunger in this matter of food security.

So far we have spoken of national and international initiatives to produce more food and improve distribution. Hungry or satiate, we are shadowed by a greater devastation - the awesome arsenals of nuclear and other weapons. Do we struggle against the desperation of hunger only to see the world blown asunder? Do we preserve the human body in health and vitality only to sacrifice it on the altar of war? Hunger is generally the most common cause of violence in animals or in humans. Wars have been fought for food, for territory, for honour. But ironically, the hungry are not belligerent today, it is those who have plenty.

Eminent economists say that if the present daily world expenditure of about \$ 1.3 billion were frozen even at this level, the money to eliminate hunger could easily be found. The expenditure incurred on a new inter-continental missile could plant 200 million trees, irrigate 1 million hectares, feed 50 million malnourished children in developing countries, buy a million tonnes of fertilizers, erect a million small biogas plants, build 65 000 health care centres or have 340 000 primary schools. The strategic Hunger Elimination Treaty, which President Kenneth Kaunda advocated in an earlier lecture in this series, coupled with progressive disarmament, is a worthwhile programme.

It was with the use of the plough that the human species first became conscious of the earth as the bountiful mother and touched it with sanctity.

The earth has been ravaged, desecrated, made sterile - perhaps through ignorance in the initial stages but lately driven by greed and arrogance. Today it is not the ignorant but the knowing who pose the main danger to humankind's survival. Knowledge no longer leads to the realization of Truth. There is little visible pain at misery or violence. We talk of a crisis in the human environment, consciousness, and values; but we do not see it as a breakdown and confusion in a complex pattern of relationships.

Recognition that human actions determine the future of the raw material of life must awaken us to our responsibilities. Through education we must re-establish the sacred dimension that views the resources of the world - the air and space, the earth, water, plants, animals - as a common heritage to nurture and use frugally. Life can survive only through deep awareness of the globe as one and a sharing of the earth's riches in harmony, without unsettling the equilibrium or disturbing natural laws.

The prosperity of any single country is linked with that of the rest of the world. Such interdependence between free nations, of benefit to all, presupposes the self-reliance of every nation, as well as the recognition that the small and the weak also can and should contribute to the common cause. A beautiful parable narrated by our poet Rabindranath Tagore comes to my mind:

"Who among you will take up the duty of feeding the hungry?" Lord Buddha asked his followers when famine raged at Shravasti.

Ratnakar, the banker, hung his head and said, "Much more is needed than all my wealth to feed the hungry."

Jayasen, the chief of the King's army, said, "I would gladly give my life's blood, but there is not enough food in my house."

Dharmapal, who owned broad acres of land, said with a sigh, "The drought demon has sucked my fields dry. I know not how to pay king's dues."

Then rose Supriya, the mendicant's daughter. She bowed to all and meekly said, "I will feed the hungry." "How!" they cried in surprise. "How can you hope to fulfil that vow?"

"I am the poorest of you all", said Supriya, "that is my strength. I have my coffer and my store at each of your houses."