

# Agricultural Modernisation and Agricultural Development in India



**M. Vasu**

**AGRICULTURAL  
MODERNISATION AND  
AGRICULTURAL  
DEVELOPMENT IN INDIA**

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**Dedicated To**  
**My Beloved Parents**  
M. Maruthamuthu  
&  
M. Ariyamalai

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## *Preface*

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Agricultural sector in India recently faces serious challenges and constraints because of liberalisation and globalisation policy followed by Indian Government.

Establishment of many agriclinics and agro colonialism leads to our economy in progressive path. Huge volume of investment allocations have been made to improve agriculture as agri business sector but have not been able to achieve the desired goal because many difficulties and uncertainties are clubbed with each other.

Agricultural modernisation as was introduced by the British raj was based on exploitative land, labour and credit relations and was promoted with our eye to colonial interests. The modernisation that independent India has witnessed has improved the lot of peasants of all categories, but the large farmers have come to dominate rural society. Social equality remains elusive. The book covers all these aspects in a vivid way.

I would like to express my heartfelt gratitude to the management and Dr. A. Arunachalam, Chairman, Adaikalamatha College, Vallam, Thanjavur, for having

given me an opportunity to serve in this College and enrich my knowledge for writing a book.

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I must thank God Almighty for all the blessings He has showered on me for writing this book successfully.

Dr. M. Vasu

June 2009

PUDUKOTTAI

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## *Emerging Agricultural Issues in India*

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### **A Saga of Success**

From a nation dependent on food imports to feed its population, India today is not only self-sufficient in grain production but also has a substantial reserve. The progress made by agriculture in the last four decades has been one of the biggest success stories of free India. Agriculture and allied activities constitute the single largest contributor to the Gross Domestic Product, almost 33 percent of it. Agriculture is the means of livelihood of about two-thirds of the workforce in the country.

This increase in agricultural production has been brought about by bringing additional area under cultivation, extension of irrigation facilities, the use of improved high-yielding variety of seeds, better techniques evolved through agricultural research, water

management, and plant protection through judicious use of fertilizers, pesticides and cropping practices.

## **Crops**

The 1970s saw a multi-fold increase in wheat production that heralded the Green Revolution. In the next decade rice production rose significantly; in 1995-96, rice production was 79.6 million tonnes. The total grain production crossed 211 million tonnes in 2001-02, a big leap from 51 million tonnes in 1950-51.

## **Irrigation**

To carry improved technologies to farmers, a National Pulse Development Programme, covering 13 states, was launched in 1986. Efforts to boost pulse production were augmented further by the Special Food Production Programme. In 2001-02, pulse production was 13.52 million tonnes. With some states offering more than the statutory minimum price, sugar cane production also received a boost, and in 2001-02 a record 292.2 million tonnes was registered. As efforts continued to increase the irrigation potential in the country, the last 40 years saw the gross irrigated area reach 85 million hectares. Flood forecasting has become an important activity over the years. Over 500 hydrological stations collect and transmit data through 400 wireless stations for issuing forecasts for 157 sites. About 5,000 forecasts are issued in a year with 94 percent accuracy. The country also receives international support, with the World Bank as a primary source, for developing its water resources. International cooperation is also envisaged in setting up a National Centre for Information on Water and Power. As there is a broad

seismic belt in the country, particularly along the Himalayan, and the Kutch region and parts of Maharashtra, a scheme is being evolved to collect all data on seismic activity at various dam sites.

## **Fertilizers**

The fertilizer industry in India has grown tremendously in the last 30 years. The Government is keen to see that fertilizer reaches the farmers in the remote and hilly areas. It has been decided to decontrol the prices, distribution and movement of phosphatic and potassic fertilizers. Steps have been taken to ensure an increase in the supply of non-chemical fertilizers at reasonable prices. There are 66 fertilizer quality control laboratories in the country. Since bio-fertilizers are regarded as an effective, cheap and renewable supplement to chemical fertilizers, the Government is implementing a National Project on Development and Use of Bio-fertilizers. Under this scheme, one national and six regional centres for organizing training, demonstrating programmes and quality testing of bio-fertilizers has been taken up.

It was a challenging decision of the Government to take Bombay High gas through a 1,700 km pipeline to feed fertilizer plants located in the consumption centres of North India. However, the major policy which has ensured the growth of the fertilizer industry is the thrust on accelerating fertilizer consumption by fixing, on the one hand, low and uniform price for fertilizers, and on the other hand providing the manufacturers adequate compensation through the retention price and subsidy scheme. As expected, fertilizer nutrient demand has gone up from 0.29 million tonnes in 1960-61 to 16.7 million tonnes at the end of

2000-01, compared to 12.15 million tonnes during 1992-93.

### **Fisheries**

Fish production achieved an all-time high of 5.6 million tonnes at the end of 2001-02. Programmes that have helped boost production include the National Programme of Developing Fish Seeds, Fish Farmers' Development Agencies and Brackish Water Fish Farmers' Development Agencies. The Central Institute of Fisheries Nautical and Engineering Training trains the necessary manpower. To diversify fishing methods and introduce processed fish products on a semi-commercial scale, an Integrated Fisheries Project has been launched. A National Fisheries Advisory Board has also been established.

### **Food Processing**

The Ministry of Food Processing Industries, set up in July 1988, is the central agency of the Government responsible for developing a strong and vibrant food-processing sector with a view to create increased job opportunities in rural areas, enable the farmers to reap benefit from modern technology, create surplus for exports and stimulating demand for processed food.

A new seeds policy has been adopted to provide access to high-quality seeds and plant material for vegetables, fruit, flowers, oilseeds and pulses, without in any way compromising quarantine conditions. Initiatives have been taken to encourage private sector investment in the food processing industry.

## **Agricultural Research**

The apex body for education, research, training and transfer of technology in the field of agriculture is the Indian Council of Agricultural Research (ICAR), established in 1929. India's transformation from a food deficit to a food surplus country is largely due to ICAR's smooth and rapid transfer of farm technology from the laboratory to the land.

ICAR discharges its responsibilities through 43 research institutes, four national research bureau, 20 national research centres, nine project directorates, 70 all-India coordinated research projects, and 109 Krishi Vigyan Kendras (farm science centres).

Besides, the programme of Agricultural Education is coordinated by ICAR with the curricula and other normative guidance given to the 26 agricultural universities and four national research institutes.

## **Oilseeds Production**

A Technology Mission on Oilseeds was launched in 1986 to increase production of oilseeds in the country and attain self-sufficiency. Pulses were brought under the Technology Mission in 1990. After the setting up of the Technology Mission, there has been consistent improvement in the production of oilseeds. The oilseed production, which was 108.3 lakh tonnes in 1985-86, has increased to 247.30 lakh tonnes in 1998-99, the highest production so far. However, due to unfavorable weather conditions prevailing in the major oilseeds-growing states, the oilseed production during 1999-2000 and 2000-01 suffered some decline.

The increase in production was largely contributed by soybean, rapeseed and mustard. Production of pulses has seen many ups and downs, which is expected to be checked under the mission. The country grows mainly nine oilseeds, with groundnut, rapeseed and mustard accounting for 62 percent of total production. Lately, soybean and sunflower have shown major growth potential.

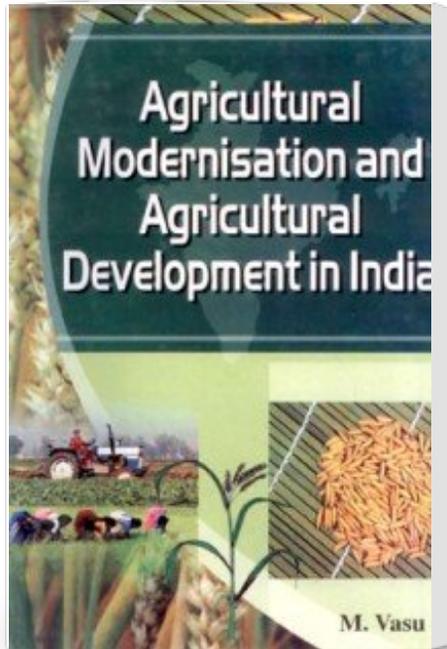
### **Drinking Water**

A Technology Mission on Drinking Water and Related Water Management has been constituted to cover the residual problem villages and provide potable water at 40 litres per capita per day, and 70 litres per capita per day in desert areas inclusive of 30 litres for cattle. The mission is tackling the problem through 55 mini-missions in project districts and countrywide problem-oriented submissions. A Village Level Operation and Maintenance (VLOM) pump called India Mark-II has been developed and is being exported to 40 countries.

An appreciable pace of research has taken place in all sectors of agriculture including crops, horticulture, natural resource management, livestock, fisheries and agricultural engineering. The technology-led developments in agriculture have made India self-sufficient in foodgrains and a leading producer of several commodities in the world. The green revolution in crops, yellow revolution in oilseeds, white revolution in milk production, blue revolution in fish production and a golden revolution in horticulture bear an ample testimony to the contributions of agricultural research and development efforts undertaken in the country.

India has received worldwide acclaim in the field

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