CHAPTER - II

HISTORICAL BACKGROUND

Turning to the history of oilseed research in our country, up to 1947, oilseed research in India was conducted independently by the states and there was very little coordination among them. From 1947 to 1966 oilseed research was supported by Commoditiy committees and research commenced in an organised way. Only in 1967 in ICAR took over the research on oilseeds and coordinates, like in the case of wheat and rice, the oilseed programme would not pick up any momentum. That was the reason ICAR took over the All India Coordinated Programme in 1967. In the Third Plan, there were 32 centres working on oilseeds with a budget of Rs.10 million; in the Fourth Plan 40 centres with a budget of Rs.15 million; in the Fifth Plan we had 62 centres with an outlay of Rs.40 million and in the Sixth Plan we had 77 centres with Rs.60 million. Considerable emphasis has been given by the ICAR to intensify the work on oilseed research. The Project Directorate on oilseed was started in 1976 and the regular Project Director joined in 1973. In addition to that we appointed a series of Project Coordinators for each of the individual crops to give impetus to oilseed research. All India Coordinators for groundnut, sesame, rapeseed-mustard, and other oilseed crops and their job is to see that research of that particular crop is coordinated properly. In addition, the National Training Centre and organised some training programmes for groundnut, castor, etc., and now, within a few days, a training programme is being organised for rapeseed-mustard at Haryana Agriculture University, Hissar. The National Centre for Groundnut Research at Junagarh started in 1979 exclusively to work of groundnut. In addition to that there are a number of ad hoc schemes of the ICAR, dozens of them to do research in different agricultural universities. The international collaboration from International Development Research Centre of Canada. The work on sesame, safflower, and repeseed-mustard. There is also a Swedish Development Agency, on repeseed-mustard. In addition to that, ICRISAT, which is located in Hyderabad, is also doing extensive work

on groundnut. We have a separate All India Coordinate Research Project on soybean with 18 centres. The coconut programme going on at a number of centres. In Bangalore last year a decision wastaken that we should initiate and intensify work on the African oil palm. This is one of the potential areas of research. The elite seed production programme for sunflower. A hybrid of sunflower has been developed and given to the National Seed Corporation and other seed agencies.

The Department of Agriculture is more concerned then us because they are answerable for the total production of oilseed in the country. Since 1980-81 they have intensive projects for increasing the production of groundnut with a budget of Rs.35 crores. Soybean project in Madhya Pradesh is operating since 1981-82 with an outlay of Rs.10.56 crores. There is intensive oilseed Development Programme, extension of oilseeds to new areas, irrigated areas, development of soybean and sunflower, with an outlay of Rs.19.35 crores. Then we have the NDDB Project in Gujarat on augmenting production and marketing of edible oils and oilseed. They have 1268 cooperatives in the country and the number of cooperative is increasing. The Oil Palm India Limited has plated about 3,110 hectares under oil palm in Kerala and about 640 in the Andaman Nicobar Islands. The National Oilseeds Development Project, a huge project to increase production by 3 million tonnes with a budget of Rs.70 crores. we have a very extensive minikit programme: in 1982-83, 3.97 lakh of minikits have been supplied, as compared to 72,000 in 1981-82 and 32,000 in 1980-81 - all of which shows the importance being given to improve oilseed production in the country. In addition to that a centrally sponsored and World Bank-aided Kerala Agricultural Development Project is operating, which is involved in the improvement of the coconut production in the country.

The area under rabi groundnut has increased from 2,000 hectares to 1.1 m hectares in Gujarat, and yields are about 1530 kg per hectare as compared to 610 kg of the kharif groundnut. This is a hopeful sign area under sunflower and soybean is increasing in a big way. Inter-cropping of sunflower is going up in Gujarat because they keep 90 cm

distance between two rows of groundnut and this trend is catching up in Gujarat.

The national scientists have developed new varieties of different crops - e.g., 30 varieties in the case of rapeseed mustard alone. It is possible to produce 25 to 35 quintals of seed of this crop per hectare with proper management and plant protection. The production and protection technologies have been standardised in a number of crops. They have produced early maturing varieties to fit into the cropping systems and also for the intercropping systems. Two sunflower hybrids from the University of Agriculture Sciences, Bangalore, BSH I and II and Surya from the Punjabrao krishi Vidyapeeth, Akola are vary promising, and variety Morden is picking up very well in Gujarat for intercropping.

The work on oil content should be intensified. It is not enough if only the oilseed production is increased but it is also very important to increase the yield of oil per kg oilseed or per unit area. In case of safflower, our scientists have improved the oil content by about 4-5 per cent as compared to the commercial varieties we are growing. Our present emphasis is to improve the oil content per se. The collection, evaluation and cataloguing of the germplasm is going on in a big way. We have 7,000 varieties of groundnut, about 3,000 varieties of sesame, and about 4,000 varieties of rapeseed-mustard. We have reasonably assembled the world germplasm of all the major oilseed crops. We are cataloguing them and also developing facilities for long-term storage.

The production technology for higher yields is being perfected and as I said, 25-35 quintals per hectare is possible with the new technologies and new varieties. Our scientists will have to work on improving the yield per hectare. Another important aspect is the oil content in various crops. In the case of cottonseed oil, rice bran oil and African oil palm there are tremendous potentialities; in fact there are several non-conventional oilseed plants. The U.S. Department of Agriculture lists about 2,000 varieties round the world, capable of producing edible oils, out of which we have about 100 in our country.

In view of the importance of the development of minor and non-edible oilseeds in the country, the President, Indian Central Oilseeds Committee vide Government of India. Ministry of Food and Agriculture, letter No. 11-37/58- Com. II dated the 17th June 1959, constituted a "Special Committee for development of minor and non-edible oils".

A number of plants like mahua, neem, sal, kusum, karanja and even rubber seed and tea seed can be use for extraction of edible oils. It was planned to produce 1.38 lakh tonnes of oil from the non-conventional sources by 1981-82 and an outlay of about two crores has been earmarked. The World Bank Project on cotton has been a very good success. Similarly, if some blocks can be taken up where oilseeds are grown intensively, it will go a long way to increasing the production of oilseeds in the country. One of the problems in oilseeds is the risk factor involved. As to say the vagaries of monsoon influence oilseed production tremendously. Some type of crop insurance on a limited scale in selected districts will create a lot of confidence in our farmers. Another area is, to improve Processing technologies to extract more oil. With some of our current technologies we are not able to extract all the oil and considerable amount is left in the oil cake - this requires special attention. Breeders have to pay more attention to increasing the yield of the crops per se. Quality seed production should be taken up on a massive scale and seed should not become a limiting factor. We need to develop dry farming technology because over 90 per cent of the oilseeds are under dry farming situations. Some kind of mechanisation is necessary but nobody is coming forward to manufacture the implements for dry farming situations.

Vegetable oilseeds and oils have assumed an importance of their own in the economy of the country. The demand of vegetable oils, both for edible and non-edible purposes, has increased in recent years with the increase in population and standard of living. It is in this context that increasing production of oilseeds has been given a high priority under the new 20-point programme.

The first three years of the Seventh Plan have seen a remarkable change in the agricultural scenario of West Bengal. There has been a major break-through in production of foodgrains, especially rice. It has also been noticed that there is a perceptible trend towards change in the cropping pattern specially in commercial crop production. However, the State continues to face substantial deficit in oilseed production. Being a major consumer of mustard oil in the country West Bengal has to depend on supply from other States.

To fill up the gap, imported edible oil like Rapeseed oil is distributed through public distribution system. During 1986-87 this State produced 0.58 lakh tonnes of mustard oil from its internal production of Rapeseed - mustard and about 2.16 lakh tonnes of mustard oil was imported from other States in addition to substantial quantity of Rapeseed oil from imported edible oil pool. If fact only 28% of the requirement of edible oil was met from internal production. However, due to introduction of various scheme like NODP, OPTP, NOVODB, the situation has changed during 1987-88 and this State has produced 3.34 lakh tonnes of rape-mustard seed which has yielded 1.11 lakh tonnes of mustard oil. Now this State is in a position to meed about 50% of the overall requirements of various oil seeds. This could be achieved due to the integrated extension support vis-a-vis transfer of technology at the field level under the technology mission. There is also a growing awareness amongst the farmers about need for adoption of improved package of practices in the cultivation of oilseeds crops, which is giving them a high return. As a result the production of soilseeds is expected to increase from 2.36 lakh tonnes in 1984-85 to 5.44 lakh tonnes by 1989-90.

The major constraint in the state are that most of the area under oilseed crops is rainfed comprising largely of marginal and sub-marginal lands resulting in year to year fluctuations in production. Considerable production losses occur due to pests and diseases, inadequacy of arrangements for timely supply of quality seed of improved varieties, other inputs and credit, etc. These coupled with the small size of holdings have made the oilseeds to be grown under conditions of poor crop

management resulting in low yields. Finally, marketing support is practically non-existent. No body can expect the farmer to use fertile and irrigated lands for crops like oilseeds because wheat, paddy, sugarcane, cotton and various other crops prove to be much more profitable, in spite of the fact that oilseeds fetch very good prices in the market. This is only because of the shortage of edible oils. They have been fixing the support prices for oilseeds only to give a boost and incentive more as a satisfaction to the farmer, but this is more or less irrelevant because the market prices are much higher than those announced by the Government.