C H A P T E R - VI

COMMERCIALISATION OF FARMING

The Area, Output and Yield of Sugarcane in Kopargaon Taluka.

6.1 INTRODUCTION :

Considering the agricultural growth rates, though Maharashtra state runs sixth among the states of the Indian Union, some of it's regions have shown definite signs of rapid development in the field of agriculture since the inception of the planned economic development in the country.[1] The district of Ahmednagar is eventhough drought prone area, it is very well known for sugarc cultivation owing to the irrigation facilities made available by the Government.

The objective of this chapter is to highlight the changes in respect of the composition of agricultural output, changes' in the allocation of cultivated lands among different crops mainly between food crops and cash crops and the factors that have induced the changes in the allocation of agricultural land to commercial crops and especially to sugarcane crop and the effects of those changes in the secondary and tertiary sectors of the economy of the taluka under study.

6.2 SUGAR INDUSTRY IN AHMEDNAGAR DISTRICT :

Ahmednagar district is the sugar bowl of Maharashtra with 18 sugar factories in the district.(13 in cooperative sector

and 5 in private sector) The district produces about 25% of sugar in Maharashtra and shrirampur is the biggest sugar market in India.

The first sugar factory in Maharashtra was started in 1919. This was the Belapur sugar Mills at Haregaon in Ahmednagar district. By the end of 1940 four more sugar factories were established. The newly established factories were Maharashtra sugar mills, Ltd. Tilaknagar and the Belwandi sugar Mills Shrigonda in 1934, the Godavari Sugar Mills, K Kanhegaon in 1939 and Godavari Sugar Mills, Laxmiwadi in 1940.[2]

Shri Changdeo Sugar Factory was started in 1941 at Puntamba. Till independence, there were six sugar factories in Ahmednagar District, all in the private sector. After 1947, 13 sugar factories were established on a co operative basis in this district.

We find that, by the end of 1975 the number of sugar factories established and licensed in Maharashtra was 84. The remarkable thing is that the highest number of sugar factories was in Ahmednagar district. Out of the total number in Maharashtra, 18 sugar factories, i.e. 20 percent were situated in the Ahmednagar district, and the highest number of sugar (Six) factories in the district was in Kopargson taluka.

6.3. KOPARGAON TALUKA :

Agricultural is the major occupation in Kopargaon taluka As per the census of 1971, the total population of the taluka was 2,62,619. Out of this 76.56% depends upon agriculture and the remaining depends upon other occupations in various fields such as industry, trade, commerce, transport, construction and other services, The remarkable characteristic of the taluka is the extensive agro-industrial sector containing six sugar factories and two alcohol factories, one in the private sector and the other in the cooperative sector. The alcohol factory in the cooperative sector, Viz. Kosang was started by the three cooperative sugar factories in Kopargaon taluka. Along with these factories there exists a relatively more developed agricultural and natural resources like rivers, grazing land, trahsport facilities, marketing centres, a small fertilizer factory, dairy etc.

6.4 A BRIEF HISTORY OF THE SUGAR FACTORIES IN KOPARGAON TALUKA

Upto 1914, the sugarcane farming made considerable progress, but the fall in gur prices brought this progress to and end. The gur price situation led to the decline in the area under sugarcane farming. Cultivators became less intrested in taking advantage of the canal water and hence the

collection of water revenue decreased.[3] In order to find out reasons and a solution, Government appointed a committee under the chairmanship of Shri, Kamat. In 1932 the committee recommended the establishment of a sugar factory in the area. The committee also suggested the grant of special concessions to the new sugar factories.

Some cultivators from Wari, Kopargaon and Samvatsar approached the promotors of the Godavari Sugar Mills and the Govt. M/S Karimshah Somaiya who were working as sugar commission agents acquired land on lease from the local farmers and established the first sugar factory on the left bank of the Godavari river at Sakharwadi. The Factory purchased and acquired on lease nearly 14000 acres of land at Nighoj-Nimgaon, Rui, Shardi, Rastpur, Samvatasr, Padnegaon, Wari and Kanhegaon. The crushing capacity of the factory was 650 tunnes perday in the begining. By 1955-56 it was increased to 1016 tonnes.

Godavari Sugar Mills started its second factory on the right bank of Godavari river at Laxmiwadi in 1940 and started its first crushing season in the year 1942-43. Its crusing capacity in the begining was 800 tonnes and it was increased up to 1016 tonnes by the year 1957-58.

In 1939–40 when the construction of the Laxmiwadi sugar factory was going on, some rich cultivators acquired on lease some land for sugarcane cultivation and tried to get machinery for another sugar factory at Puntamaba. But their meagre resource were exhausted in purchasing and leasing of land. In those days, it was difficult to procure an adequate amount of financial assistance from commercial banks and other sources. Therefore, they approached M/S Bhiwandiwals and Co. of Bombay, who agreed to give a certain amount of credit on the condition that they would not take further loan from any other partly. Besides, if the cultivators were not able to manage within the given amount of credit, they would have to hand over the factory to M/S Bhiwandiwala and Co. for its further development.[4] Had the cultivators over come financial difficulty, this would have been the first sugar factory of cultivators in India in 1940–41.

Ofcourse, some shares were retained by the orginal owner cultivators. The factory thus established is the changed sugar factory at Puntamba erected in 1940. It started its first crusing season in 1941. The crushing capacity was 350 tonnes a day in the begining. It increased to 500 tonnes by 1948–49 and 1955–56 it further increased to 800 tonnes.

6.5 COOPERATIVE MOVEMENT :

Before going in to actual establishment of these factories, it will be very useful and necessary to look

back in the Cooperative movement in this area. The involvement of Government in the cooperative sugar factories on a large scale began in 1954 but the idea of cooperative sugar factory was not unknown before 1954. In fact, the launching of the scheme of cooperative factory in that year can be directly traced to the success of the idea of pravaranagar in Bombay State(Now Maharashtra state) during 1948 to 1954. Even before some cooperative sugar factories were set up in the united provinces and Madras provinces during the thirties but only one of the four such sugar factories survived after independence.

The idea of a cooperative sugar factory gathered momentum immediately after the world was II in the district of Ahmednagar in the Bombay state.(Now Maharashtra state) the Ahmednagar district was fortunate in securing irrigation facilities before the world war I. This district was lagging behind in agricultural production due to famine conditions but the irrigation facilities changed the face of the district.

The local farmers around belapur Road in Ahmednagar district were encouraged to pursue the idea of cooperative sugar factory by the local official of Bombay provincial cooperative Bank. The official held a conference of local farmers at Belapur Road on the 17th December, 1945 under the presidentship of Dr. D.R.Gadgil the veteran economist of Poona. On account of

of the hard work of the managing committee the Government official and technical experts of the pravara cooperative sugar factory at Loni could bring out the first bag of sugar on 31st December, 1950. So the idea of the first cooperative sugar factory after independence become a reality in a period of five years of its conception.

Soon after the establishment of the Pravara Sugar Factory, the construction of the first cooperative sugar factory of Kopargaon taluka was started in 1953 known as Kopargaon cooperative sugar factory at Kolpewadi. Prof. D.R.Gadgil the noted economist, was one of the Directors of the factory. The factory started its first crusing season on 12th February 1956. It increased its capacity from 1000 M.T. to 1750 M.Tonnes by 1959-60.

Some cooperatorrs from the taluka inspired by the working of the factory in the same taluka at Rahata. On 3rd March 1955 the factory got itself registered and imported machinery from Germany. The factory is known as Shri. Ganesh Cooperative sugar factory Rahata. The crusing capacity of this factory in the begining was 1000. M.Tonnes a day and was further increased to 1750 M.Tonnes by 1972-73.

The Third cooperative sugar factory was started at Shignapur Viz. The Sanjeevani Cooperative sugar factory. Itwwas registered on 20th October, 1960 and started production on

10th Nov. 1963. Its crushing capacity at the begining was 1000 M.T. per day. It was further raised to 2000 M.T. by 1974-75.

As compared to the private sugar factories, the crushing capacity and output of cooperative sugar factories are greater than those of the private sector sugar factories.

6.6 BEHAVIOUR OF IRRIGATED CROPS IN KOPARGAON TALUKA (SUGAR CANE CROP)

After having discussed throughly the development of irrigation facilities by different sources, we shall make an attempt to analyse the behaviour of hectarage under perenially irrigated crops especially hectarage under sugarcane. The sugarcane crop is highly water intensive crop. Besides the agro climatic conditions are quite favourable in Maharashtra. Since Kopargaon taluka comes under the Maharashtra State region, it is but natural that given the appropriate perennial irrigation facilities, the cultivators are prone to shift the hectarage under traditional food crops to commercial crops especially sugarcane.

As we have noted in the preceding chapter, after the construction of Nandur Madmeshwar dam on the Godavari river, canala on both right and left sides of the dam were completed in 1911. Both the left and right side canals, of the dam flow

through Kopargaon taluka and irrigate a substantially larger portion of the cultivated land. Since our intension is to study the changes in the cropping pattern consequent upon the development of irrigation facilities from 1965-66 we did not make an attempt to analyse the changes prior to 1965-66.

In the year 1965-66 (the base year of our period under study), the hectarage under sugarcane amounted to 12866 hectares. The percentage of it to the net area irrigated formed 36.56. In the subsequent two years 1966-68 the percentage to the net are irrigated remained almost constant. (34%) Thereafter in the last two years of the subperiod (1965-70) the area under sugarcane increased continuously. The index number changed from 100.00 (base year) to 115.47 and 118.66 consecutively. It's percentage also increased to 38.95 and 43.51 in the same years. The yield of the sugarcane crop in terms of gur increased from 6869 K.G. per hectare in the base year to 7879 K.G. per hectare in the year 1969-70. As a resutl the index number of yield per hectare change from 100.00 to 116.25. The increasing trend of the yield of the crop induced the area under sugarcane during the first subperiod Similarly the production of the crop in the taluka increased from 88377 M.T. to 121907 M.T. (1969-70). As a result the index number of the production of the crop changed from 100.00 to 137.94 (1969-70) This increase in production could be

accounted for both by increasing hectarage and increasing the yield per hectare of the crop. In other words both area and yield of the crop head contributed to the growth of the output.

During the second subperiod, (1970-75) the net area irrigated more or less remained constant, despite very small marginal variations in the interveneing years. The index numbers fluctuated between the range of 94.73 (1973-74) and 108.58 (1974-75). However, the percentage of the net area irrigated to the net area sown fluctuated voilently in sympathy with the changes in the net area sown. (See table No. 5.4). The area under sugar cane shows a firm tendency towards a decline as the index number changed from 122.77 to 108.02. On the contrary the yield of the crop reveals the tendency towards an increase. The index number of the yield changed from 114.94 to 169.38 barring the abnormal fall in the two interveneing year (1971-73) Analogously production of the crop increased substantially. The index number changed from 141.16 to 182.98. In the interveneing two years (1971-73) the production index fell down because of the fall in both hectarage and yield of crop. In the last year of the subperiod it shot up abnormally as a result of substantiated increase in the yield per hectare rather than increase in the hectarage.

During the first three years of the last subperiod (1975-80) the net area irrigated increased from 31634 hectares to 39906 hectares. The index number, consequently, changed from 89.89 to 113.40. But the percentage of the net area irrigated to the net area sown abnormally shot up from 39.15 to 97.33. This abnormal increase in the percentage share could be explained by the fact that the net area sown dropped abysmally to 41000 hectares. The index number of the net area sown, as a consequence sharply declined to 47.69 in the same year. However, this loss in the net area sown compensated by the increase in the area sown more than once. The area sown more than once abnormally increased to 32500 hectares. Hence, we do not notice a very abnormal variations in the gross cropped area in that year, though the percentage of it to the total geographical area of the taluka declined to 68.53. This fall in the percentage of the gross cropped area could be explained by the failure of the south west monsoon as a result of which a large portion of the agricultural lands went out of cultivation Thereafter, the net area sown resumed its upward trend. In the last two years of the period the net area irrigated remained almost constant as index number did not change substantially. However, the area irrigated more than once in year increased sharply excepting the last year. The index number as a consequent shot up from 676.10 (1975-76) to 989.48 (1978-79).

During this last subperiod the area under sugarcane shows

a firm tendency towards a decline as the index number moved down from 106.31 (1975-76) to 83.58 (1979-80) Similarly its percentage to the net irrigated area changed from 43.24 to 29.13. This countinuous fall in the hectarage of sugarcane points out to the fact that the farmers have started to adopt the multiplie cropping system on the irrigated lands during the latter part of the period. Besides the lands which have remained under sugareane cultivation for considerably a longer period of time have become saline and thus have become unsuitable for the cultivation of the prennially irrigated sugarcane crop. Incidentally we take note of the fact that the three factories in the private sector in the taluka have recently closed their production for want of sugarcane supply. Even the remaining three cooperative sugar factories are in existence, they have to rely for the sugarcane supplies on the other areas out side the taluka. Even though the establishment of sugar factories in both the private and cooperative sectors was responsible for the expansion of the area under sugarcane in the earlier period, at present they are confronted with an acute shortage of raw material i.e. (Sugarcane).

Contrary to the behaviour of the hectarage under sugarcane, the behaviour of the yield per hectare remained on the ascendancy. This could be corrborated by the upward trend of

the yield index. Despite the falling area under sugarcane the production of the crop in terms of gur has been increasing during the latter part of the period.(See the column No. 7 of the table) The overall increasing trend of the production could be held responsible by the rising yield of the per hectare. The rising yield per hectare points out to the fact that the farmers have been adopting better water management and improved agricultural practices as far as the sugarcane cultivation is concerned. Besides the increase in the yield per hectare could be accounted for by the intensive application of chemical fertilizers in a scientific manner.

The agriculturists, in recent years have been diverting the irrigated lands under sugarcane towards horticulature and cultivation of food crops like cereals and pulses. The rise in the relative prices of competitive fruit crops and increasing demand for them, must have caused the diversion of land from sugarcane plantations to horticulture. Moreover, in view of likely imposition of restrictions on the use of water for 12 months for sugarcane cultivation, and the governments emphasis on the need for increasing the production of food crops, oil seeds and pulses, must have compelled the farmers to reduce the area under sugarcane. This reversing trend of the sugarcane area could be regirded as beneficial from the point of view of the society as a whole in the long run. If the lands remain under perennial irrigation on account of sugarcane

cultivation and increasing doses of chemical fertilizers are applied to the land for longer period of time the agricultural lands are bound to became less and less fertile and useless for cultivation of other crops in the near future. To avoid the loss of the fertility of soil caused by the perennial use of water and heavy application of chemical fertilizers, a huge amount of investment will have to be made by the Government in construction of drainage, which seems to be beyond the means of the Government.

4.7 FACTORS CONTRIBUTING TO THE GROWTH OF AREA UNDER SUGARCANE:

As pointed out some where earlier, sugarcane crop is both perennial and highly water intensive crop and as such it requires perennial sources of water supply. Since the beginning of the planned economic development process, the emphasis has been on the development of agriculture, and among the measures adopted for agricultural development, the emphasis has been on the development of irrigation facilities.

The percentage of the net area irrigated to the net area sown increased from 40.93 to 53.04 percent in Kopargaon taluka during tye period of 1965-66 to 1980-81.

Thus the increasing area under irrigation had been mainly responsible for the growth in the area under sugarcane.

In other words, the increasing irrigation facilities have induced a change in cropping pattern and that too in favour of sugarcane cultivation because of suitable agroclimatic conditions. Incidentally one fact that should be noted with regret, along with increasing irrigated area the irrigated area sown more than once in a year did not increase pari passu. It showed a slightly increasing trend in taluka. Consequently the area under multiple cropping in the gross cropped area which may be regarded as one of the aspect of modern agricultural practices has not increased commensurately.

6.8 AVAILABILITY OF IMPROVED CHEMICAL FERTILISERS :

The second main factor that has induced the expansion in the sugarcane area has been the increasing supply of chemical and improved fertilisers. Scale in the taluka. The cooperative sugar factories in the taluka supply all the where withal to the member producers of sugarcane. The increasing availability of water and chemical fertilisers, the basic inputs of agriculture, have spearheaded and contributed substantially to the expansion of sugarcane hectarage in the taluka. Moreover the introduction of high fertiliser responsive varieties of sugarcane plant have encouraged ther farmers to expand the area under sugarcane plantations. Still firther

the availability of basic inputs, water, improved fertilisers and the new strains of the sugarcane plant have helped to overcome the constraint on the cultivation of sugarcane with regard to land specificity.

6.9 A CHANGE IN THE TECHNIQUE OF CULTIVATION :

The development of either industry or agriculture involves a change in the technique of production. A change in the technique of irrigating sugarcane crop has also been decisiberly responsible for a shift of hectares from food grain crops to sugarcane. Prior to the plan period, the method of irrigating sugarcane crop was heavily dependent on biological sources of energy. The irrigation method used in the cultivation of sugarcane was both human and animal labour intensive. But with the improvement in the system of irrigating crops and especially crops, for instance installation of oil engines, electric pump sets and lift irrigation, sugarcane cultivation has become much more easier.

The spread of electricity in the country side and that too increasing bias towards larger supply of electricity for accelerating agricultural development has brought about an increase in the amount of irrigated lands. In an exactly analogous manner, through development of canal irrigation the marginal and submarginal lands in the plains of the taluka

have been brought under cultivation. In sum, the substitution of mechanical source of energy for biological source of energy has further facilitated the expansion of the area under sugarcane in the taluka.

6.10 LONG TERM AND SHORT TERM INSTITUTIONAL FINANCE :

Among the states, Maharashtra is the leading state and among the districts, the distrixt of Ahmadnagar is the leading districts in the field of cooperative finance. Ahmadnagar district central cooperative bank (A.D.C.C.B) through their primary cooperative credit societies have been supplying working capital on an increasing scale since their inception In the distribution of short term loans they accord top priority to the finance for sugarcane cultivation. The scale of finance among the scales of finance for different crops is the highest as the repayment has been insured through the cooperative sugar factories.

Besides Ahmadnagar District land development Bank (A.D.L.D.B) have been providing long term finance to the farmers for development of irrigation sources, installation of electric pump sets and for general improvement of lands. The long term institutional finance enabled the farmers to expand their land under irrigation. The expansion of land under irrigation has, in turn, induced the farmers to divert

them to the cultivation of sugarcane with a view to facilitating the repayment of loans to the cooperative primaries.

6.11 MARKETING OF SUGARCANE CROP :

Another equally important factor that may be held responsible for the expansion of sugarcane crop is the existence of the market forit. The establishment of cooperative sugar factories in the taluka provided ready market for sugarcane crop in the taluka. The cooperative sugar factories under statutory obligation to buy at fixed prices the supplies of sugarcane within their area of operation from their respective producers members. The cooperative sugar factories by their cooperative nature itself, fix remunerative prices for sugarcane crop. Besides the Government itself announced in advance the minimum prices for sugarcane along with other major cereal crops. Often the actual prices paid for sugarcane exceed the floor prices fixed by the Government. The area under sugarcane would not have increased at such a phenomenal rate it there had not been an adequate deamand to absorb the supplies. In the case of the crop in question, it was provided by the statutary traiff protection given to the sugar industry from 1931. It was on this ground that the protection of sugar industry was responsible for the development of sugarcane, cultivation.[5]

In sum, increasing irrigation facilities and improved methods of irrigation, increasing supply of improved chemical fertilisers, highly resp nsive new strains of sugarcane plant the changes in the technology of cultivation i.e. adoption of animal and human labour saving devices, increasing supply of institutional finance at the reasonable rates of interest assured prices of sugarcane rather at high levels through sugar cooperatives and easy accessibility of the market within the locality together have contributed to the modernisation of agriculture through cultivation of sugarcane in the taluka.

6.12 IMPACT OF INCREASING AREA UNDER SUGARCANE :

The effects of the growing area under sugarcane crop may be classified into several categories such as economic, political and cultural also. However, here we can confine ourselves to the analysis of economic effects only owing to the limited scope of this chapter. The change in the structure of agricultural output consequent upon the increasing proportion of sugarcane output in the total output of agriculture had produced beneficial effects. This sort of structural change has triggered off a number of salutary effects in the secondary and tertairy sectors of the economy of the taluka.

With the establishment of sugar cooperative factories in response to a growing area under sugarcane and vice versa also, a process of industrialisation has been initiated. The origin of the industrialisation of the taluka with varying degrees could be traced to the shift of area from food grains to commercial crops and especially sugarcane crop. Analogously the growth in the industrial sector consequent upon the development of the agricultural sector of the taluka has given an impetus to the growth of service sectors viz. banking, insurance, transport etc. The growing economic activities in both industrial and service sectors of the taluka may be ascribed to the development of agriculture and more specially to the shift of area from foodgrain crops (excepting few major cereals like jawar, wheat) to sugarcane cultivation.

The development of these factories in response to the expansion of sugarcane crop provided employment opportunities for urbanities and even to the rural folk in both industrial and commercial enterprises. Further the sugar cooperatives which are responsible for the development of such industries, again have provided another wave of employment opportunities for the rural population. It would notbe exaggerating if we say that the growth of sugarcane area has generated a number of employment opportunities for the educated and uneducated,

skilled and unskilled population in all the primary secondary the tertiary sectors of the taluka.

The expansion of sugarcane area and consequent establishment of sugar cooperatives and other ancillary industries have induced the inter taluka maigration of population. The cooperative sugar factories moreover have induced the agricultural population eapecially belonging to marginal and submarginal farmers class to migrate during crushing season to work as casual labourers on the sugarcane plantations to cut sugarcane plants and to transport to the sugar factories. They are recruited by the sugar factories on the contract basis mainly for doing menial jobs such as cutting sugarcane, loading and unloading of sugarcane on the factory sites.

The expansion of sugarcane area has further facilitated the development of roads and communication facilities in the country side of the region. Majority of the villages have been linked through the construction of roads connecting with the centres of sugar cooperatives and with the other growth centres. The development of roads have been the results of the necessity of transporting the agricultural raw materials such as sugarcane, to the manufacturing centres and of providing the agricultural modern inputs to the agricultural production sites. Moreover, the means of transport have been

changing rapidly. Rich sugarcane growing farmers have been increasingly replacing bullock carts and bullock ploughs with tractor trailors for transporting agricultural produce and raw materials (sugarcane) for the sale to the marketing and manufacturing centres. Because of improvement in transport and communication the rural people have increased their contact with the growth centres. Through the operation of the demonstration effect, the affluent sections of the rural people have been switching over to a new way of life. The cooperative sugar factories have their own high schools, public schools and colleges to cater to the educational needs of the surrounding population. This sort of change may be considered as an indication of economic change brought abour from the shifts of subsistance farming to Commercial ised farming i.e. from the shift of diversified food grains cultivation for subsistence to specialised sugarcane cultivation.

In spite of all these beneficial effects of the area expansion under sugarcane that was brought about, glaring economic disparties persist. The only areas where the perennial sources of water are made available a shift in cropping pattern has occurred, where as the area where the perennial water sources are not available have trailed far behind and agriculture is still being carried on mainly for self subsistance which

often times is quite inadequate to meet even the consumption requirements of farm families.

R E F E R E N C E S

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2. N.G.Bapat — "Economic Development of Ahmednagar District." Page. No. 310. 1973, Progressive corporation Pvt. Ltd. Bombay.

3. N.G.Bapat — Op.Cit. P. 310.

4. Ibid. — P.2

5. K.N.Raj — Presidental Address for the 55th Annual conference of the Indian Economic Association at Gaya, 27th to 30th December, 1972.

TABLE NO. 6.5

INDEX NUMBERS OF NET AREA SOWN (NAS), NET AREA IRRIGATED (NAI) AREA IRRIGATED MORE THAN ONCE (AIO) IN KOPARGAON TALUKA

Yield- In terms of gur per hectare in K.gs.
Production- in terms of metric tonnes.

Year	N.A.S.	N.A.I.	A.I.O.	Area sugar	Yield	Production
1965-1966	85962 100 -	35190 100 (40.93)	2235 100 6.35	12866 100 36.56*	6869 100 -	88377 100 -
1966-1967	85365 72.35 -	34815 104-87 (59.33)	3123 195.07 11.81	12100 83.58 29.13*	7297 149.48 -	88294 124.94 -
1980-1981	69871 82.28 -	37065 105.33 (53.04)	11854 530.38 31.98	11933 92.75 31.98*	11605 168.95 -	138482 156.69 -

Source : i) As in Table No. 2.1 (ii) Yeild data collected from the Department of Agriculture, M.S.(Central Building Poona)

Note :i) The figures in the bracket indicate the relative percentage shares in the Net area sown. (Column No. 3)
ii) The figures with astricks in column No. 5/relative percentage shares in the N.A.I. (Column No. 4). indicate the

SUGACANE

GRAPH NO. 6·9

THE AREA, YIELD AND PRODUCTION OF SUGARCANE (1965-66 TO 1980-81)