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## SUMMARIES

### TRENDS IN INTER-STATE INEQUALITY IN THE PERFORMANCE OF CO-OPERATIVE MARKETING SOCIETIES IN INDIA

M.M. Bhalerao, Ramashray Singh, V.P. Tyagi and M.J.M. Reddy\*

An attempt has been made in this paper to study the inter-State inequality in the performance of primary marketing societies (PMS) in India. Both the trends in inequality during the decade 1968-78 as well as the extent of inequality have been studied with the help of (i) coefficient of variation, (ii) Gini coefficient and (iii) Lorenz curves. These statistical tools have been used for finding out the estimates and drawing the curves for both the years, the base year (1968-69) and the last year (1977-78) of the decade so as to find out the extent of inter-State inequality as well as the trends in this inequality, *i.e.*, whether inter-State inequality in different indicators of the performance of PMS has increased or decreased or remained unchanged during the decade. The indicators considered are (i) loans per member, (ii) value of produce sold per hectare, (iii) membership per society, (iv) working capital per member, (v) value of farm requisites supplied per member, (vi) value of consumer goods supplied per member, (vii) value of agricultural produce marketed per member and (viii) capacity of owned godowns per member.

The study is limited mainly to the general purpose marketing societies at the primary level, *i.e.*, primary marketing societies. Comparable data for the major 17 States are available for this period and the decade 1969-78, almost coinciding with the Fourth and Fifth Plans, which witnessed considerable growth of marketing societies. The study is based on the secondary data compiled from the publications of the Reserve Bank of India, Directorate of Economics and Statistics, Government of India, National Sample Survey, Central Statistical Organisation, National Co-operative Union of India, National Co-operative Development Corporation and International Co-operative Alliance. The analysis indicates considerable inter-State inequality between the 17 major States in the performance of PMS during both the periods 1968-69 and 1977-78. But this inequality during the decade 1969-78 decreased slightly. The policy implications of the study are to probe further the causes of such inequality and step up the pace of agro-economic and co-operative development in the backward States for a balanced regional development of the country.

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## PRODUCTION AND MARKETING OF MILK IN RURAL AREAS OF PUNJAB

Bant Singh, H.S. Bal and Narinder Kumar †

The paper makes an attempt (i) to find out the total quantity of milk produced, quantity sold and other disposal of milk on an average farm situation in Punjab, (ii) to study the different channels of marketing of milk in the State, and (iii) to measure the price spreads in the marketing of milk in Punjab. The study relates to the year 1982-83 and is based on data collected from a sample of 200 farm holdings selected under the "Comprehensive Scheme to Study the Cost of Cultivation of Principal Crops in Punjab." The study revealed that on an average farm situation in Punjab, 3,250.61 litres of milk were produced during 1982-83. Nearly 16 per cent of the total production was sold and the remaining 84 per cent was consumed either directly (49 per cent) or after converting it into other products (35 per cent). Both the quantity of milk produced and the quantity of milk sold were higher in the central districts of the State (Region II) as compared with north-west (Region I) and south-west (Region III) districts. Depending upon the involvement of various agencies in the marketing of milk from the producer to the consumer, five marketing channels were observed. These are: (1) Producer - Milk Vendor - Consumer, (2) Producer - Milk Vendor - Halwai - Consumer, (3) Producer - Milkfed - Consumer, (4) Producer - Halwai - Consumer, and (5) Producer - Consumer. Of these, channel III ranks first both in respect of the quantity of milk marketed and the number of farmers selling milk through it. Second in importance is channel II followed by channel I, channel IV and then channel V. Although Milkfed is doing a commendable job in the collection and distribution of milk, the milk vendor still dominates in the marketing of milk. The price spreads ranged from 33 per cent to 40 per cent under the major channels of marketing of milk in the State. Though the producer is benefited by selling milk directly either to the consumer or to the Halwai, this agency has its own limitations. Therefore, from among the other agencies it is profitable to sell milk through Milkfed.

## POTATO CYCLES IN HISSAR MARKET : A HARMONIC ANALYSIS

S.D. Chamola, R.K. Patel, P.K. Sardana and P.K. Suri \*

Agricultural commodities and prices follow some regular cycles. These cycles are of two types: seasonal cycle of the duration of 12 months and longer cycle. The study of these cycles is essential for forecasting short-term and long-term development in agricultural commodities. The main objective

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of the present paper is to study potato cycles in Hissar market during the period 1970-71 to 1982-83. Harmonic analysis using trigonometric functions was used. The analysis was done with respect to wholesale prices, market arrival, estimation of price elasticities, price elasticities of seasonal and long-term cycles and lags in adjustments. The analysis of wholesale prices has shown highly significant value of  $R^2$  at 5 per cent level of probability, indicating seasonal cycle, three-year cycle and trend explaining about 60 per cent of the variations. The estimated equations for the market arrivals was found to be significant. The study of short-term elasticity showed that with the introduction of price variable the value of  $R^2$  improved, indicating a better predictive performance. The short-term price elasticity was 0.40. The price elasticity of arrivals indicates the responsiveness of arrivals to the prices. The seasonal price elasticity worked out to be 1.92 and long-term price elasticity is estimated to be -2.27. The time lag between a change in price and its response to market arrivals corresponding to the seasonal cycle was obtained. The time lag corresponding to the seasonal cycle was found to be approximately one month. This lag is indicative of imperfections in the market conditions, specially the seasonality in production and the time lag involved in transporting.

#### MARKETING COSTS AND MARGINS IN GUAR (*Cyamopsis tetragonoloba L. Taub*) IN HARYANA

L.R. Suhag and Himmat Singh †

Guar is one of the important dryland *kharif* crops grown in the North-Western States of India, *viz.*, Rajasthan, Haryana, Punjab, Gujarat and Uttar Pradesh. So far, this crop was grown as fodder and feed to livestock. But now keeping in view the increasing industrial uses of 'guar gum' and establishment of guar gum factories, this crop has become a potential cash crop particularly in dry farming areas of Haryana. Therefore, the present study was undertaken (i) to examine the extent of marketable surplus and marketed surplus of guar on selected farms in Haryana and (ii) to study the price spread of the most important marketing channel involved in the marketing of guar in the State. From the six important guar growing districts of Haryana, three districts, *viz.*, Hissar, Bhiwani and Sirsa were randomly selected for this study and the data were collected from a sample of 120 farmers and marketing agencies for the year 1982. It was found that the marketable surplus was highest in Sirsa being 82.44 per cent followed by Hissar and Bhiwani districts with a share of 75.50 and 57.71 per cent respectively. The marketable surplus in Bhiwani was low because a major portion of guar production was fed to the livestock as concentrate. However, the marketed surplus was highest in Hissar district (73.56 per cent) followed by Sirsa (64.45 per cent).

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The study also revealed that on an average, the producer received 88.31 per cent of the price of guar seed paid by the consumer. The share of the producer in the consumer's price was found to be 86.78, 91.12 and 87.08 per cent in Hissar, Sirsa and Bhiwani districts respectively. The retailer's margin excluding the costs was 8.46, 4.37 and 8.96 per cent in Hissar, Sirsa and Bhiwani districts respectively. On an average, the retailer took 7.28 per cent of the consumer's price. The retailer's margin was found lowest in Sirsa market (4.37 per cent) followed by Hissar and Bhiwani districts. The study concluded that the National Agricultural Co-operative Marketing Federation of India Ltd. (NAFED) may enter into contract with the guar consuming countries to promote the export of guar. Their expertise in trade and familiarity with farmers may help the industrialists concerned in procuring maximum quantities of guar from the producing areas.

#### IMPACT OF THE CHANGING MARKET STRUCTURE AND POLICIES ON THE GROWTH OF APPLE INDUSTRY IN HIMACHAL PRADESH

D.S. Thakur and K.R. Sharma \*

In order to cope up with the phenomenal increase in the marketed surplus of apple, the Government of Himachal Pradesh established the Himachal Pradesh Horticultural Produce Marketing and Processing Corporation Ltd. (HPMC) in 1974 for developing an integrated marketing structure for profitable marketing of apple and other fruits. This paper examines the impact of the changing market structure and policies including the role of HPMC in providing remunerative prices to the apple growers and thereby giving impetus to the production of apple and other fruits. The data pertaining to different aspects of apple production, marketing and prices have been collected and analysed for three different intervals of time before and after the establishment of HPMC to clearly study the effectiveness of the changing market structure and policies on orderly marketing and the growth of apple industry in the State. The study has highlighted that there has been a phenomenal growth in area, production, marketed surplus and export of apples during the last two decades. At the same time, the government has tried to make comparable improvements in the traditional marketing system particularly with the establishment of the Rs.16.31 crores HPMC project, direct entry of co-operatives including National Agricultural Co-operative Marketing Federation of India Ltd. (NAFED) in apple trade and regulation of market practices. The study shows that these steps have already benefited the growers to some extent who were previously at the mercy of the traders that resulted in the exploitation of the fruit growers.

The problems currently faced by the apple growers have been also analysed and reported in the study. It is found that much needs to be done particularly for the new apple growing areas which are unknown in the apple

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business in terms of improving the road and transport network, orderly marketing facilities and giving remunerative prices. The traders' commission and other marketing charges prevailing since the fifties need to be reduced in view of the phenomenal increase in marketed surplus. Minimum support price should be announced for apple as is being done for other crops. HPMC, NAFED, co-operative societies, etc., should be made to make outright purchases from the growers to replace the private traders particularly in the backward areas. HPMC should organize Apple Growers Co-operative Societies in the villages to procure apples from the orchardists and to provide all the technical inputs required by them. Law should be enacted to provide for direct purchase by such organizations like HPMC, NAFED and other co-operatives from the farmers in the market (in addition to the producing areas) without intermediaries or commission agents. This will provide for desired market structural changes and healthy competition in each market to save the producers from the proverbial exploitation by the traders and middlemen.

#### IMPACT OF REGULATION ON FRUIT MARKETING IN NORTHERN INDIA

R. Swarup, Ranveer Singh and B.K. Sikka †

The regulation of markets has been considered to be a definite step in safeguarding the interests of sellers as well as buyers. But at least in the case of fruits the situation has not improved much as discovered by the detailed studies conducted for Himachal fruits in the markets of northern India. The results of the study reveal that the benefits flowing from the regulation of fruit markets are being over-stated to include all benefits that could possibly accrue from a well regulated and perfect market mechanism. Unfortunately, the situation is far from being so. All the marketing costs, as is well known, are to be shared between the primary producer and the ultimate consumer. Each function/service helps to move the goods in the marketing channel and it may not be really easy to eliminate any of these. However, some integration may be possible. While, by and large, all traditional charges/costs continue at rates higher than those prescribed, market fee has become an additional burden on the already high marketing cost. Furthermore, some of the charges like commission are now charged from both the parties, *i.e.*, the seller and the buyer. From the former it is collected on the pretext of tradition while these are charged from the buyer on the basis of law. All malpractices practised traditionally continue unchecked. These include sale deals through negotiation and under-cover, deductions in kind, unauthorised charges, appeals for reduction in sale price, etc. The farmers' representative on any market committee is certainly a farmer in the legal sense of the word but is invariably a large holder and a rich person who often has strong political links and wields great influence. He thus belongs to a much different class—he is more

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of everything else and farmer in the last. Therefore, the interests of the small and marginal farmers particularly remain neglected. No doubt, under the Market Regulation Acts huge amounts have been collected by way of market fee and that has made it possible to have better market yards which, however, in most cases are not being utilized fully for reasons of faulty planning and greater emphasis given to grain markets. Some employment too has been generated by the regulation. But the very purpose of regulation has not borne the desired fruits for which vigilance and sincere as well as serious efforts are essential.

#### ECONOMIC APPRAISAL OF CHANGING MARKETING STRUCTURE — A CASE STUDY OF HIMACHAL'S APPLE

Kanwar Prakash Chand and A.L. Nadda \*

Horticultural crops being perennial in nature, long-term perspective marketing planning on scientific lines is essential for their development. How-so-ever scientifically managed the orchards may be, the fruit production is susceptible to natural hazards more than any other production phenomena. In an exceedingly good year, growers can hardly feel satisfied with a bumper crop since prices in the absence of certain facilities crash down. In a bad crop year, the grower is elated with ruling high prices but the output being low, his family income goes down. This problem is further aggravated by the lack of market for the culled apple and other related marketing problems. In view of multifarious problems the State Government negotiated an integrated marketing project to modernize the entire apple marketing system. Consequently, the H.P. Horticultural Produce Marketing and Processing Corporation Ltd. (HPMC) was set up in 1974. This Corporation is undertaking various marketing functions such as marketing of apple on consignment basis, forwarding, supply of packing material, procurement of low grade apple for processing, etc. The HPMC has also opened a chain of cold stores in producing as well as consuming areas. The economics of conventional and modern marketing system on scientific lines suggests that the latter has a clear edge over the former. Moreover, the existing level of returns to the growers can be increased to the tune of about 28 to 30 per cent if they patronise the modern marketing system in full. The second major objective of the project was to create healthy competition so as to ensure better/competitive prices to the growers and to supply quality product to the consumers at reasonable prices. The analysis revealed that the producers have been benefited in terms of increasing remunerative prices, whereas the consumers got fruits at reasonable rates. Besides the above-mentioned benefits, the growers have also been benefited through the sale of their low quality and culled apple to HPMC for

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processing purpose at remunerative prices. In all, this study provides conclusive evidence in support of the changing apple marketing structure over the conventional system.

### DYNAMICS OF VEGETABLE MARKETING: A MICRO STUDY

G.C. Srivastava†

An attempt is made in this paper to examine on the basis of empirical data the dynamics of vegetable marketing around Bhagalpur town, Bihar. Three different aspects of marketing, *i.e.*, the marketed surplus, marketing channels and the efficacy of price spread are examined in the paper. The data were collected from a sample of 60 vegetable growers in three predominantly vegetable growing villages pertaining to the year 1975-76. The vegetables considered for this study included cauliflower, potato, tomato and other vegetables (brinjal, chilli, *bhindi*, onion, pea, bottle gourd, etc). The marketed surplus of vegetables ranged from 90 to 98 per cent. The distribution was only through private channels of marketing which consisted of (i) Producer — village beoparies — consumers, (ii) Producer — village beoparies — wholesalers — retailer — consumer, (iii) Producer — wholesaler — retailer — consumer and (iv) Producer — consumer.

The highly significant regression coefficients for different vegetables showed that the shares of the producers and the retailers were directly affected by the consumer's price. In such a dynamic set-up of vegetable marketing the producer's share was inversely related to the consumer's price (cauliflower — 0.9407 and tomato — 1.3071). The regression coefficients of producer's share for potato and 'other vegetables', though positive, were statistically non-significant. On the other hand, the results showed that the retailer's share increased with an increase in the consumer's price, whereas at the same time the producer's share decreased with an increase in the consumer's price. The logical conclusion drawn is quite obvious. The benefit derived from an increase in the consumer's price did not go to the producer. Instead, it was absorbed by the retailers. This trend would be a great disincentive to the small and marginal growers in this locality who have great agro-climatic and economic potential for horizontal as well as vertical expansion of vegetable production and marketing.

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## MARKETING OF SUGARCANE THROUGH CO-OPERATIVE CANE DEVELOPMENT UNIONS IN UTTAR PRADESH

Jagdish Lal \*

The main objectives of this study are three fold: (a) to examine the rationale of establishing Co-operative Cane Development Unions and their achievements during different Five Year Plans, (b) to study the impact of development activities of Cane Unions on the crop productivity in different regions of the State, and (c) to study the extent of sugarcane marketed by the farmers of different size-groups and problems faced by them in marketing through Cane Unions. The study is based on the primary and secondary data collected from various sources. Secondary data on different marketing and development activities of Cane Unions were collected for the period 1935-82. The primary data collected under one of the Institute projects entitled "Sugarcane Economics and Constraints in Adoption of New Technology" were used. The data were collected from 412 farmers classified under three size-groups, viz., small, medium and large in all sugarcane growing regions of the State. The study indicated that during the early thirties there was no organized system of marketing and statutory control on prices due to which the cane growers had to undergo many hardships in the disposal of their produce. In 1935 the department for sugarcane development was constituted which introduced a scheme for marketing and development of cane at factory gate through the Cane Unions.

The study revealed that during the period 1935-82 the number of societies and their members increased significantly with a compound growth rate of 2.11 per cent and 5.47 per cent per annum respectively. The extent of sugarcane supplied through these Unions increased from 49 per cent of the total supply to 99 per cent during the period under review. In all the regions of Uttar Pradesh, loans distributed by the societies in the form of fertilizers and irrigation have brought about significant improvement in sugarcane productivity which enhanced the total income of the farmers from this crop. Suitable measures need to be taken for the improvement in plant protection activities of the societies.

The major constraints in marketing sugarcane through the Cane Unions are difficulties in getting cane supply indents, prevalence of various malpractices and nepotism in the distribution of cane indents, delay in payment of cane price, long period of stay at mill gate, scarcity of labour, transportation and weighing problems. These constraints have resulted in the reduction in the quantity of sugarcane supplied to the factories. Diversion of sugarcane to gur and khandsari industry where processing losses of sugar are more has led to a decline in total sugar production. There is, therefore, need to increase the efficiency of marketing through Co-operative Cane Unions which will increase the growers' income as well as total sugar production.

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CHANGING MILK MARKETING ORGANIZATION —  
DIRECTION AND CONSEQUENCE \*

Y. Kumar and V.P.S. Arora \*\*

The study was conducted in Meerut district of Uttar Pradesh to estimate the direction and consequences of changing milk marketing organization in terms of marketable and marketed surplus, marketing channels and market margins and price spread. The district is an adopted district by the National Dairy Development Board under its dairy development programme. The programme is implemented through the State Co-operative Dairy Federation, Lucknow. The data pertained to the year 1981. The share of marketed surplus and marketable surplus of milk in total production was 77.28 and 83.40 per cent respectively. In the case of landless and small dairy farmers, however, the marketed surplus exceeded marketable surplus. And hence, large dairy farmers may be persuaded to part a higher proportion of milk in order to increase the supply of milk from the rural area. It was revealed that within a span of about four years, the co-operative marketing network was able to capture about 50 per cent of the milk trade from traditional milk marketing agencies like milkmen, khoa makers, etc. This network was found successful in benefiting the producers by offering a relatively higher price, in benefiting the consumers by supplying milk at a relatively lower price and the society by minimizing the marketing price of milk. The only obstacle which was found coming in the way of further success of co-operative network is the practice of not making advance payment to dairymen. This calls for better co-ordination between the co-operative credit and co-operative milk marketing societies.

ECONOMICS OF MARKETING AND PROCESSING OF GUR  
IN DISTRICT MUZAFFARNAGAR (U.P.)

Anant Ram Verma †

This paper attempts to estimate the economics of marketing and processing of gur in district Muzaffarnagar, Uttar Pradesh for the year 1982-83. It seeks to estimate the marketing costs, margins and cost of processing. The price spread in the marketing of sugarcane under power-kohlus units of gur has also been worked out. The study is based on the data collected by survey method from randomly selected 100 sugarcane growers from ten villages selected from Kukada block of Muzaffarnagar district (U.P.), arranged in descending order of the proportion of area under sugarcane to gross area sown. The data on marketing charges, cost of processing, etc., were collected from different

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\* Paper has been drawn from the first author's M.Sc. Thesis entitled "Marketing of Milk in Meerut District of Western U.P." submitted to the G.B. Pant University of Agriculture and Technology, Pantnagar.

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market functionaries involved in the marketing of gur at new mandi, Muzaffarnagar. It is a secondary market. Both assembling and distribution of agricultural commodities take place in this mandi. The findings of the study revealed that the peak months of arrival of gur in the mandi were October, November, December, January, February and March, accounting for 90.29 per cent respectively of the total arrivals during the year 1980-81. New arrivals usually start in the month of October and continue to increase upto March. The price was consequently low. The price was higher in the off-season. The producer's share in the consumers' price for processor's channel and producer's channel came to 65.48 per cent and 58.33 per cent respectively. The average cost of processing of sugarcane under power-kohlus units of gur came to Rs.4.20 per quintal. It is necessary to increase the producer's share in the consumer's rupee to provide incentive to the producers, while at the same time lowering the cost of cultivation and consequently the prices of sugarcane gur so as to induce their increased consumption by the consumers. It is, therefore, necessary to reduce the price spread by encouraging the development of co-operative markets of sugarcane gur (and by linking the consumer's co-operatives with the marketing co-operatives), increased facilities of processing, storage and grading of sugarcane gur, regulation of markets and rationalisation of various marketing charges. Cheaper credit agencies should be established for providing credit to the producers as well as the market functionaries involved in the marketing of gur. The supply of electricity/diesel to the processing units at a cheaper rate as well as the provision of warehousing and storage facilities both at the mandi and village level would go a long way in increasing the efficiency of marketing.

#### ROLE OF CANE CO-OPERATIVE MARKETING SOCIETIES IN INCREASING PRODUCTION AND INCOME OF SUGARCANE IN DISTRICT MORADABAD

Shri Ram, R. Saran and R.P. Singh \*

An attempt has been made in this paper to study the role of cane co-operative marketing societies in increasing the production of and income from sugarcane, based on data collected from a randomly selected sample of 100 farmers comprising 50 members of co-operatives and 50 non-members from a cluster of ten villages in Amroha block, Moradabad district, Uttar Pradesh in 1983-84. The study reveals that cane co-operative marketing societies are proving helpful in increasing sugarcane production because they supply inputs, *viz.*, fertilizers, seeds, pesticides, implements and machinery of the right type at proper price and at the right time. The co-operative marketing societies provide finance which is repayable at the time of disposal

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of sugarcane to the mills. They protect the interests of the members against the sugarcane mills and they are able to get a remunerative price for the members' sugarcane. It was revealed that the gross income, net income, family labour income and farm business income per hectare were higher in the case of members of co-operative marketing societies as compared to those of the non-members. These societies have also undertaken welfare activities such as provision of infrastructure like construction of roads, transport facilities, educational facilities in their area of operation. There is need to strengthen the present cane co-operative marketing societies and extend their services to uncovered areas. •

REGULATED MARKET AND ITS LIMITATIONS (A CASE  
STUDY OF ANAKAPALLE REGULATED MARKET WITH  
REFERENCE TO JAGGERY TRADE)

T. Hanumantha Rao †

An attempt is made in this paper to examine the limitations of Anakapalle Regulated Market in playing its role effectively in reducing the price spread, regulating the market charges and eliminating the middlemen. The data presented in this paper were collected from Nagulapalli village (Visakhapatnam district) which is two miles away from Anakapalle town. For the selection of sample units a list of the farmers in the village was prepared and the farmers were stratified into three size-groups, small, medium and large. From each size class 20 random samples were taken. Anakapalle owes its flourishing commercial life to its jaggery market which is the second largest in the country. The ryots manufacture jaggery and bring it in lumps to the market for sale. It is auctioned with the help of commission agents under the supervision of an official of Anakapalle Market Committee. The particulars of cost and income show that there is a large difference between the initial price received by the producer and ultimate price paid by the consumer.

The data show that the cost of cultivation per acre has a tendency to decline with the increase in the farm size whereas the per acre income shows a tendency to rise with the increase in the size class. The data further show that the marketing cost has a tendency to rise with the increase in the farm size. Of the three constituents of marketing charges, commission charge accounted for 81 per cent in all the size-groups. It is estimated that the price spread will range from Rs.40 to Rs.65 per quintal. As things stand in the Anakapalle market, it appears that the commission agent or middleman cannot be dispensed with. If the price spread is to be reduced, direct sale of the commodity to the consumers by the Anakapalle Market Committee may be tried. Insufficient accommodation and staff, inability to provide credit facilities

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to the farmers may stand in the way of the Market Committee in its implementation. In spite of the limitations, a beginning may be made by the Market Committee in the matter of direct sale as is being done in the market of South Arcot district of Tamil Nadu.

### MARKETING OF GROUNDNUT IN RAJKOT DISTRICT OF GUJARAT STATE

V.T. Raju and B.H. Kakadia \*

In view of the importance of groundnut in Gujarat State, a study on its marketing was undertaken with the following objectives: (i) to study the disposal pattern of groundnut, (ii) to examine the different channels of marketing for groundnut, (iii) to find out the marketing costs of groundnut in different marketing channels and (iv) to study the price behaviour of groundnut. The Rajkot district was selected for the study as it has the largest area under groundnut cultivation and also it has the biggest groundnut markets (Rajkot and Gondal) in the State. The data were collected from 40 farmers of regulated markets, ten traders and two co-operative societies. The study revealed that the farmers of Rajkot district have sold most of their groundnut production making provision mainly for seed. The percentage of sales of groundnut to total production increased with the increase in the size of holding. Most of the sales took place in the month of December followed by March, November, January and February. It was found that the small farmers sold their produce soon after the harvest and the prices were low whereas the large farmers sold their produce throughout the year. The regulated markets were found to be the important marketing channels followed by co-operative societies and village merchants for groundnut marketing.

The marketing cost for farmers was higher at Gondal market (Rs.5.07 per quintal) compared to Rajkot market (Rs.4.99 per quintal). In the case of co-operative societies the marketing cost was Rs.10.75 per quintal. The marketing cost for traders was also more at Gondal market (Rs.9.49 per quintal) compared to Rajkot market (Rs.9.24 per quintal). The price of groundnut in both the selected markets showed an increasing trend. The correlation coefficient between monthly prices and arrivals was found negative in both the markets, indicating a definite inverse relationship, that is, as groundnut arrivals increase prices decrease and vice versa.

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MARKETING OF MANGOES AND VEGETABLES —  
A STUDY OF REGULATED MARKET AT SURAT

V.K. Madalia†

The wholesale marketing of mangoes and vegetables in Surat city was regulated during the year 1951-52 by the application of the Bombay Agricultural Produce Market Act, 1938. After the formation of the Gujarat State in 1960, the Gujarat Agricultural Produce Market Act, 1963, and the Gujarat Agricultural Produce Market Rules, 1965 were made applicable to this market. The regulated market at Surat is one of the two important vegetable markets in Gujarat State, the other one is at Ahmedabad. The present study was undertaken with the following objectives: (i) to examine the working of the market with a view to know whether the malpractices in the marketing of mangoes and vegetables have been removed or not, (ii) to examine the market arrivals and the benefits accrued to the sellers of mangoes and vegetables due to regulations and (iii) to analyse the share of co-operatives and private agencies in the marketing of mangoes and vegetables. In the pre-regulation days the trading of mangoes and vegetables was subjected to various unfair practices. The rate of commission was 9.25 per cent. The system of giving *vataav* (discount) was in vogue. The practice of *betala tol* (i.e., 42 seers instead of 40 seers) in certain commodities was prevalent. The commission agents and the weighmen used to take a seer of goods from the produce. The interest on advances was 9 per cent. The system of price settlement under cover was prevalent and sometimes the rates were declared after 2 to 3 days. Thus, the sellers had to suffer a lot as there was no control over the market functionaries. As a result of the application of the regulations, these unfair marketing practices have been stopped. The commission agents, the weighmen and other functionaries have been licensed. During the year 1982-83 there were in all about 2,000 licensed functionaries working in the market. As judged by the total quantity of mangoes and vegetables handled in the market, the benefits accrued to the sellers due to the regulation of the market has been tremendous. A noteworthy feature of the market is that as many as seven producers' co-operatives and one retail and wholesale vegetable sellers' co-operative work as commission agents. However, the share of these co-operatives in the annual turnover during 1978-79 to 1982-83 ranged from 10 to 15 per cent only.

In order to provide better marketing services the following suggestions are offered. First, the present marketing yard is too small to handle the transactions. It is, therefore, recommended that government should give clearance to the proposal of the Market Committee made in 1976 for acquiring an area of 13,000 sq. yards. Second, the proposal of reserving an area of 19 acres at village Dumbhal for market yard has been incorporated by the Surat Urban Development Authority in the master plan submitted to the State Government. It is recommended that the Government should accept this proposal immediately. Third, more and more co-operatives should be

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encouraged to work as commission agents. Fourth, at the time of gluts in the markets, many times the producers are compelled to sell their products at a very cheap rate. It is, therefore, suggested that the facility for cold storage should be provided to them. Alternately, it may be suggested that at the time of gluts, government should come to the rescue of the producers to arrange for the disposal of the products through agencies like consumers' societies, other co-operatives and Food Corporation. Fifth, to check the malpractices in the retail trade there should be a separate act for the retail trade. Sixth, to provide better marketing services, there should be separate acts for fruits and vegetables. Seventh, the facility for transporting the commodities from the market yard to various retail markets in the city should be provided. Eighth, consumers' co-operatives should be encouraged and they should be allotted stalls at various places in the city. Ninth, *panch sheriya* markets (markets selling vegetables upto a minimum quantity of 2 1/2 kg.) should be started in various parts of the city. Tenth, efforts should be made to develop marketing activities through journals, radio broadcasts, extension services and other audio-visual aids like films on most successful markets. Lastly, creation of a separate Market Development Board at the State level is suggested to supervise and guide the activities of regulated markets in the State.

#### AGRICULTURAL MARKETS PROJECT AND MARKET STRUCTURE AND PERFORMANCE: A CASE STUDY OF TWO JUTE MARKETS IN BIHAR

Jagdish Prasad and Rajendra Prasad \*

An attempt has been made in this paper to evaluate the impact of Market Development Project on the structure and performance of jute marketing in Bihar. The present study, therefore, proposes to examine the following two hypotheses: (i) The larger the concentration of buyers and sellers, the greater the inefficiency in the marketing system; and (ii) the larger the competitive environment between buyers and sellers, the greater the movement of wholesale prices towards perfection. The data were collected from the original schedules of the Bihar Agricultural Markets Project for a period of six years, *i.e.*, three years preceding the construction of market yard (1973-1976) and three years after (1977-1980). Two important jute markets of the Purnea district of the Bihar State, namely, Gulabgh and Forbesganj were selected for study on account of the fact that these two markets alone account for 66 per cent of the total jute marketing in Bihar. The degree of concentration was studied through the technique of Lorenz curves and the magnitude of the concentration was measured by the Gini concentration ratio. The moving average method is used to examine the seasonality and the analysis of variance is used to examine the rate of fluctuation of yearly averages of price margin.

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The results indicate that the Gini concentration ratios are high in pre- and post-market yard period at both the markets under study, indicating thereby imperfections in the jute market structure of Bihar. The results of the seasonal indices for wholesale purchase and sale prices indicate that the mark of seasonality is pronounced in prices. However, the situation in Gulabghagh shows improvements though Forbesganj shows a sign of higher improvement. The yearly averages for percentage difference between maximum and minimum wholesale purchase prices and wholesale selling prices have decreased at both the markets during the post-market yard period. Likewise, the yearly averages for trade margins have also decreased. Thus, the study suggests some positive impact of the market yard on the performance of jute markets in Bihar. However, the concentration is still noticed during post-market yard period, reflecting thereby the imperfections in jute market structure.

#### ECONOMIC ANALYSIS OF BIDI LEAF TRADE IN BIHAR

Rajni Guleria †

The paper makes an attempt to examine the pre- and post-nationalisation practices of bidi leaf trade in Bihar. Specifically, it tests the hypothesis that in spite of a higher price to bidi leaf growers, it is uneconomical for them to accept the new marketing system. Our analysis proved the hypothesis valid. The main conclusions of the paper are as follows: The twin objectives of nationalisation of bidi leaf trade in Bihar were first, to protect the interest of leaf pluckers and second, to eliminate the private traders. Our analysis reveals that the forest department which became the monopolistic marketer of bidi leaves in the State failed to achieve either. The only objective of nationalisation seems to be generating extra revenue to the forest department. During the pre-nationalisation period, the forest department revenue from lease of forest was about Rs.49 per quintal of leaf traded, whereas after the State takeover of the trade, it earned a revenue of Rs.213 per quintal. About 89 per cent of total net surplus generated in the bidi leaf system, even after nationalisation of trade is not made available to the leaf growers. It is evident that the government intervention in the form of nationalisation of trade is not enough to protect the interest of the growers. The feasibility of organizing the growers, though is a moot question, needs to be assessed for such an objective. It is observed that an increase in the prices of bidi leaf from Rs.15 to Rs.45 per quintal did not improve the growers' margin in net surplus generated in the trade. It was mainly because of the lack of machinery for bidi leaf marketing. After nationalisation growers in some locations had to travel long distances before the day's produce was handed over at the forest department collection centres. Although the net revenue generated after nationalisation in the majority of sample villages improved, for some locations the void

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created by the take-over of trade brought sufficient economic strains. Even if such locations are few, the economics of bidi leaf growing, at least for those growers for whom it is the main occupation, might not allow such a system to function.

#### IMPACT OF MARKETING CO-OPERATIVES ON MARKETING OF MINOR FOREST PRODUCTS — A CASE STUDY OF RANCHI DISTRICT (BIHAR)

M.L. Singh\*

The study was conducted in Ranchi district in Bihar to measure the difference in price received by the collectors and marketing costs of minor forest products in the co-operative and non-co-operative channels. The data related to the year 1983-84. The study came to the conclusion that the collectors' price was significantly higher in co-operative sales. The co-operatives greatly reduced the marketing cost by charging less profit and commission which were higher in the non-co-operative channel. They had the further advantage of eliminating arbitrary market charges like dhalta, and charity and malpractices like weight manipulation to the disadvantage of collectors existing in the non-co-operative channel. However, these advantages of co-operatives were counterbalanced by higher costs on account of transportation, storage, interest and bagging. The co-operatives had small share in the collectors' sale due to non-existence of their branches in villages and shops of essential goods, lack of funds, storage space and staff.

#### RECENT TRENDS IN THE MARKETING OF JUTE: AN ASSESSMENT

Dilip Kumar Chatterjee and Kalyanbrota Bhattacharyya †

The central objective of the present study is to analyse the marketing behaviour of the jute cultivators in the context of the specific marketing problems faced by them and to evaluate the role of the Jute Corporation of India (JCI) in ensuring a reasonable price of jute in the market. For this study, we have surveyed the village Chhotokulgachhi (selected at random) in the district of Burdwan, West Bengal. The information collected has been supplemented by the data collected from various government offices. From the study it has been found that with limited resources the JCI has been partially successful in maintaining a market price at or above the minimum price but failed to ensure a reasonable return to the grower. However, in comparison to the unenviable condition of the growers in the past, there has been a marked

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tendency of improvement in this respect over time. From our survey, it appeared that the JCI did not make sincere attempts to restrict the number of intermediaries to any reasonable limit and so a number of intermediaries operate in the field. The fixation of statutory minimum price seems to take little cognizance of the magnitude of costs and reasonable return. Imperfections like unreasonable inter-spatial price differential still persist. Some indications that the growers are perhaps deprived of their legitimate share of the consumers' rupee have also been obtained.

### THE PROBLEMS OF POTATO MARKETING— A CASE STUDY IN WEST BENGAL

Anandamoy Sen \*

In West Bengal the cultivation of potato has made great strides during the last two decades. The steady and rapid increase in the production of potato has created numerous marketing problems. Due to the perishability of the crop seasonal fluctuations in the prices are a common feature. The inability of the farmers, mainly the small cultivators to retain the stock to sell at a good price is being exploited by the traditional private traders. The Agro-Economic Research Centre, Visva-Bharati conducted a survey on the economics of potato cultivation and marketing in West Bengal in the year 1968 and 1980. An attempt has been made to compare the cost of and returns from this crop and also the marketing problems at the two points of time. The government or the local bodies have very little control over the business adopted by the private trade, as a result the major benefits go to the private traders at the cost of the growers. Traders and cold storage owners purchase the potatoes for getting high price at lean period. The growth of cold storages in West Bengal is mainly due to the initiative taken by the private enterprises. The total number of cold storages in West Bengal till 1980-81 was 217 with a capacity of 10.50 lakh metric tonnes, about 90 per cent of them are being controlled by the private owners. The findings reveal that cold storages have provided the middlemen and traders an opportunity to manipulate prices in the lean months of the year. As a result, the traders' return per quintal of the crop has been generally higher than the producers' return. The Government of West Bengal was seized of the problem when the prices of potatoes spurted in 1980. Even though the departments of agricultural marketing and co-operation are not so active in West Bengal, priority should be given to the co-operative sectors only for installation of new cold storages. To tide over the unpleasant situation created by private traders, it is felt that the government departments should make an entry into potato marketing in a big way.

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## MARKETING OF POTATO—FEW RELEVANT POINTS

Aditi S. Ray †

Although marketing of most of the agricultural commodities have undergone substantial changes for the better over the years, potato marketing continues to be dominated by traders. Even with the entry of co-operatives, potato marketing continues to be disorderly, with seasonal glut in the market placing the farmers often at the mercy of private traders. The number of intermediaries in the potato marketing is large which results in the farmer getting only about 34 per cent of the consumer's rupee. The two main bottlenecks in the way of efficient marketing of potatoes may be identified as inadequate cold storage facilities and transportation difficulties, which have accentuated over the years due to a substantial increase in potato production. Although at present about 90 per cent of the total installed cold storage capacity is utilized for storing potatoes, it can cater to a little more than one-third of the total potato crop. A significant part of the storage capacity goes for storing seed potatoes. A substantial portion of the cold storage capacity is in private hands, many of whom are traders themselves. Winter potato, constituting the bulk of potato production, is harvested during January-March. As many States including Maharashtra, Kerala and Andhra Pradesh are deficit States for potato, immediate transportation of harvested potato from surplus States to deficit States is essential. Long distance transportation requires refrigerated aircooled railway wagons, which are in short supply. For road transportation, non-availability of trucks creates problems. Virtual non-existence of the practice of grading creates a problem for implementing agencies like National Agricultural Co-operative Marketing Federation of India Ltd. (NAFED) to carry out price support operations. Of the insufficient number of regulated markets existing in the country, only 13 per cent have facilities for grading farmers' produce. The majority of the wholesale markets both in the producing and consuming areas continue to be unregulated.

In the absence of adequate cold storage facilities for table potato, improvised structures with suitable ventilation, built on locally available materials may be made use of. Cool chambers on a large scale may be made near railway sidings in producing/consuming centres for minimizing spoilage loss in transit. The NAFED has already made some successful experiments in this direction. The National Co-operative Development Corporation (NCDC) is in the process of building 253 cold storages with additional storage capacity of 10.12 lakh tonnes with World Bank assistance. Similarly for transportation, improvised and insulated wagons with mats made by bamboo, coconut and palm leaves may be used. In order to avoid greening and rotting of potatoes in transit potatoes need to be packed in gunny bags of standard specifications, so that they are not exposed to light. In any case railways need to give priority

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for potato transportation. The pace of growth of regulated markets with grading facilities need to be geared up. Farmers also need to be informed of the grading specifications and facilities through an efficient market intelligence system. Open bidding in the market would help farmers realise a better price. Last but not the least, formation of growers' co-operatives, which would cut down intermediaries through vertical integration, would help the farmers to have a larger share in the consumer's rupee, and go a long way towards removing some of the marketing problems.

#### IMPACT OF REGULATION OF MARKETING OF COTTON ON PRICES IN MAHARASHTRA

B.D. Bhole, Y.P. Mahalle and N.A. Gadre \*

Maharashtra is the only State to start Monopoly Procurement Scheme for cotton crop which is the major cash crop of the State. This scheme has been implemented in the State from the year 1972-73. Now it is high time to evaluate this scheme. The present study has been undertaken with the following objectives: (i) to estimate the gains from the monopoly procurement scheme to the cotton growers in terms of price, and (ii) to compare the trends of cotton prices in Maharashtra with those in the neighbouring States. For this two approaches were used. In one approach the prices within the State before and after implementation of the scheme are studied while in the second approach the prices of cotton in Maharashtra are compared with those in the neighbouring States. The results clearly indicated that the prices received by the farmers for cotton crop in Maharashtra after regulation are higher than those that would have been in the absence of the scheme. And secondly, the index numbers of cotton prices in Maharashtra for the post-regulation period are higher than the index numbers of the prices of cotton in the adjoining States (Madhya Pradesh and Andhra Pradesh) where open market system exists.

#### EFFECT OF MONOPOLY PRICE ON COTTON PRODUCTION IN THE MARATHWADA REGION OF MAHARASHTRA STATE

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This paper makes an attempt to examine the impact of the monopoly procurement scheme introduced in 1972 and new technology (high-yielding varieties of cotton) on area, production and productivity of cotton in the five districts of Marathwada in Maharashtra, viz., Aurangabad, Bhir, Nanded, Osmanabad and Parbhani during the period 1960-61 to 1980-81. A decom-

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position model is used to analyse the effects of price, yield and area and their interactions on the production and productivity of cotton in the pre-technology period (1960-61 to 1969-70), in the post-technology period (1970-71 to 1980-81) and during the entire period. It is observed that after the introduction of HYV, there was a significant increase in cotton production and productivity without any change in the acreage. This is mainly due to the high yield potential of the improved varieties. The effects of area, yield, price and their interaction showed a negative trend in the pre-technology period and a positive trend in the post-technology period. About 38.32 per cent of the increase in the value of cotton production was due to the price effect and 67.76 per cent was due to the yield effect. The area effect has shown a negative trend. During the last decade monopoly procurement prices and HYV have helped to boost up the cotton production in the region.

#### PRICE SPREAD IN THE MARKETING OF VEGETABLES GROWN IN THE VICINITY OF PUNE CITY

R.C. Raut, Jagannathrao R. Pawar and H.A. Mazire \*

An attempt is made in this study to indicate the shares received by the vegetable producers and intermediaries in the consumer's price, based on data collected from a sample of 120 vegetable producers drawn at random from five villages of Haveli tahsil in Pune district, Maharashtra State. The data pertained to the year 1981-82. The study revealed that the per hectare cost of production and gross returns were the highest at Rs.10,384 and Rs.17,556.60 respectively in the case of tomato and the lowest at Rs.1,996.50 and Rs.2,864.19 respectively in the case of coriander. The per hectare net return ranged between Rs.241.17 and Rs.7,172.60, the lowest and the highest being in carrot and tomato respectively. The major components of the marketing cost of vegetables were commission, transport, losses in handling and packing which together accounted for 92.75 to 94 per cent of the total cost of marketing. The per quintal cost of marketing of vegetables selected for the study ranged between Rs.17.35 and Rs.32.67. It was relatively high in the case of ladies finger (*bhindi*) and tomato as compared to that of guar, cauliflower and cabbage. From the price spread in the marketing of different vegetables it was revealed that the producers could get only 43 to 59 per cent of the consumer's price, the lowest and highest being in the case of onion and guar respectively. The retailers were found to be the real beneficiaries and they could get high margins almost to the extent of 31 to 41 per cent of the consumer's price. The study therefore, recommends that adequate facilities for quick and cheap transport, cold storage and preservation should be developed. Wherever possible, a large number of intermediaries should be eliminated by organizing producers' co-operatives.

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