INDIAN JOURNAL OF AGRICULTURAL ECONOMICS

RAPPORTEUR'S REPORT

ON

ISSUES IN AGRICULTURAL PRICE DETERMINATION AND PRICE POLICY

Rapporteur: D. S. Tyagi*

Keeping in view the role of agricultural prices in agricultural development and also the recent controversies relating to the levels at which the prices of various farm products have been fixed by the Government, one would have expected that a large number of papers would be submitted for discussion on the subject of issues in agricultural price determination and price policy. The scope of study as indicated by the synopsis for the subject covered a wide gamut of topics. However, only 30 papers have been accepted for discussion on this subject.

These papers can be broadly grouped on the basis of their main theme into the following categories: ten papers on issues relating to cost of production approach; ten papers on issues pertaining to parity prices; four papers on effects on income distribution and uniform versus different prices for different regions; four papers on effects of marketing channel on prices received by producers and relationship between market and procurement prices; and two on integration of different approaches.

With a few exceptions, the viewpoints represented or empirical evidence marshalled in the papers are hardly novel and thought provoking. Most of the papers appear to have been prepared not only in great haste but also are methodologically very weak. What follows is a brief account of the salient features of each paper along with comments on them and then some suggestions for organizing the Group Discussion on each theme.

I

COST OF PRODUCTION

The parity between costs, prices and incomes in agriculture has been examined in a systematic manner by studying the movement of cost of production and procurement prices by M. S. Bhatia. The average cost of production of paddy has been found to have risen by 83.77 per cent during 1971-72 to 1979-80 and that of wheat by 95 per cent during the period 1970-71 to 1979-80. The results of his analysis also indicated that the increase in the prices of agricultural inputs was of the order of 117.84 per cent which was higher than the increase

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* Director, Agricultural Prices Commission, Ministry of Agriculture, Government of India, New Delhi.

in the prices of wheat, sugarcane and bajra. However, the increase in the prices of cotton and groundnut was much higher than the increase in the prices of agricultural inputs. The input cost index prepared by Bhatia taking seed, fertilizers, electricity, pesticides and diesel deserves attention. The weights assigned to different inputs are neither based on the cost of production of any particular crop nor are they based on the total purchases made of these commodities by the agricultural sector.

S. L. Deshpande *et al.* in their paper have studied the economics of package of practices for high-yielding varieties (HYVs) of cotton vis-a-vis traditional varieties in Akola district. Their results based on a study of 50 farmers each growing H-4 and AK-235 cotton indicate that the cost of production of both the varieties of cotton showed a decline with an increase in the level of adoption index. The cost of production at full package was found to be the least and covered by the support prices announced by the State under Monopoly Procurement Scheme.

V. Rajagopalan and S. Varadarajan in their paper have argued that since cost C does not include normal profit and a reward for entrepreneurial services of the farmer, a component reflecting this needs to be added to cost C. This amount may be taken to be equal to the retailer's normal profit margin over his cost outlay. If the retailer's normal profit is K per cent of his outlay, then the relevant cost would be $(1+K/100)$ cost C. The important point that deserves attention is that why the entrepreneurial profit to the farmer has to be equal to the retailer's normal profit. In the case of paddy, the bulk-line cost after including the margin of profit to the farmer worked out at Rs. 103.97 per quintal for 1978-79 as against the procurement price of Rs. 90 per quintal.

B. S. Nagarajan in his paper examines cost-price-return balance in paddy cultivation in Thanjavur district. His results indicate that not only the procurement price but even the realised prices were lower than the cost B and C incurred by the farmers during both the seasons. As a solution to the problem of encouraging higher production without adversely affecting the consumers, he has examined three alternative strategies, *i.e.*, changing the prices without adjusting cost and yield, adjusting the cost without adjusting yield and prices and by adjusting the yield without adjusting price and cost. Since the first alternative, according to him, does not provide a reasonable solution (as the increases to be effected in the prices have to be substantial) and with the second strategy even a 100 per cent subsidy towards material input costs would not ensure the desirable results (the cost remaining higher than the reasonable price), he favours the third strategy, *i.e.*, increasing the yield. What has been completely missed in his analysis is that in the case of increasing the yield, one has to consider the behaviour of marginal cost and one cannot derive the cost at higher level of output simply by dividing the cost of cultivation per hectare estimated at lower yield levels.

R. K. Khatkar and D. S. Nandal in their paper have compared the cost of production and procurement prices and have also studied the growth rates of cost of production, procurement prices, farm harvest prices, fertilizer prices and real wages. Their analysis indicated that procurement prices were higher

than the cost C of Mexican wheat, dwarf paddy and sugarcane. In the case of *desi* wheat and paddy, bajra, maize and gram, the procurement prices were found to be lower than their cost of production. Therefore, it has been concluded that the procurement prices were found to be remunerative only in the case of Mexican wheat and dwarf paddy. The volume of procurement of wheat was found to be sensitive to the levels of output and procurement prices. However, the level of procurement during the period under investigation was also affected by the policies followed in regard to the movement of foodgrains, the system of procurement, etc. But these important policy variables have been ignored in their analysis.

M. M. Bhalerao *et al.* in their paper have tested the hypothesis that the bulk-line cost covers a much greater proportion of farmers, output and area than the average cost. The bulk-line cost usually defined as one that covers 85 per cent of production or area would be higher than the average cost unless the distribution is highly skewed. The results of many studies have already proved this point long ago. However, their data also indicated that the bulk-line cost covered a greater proportion of farmers, output and area. On this basis, they have suggested that if the Government wants to satisfy a substantial proportion of the farmers its support price should be based on the bulk-line cost of production. Recognizing that such an approach may put a premium on inefficiency they have pleaded for reduction in the cost of production of the inefficient farmers by inducing the adoption of cost-saving modern technology on inefficient farms but this is more easily said than done.

M. P. Azad *et al.* in their paper on determination of sugarcane price have highlighted the need for taking into account the burden of high price of sugarcane production to the consumer and of maintaining optimum cropping pattern. Considering bulk-line cost approach and opportunity cost principle as the main basis for price determination, the results of their exercise indicated that the bulk-line cost of sugarcane worked out at Rs. 21.60 per quintal and on the basis of opportunity cost principle worked out at Rs. 23.93 which was higher than the prevalent price of Rs. 22 per quintal. They have pleaded that the Government while fixing the level of statutory price of sugarcane should take into consideration the cost of production and price relationship existing among different sugarcane products together with the cost of production of sugarcane on the basis of bulk-line cost and opportunity cost.

M. L. Jhala expects that the price of groundnut will be equal to the marginal cost of production. Marginal cost has been defined as operational cost which accrues to marginal farmers or that incurred on marginal lands on per unit of production. The concept of marginal cost as conceived by Jhala as the cost of production on marginal lands identified as those having lowest yields is open to debate. The results, however, indicate that the average cost for marginal, small and semi-medium farmers taken together worked out at Rs. 176 per quintal and this cost was lower for medium and big farmers and thus the official support price of Rs. 175 per quintal was close to marginal cost. Jhala has argued that more attention be paid in price determination to cost of production on marginal lands. The cost of production not only of groundnut but

of any commodity on marginal lands as defined by Jhala could be higher than the average cost. His argument, therefore, might imply a substantial increase in the prices of all farm products. The implications of such upward revisions for the economy have also to be carefully examined.

A. K. Neog and M. Barkataky have argued that uniform price policy common to all farm sizes is bound to have differential income distributional effects in view of cost differentials. It has also been emphasized that the minimum support price should cover marginal cost of production and transport cost in respect of marginal and small farmers. They, however, have not bothered to look at the behaviour of marginal cost curve. In the case of agricultural commodities where even the average cost of production displays large variations, the marginal cost may display even wider variations. In such a situation, if marginal cost becomes the sole basis for determining the official price policy, then the very objective of bringing in the price stability might be endangered.

H. P. Yadav in his paper has examined the relationship between cost of production of paddy and the procurement price in eastern Madhya Pradesh. The results indicate that the cost of production of traditional as well as of HYVs of paddy of all size of farms was lower than the procurement prices fixed for the 1980-81 *kharif* season. However, the farm harvest price and the village market price during the seven weeks of immediate post-harvest period in the two districts, *viz.*, Raipur and Bastar were lower than the procurement prices fixed by the Government.

II

PARITY PRICES

In a comprehensive paper S. S. Acharya has examined eight types of parity ratios for wheat and gram. The results of his analysis indicate that input-output price parity for wheat in terms of ratio of indices of prices received and prices of purchased inputs, prices received and cost C, and gross income and prices paid by the farmers, has remained favourable, but wheat prices received by the farmers have not kept pace with either the general price level or with prices paid by the farmers. For price policy decisions, which of the eight parities considered by the author would be relevant has not been examined at all and secondly on the choice of base year, particularly in the case of productivity indices, the choice of 1965-66 may not appear to be appropriate to many. A shift in the base year, say, to 1967-68 would change the results substantially.

G. D. Diwakar and D. B. S. Sehara in their paper have examined the parity ratios from 1966-67 between the price indices of general articles and of cereal crops, and also of price indices of cereals and those of manufactures, industrial raw materials. Again, the parity ratios between the price indices of cereals and of inputs like fertilizer, diesel and electricity have been estimated. The wholesale price indices (base 1952-53=100) were used for calculating

parity ratios. The results indicate that the parity ratios between the indices of crop prices and of general food articles prices have been adverse for all the crops, except for jowar and barley for a few years. For the year 1978-79, on the basis of adjusted base method, the parity prices for wheat, barley, bajra, jowar and maize worked out at Rs. 123.77, Rs. 93.90, Rs. 102.17, Rs. 78.75 and Rs. 97.27 per quintal respectively. Thus, the derived parity prices were higher than the procurement prices fixed for these crops. But the question, whether all the three or only one of the three parity ratios should be used for price determination, has not been discussed at all in the paper.

In their paper N. L. Agarwal and R. C. Sharma have worked out for the State of Rajasthan parity ratios for four foodgrain crops for the period 1965-66 to 1978-79 with 1970-71 as the base year. The parity ratios have been calculated from the indices of farm harvest prices and aggregate index of input prices and also of procurement prices and the aggregate index of input prices. The results of their analysis indicated that after 1974-75 the parity ratios were less than unity and the parity ratio of procurement prices has shown a declining trend since 1970-71. From this they have concluded that no parity was found in the prices of inputs and outputs in the State during the period. They have, therefore, pleaded for the revision of the present policy. In a way, what the authors seem to argue is that the procurement prices be determined only on the basis of input prices and in all years full parity needs to be provided. However, both the propositions suffer from serious limitations. For example, the prices determined on the basis of changes in input prices alone may go out of alignment if the productivity of a certain crop increases while that of others remain stagnant.

B. Humbarwadi *et al.* in their paper have examined the behaviour of parity indices of prices received by the farmers for the output sold to the price paid by the farmers for buying the consumer goods and needed inputs. They have also studied the behaviour of inter-crop price parity for paddy, *ragi*, jowar, groundnut and cotton crops in Karnataka. Their analysis indicates that there existed wide disparity between the different crop combinations over the years. In the case of paddy, jowar, *ragi* and groundnut, the parity indices were unfavourable, whereas in the case of cotton they were found to be favourable during 1978 and 1979.

In his paper Shiv Ram Dass has computed implicit price indices and terms of trade between agricultural and non-agriultural sectors for the period 1950-51 to 1978-79. The implicit price indices have been worked out by dividing the estimates of NNP at factor costs at current prices originating in these sectors by the corresponding estimates at constant prices. His analysis indicated that 70 per cent of the variations in terms of trade between the agricultural and the non-agricultural sectors could be explained by changes in the availability (production) of agricultural commodities and non-agricultural incomes at constant prices. During the period 1967-68 to 1978-79 the terms of trade became adverse to the agricultural sector at an annual compound rate of 2 per cent in spite of a 4.52 per cent annual increase in the non-agricultural sector's income. For such a development he finds the explanation in the increase in the

inter-personnel disparities in income levels during this period. The terms of trade worked out from implicit prices suffers from the serious limitation that the weights attached to different commodities are on the basis of production and not on the basis of marketed surplus.

B. R. Atteri *et al.* in their paper have examined the movement of relative prices of major agricultural commodity groups and some important agricultural commodities for the period 1951 to 1977. The results of their study showed that the prices of food articles compared to manufactures have been relatively low for almost the entire period except for 1967 to 1970. Within the agricultural sector the ratio of prices of food and non-food crops indicates that the prices of food crops remained relatively higher for almost the entire period. In any exercise on the relative movement of prices, the choice of base year is crucial. In this exercise 1970-71 has been taken as the base.

B. D. Bhole and V. D. Galgalikar in their paper have estimated the parities between prices of important groups of crops and also the inter-crop price parity. The analysis pertains to an eighteen-year period from 1960-61 to 1977-78. The results of their analysis indicated that the price parities were favourable to cotton and jowar crops which were the major crops of the region and the prices were unfavourable to pulse and oilseed crops followed by bajra, rice and wheat. The period 1967 to 1970 has been taken as the base in the analysis. On the basis of their analysis the authors conclude that the price policy can hardly play any role in augmenting production of oilseeds and pulses.

Mangal Prasad and Ram Iqbal Singh in their paper have examined the movement in the prices of power, fuel, light and lubricants group in relation to the rise in the prices of food articles. The results of their exercise indicated that whereas the prices of food articles rose by 8.5 per cent per annum, the increase in the prices of other group was as high as 22.51 per cent per year. To remedy the situation they have argued that the prices of food articles be raised at a higher rate so that the disparity between the two could be bridged.

D. Vasudeva Rao in his paper has analysed the changes in input prices and output prices between 1971-72 and 1978-79 for ten crops. The data on input use per acre for different crops available in a Farm Planning Manual were used while the yields per hectare were taken from some other source. He suggests that the level of prices in 1979 should have been such as would have equalised the changes in the value of gross output to the changes in the input cost. It is important to bear in mind that what the author uses in his analysis is the structure of input use based on certain set of recommendations and not the one that has been actually followed at the farm level. The limitations of such an approach based on normative cost structure as a solution to the country's problem of price determination are obvious.

R. Korakandy in his paper discusses the issues relevant for fixation of minimum price for fish. According to him, among the criteria for fixing the minimum price, the full cost principle has practical limitations in this case because it is difficult to estimate the full cost. On the other hand, the principle of parity showed potential to change in the face of development in the industry and thus may be an appropriate method.

III

EFFECTS ON INCOME DISTRIBUTION AND UNIFORM VERSUS DIFFERENT
PRICES FOR DIFFERENT REGIONS

The effect of changes in the prices on the regional income distribution
has been examined by R. P. Sinha.   The changes in incomes have been de-
composed into production and price effects. His results indicated that, between
the triennium ending 1969-70 and triennium ending 1979-80, in comparison to
Andhra Pradesh, the gain in farm incomes due to the price effect was higher
by 99 per cent in Punjab, 78 per cent higher in Gujarat and only 11 per cent
higher in West Bengal. Since the terms of reference of the Agricultural Prices
Commission (APC) do not require it to take into account the effect of sug-
gested price policy on disparities in regional incomes, he has advocated for
suitably amending the terms of reference of the Commission. However,
without looking into all the factors such as changes in the cropping pattern
and the pattern of emerging demand, any analysis of changes in regional
incomes would remain incomplete and may even lead to somewhat distorted
results.

K. Sain in his paper has examined the behaviour of cost of production
of paddy in West Bengal during the period 1971-72 to 1978-79 and his results
also indicate significant inter-zonal variations in the cost of production of
paddy.   He, therefore, has pleaded that the present policy of fixing uniform
prices of paddy for all the zones should be changed. For a proper price policy
for paddy, it is argued that the policy needs to be conceived on the basis of
cost of cultivation, parity principles, price at which the commodity could be
imported, cost of living indices and other related matters. Without looking
into whether the price policy followed in India considered these criteria or
not, he has concluded that the price policy pursued in India so far has been
faulty and needs a change for the better.

A. G. Prasad in his paper has studied the differences in the cost of pro-
duction between different size-groups of farms and between two talukas, one
from a progressive district and the other a relatively backward taluka in a
drought-prone district. His results indicated that the cost of production of
paddy was higher in the backward taluka as compared with that in the pro-
gressive taluka. In the backward taluka the cost of production was found to
be highly correlated with the size of farm. Despite interregional and inter-size
differences in the cost of production, he favours a uniform price policy. He
argues that in a situation when the cost of production differs between size-
groups then the price fixed to help the farmers with higher cost would also
benefit the farmers with lower costs and this would lead to uneven distribution
of incomes. He feels that such a price policy instead of helping may bring
more complications.

On the basis of a study of 252 holdings selected from six tehsils of Punjab,
Joginder Singh and I. S. Chatha have examined the impact of variable price
structure on farm income distribution in Punjab. The results of their analysis

indicate the obvious, namely, a positive association between increase in the prices and the farm size. So long as one considers the total production such results would follow. But what is relevant is whether the increase in farm prices also benefits the small farmers or not.

<div align="center">IV</div>

<div align="center">EFFECTS OF MARKETING CHANNEL ON FARM INCOMES AND RELATIONSHIP
BETWEEN MARKET AND PROCUREMENT PRICES</div>

C. G. Ranade *et al.* in their paper have argued that by simply assuring higher prices for groundnut will not benefit the farmers since their share in the total value generated in the groundnut system could still remain stagnant. The growers' net income can be increased if they own the resources involved in the groundnut system. Based on micro level data for a sample of growers in Andhra Pradesh, they have examined the growers' net share in five different types of marketing channels. Their results indicate that the net benefits of vertically integrated co-operatives to the growers are significant and for giving higher farm incomes to the groundnut producers, high prices would not be sufficient. The growers' income will increase by about 34 to 114 per cent depending upon the channel and the net income before integration.

Y. P. Mahalle and N. A. Gadre in their paper have examined the gains to the cotton growers due to the Monopoly Procurement Scheme. On the basis of market prices of L-147 variety of *kapas* for the period 1947-48 to 1971-72, the prices have been projected for the period 1972-73 to 1980-81. These extrapolated prices have then been compared with the final prices received by the producers under the Monopoly Procurement Scheme. The gains per quintal to the cotton growers due to the Monopoly Procurement Scheme ranged from Rs. 99.94 in 1974-75 to Rs. 293.97 in the year 1976-77. How far this type of comparison is valid remains an open question, particularly when in the later period the general price level has been showing a rise at a much faster rate.

P. K. Patankar in his paper has examined the relationship between the procurement prices of wheat and rice and their market prices. The inter-crop disparity in the administered prices in respect of these two crops has also been examined. The results of his analysis indicated that a spurt in the procurement prices did not have a positive influence on production and productivity in Madhya Pradesh. The procurement prices have imparted bullishness to the state of market expectations. Both these conclusions are based on an incomplete analysis particularly in the case of the second conclusion, the author seems to have interpreted the association between procurement and market price as the procurement prices determining the market prices. In his paper G. S. Kainth has considered market prices as determinants of procurement prices.

Kainth in his paper has analysed the relationship between the size of procurement and the level of output and procurement prices. The elasticity of procurement with respect to procurement price worked out to 0.42 and with respect to output, it was 1.17. He has also tested the hypothesis that the procurement price depends on the market price. His analysis in the case of wheat indicated that the procurement price has been varied systematically in response to movements of free market wholesale prices. In this context, two things deserve attention; one is whether the association between the open market price and procurement price can be interpreted as cause and effect relationship. In his paper Patankar interpreted this association as market prices being determined by the procurement prices. Secondly, it is well-known that the farmers base their expectations on the basis of prices received and thus the price fixing authority should consider the behaviour of open market price also while determining the level of procurement prices.

V

INTEGRATION OF DIFFERENT APPROACHES

B. K. Sikka *et al.* in their paper have studied the problem of price determination of potato in Himachal Pradesh and have used three commonly known criteria, *viz.*, (a) cost of production, (b) ruling price and (c) parity price. Their simplistic solution to the problems of integrating the three approaches is that the support prices should be determined as an average of cost B, ruling price and of parity price. Unfortunately, the logic for giving equal weight to each of these three criteria and why one has to confine only to these three as the major determinants of prices have not been spelt out in the paper. Again, an answer to the question as to why cost B would be more appropriate than cost C in the formulation suggested by them has not been touched in the paper.

R. Prabaharan *et al.* in their paper have estimated the cost of production of milk in different regions in Tamil Nadu and have examined the parity of milk prices and prices paid by the farmers in the case of buffalo milk. The average cost of production inclusive of a profit margin and risk allowance has been estimated at Rs. 2 per litre for 1980. The bulk-line cost has been estimated at Rs. 1.98 whereas the parity price would work out at Rs. 2.23. The profit margin has been taken at 10 per cent and risk allowance at 4 per cent. The important question, why the profit margin should be 10 per cent and risk allowance 4 per cent, has been completely ignored. They have concluded that no single approach can be taken as an adequate criterion for fixing the price of milk. When the estimates of prices by different approaches are fairly close, they have argued that any price within the range which might suit some social and political objectives can be considered as rational. In any other situation, they have argued that reasonable price can be determined by the average cost of production plus a mark up and this mark up can be determined by the parity approach.

VI

ISSUES FOR DISCUSSION

Before taking up the issues for discussion, it would be appropriate to have a closer look at the guidelines given to the Agricultural Prices Commission (APC) for deciding upon the price policy. The terms of reference of the Commission, *inter alia*, require it to keep in view (*i*) the need to provide incentive to the producer for adopting improved technology and for developing a production pattern broadly in the light of national requirements; (*ii*) the need to ensure rational utilization of land, water and other production resources; (*iii*) the likely effect of the price policy on the rest of the economy, particularly on the cost of living, level of wages, industrial cost structure, etc.; and (*iv*) to take into account the changes in terms of trade between agricultural and non-agricultural sectors.

It is apparent from (*i*) above that the cost of production is relevant for price policy purposes because unless the prices fixed cover the cost of production incurred by the farmer, it would not act as an incentive to improve production. The trends in input and output prices also need to be examined, as the farmer's decisions are based on expected prices. Since expectations are the result of past experience, while deciding upon the level of prices, the price behaviour of the commodity in question and also of the inputs becomes relevant. The second item of the terms of reference of the Commission requires that the price policy should not encourage production in excess of demand and ensure the most efficient pattern of production between regions taking into account both short and long-term considerations and the importance of encouraging balanced and diversified form of agriculture. On this account, therefore, the emerging demand and supply of the commodity in question and the behaviour of inter-crop price parity need to be examined while deciding upon the level of administered prices.

Whereas the prices of agricultural commodities influence the income of the farmers, they also affect the levels of living of the people engaged in other sectors of the economy, since agricultural commodities form a part of wage goods. It is for this reason that the third item of the terms of reference of the Commission requires it to take into account the likely effect of the price policy on the cost of living and level of wages. The weight of the agricultural commodities in the wholesale price index is such that any significant movement in the agricultural price affects the general price level and therefore the agricultural price policy cannot be decided in isolation or in exclusion from the impact of suggested price policy on the general price level. The fourth item of the terms of reference requires that the terms of trade between agricultural and non-agricultural sectors are not allowed to move beyond a certain limit on either side.

Thus, there are several factors which the APC should take into consideration while determining the appropriate price level of any commodity. The reports of the APC also indicate that the Commission is guided by the

following criteria, though it does not follow a mechanical approach: (*i*) cost of production, (2) changes in input prices, (3) market prices, (4) demand and supply, (5) effect on industrial cost structure, (6) effect on cost of living, (7) international market price situation, (8) inter-crop price parity, (9) input-output price parity, (10) parity between raw material and finished product prices and (11) changes in terms of trade.

In this context, it may also be emphasized that the determination of prices, following a mechanical (formula) approach on the basis of one or two criteria, has its own limitations. For example, the prices based mainly, or exclusively, on factors related to production may easily get out of tune with the trend in consumer and export demand. Similarly, the behaviour of market prices cannot be adopted mechanically for price determination in situations where the market prices fail to provide correct signals owing to imperfections in the market structure. Again, even in the case of terms of trade adjustment, it is important to remember that, with the passage of time, the commodity composition of items included in prices paid and prices received changes and this, in turn, reduces the validity of parity index formula.

Since the APC keeps in view the factors indicated in the synopsis and almost all the factors discussed in the papers, it would be quite in order if we adopt the following frame for discussions. In the case of any particular approach, what concept should be adopted, how it ought to be measured and estimated, how it should be used for deciding the prices and finally how it should be integrated with other relevant approaches?

(*i*)   *Cost of Production*

As regard the cost of production approach, a perusal of the synopsis on the topic circulated by the Society would suggest that the contributors were expected to discuss critically the efficacy of the prevailing norms in cost computations adopted by the APC; whether the cost of transport from farm to the market and risk factor be taken into account in the estimation of cost; whether or not the support price announced in the past covered the cost of using full package; and the implications of adopting bulk-line cost pricing.

A large number of papers received have compared the cost of production with the procurement/support prices. The underlying conclusion that emerges from the analysis presented in three papers is that the procurement/support prices generally were fixed at levels higher than the estimated co-t. Even the costs of production at full package adoption were found to have been covered by the prices fixed. However, in the case of paddy in Thanjavur, the price fixed was found to be below the cost of production. A case for adding a component reflecting the normal profit and a reward for entrepreneurial services of the farmer to cost C has been presented in one of the papers. It has been argued that to cost C a component equal to the retailer's normal margin of profit over his outlay be added. Another paper has advocated adding to cost C a profit component and also a component for risk allowance. Inclusion of transport cost has been suggested in yet another paper.

While no systematic attempt has been made to discuss the pros and cons of adoption of bulk-line cost as a basis for price determination, two papers have argued for adoption of bulk-line cost of production for price determination. A case for considering the marginal cost has been made in two papers.

The Group may consider discussing the topic on the following lines. It would be instructive first to clear which cost concept should be adopted in price determination, whether the concept of cost C or the concept of cost C plus a margin of profit and risk factor or any other is most appropriate. Next, we may like to discuss which cost should form the basis—whether it should be the average, bulk-line or the marginal cost or any other? At what level of aggregation should the costs be estimated? Whether the present approach of estimating the cost of production at State level is appropriate, or whether it has to be at the all-India level or at the regional levels?

(ii) Parity Approach

In the case of parity approach the contributors were required to study, either at the all-India or State level, the prices received by the farmers and the prices of inputs and consumer goods purchased vis-a-vis procurement prices. Another area suggested was the inter-crop parity particularly to ascertain as to what extent the decline in area and production of pulses could be attributed to the neglect of inter-crop price parity. Recognizing that the impact of the movement of terms of trade may be different in different regions, the contributors were required to probe whether the terms of trade could be adopted as a major factor for fixing administered prices at the all-India level.

The input-output price parity both at the State and at the all-India level has been examined in a number of papers. However, in these papers, how the input price index should be computed and whether the relevant comparison would be at the level of an individual crop or all the crops grown by the farmers have not been discussed. Similarly, in the case of parity ratios between the price received and prices paid for consumer goods and needed inputs, the crucial question of identifying the goods purchased and of estimation of their share in the total purchases have not attracted the attention it deserved. Even in regard to inter-crop parity, what type of comparisons whether the one between the prices or the one reflecting relative profitability would be most appropriate has not been examined from this angle.

Recognizing that the results obtained depend decisively on the methodology adopted for estimating parity ratios, the Group may like to devote some time on the methodological issues in the estimation of parity ratios. The important issues that we may like to discuss in the case of inter-crop parity are, which one of the eight parities estimated by Acharya is most appropriate, whether the inter-crop price parity be examined only for the competing crops or for all crops and whether the comparison has to be made for individual crops or for an individual crop with the group of competing crops, and at what level of aggregation such parities would be most meaningful? Considering that the adverse weather conditions affect different crops differently,

what should be the criterion for choosing the base year? The problem of selecting a suitable base is of equal importance even in the computation of terms of trade. The Group may also like to devote some time as to how the commodities purchased by the agricultural sector be identified and how the weights to be attached to each commodity be derived. Apart from discussing the extent to which the principle of parity can be adopted for price determination, the Group may consider discussing the merits and demerits of Laspeyre's and Paasche's formula for computing indices of prices received and prices paid.

(iii) Effects on Income Distribution and Uniform versus Different Prices for Different Regions

Given the significant inter-crop, interregional and inter-size class differences in the levels of agricultural development, it was desired that the crucial question as to which section of the farming community and which regions benefit from remunerative prices be examined. In view of the differences in the cost of production in different regions, the implications of adoption of differential prices for different regions were required to be investigated. Of the four papers received on the subject the results of one indicated that the maximum benefit of rise in prices accrued to a high income State. The benefit of rise in the prices of farm products was found to be positively associated with the size of farm in another paper. In view of the significant differences in the cost of production of paddy in different zones, a case for changing the policy of uniform prices has been made in one of the papers on the subject. Despite the interregional and inter-size differences in the cost of production, Prasad has favoured a uniform price policy.

To begin with, the Group may like to discuss as to how the benefits of higher farm prices need to be measured. Is the approach of comparing absolute changes in the incomes of different groups of farmers relevant or do we seek an answer to the question, whether the rise in farm prices benefits also the small farmers or not?

The Group may also like to discuss as to what extent the price policy can take into account the impact of price policy on regional income disparities without going in for different prices for different regions. While discussing the merits of uniform prices vis-a-vis differential prices for different regions, the Group may discuss whether the adoption of differential pricing policy would not go against the accepted principle of comparative advantage and what would be the impact of such a policy on regional income distribution and how such a policy can be implemented without endangering the fabric of our socio-political set-up.

(iv) Effects of Marketing Channel on Farm Incomes and Relationship between Market and Procurement Prices

The question what price would constitute fair price under (a) monopoly procurement, (b) compulsory levy system, and (c) procurement of purchases

under price support, has not been examined in any of the papers. However, vertical integration of groundnut system for improving the realisations of groundnut producers has been advocated in one of the four papers falling under this category. The prices received by the farmers under the Monopoly Procurement Scheme have been compared with the prices estimated through extrapolating the past observed trend in market prices to find the benefits of the Scheme to the farmers in one of the papers. Two papers have examined the association between the procurement and the market prices. Whereas one concludes that the procurement prices imparted bullishness to the state of market expectations, the other concludes that the procurement prices have been varied systematically in response to the movement of free market wholesale prices.

The Group may first like to discuss the question of fairness under different systems of procurement. Very naturally, in years of short crop even a lower level of procurement price when only a part of the produce is to be procured may be taken to be fair keeping in view the realisations from the other part, but under monopoly procurement its level for being fair price has to be different. On the question of market integration as an alternative or in conjunction with a system of effective price support, the Group may discuss the benefits of such integration and also the practical feasibility of extending such integration to the entire crop output, along with the associated implications for the consumers and for the rest of the economy. Some time may also be devoted for discussing as to what extent, with the given imperfections in the market structure, the market prices can be considered as a guiding factor in determining the administered prices.

(v) *Integration of Different Approaches*

The crucial issue in the price determination, *viz.*, development of a scientific method of setting procurement prices by integrating various considerations into a workable and objective model did not receive the attention that it deserved. Only two papers have touched this aspect and the treatment is also very casual. While the authors of one paper have advocated setting the support price at the simple average of cost B, ruling prices and parity price, in the other paper it has been argued that when the estimates of prices by different approaches are fairly close any price within the range can be considered rational and in any other situation it can be determined by the average cost of production plus a mark up determined by parity approach.

In this context, the Group may like first to discuss which particular considerations be given more weightage in price determination and whether the weightages attached to different criteria should in all situations be the same or be changed according to the circumstances. Then, how the integration of these different approaches be done can be discussed.

Again, it may be mentioned that in many countries the prices are fixed on the basis of formula approach. It is, however, observed that even in those countries where such formulae are used, the price fixing bodies are required to consider many more factors. For example, in the United States, the Secre-

tary of Agriculture is required to take into account, among other factors, the availability of funds, and the ability to dispose off stocks acquired through price support operations. Thus, despite the use of a formula, the prices determined in almost all countries contain a certain degree of arbitrary judgment. By contrast, under non-formula method, the possibilities of too little weight being attached to factors such as cost of production, input prices or the purchasing power of prices received by the farmers in relation to consumer interrests or competitiveness in world market, etc., cannot be ruled out.