A PROPOSAL FOR DUAL PRICE POLICY*

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The farm prices have baffled solution for both developed and developing economies. The developed economies run into the problem of farm surpluses with their price support programme. Developing economies face a still more complicated problem. If they allow prices to rule high in order to provide incentives to producers, the consumers, especially of low income groups, have to carry a crushing weight and the development activities are plagued by a price spiral. If developing economies attempt to contain prices within levels fair to consumers, price incentives to producers are curtailed or taken away. The developing economies are thus perched on horns of dilemma. Whereas a systematic study has been made of the problems faced by developed economies in regard to their price policies, such studies are yet to be undertaken for developing economies.

Regarding developing economies the opinions have remained fluid. The economists throw their weight mostly on the producers' side, they would want that the producers, the linch-pin in the planning, should have incentives to produce more. Besides high prices would eliminate the problem of market shortages and prevent frittering away of valuable foreign exchange required for imports of grain to meet the market shortages. The planners and politicians would not easily accept this advice. To them assuring adequate food supply to low income-groups in the present times is of greater importance. As a result of this conflict in views one gets for advanced economies relatively high prices and farm surpluses and for developing economies relatively low prices and food deficits. To economists, this is an unpalatable paradox.

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What then is the way out? In this paper it is suggested that there is no easy way out. But the present position of surpluses in advanced economies and deficits in developing economies is untenable and for developing economies drifting would make the situation increasingly more difficult for repair.

The paper approaches the problem in the way which is by now widely accepted in essence, though its implications are not fully worked out. It accepts that the position of disequilibrium cannot be avoided altogether. This has to continue for some time. But it is considered possible that the problem of deficit of food arising out of the present consumer-oriented price policy for foodgrains in India can be avoided or at least mitigated and the producers can be induced to produce more.

After a brief setting of the problem in Section One, the paper takes up a theoretical analysis of the problem in Section two which is followed by the Section three which briefly examines the operational frame of the policy suggested here. Section IV attempts to examine problems and some implications of the policy.

The price policy regarding farm products in India has see-sawed during last fifteen years or more between the fixation of support prices to protect interests of producers and the fixation of maximum prices to protect the interests of consumers. With sudden drop in prices after 1953-54, support price programme came to the forefront. Before it could be given shape, the supply stringency that arose in the wake of low production in 1957-58 pushed the fixation of maximum prices to the fore. On the whole, during the first two Plans the price policy remained oriented to the protection of consumers' interests. In the third Plan, it was postulated that farm price policy would be reoriented to interests of the consumers and producers. Probably the bumper crop of 1960-61 might have prompted this approach. But, the events thereafter have necessitated the farm price policy to move mostly in the old grove. Fixation of maximum prices, especially for foodgrains, was taken up and had to be supplemented largely by liberal imports. Two major impacts of this policy are perceptible. Firstly, we find that food prices, over the period, have not tended to increase
relative to non-food prices and relative to general price index, despite food shortages. There is, though feeble, a declining trend.\(^1\)

### Table 1

**RELATIVE PRICES OF CEREALS**

<table>
<thead>
<tr>
<th>Financial Year</th>
<th>Cereals</th>
<th>Non-food Crops</th>
<th>General</th>
<th>(Index Numbers) Ratio of Wholesale Prices</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>1 to 2 A</td>
</tr>
<tr>
<td>1952-53</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>1953-54</td>
<td>100</td>
<td>110</td>
<td>106</td>
<td>90</td>
</tr>
<tr>
<td>1954-55</td>
<td>84</td>
<td>104</td>
<td>97</td>
<td>81</td>
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<tr>
<td>1955-56</td>
<td>76</td>
<td>99</td>
<td>93</td>
<td>77</td>
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<tr>
<td>1956-57</td>
<td>96</td>
<td>116</td>
<td>105</td>
<td>83</td>
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<td>101</td>
<td>117</td>
<td>108</td>
<td>86</td>
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<td>104</td>
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<td>94</td>
</tr>
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<td>1960-61</td>
<td>104</td>
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<td>125</td>
<td>72</td>
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<td>1961-62</td>
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<td>143</td>
<td>125</td>
<td>71</td>
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<tr>
<td>1962-63</td>
<td>106</td>
<td>137</td>
<td>128</td>
<td>77</td>
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<tr>
<td>1963-64</td>
<td>122</td>
<td>146</td>
<td>139</td>
<td>84</td>
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<tr>
<td>1964-65</td>
<td>140</td>
<td>163</td>
<td>151</td>
<td>86</td>
</tr>
</tbody>
</table>

The data in the above table show an increase in the money prices of the cereals. The money prices of non-food crops also have

1. The value of trend coefficient in the linear regressions of the two ratios given above are

\[
\begin{align*}
A : Y_1 &= 83.34 - 0.962 x \\
B : Y_2 &= 89.18 - 0.622 x \\
\text{Index No. of cereal prices} \\
\text{Index No. of non-food crops prices} \\
\text{Index No. of cereal Prices} \\
\text{General Price Index} \\
X &= \text{time in series of years from 1952-53 to 1964-65}
\end{align*}
\]

Statistically the trend value is not significant. Hence, the declining trend is not established. But we can infer that the relative prices of cereals have stagnated or tended to decline but there is no evidence to indicate a rise.
increased. The General Price level too has risen. The prices of cereals relative to non-food crops or General Price level, were, however, low till 1961-62. They have recovered somewhat but they are still below the 1958-60 levels.

Farm Management Studies carried out in different States in the country during 1953-57 indicated that in some cases the price-cost relationship was adverse. The evidence available in regard to trends in cost is fragmentary, and give no clear trend. The parity prices for Assam and the Punjab show two diverse trends. Besides parity prices are not constructed to reflect costs adequately. The relationships between cereal prices and prices of three inputs: (1) iron and steel, (2) cement, and (3) fertilizer, suggest that regarding the former two, in 1962, the relative prices were the highest since 1953. For fertilizer the relative price was high in 1961, though it dropped to the lowest level in 1962.

The above evidence would show that the cereal prices may not have enough incentives to offer to producers since the relative prices of cereals have continued over a decade to be unfavourable to producers.

To an extent, the imports of cereals reflect the market deficits of supply. The available data show that they have tended to increase and that they involve a steep increase in costs. The relevant data are contained in the following table.

**TABLE – 2**

**IMPORTS OF CEREALS**

<table>
<thead>
<tr>
<th>Year</th>
<th>Quantity</th>
<th>Rs. crores</th>
</tr>
</thead>
<tbody>
<tr>
<td>1954</td>
<td>83(\text{,}000)</td>
<td>48.53</td>
</tr>
<tr>
<td>1955</td>
<td>70(\text{,}000)</td>
<td>33.11</td>
</tr>
<tr>
<td>1956</td>
<td>142(\text{,}000)</td>
<td>56.34</td>
</tr>
<tr>
<td>1957</td>
<td>3588</td>
<td>162.39</td>
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<tr>
<td>1958</td>
<td>3173</td>
<td>120.51</td>
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<tr>
<td>1959</td>
<td>3817</td>
<td>141.41</td>
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<tr>
<td>1960</td>
<td>5056</td>
<td>192.84</td>
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<tr>
<td>1961</td>
<td>344(\text{,}000)</td>
<td>129.56</td>
</tr>
<tr>
<td>1962</td>
<td>3583</td>
<td>141.09</td>
</tr>
</tbody>
</table>

*Source: Bulletin on Food Statistics 1963.*

*C & F = Including Costs and Freight.*
As the above data show, the shortages of domestic food supply have tended to widen. Imports of food since 1962 have tended to increase further. In the current years they have crossed even 1960 – level.

II

As already mentioned, two considerations have weighed alternatively with countries in different stages of development and in different phases of price movements. They are: (i) adequate income to the producer and (ii) reasonable cost of food to consumers. These two often conflict. Both of them lead to market disequilibrium. The disequilibrium gives rise to either commodity surpluses or scarcities unless dual or multiple pricing of the commodity is adopted.

We can visualize four different types of disequilibrium positions for normally sloped demand and supply curves.* Let us concentrate on the following simple formulation to begin with:

\[
\text{PRICE} \\
\begin{align*}
\text{P}_1 & \quad \text{D} \\
\text{P}_0 & \quad \text{b} \\
\text{P}_2 & \quad \text{D}' \\
\end{align*}
\]

In some of the advanced countries we observe the situation as above. Prices are supported at level \((\text{P}_1)\) higher than equilibrium price \((\text{P}_0)\). There emerges a commodity surplus equal to \(q_1 - q_2\). Over a period

*Only three are referred in the paper.
of time these surpluses assume threatening proportions. This situation though untenable is not quite indefensible. At the time when demand sags suddenly due to depression, the shape of the supply curve is no longer normal but is kinked as s b q₁. If the quantity (q₁) produced is allowed to be cleared through the market, it will be consumed at a price (pₑ) much below the initial equilibrium price. Since supply puts up resistance (due to its irreversibility during the downward phase of price movement) the producers will incur heavy losses, there would be heavy human suffering and the agricultural industry would be put out of gear for a long time.

In a dynamic and progressive society surpluses emerge due to similar dis-equilibrium situation. But in such a case the dis-equilibrium would arise mainly because the supply curve shifts too far out in comparison with the rightward shift of the demand curves. Shift in the supply is caused by rapid technological changes. Since some of the resources which are specific to agriculture and which are rendered surplus in the process of technological change, cannot be easily withdrawn, the community faces in the immediate context a kinked supply curve of the type shown above (s b q₁). The defensible first reaction of the community to this situation is to support prices and allow surpluses to be accumulated. Once again the community is prompted in this action by the motive to help farmers to preserve agriculture in shape. The error however lies in assuming that supply curve is irreversible even over a relatively long period (i.e never regains the s b s' shape). Helping surplus resources out of agriculture as rapidly as they are rendered surplus—even with a lag in the impact—is an acceptable solution of an untenable situation. It has been proved by economists that the cost of holding back surplus commodities (q₁ - q₂) is by far more—both in regard to investment by the Government and loss of welfare to the community—than the cost of moving surplus resources out of agriculture.

By now the above analysis and policy prescriptions are well known to economists. This obvious has been elaborated here mainly to help us understand the situations with which underdeveloped or developing economies are faced. As we shall see, the two situations are not parallel. Unlike developed economies, in developing economies the food situation resembles, only to an extent, to that obtaining
during war time. During war the demand for farm products suddenly spurs up. During that period though the consumers' expendable income rises it does not rise to the same extent as the national income (ignoring defence losses). Pressure of war demand on rigid supplies leads to price rises. The consumers are then put to heavy strain. During the period of development a similar situation arises because with increased investment activity, the labour income tends to rise pushing the demand for food upwards. Supply of farm products being sluggish in the developing economies, pressure from demand would result into a substantial rise in farm prices. Thus left to the market forces, the non-producing consumers would find much of their development gains syphoned off by the farm sector. If the community is obliged, as it is in case of at least the organized labour, to compensate the consumer for price rise, a price inflation may permeate the non-farm sectors. This would create a dilemma or a vicious circle for the economy. The policy to curb price-rises during war or development period is therefore not quite unjustifiable.

If we follow the earlier diagramatic formulation, the disequilibrium situation just described would be represented as under:

![Diagram](image)

A shift in the demand accompanied by an attempt to curb the price-rise would result in a scarcity equal to $q_1 - q_2$ necessitating the gap to be filled up through imports, gifts or loans. If this is a temporary situation,
such a solution would be regarded ideal. If the situation is of a transitory character and is likely to last for a little longer period and if external supplies are likely to be inadequate, price controls with rationing would also be accepted as justifiable. But the situation that develops in the wake of development process is not temporary as during the war. Hence an enduring solution has to be sought. Through imports we may be able to increase the supply beyond equilibrium quantity of domestic production (gain being \( q_1 - q_2 \)) but this is done at a heavy cost to the community.

Two disadvantages of curbs on prices can be clearly seen. In the first place, if the prices are maintained at the initial equilibrium level i.e. below the new equilibrium level, the gain of the development may remain mostly with non-producing consumers especially those whose (labour) incomes increase. Secondly, the producers will not have enough incentive to increase production. In addition, producers’ risk bearing capacity will also be low which would discourage attempts of the community to introduce technological changes.

We thus reach an impasse: In order to thwart price inflation we curb the prices which have a tendency to rise under the pressure of demand and relative sluggishness of supply. By our very act we aggravate the situation by denying incentives to innovate and thus accentuating sluggishness of supply. In spite of the fact that the curb on prices is motivated by good intentions the results obtained are contrary. In these circumstances, as the time passes, other things remaining the same, the dependence on imports would tend to increase.

A Suggestion For Dual Price Policy

What is the way out? If the short run disequilibrium is inevitable, the way out would lie in dual or multiple pricing, i.e., higher price for the producer and lower price to the class of consumers to be protected against the price rise. Obviously, this would be a short run solution, no disequilibrium can be allowed to run over a long period without endangering severely the production efficiency of the economy. The principal merit of this short run solution of dual prices however is that it would expedite the long run solution of the problem of short supply. The following diagram brings out the essential elements:
In an extreme case we can assume that no imports are permitted. In such a case the producers' price \( (p_1) \) would be, much above the free market price \( (p_2) \), but the consumers' price \( (p_0) \) neglecting marketing costs would remain unchanged. The producers and consumers would have an advantage in this position. The subsidy costs equal to rectangle bounded by \( p_1, p_0, d, c \), of the programme to the community would be crushingly heavy. The vital question will be: from where shall the community meet this cost? If consequently the subsidy cost is to be raised through the taxation, then the net advantage to producers and consumers will depend on the difference in their respective price advantage and taxation. Though the direction of the solution is right the extreme position assumed here makes it unacceptable. The market solution of new equilibrium is equally unacceptable, as already indicated earlier.

Though arbitrary, an intermediate position has to worked out. In this position imports will have to be permitted on a restricted scale, a moderate price rise has to be allowed to producers and consumers
will have to be charged a moderate increase in their prices. The internal supplies will increase (by $q_1 - q_0$) and imports will be reduced—

$$\{ (q_1 - q_0) \} - (q_4 - q_3).$$

The price disparity will also be reduced from $(p_1 - p_0)$ to $(p_3 - p_4)$. The cost of subsidy will also be reduced from $$(p_1, p_0, d_1 c, )$$ to $$(p_3, p_4, e_1 f).$$

III

Operational Frame of the Dual Price Programme

Operationally precise scheme of dual prices for food-grains would require much more detailed consideration than that can be given in this paper. Only an outline with some guiding criteria can be considered here. Issues involved are several. Essentially a price to the farmer should be nearer the equilibrium point after taking into account the shift in the demand and the price to the consumer may be nearer the initial (pre-shift) equilibrium-point. Programme to import grain would lower the post-shift price of domestic grain. Hence we should have firm knowledge of projected demand and supply functions and a definite programme of imports to predict grain prices at farmer’s level with precision. The problem of predicting grain prices is further complicated by the fact that only a portion of grain produced is marketed. Not only we should know supply function of total product but also its relation with marketed quantities.

There is an additional problem of wide fluctuations in production from year to year resulting into acute shortage in one year and surplus supply in the next. Assuring farmer a steady price at incentive level despite these fluctuations would be considered a difficult task.

All these problems cannot be discussed in detail here. They would be alluded to while developing the framework of operational schemes below in order to bring out the implications of the scheme where necessary. Since projection of demand for and supply of grains is essential but well-nigh impossible it is assumed that there would be a flexible import policy and adequate buffer stocks to reduce undue risks of errors of projections. The buffer stocks should also take care of the year-to-year fluctuations in production. Subject to a flexi-
ble import policy and buffer-stocks we can envisage the broad details of dual price scheme. The primary merit of the schemes will be its operationally concrete shape which may involve partly a sacrifice of theoretical perfection. To begin with the scheme can be based on the immediate past experience regarding prices, production and demand. In this scheme the price line will be held in check at consumers’ level as of given date. At this level of prices there may be an excess demand in subsequent periods. This excess demand will consist of two parts: (i) increase in demand due to increase in population, and (ii) increase in demand due to increased expendable income.¹

Of the two parts of excess demand, it will be necessary to assure increased supply to match additions to demand due to population rise. This can be done by increasing imports in the initial stages. The remaining excess demand can be allowed to exert pressure on domestic supplies through price rise at the producers’ end. The difference in the prices at the farmer’s level and the initial equilibrium price at which grain is to be offered to consumers can be met from the subsidies to be paid by the Government. A more moderate version of this proposal may be to allow part of the price rise to be transmitted to consumer’s through pooled price of imported and local grain since this would impinge on additional income and not on ‘additional’ people to be maintained by the community.

The above scheme otherwise attractive may not be operationally very simple. The prices vary seasonally within a year. The above scheme does not take account of these inter-season price variations. The equilibrium point is moving all along the demand curve during the year as the supply moves in the market and subsequently gets absorbed through consumption or for building up of stocks from month to month. The entire spectrum of inter-season prices moves up or down from one year to the next. The movement is not necessarily parallel and hence inter-season price variations also change from one year to the next. Even if farmer gets market-price he is not sure of a particular level of the price, the element of uncertainty is therefore very large. For him the real need is that in the dynamic situation of rising pressure of

¹It is assumed at this stage that supply will remain unchanged, year to year fluctuations being taken care of by policy of buffer stock and flexible imports.
excess demand not only the prices to farmers should be above that assured to consumer but the farmers should have a dependable price expectation. To induce them to invest adequately in grain crops the inter-season variations may have to be narrowed or eliminated.

It would not be sufficient for the policy-makers to calculate the total need for foodgrains for the year for the whole country but they would be required to estimate market requirements in different regions during different parts of the year. When increase in population is taken care of through assured supplies from stocks or imports or both together and the increased income is to be allowed to exert its pressure on demand for food through price rise, the task of fixing price at the producer’s end may be also viewed as fixing the prices for harvest period and subsequent months till the next harvest. Instead for the Government it may be convenient to fix one price or a given range for the year. If the Government really wants to avoid unduly low prices during the harvest period compared to relatively high prices during off season and wants the benefit of the pressure of excess demand to be transmitted to the farmer’s end in large measure, it would be desirable that harvest period prices be fixed equal to or nearer the off-season prices. Thus in this extended scheme the market mechanism would be tagged on to the administered price in a special way. The upper limit of the price would be fixed for farmers in terms of off-season prices taking into account the market demand and supply. The harvest price offered by the Government being nearer or equal to the off season price it would provide an additional incentive by eliminating undue depression of prices at harvest. The consumers’ price will however continue to be totally an administered price. Since the Government will have adequate supplies of local and imported grains, maintaining administered price at the consumers’ level may not be very difficult. But to administer this price level the Government will be called upon to bear the subsidy cost.

In this extended scheme the subsidy would consist of two elements: (i) subsidy to match price rise caused by un-covered excess demand resulting from rising incomes only, and (ii) subsidy to match the price-spread between harvest period and off season. To what extent should community go in this direction will depend on availability of resour-
ces and organization. One may begin even with the second type of subsidy listed and arrange for imports in the beginning even to cover partly the excess demand arising from rising community’s income.

**Cost of Subsidy**

Any precise estimate of the cost of subsidy at this stage would be difficult to work out. There are several aspects about which decisions may have to be taken before cost of subsidy can be precisely worked out. For instance, whether, the Government should handle the entire marketable surplus or only a part of it? This decision will depend on whether the Government has a machinery to distribute grain for cities only or for rural areas as well. Further, price levels at a given point of time in a year for a particular crop may differ between surplus and deficit states by a margin much wider than the cost of transport and other allied costs. So also the consumption levels for foodgrain in any two regions may also vary by a wide margin. The incomes in two regions too may differ. In view of these differences in income, consumption and prices, in the first place the Government may have to work out food budget for each region separately from year to year. In working out the details of this budget the Government may have to decide whether differences in consumption levels are to be narrowed, maintained or allowed to be freely determined. It may be advisable to take full account of population increase and provide for it at the current level of consumptions for different regions initially. The size of the surplus available for transfer from one region to the other would depend on these decisions, subject to year to year fluctuations in output. The Government may like to transfer surplus grain from one region to the other at cost keeping in view the consumer prices in receiving regions, and if it does so it will thus reduce the burden of the cost of subsidy to the treasury.

In view of these complications, we can work out only an approximate cost of subsidy. For this we shall assume that only one-half of the marketable surplus at the most may have to be handled by the Government or the public agency. This would be a rough approximation of the division of the marketable surplus between city dwellers and non-producers in rural areas. If in cities upper income groups are not to be covered by rationing the distribution requirement would be still
less. This objective of isolating upper income groups from the rest can be indirectly (and only partially) attained if some high-priced fine varieties of grain are kept out from the subsidized distribution. There would be no fear of shift of resources from coarse to fine varieties of grains since at farmers’ level prices of the coarse grains would be maintained fairly high. If we concentrate on certain income groups in towns and cities, probably not more than 1/3 of the total marketable surplus will come to be handled by the Government.

The cost of subsidy to the Government might have amounted to as low as Rs. 122 crores or as high as 551 crores for the period 1958-59 to 1963-64 depending on different assumptions. If it is assumed that Government were required to handle one-half of the marketable surplus and to meet the entire cost of marketing i.e., the difference between the harvest price and retail price and that the consumer price will be held in check from 1958-59 to 1963-64 at 1958-59 level, the total amount of subsidy to be borne by the Government would have been about Rs. 551 crores. If the Government had decided to handle only 1/3 instead of 1/2 of the marketable surplus then the cost of the subsidy to the Government would have been Rs. 366 crores. If the Government had handled one-half of the marketable surplus but used the imported grains to meet the consumer demand at constant prices (implying that the foreign government would be willing to enter into agreement to supply grain at constant prices for a period of five years) then the cost of subsidy would have been Rs. 138 crores and if imported grains were distributed to consumers at the levels of prices received by farmers then the cost of the subsidy would have been reduced to Rs. 122 crores for 5 years from 1958-59 to 1963-64.1 This would include (i) rise in money prices during the 5 years (2) Cost of marketing and (3) addition to cost due to increase in marketed surplus.

1. (a) We should add that per capita availability of food grains remained more or less the same during 1958-59 to 1963-64. But in future more food may have to be made available to consumers.

(b) The basic data regarding production and marketable surplus to arrive at alternative estimates of subsidy costs are as under:
We may note that the market arrivals are much below the marketable surplus calculated by us. We may also observe that if the subsidy succeeds in providing incentive and results into increased production enabling Government to have sizeable holding of the stocks the cost of subsidy may decline in future. On the other hand we may also observe that smaller subsidy would mean reduced incentive to the farmer and hence lower response in production increase. A considered choice from alternatives of cost to the Government, relief to consumers and incentive to producers may be necessary which cannot be done on the basis of a rigid formula.

<table>
<thead>
<tr>
<th>Year</th>
<th>Basis</th>
<th>Value of production (Rs. crores)</th>
<th>Value of Marketable surplus (Rs. crores)</th>
<th>Marketable surplus as percentage of production</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959-60</td>
<td>1959-60 wholesale</td>
<td>2635.0</td>
<td>801.2</td>
<td>30.4</td>
</tr>
<tr>
<td></td>
<td>price</td>
<td></td>
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<td></td>
</tr>
<tr>
<td>1959-60</td>
<td>1959-60 retail</td>
<td></td>
<td>911.5</td>
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<td></td>
<td>price</td>
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<tr>
<td>1963-64</td>
<td>1963-64 wholesale</td>
<td>3271.3</td>
<td>996.0</td>
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<td></td>
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<tr>
<td>1963-64</td>
<td>1958-59 wholesale</td>
<td></td>
<td>884.3</td>
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<tr>
<td></td>
<td>prices</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Wholesale and retail prices are unweighted averages of prices reported for different centres.

The crops considered are all cereals excluding barley. Marketable surplus has been arrived at on the basis of aggregation of marketable surplus of individual crops.
III

PROBLEMS AND IMPLICATIONS

(a) Some related problems:

Three problems related to the dual price scheme as outlined above are examined below.

Inelasticity of food supply

The first problem would be of a theoretical nature. The entire subsidy plan depends, it may be argued, on the elasticity of supply of foodgrains. If the supply elasticity of foodgrains is very low or zero the subsidy might be a dead weight on the economy and a price rise through it may bring no increase in supply. In the first place elasticity of supply of individual crops or even a group of crops like major cereals is unlikely to be zero though it may be low. Secondly, the elasticity of market supply is likely to be greater than elasticity of total product and what matters for the purpose of grain distribution is the former.¹ Thirdly, if along with low elasticity of supply, elasticity of demand is also low, marginal increase in total supplies through expanded imports would relieve the pressure markedly and reduce the cost of subsidy particularly if imports are available at initial (pre increase) prices.

Impact on Inter-crop Price Parity

Another possible problem may be that high prices of grains through subsidy may disturb the inter-crop price parity. In a situation where scarcity is pervasive affecting all crops, it may be argued, incentive prices are required for all crops and not for a few selected ones. Hence a programme like dual prices for grains may result in


shift of resources from less favoured commercial crops to favoured foodgrains, particularly cereals, and thus accentuate the scarcities of the less favoured crops. To examine this observation, let us begin with the situation in which there is no subsidy programme and there is also no other programme to influence the food prices. In this situation, only the market forces influence the demand for and the supply of all crops. With population increasing and incomes rising, there would be pressures on supplies of all crops but the income-elasticities of demand being greater for non-food crops, shifts in demand for non-food crops will be relatively greater. Whether this will raise the prices of non-food crops relative to those of foodgrains will depend on the relative magnitudes of the price elasticities of supply and demand of food and non-food crops.

If for foodgrains income elasticity of demand is +0.6 and price elasticities of demand and supply are −0.1 and +1.1 respectively (hypothetically assumed) a given percentage increase in income may tend to bring about three times greater percentage increase in foodgrain prices. If for non-foodgrains income elasticity of demand is +1.2 and price elasticities of demand and supply are −1.2 and +0.8 respectively (hypothetically assumed) a given percentage increase in income may tend to bring about only half the percentage increase in their prices.¹ We have assumed population to be constant for simplicity of analysis. We have assumed all the elasticities i.e. income elasticity of demand and supply in case of non-food crops to be higher than that for foodgrains. But price elasticities for non-food crops have been assumed to be much higher than that for foodgrains while income elasticity for demand for non-food crops have been assumed to be higher by a smaller margin over the income elasticity of demand for foodgrains. We find that lower differential in income elasticities compared to the differential in the price elasticities between food and non-food crops tends to give relatively larger price rise for foodgrains relative to the price rise for non-food crops in response to a given rise in incomes. This observation based on our exercise is very relevant.

¹. The underlying model is very simple.
According to it we may find that a given rise in income may result in relatively greater increase in food prices. The dual price programme envisages to absorb to an extent the pressure of excess demand for foodgrains on the prices at producer’s end. It would not raise the prices of foodgrains out of proportion compared to those of non-food crops. It only prevents food prices being out of line with non-food prices.

Secondly, with subsidy programme we operate on prices primarily at consumer’s level (not all but only non-producing consumers). It may be argued that relatively lower prices of foodgrains for them may have secondary income effect on demand. This secondary income effect (in which case population is held constant) cannot push the non-food prices disproportionately high if income elasticities and price elasticities for them are in the same relationship with that for foodgrains as illustrated above.

A programme to peg food prices artificially at a given level both for producers and consumers, as might now be easily realised, would certainly push non-food prices to levels far above that of foodgrains resulting in shift in resources to non-foodgrains. This was the experience during the World War II period and the post-war period too. At one stage it necessitated a control on allocation of areas to different crops which met with a tame success.

Production subsidy Vs. Price Subsidy

One more objection to price subsidy under dual price policy may be that it would be a blanket help – a sort of an income rise–in contrast to a production subsidy which would be selective and would be linked directly to production thus giving greater assurance for production increases. In other words, instead of operating on the given supply curve the production subsidy would increase the supply elasticity itself and thus help check price rise.

There are two aspects of production subsidy. If entitlement to subsidy is tied to production achievement it would require an extensive supervisory machinery to ascertain production records of individual
producers. A laxity in such a machinery may result in an abuse of the subsidy. In a country like Britain whose geographic dimension is small and whose peasantry is also small in size such a scheme may succeed as it did during World War II.

Alternatively, production subsidy may be tied to the supply of specific inputs. Preference may be given to non-traditional inputs such as fertilizers and improved seeds. Their prices may be subsidized. In regard to such items of production for specific subsidy, some problems arise. The cost of manures and fertilizers and seeds together would range from 48 to 10 per cent of paid-out cost (i.e. cost A which includes rental payment). The median value would be 20 per cent. (Basis: Farm Management Studies 1953-57). This covered entire seed and manure costs. In recent period use of fertilizer has increased. Taking that into account and also accounting for the fact that at the cost only 1/3 to 1/2 of the area can be under improved seeds at a cost of time, the share of the cost of fertilizers and improved seed to paid-out costs could not exceed 20 to 25 p.c. Subsidy even to the extent of 1/3 to 1/2 of the price of fertilizer and seed may not reduce paid out cost to the farmer by more than 6 to 12 per cent. This might be equal to or somewhat less than the amount of subsidy that might be required under dual price system. What is more important is that these inputs are not specific to foodgrains. For instance, fertilizer can be used for both foodgrains and non-food crops. Hence it is unlikely that subsidized fertilizer may be used primarily for food crops especially if foodgrain prices are pegged and hence remunerative. What applies to subsidized fertilizer supply would apply to subsidized supply of irrigation water, cement, iron and even financial credit in general. Only exception would be improved seeds which are very specific in use.

The above observation does not imply that specific-production-subsidy has no merit and hence no role to play in inducing seed supply of crops. On the contrary if price subsidy and specific-production-item-subsidy are judiciously combined the result might be fuller and more encouraging. But specific-production-item-subsidy, itself, with foodgrains prices pegged to a fixed (or shifting but fostering) level, may achieve very little worthwhile.
Subsidy-Induced Scarcity

It may be argued that willingness of the Government to underwrite difference between prices to the consumer and to the producer may make ‘hoarding’ more attractive and if it assumes sizeable proportion then the purpose of the subsidy may be defeated. Government may be involved deeper and deeper in the subsidy price with costs to Government mounting without increase in production. This would be a great weakness of the scheme. The solution for this weakness would be administrative. For instance, Government may arm itself with a right of pre-emption i.e., right of the Government to take over stocks of traders if need be at the purchase price plus legitimate costs of storage, interest, etc. Probably this may not be necessary if Government enters the market fairly early in the season through appointed agents or through co-operative societies and pays a pre-determined price which is sufficiently remunerative. It will then have sufficient stock to meet the pressure of excess demand at the consumer’s end. It may be added that the particular weakness of the scheme would be common in varying degree to the alternatives too such as monopoly procurement or partial procurements.

Some Implications

Let us take a look at some of the implications of the dual price policy.

Price Rise To Producers

We have observed earlier that the off-season price may be paid to the farmer during the harvest period. The following data would suggest that the farmers unloading their crops during immediate post-harvest period will get around 10 to 14 per cent higher price under this programme.
A PROPOSAL FOR DUAL PRICE POLICY

TABLE – 3
TYPICAL SEASONAL INDEX NUMBERS OF PRICES

<table>
<thead>
<tr>
<th>Month</th>
<th>Rice</th>
<th>Jowar</th>
<th>Wheat</th>
</tr>
</thead>
<tbody>
<tr>
<td>October</td>
<td>103</td>
<td>101</td>
<td>101</td>
</tr>
<tr>
<td>November</td>
<td>100</td>
<td>101</td>
<td>101</td>
</tr>
<tr>
<td>December</td>
<td>95</td>
<td>100</td>
<td>102</td>
</tr>
<tr>
<td>January</td>
<td>94</td>
<td>98</td>
<td>106</td>
</tr>
<tr>
<td>February</td>
<td>94</td>
<td>96</td>
<td>106</td>
</tr>
<tr>
<td>March</td>
<td>95</td>
<td>96</td>
<td>102</td>
</tr>
<tr>
<td>April</td>
<td>98</td>
<td>98</td>
<td>97</td>
</tr>
<tr>
<td>May</td>
<td>100</td>
<td>99</td>
<td>95</td>
</tr>
<tr>
<td>June</td>
<td>102</td>
<td>102</td>
<td>95</td>
</tr>
<tr>
<td>July</td>
<td>105</td>
<td>105</td>
<td>97</td>
</tr>
<tr>
<td>August</td>
<td>107</td>
<td>103</td>
<td>100</td>
</tr>
<tr>
<td>September</td>
<td>106</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Percentage difference between minimum and maximum: 14.3, 9.5, 10.9


To whom the benefit will go? No clear answer is obtainable to this question. Of course, the marketable surplus would be small from the small farmers. According to one source, of the total marketed surplus about 1/4 is supplied by those cultivating less than 5 acres and another 1/5 is supplied by those cultivating 5 to 10 acres. Probably this being an All-India estimate aggregating paddy areas which have small average holdings with areas growing other crops might not be reflecting the correct situation of relatively small farmers in all regions.¹

¹ Distribution of Marketed surplus of Agricultural Produce by Size level of Holding in India 1950-51 – Dharam Narain, Occasional Papers No. 2, Institute of Economic Growth, Delhi.
The studies of individual regions or villages would suggest that very small farmers are net buyers and after a stage, an increase in the marketed surplus out of every increment to production more or less bears a fixed proportion. The level at which net purchases and the marketed surplus would be zero varied rather widely from one year to the next and from one region to the other. Avoiding some extreme positions, we can infer from these studies that those below zero-marketable-surplus-line would be predominantly farm labourers. Even after making an allowance for such sweeping generalization, it would be difficult to infer from these studies that substantial proportion of total marketed surplus would come from the small farmers.

The Agro-Economic Research Centres' data show that regarding wheat the percentage share of marketed surplus to total output might be relatively smaller for small and medium farmers compared to that for big farmers. In case of paddy such inference also was not evident.

It can however be shown that substantial portion of the total produce arriving on the market till recently was concentrated around harvesting period. If therefore those who sell during the immediate post-harvest period are either small farmers or economically otherwise weak, they may benefit relatively more from the policy of dual price or the policy of raising harvest prices to the off-season levels. To others, who are likely to be substantial farmers, high price may provide additional incentive. The following data of seasonal pattern of marketing are enlightening in this regard.

2. The Marketable Surplus Function for a Subsistence Crop:

3. Ibid. Ministry of Food and Agriculture, p. 57.
Table 4
SEASONAL PATTERN OF MARKET ARRIVALS

<table>
<thead>
<tr>
<th>Wheat Quarter ending</th>
<th>Per cent</th>
<th>Paddy Quarter ending</th>
<th>Per cent</th>
<th>Jowar Per cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960-61 June</td>
<td>48</td>
<td>December</td>
<td>25</td>
<td>19</td>
</tr>
<tr>
<td>1961-62</td>
<td>51</td>
<td></td>
<td>29</td>
<td>21</td>
</tr>
<tr>
<td>1960-61 September</td>
<td>15</td>
<td>March</td>
<td>34</td>
<td>41</td>
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<tr>
<td>1961-62</td>
<td>17</td>
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<td>34</td>
<td>35</td>
</tr>
<tr>
<td>1960-61 December</td>
<td>16</td>
<td>June</td>
<td>24</td>
<td>28</td>
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<tr>
<td>1961-62</td>
<td>16</td>
<td></td>
<td>23</td>
<td>32</td>
</tr>
<tr>
<td>1961-61 March</td>
<td>22</td>
<td>September</td>
<td>17</td>
<td>12</td>
</tr>
<tr>
<td>1961-62</td>
<td>15</td>
<td></td>
<td>15</td>
<td>12</td>
</tr>
</tbody>
</table>

Source: (Agricultural Price Policy in India—Ibid. Government of India)

As the table shows, in case of wheat nearly 50 per cent of the market arrivals are concentrated during the first quarter of post-harvest period, in case of paddy 50 per cent of arrivals are spread over two quarters.

Price-Cost Relationship

Is the level of food prices generally remunerative? In other words, is the price cost ratio favourable to producers? The available data on this aspect are about a decade old and defective. Besides separate prices for irrigated and unirrigated varieties are not available.

The available data do not give a clear trend whether the cost-price ratios were positively for small farms a decade ago. However, taking all size-groups together, we find that except for paddy in Madras and jowar in Maharashtra, prices compared unfavourably with average
costs per unit of output (marginal costs would in all probability be higher than the average costs) and in those cases we find more instances of smaller farmers facing relatively more adverse cost-price ratio.

According to a recent report on West Bengal the cost of production per maund of paddy varied within a very wide range, for Aus paddy it varied from Rs. 7 to over Rs. 40, for Aman paddy it varied from Rs. 7 to Rs. 27. Under these circumstances of cost varying by a margin of 200 to 500 per cent, it is impossible to cover all high-cost producers by any one programme. In fact those who would be left out would in all probability be incorrigible, and beyond the reach of price incentives. But if paddy price is raised say by 15 per cent or so of the total producers about 50 per cent to 80 per cent will be covered. They would be then able to cover their costs. This would be a substantial gain.

Conclusion

The proposal of dual price made in the paper arises out of market disequilibrium of demand for and supply of foodgrains especially in developing economies. It involves a cost of subsidy to the Government. Compared however to the advantages of the programme, the cost may not be considered heavy. Its principal merit however is that it is expected to induce rapid shifts in supply which in the ultimate would correct the disequilibrium. Thus the cost of the proposal may decline with time. Further, it does not involve additional administrative machinery.
