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RICE PRICE POLICY

by

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Over the past 20 years the Government, through NARIC and RCA, has been actively engaged in programs to support a floor and control a ceiling price for palay and rice. Under the most recent law, RA 4643 (1966), rice producers are guaranteed a floor price of not less than ₱16 per cavan of palay and consumers a price ceiling not greater than ₱1.40 per ganta of rice, but prices have become unrealistic since the imposition of the floating exchange rate in 1970.

The rice price spiral that followed in 1970/71 is only the most recent evidence of the continuing desirability for implementing the price stabilization function by an appropriate agency of the Government. Other economic reasons include: 1) the large annual price fluctuations, far exceeding holding costs, that have occurred frequently at both farm and retail levels, 2) the evidence of several persistent inter-regional disequilibria in excess of transport costs, and 3) emphasis placed by rice millers on trading profits at the expense of efficient management of processing activities.[1/]

1/ For empirical evidence on these points, see Leon A. Mears and Teresa L. Anden, "Rice Prices and Rice Price Policy," U.P. School of Economics Discussion Paper No. 71-19 (September 7, 1971).

Further, there is overwhelming evidence that existing legal guidelines have lacked sufficient flexibility to permit effective implementation under continually changing conditions. They also have not sufficiently delineated general policy objectives to guide administrators toward synchronization with other development objectives and corrective action where market performance is inefficient.

1. Elements of a rice price policy. In its simplest effective form, rice price policy must satisfy the following Government objectives: 1) provide a price stability of this basic staple in line with the needs of uninterrupted development, 2) support a floor price that will appropriately stimulate production, 3) control a ceiling price that will assure rice at reasonable prices for consumers, 4) permit a seasonal range between these two prices to cover costs of holding stocks between harvests (including a premium for risk), 5) provide suitable relationships with other domestic and world prices, and 6) minimize Government implementation costs taking into account the social and other Government objectives.

In terms of marketing efficiency these policies imply: 1) seasonal price increases commensurate with holding

costs, 2) inter-market price differentials commensurate with transport costs, 3) processing costs commensurate with those possible with effective management, 4) a marketing system conducive to the introduction of cost reducing technology, and 5) domestic/world price relationships commensurate with the degree of self-sufficiency and the consequent export or import imperatives.

To satisfy these criteria will require strict financial and managerial discipline. However, similar policy objectives have been successfully implemented in other countries in Asia where the development was less advanced than in the Philippines.[2/] The only precaution would be to ensure that the specifics of the policy were realistic to the Philippine stiuation. They should take into consideration constraints relating to transportation, weather, processing, storage, cultural characteristics and organizational and financial capacities. These are discussed along with suggested procedures for determining relative prices within the policy guidelines.

[2/] For details see International Rice Research Institute, Viewpoints on Rice Policy in Asia, Los Baños, Laguna (August 1971). Particular attention is called to Saleh Afiff and C. Peter Timmer, "Rice Policy in Indonesia," and Jin Hwan Park, "Food Consumption and Rice Production in Korea."

2. Determination of price levels. Price determination can appropriately begin with the establishment of a floor price at RCA receiving bodegas that will bring forth desired production response.[3/] Determination of this price level should take into account the effects on hectarage planted in rice (and on yield) and on the use of modern yield increasing inputs, of a change in the palay price relative to other prices. Studies of the price elasticity of hectarage by Mangahas provide guidelines of hectarage and resulting yield changes but subjective evaluation must be relied upon to judge effect of expected palay price on

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[3/] John Mellor has disagreed with this approach, stating that "costs of production should not be an explicit basis for determining the support level partly because the context assumed is one of improving technology and hence declining costs. The basic incentive for expanding production is provided by declining unit costs and not by rising prices," see "The Agricultural Marketing System and Price Stabilization Policies," mimeographed paper presented at First Asian Conference on Agricultural Credit and Cooperatives, No. ACACC/CP/5/1, Manila, Philippines (December 7, 1970), p. 10. Mellor appears to assume self-sufficiency (and an apparently rigid import/export policy) and then to allow equilibrium to take place by market price fluctuations as crop size varies with the weather or insect attacks. This might provide a more stable income for producers under varying crop conditions but its opposite effect on the consumer is unacceptable to the authors. Further, under Philippine conditions in 1971, foreign exchange constraints dictate a strategy for reaching self-sufficiency by stimulating production through rising prices as well as declining unit costs.

increased input use.[4]

With the price structure of palay relative to other goods that existed in the late 1960's, together with credit provision and other support to farmers through the rice intensification program of the Rice and Corn Production Coordinating Council (RCPCC),[5] increased input use was induced with resulting increased yields. Total output appears to have been close to the self-sufficiency level in 1970.[6] So, a floor price at harvest that would at least maintain for the 1971/72 harvest the late 1960 terms of trade for the farmer would appear to be an appropriate first approximation. A first approximation for such a floor price for the Central

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[4] Mahar Mangahas, et al, Production and Market Relationships for Rice and Corn in the Philippines, The International Rice Research Institute, Technical Bulletin No. 9, Los Baños, Laguna (1969), pp. 102-ff.

[5] RCPCC activities are presently undertaken by the National Food and Agricultural Council (NFAC).

[6] The need to import again in 1971 might seem to contradict this self-sufficiency conclusion. However, with the heavy typhoon damage of the 1971 crop, the low production could be a reflection only of a negative deviation from a self-sufficiency trend.

Luzon region would approximate ₱21.50/cavan of palay ordinario.[7/] This price should be announced several months ahead of each major planting season and maintained through the related harvest if it is to have the desired effect.

Time should be approaching when the guaranteed floor price can be reduced relative to other goods. Profitability of modern technology with improved seed is widely recognized in the Philippines. At 1971 fertilizer prices and a palay price of ₱21.50/cavan, expected incremental benefit cost ratios are in the order of 3 to 1 for incremental fertilizer application of up to 90 kg. nitrogen/ha.

7/ This assumes a 33.5 percent inflation of the Consumer Price Index excluding rice between period immediately preceding the February 1970 devaluation and harvest season 1970/71. If inflation persists, further adjustment would be required in floor and ceiling price levels. This price might appear to be biased on the low side for the 1971/72 harvest considering the possibility that farmers would tend to substitute corn for rice after the relatively high corn prices in 1971. In the longer run, any existing bias would tend to disappear as corn/rice relative prices returned to historical relationships. In the short-run, any existing bias would appear to have been more than offset by selection of the ₱21.50 floor price. This price is 33.5 percent above the legal floor price of ₱16.00/cavan. However, RCA purchases between 1967 and 1969 were sufficient only to maintain a floor price in Central Luzon of approximately 4.5 percent below ₱16.00. Thus, the suggested new floor price of ₱21.50 is in fact approximately 40 percent above the floor price realized from 1967 to 1969.

(compared to no fertilizer use). Such ratios far exceed those necessary to attract and hold farmers with assured water supply to high-yielding seed and the modern inputs required.[8/] When the self-sufficiency objective is realized, the higher income generated by this technology can be transferred to other investment to the extent the floor price can be lowered and still induce production at a level to balance demand at the related ceiling price. To continue unnecessarily high price supports would tend to discourage spread of modernization to a diversified agriculture. It also would perpetuate -- without reason -- the regressive income effects arising with the affluent farmer being more apt to have the irrigation which provides greater probability of realizing larger benefits from the new technology.

Given the historical average marketing margin in the Central Luzon/Manila market between 1958 and 1969 of

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[8/] Criticism has been raised by J. C. Alix that the ₱16/cavan support did not provide sufficient inducement to the rational farmer to increase rice production, given his production cost per cavan of high yielding varieties in 1970 of ₱13.50 (the level of inputs to which this production cost applied was not specified), see Agricultural Economics, Statistics and Market News Digest, Vol. V, No. 16, Bureau of Agricultural Economics, DANR (September 29, 1971), pp. 1-2. In contrast, the authors of this paper hypothesize that the increased use of modern inputs by rice producers is a function of the relevant incremental benefit/cost ratio resulting from the use of those inputs and not primarily of the relevant before and after total production costs.

approximately 25 percent from farm to retail, this floor price would lead to a retail price in Manila at harvest time of ₱2.08/ganta of Macan 2nd class rice.[9/] The retail price later in the year must be sufficiently higher than the harvest-time price to allow for costs and risk of holding (for 4 to 5 months). This would require a 10 percent rise or a ceiling price before harvest of approximately ₱2.30/ganta.[10/] It is important that this range allow for full storage costs as otherwise Government operation will have to displace private storage, with responsibilities and financing that the Government is probably not desirous of assuming.

9/ Analysis of marketing margins upon which this average was based is described in a paper to be published by the authors in early 1972 as a Discussion Paper of the U.P. School of Economics, Diliman, Q. C.

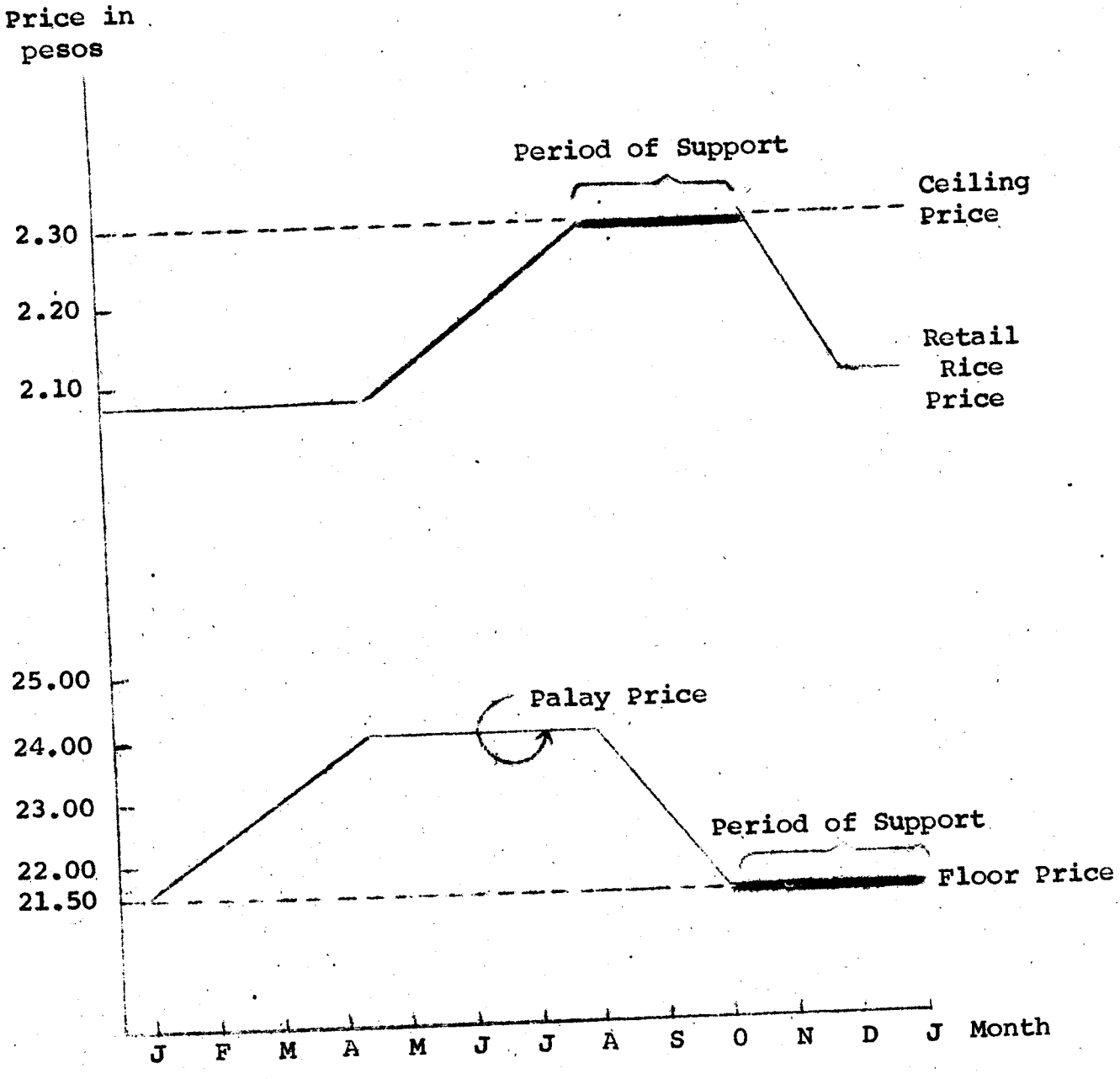
10/ This price rise allowance of 10 percent is 2 percent greater than the average seasonal swing of the seasonal index for the Manila market and provides a risk premium above holding costs. This allowance is low compared to the 20 percent range in effect in both Indonesia and Korea in 1971. But in both these countries the interest rate structure were approximately double that in the Philippines. For basis of estimation of Philippine holding costs and for details on average seasonal price swings, see article by the authors, "Who Benefits from the Post-Harvest Rice Price Rise," to be published in the January 1972 issue of the Philippine Review of Business and Economics, U.P. College of Business Administration and School of Economics publication. For a discussion of the Korean policy, see Jin Hwan Park, op. cit.

As production nears self-sufficiency in the Philippines, this retail price seasonal range should include the world price to enable importation or exportation as may be required with greatest overall advantage. The center of the range indicated above would correspond to an FOB Manila price of approximately US $145/ton on ordinary quality rice, 35 percent broken. This is almost double the 1971 export price for equivalent quality from either Thailand or Burma. The suggested price level therefore would prove profitable only for imports but would require a heavy subsidy for exports. This potential profit from imports explains why continued isolation of the domestic from the world market is necessary; unprogrammed imports by the private sector could interfere seriously with floor price maintenance. Uncertainty both as to production response and world price levels gives emphasis to the need for flexibility in legal price policy directives.

The seasonal pattern of retail rice and farm palay prices that might be expected in the Central Luzon/Manila region when maintaining the above floor and ceiling price limits is illustrated in Chart 1. The agency administering this policy for the Government would be expected to <u>purchase at the floor price all quantities of palay offered at that price by the farmers</u> and to <u>inject rice in markets of major</u>

CHART 1

Expected Seasonal Pattern (➡) of Rice and Palay Prices under Price Policy in Manila Area (Ordinary Quality)



Source: Basic Price Data: Farm prices, DANR, Bureau of Agricultural Economics; Rice prices, Bureau of Commerce, Manila.

urban areas as required to keep the retail price below the ceiling.[11]

3. Spatial price dimensions. The retail ceiling price level at major rice marketing and population centers outside Manila should correspond closely to the Manila ceiling if equilibrium is to be established through the market by private traders and speculators. Inter-market price ceiling differentials should not exceed transport costs. Deficit regions are an example where ceiling price might exceed that in Manila but within transport cost limits.[12]

Small regional differences will appear seasonally reflecting varying harvest patterns. This does not require differences in control prices interregionally. It means seasonal support and injection periods will tend to differ,

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[11] RA 4643 limits support purchases from farmers and tenants with production in excess of 100 cavans, a prescription that was administratively difficult to implement. In fact, RCA followed a policy of purchasing all production in excess of 100 cavans at the ₱16/cavan floor price to insure that support price was effective in helping to stimulate increased use of improved seed and modern inputs, see RCA Progress Report on Palay Procurement Program (Nov. 21, 1967), mimeographed, p. 2. To prevent pshychological barriers to production for fear that all production would not be saleable at the floor price (or above), future price policy would insure greater effectiveness if the price support was unqualified.

[12] In other developing countries, it is rare to provide such regional differentials because of the complications added to implementations.

a consideration sometimes forgotten by head office administrators who are often caught by surprise when price fluctuates in regional centers.

4. Varietal standards. Two questions arise relative to rice varieties. Should different floor and ceiling prices be specified for key varieties or, if only one set of floor and ceiling prices is used, to what variety should it apply?

Historical experience has demonstrated that commonly consumed varieties maintain price differentials that change but little over time.[13/] Thus, it can be expected that maintenance of floor and ceiling prices for one popular variety will set the relative price pattern of other varieties.

Selection of the standard variety depends on price policy objectives and market considerations. Considering the usual objective of assuring a reasonable price for the poorer consumer, most countries have chosen to support the floor price of an inexpensive common variety of palay. This

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13/ For analysis and discussion, see Mears and Anden, "Rice Prices and Rice Price Policy," op. cit. pp. 46-48.

tends to minimize subsidy requirements for stocks purchased at support levels and injected at the ceiling price. In the Philippines, this would mean a floor price for palay ordinario, a category which will include different varieties from region to region and over time, especially considering the rapid adoption taking place of new high yielding varieties. The ceiling price then must apply to common inexpensive varieties, with a 2nd class milling that permits larger conversion (and thus lower price) from the palay ordinario.[14/]

5. The buffer stock. The price policy described above requires a buffer stock carefully spread out around the country to enable expeditious market injections for ceiling price maintenance. Such stocks are replenished by rice imports when floor price support does not warrant palay purchases of the total required for the next season's buffer. Optimally, the size of the buffer stock will vary seasonally, injections reducing stocks to a minimum prior to harvest, with a maximum some months after harvest.

14/ Some countries in Asia have attempted supporting improved qualities as well as the cheaper ones. Given political and social realities in developing countries, such a policy has invariably increased stabilization costs. Government buying depots tend to classify most receipts at the higher price level, but political pressure requires that all stocks be sold at the ceiling price of the common v- To support only a higher quality variety leads t pitfalls.

Subsidies to RCA can prove a heavy drain on Government revenues to extent ceiling prices are set too low for recovery of storage and financing costs. Since these costs will vary depending on the degree of stability provided, serious consideration need be given to this decision. The buffer stock required to maintain a given ceiling price depends on the amount that annual production deviates from trend, with provision for additional stocks to allow for transport constraints and variable stock dispersion requirements. One standard deviation from the production trend approximates 90,000 tons of rice. In other words, with an allowance of a 10 percent increase for stock dispersion, it would be expected that a minimum buffer of about 100,000 tons of rice (3.4 million cavans palay) would prove adequate to offset below-trend production and support the ceiling price in two-thirds of the years. A buffer of 200,000 tons of rice (6.8 million cavans palay) would be expected to be adequate 95 percent of the time. This second alternative is the balance of risk against costs frequently chosen in other Asian countries. At mid-1971 prices, it represents an investment in palay of ₱150 million with holding costs over a normal year of approximately ₱15 million.

Management of buffer stocks would then anticipate a decline in stocks before harvest one year in twenty to as low as 20,000 tons. Handling of imports and exports would depend on crop reports early in the year. With poor crops and small buffer carryover, imports need be planned for arrival by mid-year. When forecasts indicate bumper crops, surplus for export may be predicted soon after harvest. Whether to hold large surpluses or export depends on relative costs. If exports are resorted to soon after harvest, with adverse weather or disease reducing later harvest, sufficient time remains to arrange for imports which may bring foreign exchange gain if low quality rice is imported to replace higher quality exported earlier.

6. Implementation and cost considerations. The above recognizes that RCA cannot in a normal year cover costs of holding its base buffer stock, although the subsidy involved can be reduced by careful stock management.[15/] It also is unlikely that the 10 percent seasonal support spread will be sufficient to cover their costs on domestic

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15/ A theoretical study by Shlomo Reutlinger suggests that budgetary costs might be reduced and social benefits increased by maintaining a smaller domestic buffer stock supplemented by more frequent imports and exports. See "A Simulation Model for Evaluating Buffer Stock Programs," in Symposium on Food Grain Marketing in Asia, Asian Productivity Organization, APO Project SYP/VI/70, Tokyo, Japan (December 1970), pp. 115-122. Such a plan would require exacting stock management and should be studied carefully under Philippine conditions before considering adoption.

palay bought and sold.

The subsidy necessary to cover these costs could be partially offset by widening the seasonal price spread through raising the ceiling price. While this would conserve Government revenues and benefit the taxpayer, the rice consumer would tend to suffer through higher prices, with the middlemen sharing in the benefits. It is unlikely that much of any benefit would be passed on to the producer. For each 100,000 tons sold by Government at a 5 percent higher ceiling price, budget savings would approximate ₱4 million. The effect on the Consumer Price Index would be an increase of less than one-half of one percent.

Finally, there are details of policy implementation critical to success. As can be seen, the decisions to buy palay or inject rice are determined by market price alone. During critical seasons, management requires daily price quotations of controlled varieties, more specific than quotations currently being supplied by the Bureau of Agricultural Economics (BAE). Decentralized authority for purchase and injection can reduce time lag in taking action. And, management must anticipate requirements for dispersion of credit facilities in advance of harvest. For appropriate

dispersal of buffer stocks, management must have frequent stock reports. Inter-regional shipments will be required at times. Also, firm arrangements must be made for milling palay so that rice will be available when needed. As there are limits to the time that rice or palay stocks can be held without excessive deterioration, arrangements are required for economically replacing old with new stocks when necessary.

The stabilization organization and its methods of arranging finance are of prime importance to the success of the price policy suggested above. These will be discussed in detail in a subsequent article by the authors.[16/]

16/ To be published initially in early 1972 as a Discussion Paper of the U.P. School of Economics, Diliman, Q.C.