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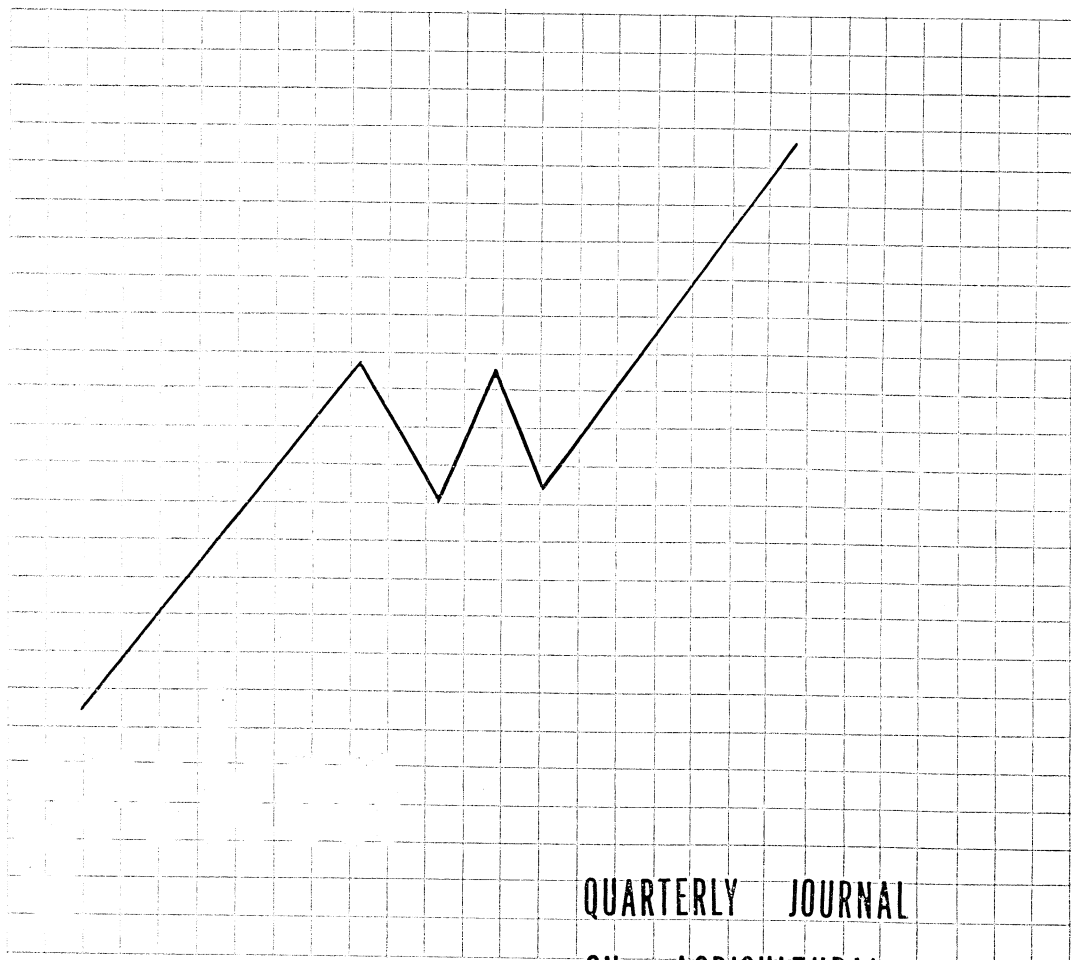
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Vol. 1, No. 4
October 1962



PRICE 20c



QUARTERLY JOURNAL
ON AGRICULTURAL
ECONOMICS

Issued by the Department of Agricultural Economics and Marketing, Pretoria

Agrekon

REQUIREMENTS FOR CONTRIBUTIONS

Editorial committee: Dr. C. van der Merwe (chairman), A.J. du Plessis (vice-chairman), Dr. F.R. Tomlinson, Dr. A.P. Scholtz
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Deserving articles in the field of agricultural economics, for publication in this journal, will be welcomed.

These articles should have a maximum length of 10 folio pages (including tables, graphs, etc.), typed in double spacing. All contributions should be submitted in triplicate (preferably in both languages) to the editors, c.o. Department of Agricultural Economics and Marketing, Pretoria, and should be received by the editors at least one month prior to publication date.

The journal is being distributed by and is obtainable from the distributors: "Agrekon", Private Bag 144, Pretoria.

(The price is 20 cents per copy or 80 cents per annum, post free.)

Dates of issue, on a quarterly basis, are the following: January, April, July and October.

"Agrekon" is also published in Afrikaans.

Problems of Surplus Production in a Developed Agriculture

by F. Popping, Department of Agricultural Economics and Marketing

Introduction

When production of agricultural commodities exceeds consumption, stocks will build up. Stocks of slightly perishable products and those of perishable products in a processed form can be held for some time. This is common commercial practice which takes into account, among other things, the seasonal character of agricultural production. Storage can, however, only be affected for a relatively short period because it involves high direct costs, while the quality of stored products deteriorates in most cases.

When producers are willing or have to accept free market prices, all stocks can usually be cleared in time. When, on the other hand, the prices asked are, in principle, based on pre-determined producers' prices, it may occur that stocks cannot be sold within a reasonable period. Such stocks are called surpluses.

In the past few years substantial surpluses have accumulated in countries with a highly-developed agriculture.

The price as regulator

When production exceeds consumption in a competitive market, a drop in price will normally restore equilibrium. A lower price discourages production and stimulates sales.

In the case of agriculture, however, the free market price is not considered to be an efficient regulator, for the following reasons:-

From year to year the volume of production is also influenced by biological and weather conditions.

Agricultural production reacts slowly to a change in prices, and in particular to a fall in prices.

The price elasticity of demand for many agricultural products is usually low.

In countries with a developed agriculture, where production tends to exceed demand, a danger therefore exists for an appreciable drop in prices, even when the equilibrium is only slightly disturbed.

The fact that farmers find it difficult to curtail production at will, apart from biological and weather conditions, can be explained as follows: When the prices of their traditional products decline most farmers cannot switch swiftly to alternative production lines. Agriculture embodies a specialised and time-consuming production process; and in the short run farmers will continue to produce the products for which their farms are organised - in order to earn some income even though it may be less. Furthermore, most farmers are not sufficiently aware of costs; a good many farmers who keep on producing at the lower price level, will do so at a loss. By using up capital, incurring debts and saving on personal expenditure they can, however, stay in production for some time.

The price elasticity of demand for agricultural commodities is generally lower for field crops (grains) than for livestock products (meat, butter); it further depends on the income distribution of the population.

Protection of income

Generally it can be stated that, when the adjustment of production to consumption is exclusively left to the price mechanism, a small and often unavoidable over-production may lead to a dislocation of the agricultural industry, and thus undeserved hardship for the farmers.

A crisis in agriculture will also detrimentally affect other sectors of a country's economy. It has thus become a common principle of agricultural policy to give the agricultural industry and the farmer some kind of protection against an unbridled drop in prices.

By marketing control, which often includes annual price guarantees to farmers, it is possible to ensure that producers' prices decline only gradually. When the declining trend continues, the security of the farming population is nevertheless jeopardised. Any Government will, of course, try to prevent that the income of the farming population falls below a reasonable level. In a period of declining prices, the income aspect of any price policy therefore assumes greater importance. Mutual price relationships can, however, still be used to effect adjustments in the pattern of production.

For the purpose of its price guarantees, the Government may fix producers' prices in respect of a number of key products on some basis which is considered fair. The average cost of production is often taken as a starting point in the calculation of such prices.

Expansion of production

In order to assure the great majority of farmers, including many small farmers and producers who with little capital of their own produce at high cost, of a reasonable living, producers' prices, as a rule, must be fixed at a level which is higher than the equilibrium price (at which total production equals actual consumption). Consequently there is always present in agriculture, as a whole, a stimulus to expand production.

At the relatively stable prices, the individual farmer far too often detects an unlimited demand for his products, and in most cases he will do everything in his power to satisfy this "unlimited" demand.

In modern agriculture appreciable scope exists for expansion:

By making use of technological progress (better seed, livestock and implements) and mechanisation (economy of scale) every farmer is in a position to produce more units of a product with the same effort and often at lower unit cost.

All farmers who work at reasonably low marginal costs will be tempted to expand production still further by intensification. This means that they use larger quantities of productive agents such as seed, fertilisers, insecticides, feed and labour per acre or per animal - until they reach the point where marginal income equals marginal costs.

Farmers who have sufficient land are, of course, in a very favourable position in these respects. Marginal land is brought into production even outside the traditional production areas.

The growth of surpluses

In the case of actual consumption a spectacular increase is not likely to happen. Everybody can eat only a limited quantity; furthermore, the purchasing power of most people is limited and, taken as a whole, increases only gradually. As a rule, total consumption of agricultural products does not increase much faster than the population growth. However, as real income per head of the population increases, e.g. as a result of industrialisation, a relative increase in the per capita consumption of livestock products can be expected.

Under these circumstances it is not surprising when, over a period of years, consumption fails to keep pace with increasing production. This gives rise to the surplus problem; a problem which has mainly two issues, namely, how to dispose of existing surpluses and how to prevent the start of fresh surpluses.

Surplus disposal

As a rule, surpluses get into the hands of public or semi-public institutions, which assume further responsibility and try to sell the goods to the local population and or abroad.

At the desired price level the domestic market is, of course, already saturated and surpluses of a product cannot simply be sold on the same market at lower prices. Surpluses that have already deteriorated in quality can, of course, be offered at special prices. Other possibilities for increasing domestic consumption include school-feeding programmes and the issue of food stamps to less privileged people, such as the aged and the unemployed. Still, the disposal of surpluses in the country of origin is always fraught with administrative difficulties.

Perforce it may also be decided to reduce the domestic consumers price (market price) with a view to increasing local sales.

Preferably an outlet for surpluses is sought abroad. Unfortunately, world market prices are depressed because all institutions which handle surpluses are prepared to accept low prices. Furthermore, caution must be exercised because other countries, which try to sell similar products on a commercial basis, take a serious view of dumping on their traditional export markets. Simultaneously, therefore, new markets must be explored. The underdeveloped countries are a potential market for agricultural surpluses (food) but they usually lack the foreign exchange to buy them. Based on long-term economic and political considerations, surpluses are nevertheless exported on special terms to underdeveloped countries under slogans such as "food for peace" or "food for development". Exporting countries which cannot afford such special terms will try to sell their agricultural surpluses on regular commercial terms on the world market, but, as indicated above, the position on the traditional markets is at present not exactly inviting.

When the institutions referred to are unable to dispose of the surpluses, these can possibly still be utilised in some different way, e.g. for industrial purposes - otherwise they have to be destroyed.

Losses

When the net realisation on surpluses turns out to be lower than the prices based on producers' prices, the difference is usually called "losses". The larger the losses suffered in connection with the disposal of surpluses at home and abroad, the more difficult it becomes to try to keep producers' prices at the desired level.

When the State is saddled with the increasing losses by way of subsidies, mounting pressure will be exerted in order to obtain a contribution from the producers. When such losses are financed by means of levies on producers' prices, this will amount to a decrease in effective producers' prices.

Losses on the disposal of agricultural products must therefore, be kept within certain limits otherwise unbearable pressure will be exerted on producers' prices.

Reducing consumers' prices

When the efforts to dispose of agricultural surpluses do not yield satisfactory results, a Government may endeavour to stimulate domestic consumption of certain products, with a higher price elasticity of demand, by a reduction in consumers' prices. The main question, however, is who must pay for this. The State could pay a subsidy to the full extent of the price reduction, but this may be costly without offering a satisfactory solution. After the initial increase in consumption, following a reduction of the price, the rate of increase will slow down. In the meantime the production of surpluses may continue unabated at remunerative prices.

The State is, therefore, usually prepared to subsidise only part of the reduction of the consumer's price. The balance must come out of the producer's pocket; in other words, the producers' price is reduced.

Constant producers' prices with restrictions on production

Producers' prices, once they are fixed, are of great social and economic significance to certain small farmers and to farmers who, with little capital of their own, produce at high cost. In normal years their incomes are just sufficient to cover their needs. These marginal producers, which include a large number of farmers, are seriously affected by every reduction of the producers' price. Unfortunately it is often beginners who find themselves in this predicament, and amongst them there may be very able farmers. Those farmers who get into difficulties as a result of a reduction of the producers' price will in many instances look to the State for assistance, and it may involve much time and money to assist all deserving cases.

Because a decrease in the producers' prices will not necessarily bring about the required adjustment in agricultural production, further price declines must follow. It may, therefore, appear preferable to maintain producers' prices at constant levels for the time being and to take direct steps to restrict physical production.

Consequently, Governments have been seeking satisfactory methods for keeping agricultural production in check.

Restrictions on acreage, whereby farmers are allowed to plant only a restricted acreage under certain products, are not effective, because most farmers are able to expand their production per acre by making use of intensive methods. A variant on acreage allocations, which at present can only be applied in the U.S.A., intends to persuade farmers to plant less than their acreage allocations. As a compensation for the area taken out of production, participants then receive payments in the form of existing surpluses or the equivalent thereof in cash.

It appears, however, preferable to endeavour to restrict production of the most "unprofitable" commodities by means of a quota system. In the case of production quota farmers (or specific farms) are not allowed to produce more than their quotas. Marketing quotas can also be instituted. Production beyond the quota allocations is either confiscated or is excluded from price support.

By devising efficient methods of production control the evil of chronic surplus production can, of course, be eliminated, thereby relieving the pressure on the desired producers' prices. It must, however, be realised that every effort to restrict production brings in its wake far-reaching legislative measures and many administrative difficulties. Also by virtue of economic considerations serious objections can be raised against the restriction of output. Restriction of production, coupled with support prices, will result in rigidity of land use and an unwarranted rise in land values. Established producers will initially benefit. Prospective farmers are precluded from entering the enterprise concerned, or they have to pay the higher land prices. Such farming enterprises will incur a high cost structure and a static character. In a

changing world, where adaptability and efficiency are the prerequisites for survival, it is, of course, in the farmers' interest that agriculture should retain its dynamic character.

Summary and conclusion

Stated briefly, it can be said that agriculture is in a socio-economic tangle as a result of the inequality in the net incomes of individual producers and the substantial production potential of the agricultural industry as a whole.

Endeavours to support the income of the large majority of farmers by means of controlled producers' prices, for unlimited quantities, are bound to end in failure. The result of such a policy is surplus production, big losses in the disposal of surpluses and ever lower net payments per unit to producers. The important social aspect of the price policy is then seriously affected.

When, as a result of surplus production and sustained losses, the stability of producers' prices is in danger, the only way out is to check a further expansion of production by means of a quota system. In this manner producers' prices can again be brought under control.

In order to restrict the disadvantages of a quota system (rigidity of land use, high cost structure), the restrictive measures should only be of a temporary nature. There should be the prospect of a gradual decrease of the real producers' price. In practice it may suffice to keep the nominal producers' price constant over a period of years, while inflation and rising costs reduce the real net income. In course of time small farmers, and farmers who with little capital of their own produce at high cost, will turn to other sources of income. The other quota holders will, even at the lower real price levels initially continue to produce the products concerned. The production thereof will of course, gradually become less and less attractive. After a lapse of time a level of production will automatically be reached - at some lower real price level where it will be possible to do away with the quota system.

Those farmers who do not have sufficient alternatives, and who are unable to stay in production at the lower real prices could be given an opportunity to apply to the State for assistance. In some cases they could be assisted by means of technical and economic extension services and temporary financial aid. In other cases, e.g. where the farming units are too small, such assistance will be fruitless. The State could, however, fulfil its social obligations towards these producers by assisting them to find employment outside agriculture.