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ECONOMICAL AND FOREIGN TRADE PROBLEMS OF THE  
HUNGARIAN FOOD PRODUCTION

BUDAPEST

1986

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## PREFACE

This volume of our series of bulletins is numbered 64 and considering the subject matters contained it will be stated that here the economic problems of the more important production branches of agriculture are discussed. Competitiveness and market orientation are also important aspects in view of the investigation.

Considering the tendency and the source of the articles it must be said that these articles are new ones published in this year in the professional review "Gazdálkodás" (Farming) and "Közgazdasági Szemle" (Economic Review). The first article is the text of the lecture given by Gyula Varga at the University of Veterinarian Sciences and Appendix at the end gives an information about the thirty years of activity of publication done by "Gazdálkodás", the scientific review of Hungarian agriculture dealing with farm management and agricultural economics.

It must be noted that the bulletins published in English and Russian have discussed also in the past the subject matters of sectoral agricultural economics and according to our experiences and opinions also the readers in the foreign countries have been found to be interested in them, either due to the fact that there were foreign connections discussed or because they provided information on the conditions pertaining to production of foodstuffs. See in this respect e.g. bulletins No. 37, 46, 55, 56, 61.

The present issue of Bulletin 64 discusses not only the development and the problems but it offers also opportunities of comparison when it deals with analysis of producing maize, wheat and fruit, of producing beef, poultry meat and pork and of the production systems considering the tasks of the present and the results in 1985.

The examination of the main agricultural production branches will in a complex way reveal not only the group of problems concerning the system of necessities prevailing in the foreign markets and concerning the competitiveness, but it also deals with the necessity for close connection between the large-scale and small-scale production and for their affecting each other mutually.

Budapest, June 1986

The Editor

Prospective effects of the regulative system on  
producing wheat and maize

by

Éva BORSZÉKI

The role of producing cereal crops is decisive in the food economy. Its development will be supported by the fact that its comparative advantage in the export is considerable and further that this secure the basis of supplying grain fodder.

The two main crops are wheat and maize produced on 53 per cent of the arable land in Hungary and their share in the gross production value of the agriculture is equal to 20 per cent and - considering the point of vies of the enterprises - it is very important that more than two thirds of the income from the basic activities of large-scale farms will be provided by them. From this it can be deducted that even a smaller modification of the regulative system concerning the cereal crops will greatly influence each of the enterprises.

The total area devoted to wheat and maize earlier was distributed as 50 per cent for each of these crops. Later this ratio has been shifted step by step for the advantage of wheat and now the ratio is 1.3 to 1.0. In the past period the annual plans of the national economy set on an aim to increase the area devoted to maize but this has not been accomplished mainly due to the economic conditions of the branch concerned. The total of the quantitative figures in the plans of producing grain crops is equal to the total figure of production but changes towards the favourable direction of its composition and quality have so far not yet been achieved by means of tools of regulation. The regulative system valid for 1986 has got the aim just to support the accomplishment of these changes.

Cost and income ratios

The production of wheat and maize has been doubled in the course of the last two decades with decreasing the harvested area in the same time. This fact makes it indisputable that the whole of the eco-

conomic regulation has been proved to be effective admitting that in the future some of its elements should be applied more effectively. The Hungarian agriculture produced 7 million tons of wheat and maize in 1968 as compared to the figure of already 14 million tons in 1984. This has been the result of increasing the yields in a dramatic way realized by means of applying technological changes coming up near to the world level; the yield per hectare of wheat has been increased from 2.5 tons to more than 4 tons and that of the maize has been increased from 3 tons to more than 6 tons (see Fig.1).

The quantitative increase has been supported not only by the favourable changes in the biological bases and in the technical and technological conditions but also by the economic regulation. The producers' prices of the wheat and maize have remained unchanged for numerous long years before they were changed in a considerable way from 1980 onward. This means that while the production cost has been increased to a value of 2.5 to 3 times as much, the producers' price between 1968 and 1982 has been increased by 10 per cent for the wheat and 25 per cent for the maize. In 1983 the further increase of the producers' price was 8 per cent and 10 per cent, respectively. (It must be noted that between 1968 and 1984 no other agricultural product could be found for which the increase of price had not been considerably greater than it was for the cereals.)

The relations between the input items, the outputs and the prices resulted in the fact that in spite of the additional output of 1.6 ton per hectare for the maize, on the level of the enterprise (considering the income and the cost items) it has become indisputable that in an average of several years the wheat has been proved to be advantageous (see Figs. 2 and 3).

Amongst the years of the eighties there had been one excellent year and one less favourable one for producing both wheat and maize, respectively. In the average of the five years the yield per hectare of the maize in the large-scale farms has been increased by 1.57 ton as a result of an input greater by 6170 Ft (on current prices). In this way the income from wheat has been greater by 900 Ft than that from the maize. Earlier the difference in yields was the greatest - 2.19 tons per ha - in the average of the years between 1980 and 1983, and in spite of this the income from wheat has still been greater by 2 per cent than that from the maize.



After increasing the producers' prices in 1983 the price of maize has nearly become the same as it was with the wheat for milling products and became greater than that of the wheat for fodder. In shaping the average price of marketing for the wheat the wheat for feed does not play nearly any role to-day. The territorial share of the wheat for feed is 9 per cent with no considerable difference in the average yields. About 20 per cent of the wheat for feed will be marketed by the agricultural enterprises and in this way the effect on the average price will not be greater than 1.8 per cent. In this way the changes in the income from the wheat will depend nearly exclusively on the production of wheat for milling products. In the same time, if we examine the structure of wheat consumption it will be experienced that the amount of wheat used as feed will continuously be increased: the total figure reaches the value of 44 to 45 per cent, i.e. the wheat for human consumption will increasingly be used for feed. On the other hand, this will raise the question of considering the content of the wheat in an increased way and of tightening the standard of the qualification. The twoness manifested in marketing and usage will result in a greater cost of producing fodder because in the case of wheat only 17 to 18 per cent will be used to own needs while the remaining amount will be marketed in the trade.

#### The effects in changes of various kinds of subsidies

In this study we shall discuss only the most important case, i.e. the way of support given to farms under unfavourable conditions of the productive site. The basis of determining the size of this kind of support is the figure of return from sales stimulating (together with other factors) the marketing of also the wheat intended for own needs as feed and later the repurchase of it by the enterprise concerned.

In the period after 1979 - due to considerations of economic politics - the size of the figures of various kinds of support has step by step been decreasing and in the same time also its structure has been changed. The nominal value of subsidy in crop production per unit area had been increasing to the early years of the eighties and the greatest value of this was to be found in 1980 concerning the maize and in 1981 concerning the wheat. Within the amount of the

total figure of subsidy the share of output has been increased and that of the input items has been decreased.

The replenishment of basic prices has been increased by 7 to 8 per cent between the years of 1981 and 1984; the replenishment of price concerning the peculiar productive regions has been given to the enterprises for wheat, while in the case of temporarily and due to other causes supported enterprises the size of subsidy could be the same both for the wheat and for the maize. In this way in the enterprises under unfavourable conditions of the productive site the support given per unit of return from sale (and in the same time per unit area) has been greater with the wheat as compared to that with the maize till 1984 inclusively. In the last year the size of support given to compensate under unfavourable conditions has become the same in either cases resulting in a more favourable figure in the case of maize due to the greater yield (per unit area) in contrast to the wheat. In the case of either plant, however, the size of the support has in a smaller measure been decreased together with the support given to compensate for the land quality till the value of 19 AK per ha (golden crown). A share of 43 to 44 per cent of the area devoted to wheat can be found in the enterprises under unfavourable conditions of the productive site and this ratio does not seem to change in a great measure with a share of 45 to 46 per cent in the case of the maize. Considering these areas the decrease of area devoted to maize has been of a smaller size than in the regions of more favourable natural conditions. By means of changing this kind of subsidy one hectare devoted to maize will receive a sum greater by 350 Ft (some 20 Ft per ton) than in the case of wheat.

According to the production figures the yield of wheat in 1986 was 4.86 tons/ha, while that of the maize was 6.3 tons/ha. Considering the production costs, the figures of the yields and the sizes of various kinds of support given in the case under unfavourable conditions discussed previously, the size of income from wheat will be some 4,000 Ft, while that from the maize will be around 2,200 Ft per hectare. This will further be influenced in the case of maize by a relief from tax of 2,000 Ft/ha of additional area introduced in the last year. Considering the national figures it will be stated that this relief has not resulted in an increase of area (in the first case not due to the time of its introduction). During the last five

years the average figure shows that in every categories of soil quality the production of wheat has been the more efficient also in areas of higher land quality (even in the case of 30 AK/ha and more) where the difference in yields ranged between 1.8 to 2.1 tons/ha, with a value of 600 Ft/ha. The sum of 2,000 Ft mentioned above in a national average will not reach even the value equalling the price support of the size of 10 per cent and in this way it goes without saying that it could become a stimulative factor only in regions where the yield has been smaller and the difference between the yields and production costs of the wheat and maize is smaller. These regions have less productive soils less favourable for production of maize where the area of production in the reality has been increased while its figure in the regions under favourable natural conditions (e.g. in the county of Tolna) has been decreased.

In order to accomplish the aim of producing more maize than it is done nowadays such a regulative system is needed that will be stimulative to increase the production of maize also in enterprises of high production level.

#### The prospective effects of regulation in 1986

The producer' prices for wheat and maize will not be changed in the year of 1986. The increase in the prices of the input items (fertilizers, chemicals for plant protection, electric energy) will increase the production cost of the maize in an increased way as compared to that of the wheat. In this way the difference between the values of the input items may even reach the figure of 7,500 Ft/ha. In order to stimulate the production of maize as a main crop and for silage the enterprises will be given a tax allowance of income tax of the amount of 800 Ft/ha. In the case of wheat only the breeds of a gluten content of 28 per cent and more (considering wet gluten) will be considered to produce yield of quality for human consumption. If it is supposed that price decrease resulting from tightening the qualitative prescriptions in the case of wheat will fully be used as a source of tax allowance in the case of maize then with the present difference in yields of 1.7 ton/ha the specific income produced by maize will be greater by some 100 Ft than that of the wheat. The difference is greater (and is some 1000 Ft/ha) in the farms having lands

of soil quality under 17 AK/ha while on the better soils the figures of income tend to be nearly equal.

If the amount of income is the same or nearly the same also the changes of profitability are important concerning the decisions taken by the enterprise. According to our calculations the income per 100 Ft of production cost will be 17.3 Ft with the wheat and 11.7 Ft with the maize. The same amount of income would be produced - with no changes in the difference between the production costs - by a difference of at least 2 tons/ha in the yield, and in this way the income produced by maize would produce an income greater of a considerable size. (It must be noted that due to tightening the requirement for quality of the wheat it cannot be a real calculation if we hope that this amount will fully be used as a source to cover the amount of tax allowance of maize. Namely to accomplish this aim would necessitate a marketing ratio for wheat for feed manifold as much as it is nowadays.)

All of these could provide a basis for the conclusion that in smaller number of the farms the area devoted to maize could in a small scale be allowed to increase and it seems to be probable that on a national level this would be enough to compensate for the decrease. In the case of wheat after the temporary decrease of income in 1986 it is inevitably hoped that from the next year onward the quality will be improved. It is important for the national economy that cereal production and within this the production of maize should really be stimulated and the important comparative advantages should be utilized in an increased way amongst the conditions of the foreign market of the eighties. It seems to be reasonable that beside the other tools of economic regulation an important factor will be the considerable increase of the producer' price both for wheat and maize in order to come close to the price level on the world market in the period between the years of 1986 and 1990. This can only be accomplished step by step and is unimaginable without the simultaneous increase of the prices of input items and without the suspension of some of the items of support in the case of input and output.

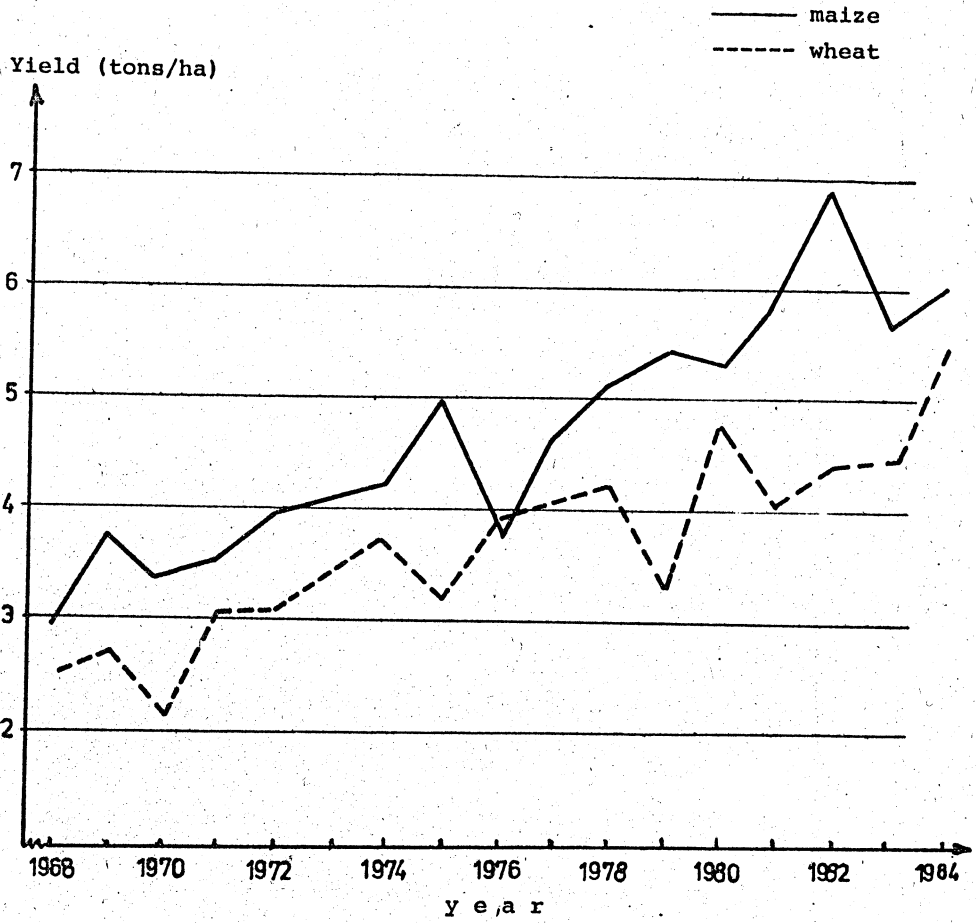
The increase of the prices of the cereal crops in the meantime will greatly influence the cost items of producing animal products and in this way it will be of a disadvantageous influence also on the export efficiency of these products. On the other hand, it is

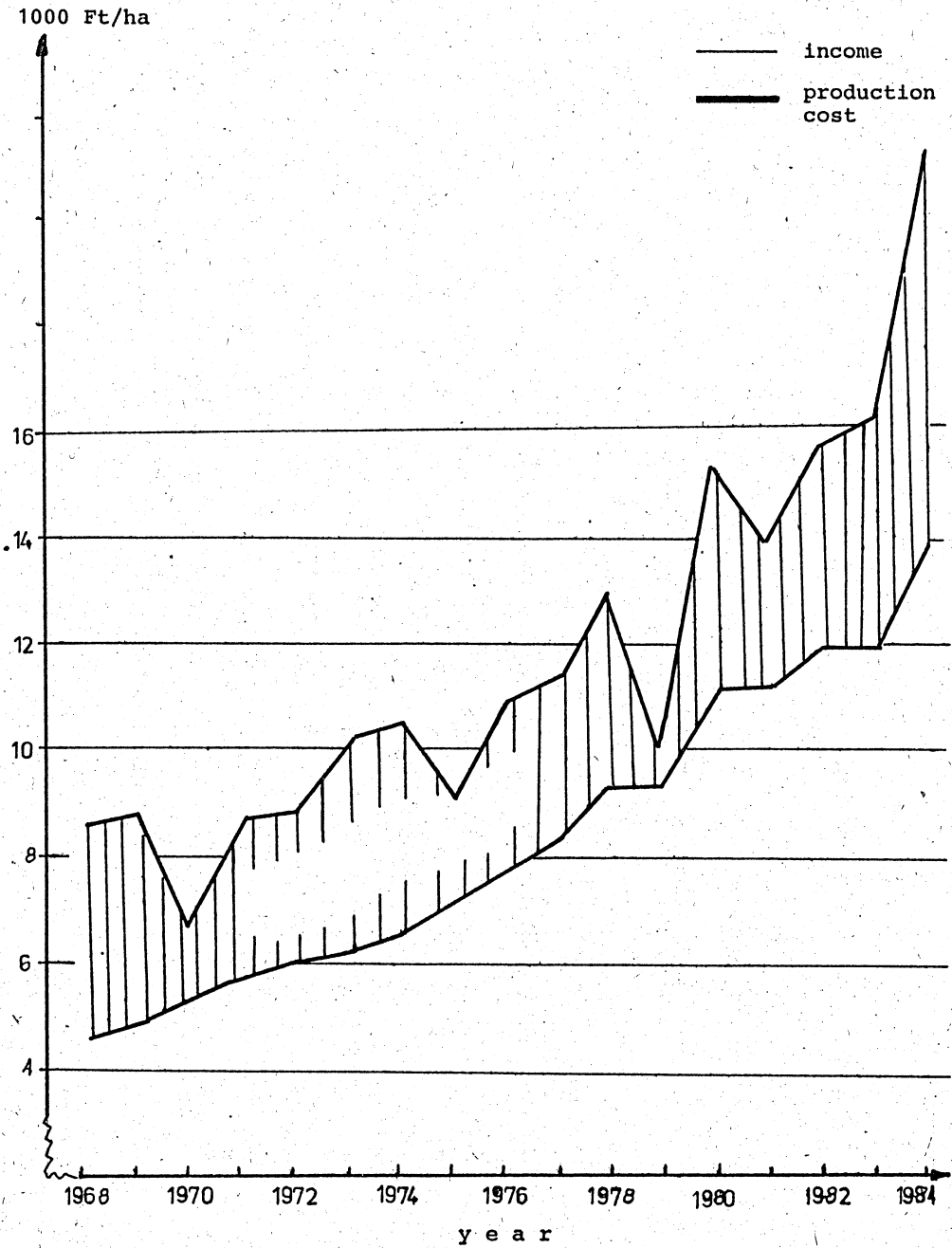
also true that the prevailing prices of the cereal fodders are not stimulative enough to improve the efficiency of utilizing the fodders and due to this it will not avect in an advantageous way the more rational utilization of the arable land.

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Fig. 1 CHANGES OF YIELDS



**Fig. 2** COST AND INCOME RELATIONS OF PRODUCING WHEAT

**Fig. 3** COST AND INCOME RELATIONS OF PRODUCING MAIZE

