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Philip Raup

Room 513

*Aug 31,
1987*



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**Vth EUROPEAN CONGRESS OF AGRICULTURAL
ECONOMISTS**

RESOURCE ADJUSTMENT AND EUROPEAN AGRICULTURE

**BALATONSZÉPLAK, HUNGARY
1987.**

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EEC Programmes, Economic Effects, And Cost Benefit Considerations
on Adjustments in EEC Agriculture

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Ever increasing agricultural surplus production and growing problems in financing their solutions have caused the EEC to initiate measures with the aim of changes in land use. EEC politicians are aware of the fact that land appropriation is a purely pragmatic measure in order to relieve the market rather than an "optimal" policy. While the costs for product storage, export, and interior domestic utilization increase, there is a growing pressure of supply in the world market and competition for new markets.

At the same time in some of the EEC countries there is an increasing proportion of farms with survival problems due to insufficient income opportunities and restricted possibilities for growth. This is due to the fact that abandonment of farms in highly industrialized countries takes place only in the course of a change in generation. In the case of falling prices, farms in the process of quitting will continue production as long as prices cover the variable costs (opportunity costs tend towards zero). Under a situation of restricted growth opportunities and constant rate of technical progress, larger farms adopt productivity aimed at progress, unconditionally. Thus the trend of an ever increasing agricultural production will be augmented. Measures of agricultural policy which tend towards a more market oriented policy are regarded sceptically by politicians in many EEC countries. They intend to supplement the existing instruments by measures which account for market relief and income and ecological objectives.

Outline of changes in land use

In view of a goal-oriented agricultural policy, the question arises initially as to what purpose the land should be used afterwards. Furthermore, if the change in land use is caused by agricultural over-production, there is a need for clarification about what should be done with land so far used for agricultural production. According to the kind of change the following cases can be distinguished:

- Fallow, including bare fallow
- Natural shrub growth
- Protection as ecological niches
- National and recreational parks
- Afforestation
- Sports and leisure grounds.

As the non-productive use of agricultural land is regarded as a transitional rather than a long term structural problem, predominantly short and medium term changes are prevalent in political discussions.

Depending on the objective and purpose of the change a decision needs to be taken about where - in which production locations and in which regions - the appropriation of agricultural land should take place, e.g.:

- in marginal production locations
- in all regions
- in regions with a high percentage of agricultural land.

Furthermore it should be decided whether only parts of farms or whole farms are to be taken out of production. The appropriation of part farms can be carried out for all kinds of agricultural land or for crop land only. In the USA a product-specific appropriation is practised, i.e. an appropriation of land tied by a restriction to a certain produce. This is not feasible in the EEC; here the question centres on the appropriation of part or whole farms.

The market aspect supports an appropriation of whole farms, as this would also relieve the particularly encumbered over-production of milk and beef. It would be preferable in view of social policy and it would be supportable in view of controls. The advantage of appropriation of part farms are to be found in higher acceptance and lower costs.

After clarification of the question about whether and how land use is to be changed then which measures of economic policy should be used in order to arrive at a change should be decided. Here one can distinguish between

- mandatory change and
- voluntary change.

A mandatory change is problematic in view of order policy, because of the costs of control and because of the problems of implementing it for all of the EEC. A voluntary change can be achieved by economic pressure (reduction of agricultural protection) and by financial incentives. In the case of a political decision for financial incentives the question on the form these should take, arises. Obvious incentives are:

- direct incentives in the form of a fixed subsidy per unit area
- a variable subsidy per unit area depending on the production potential tied with a base payment per farm
- a subsidy depending on the age of the farmer with or without accounting for agricultural old age pension and considering other factors (e.g. milk rent).

In the USA there is also a system of direct incentives in force. There, a guaranteed price for a certain amount of a produce is linked with the seizure of land. This system is not suitable for the EEC.

An alternative to a state subsidy system is a system of public tenders, which can also be found in the USA. Offers for land are obtained in the form of a public tender. These offers are then weighted and ranked with the help of a productivity gauge according to the production potential. Target prices adjusted in this way are then given to the farmers who offered the land. At the same time they are informed that those who gave the lowest tender will be considered first.

Economic Effects of Measures for Changing the Use of Agricultural Land

All forecasts published so far on the effects of land appropriation have been only partial answers and rough estimates due to the insufficient data base. However, in the course of an economic analysis of the effects, the investigations to be carried out should answer the following questions:

- How many farms and what acreage will undergo a change in use?
- Where will these changes take place?
- Are there differences in the objective/normative expectations and the real acceptance?
- To what extent can an alleviation in the market be expected?
- What are the expected effects on income in agriculture?
- What is the necessary amount of budget funds?

- What national economic welfare effects are to be expected?
- What EEC welfare transfers will occur?
- What regional fringe effects are to be expected?

In order to satisfy the global demand of analyses of economic effects, adequate answers to the above questions can only be achieved if and when a representative EEC-wide data base is available. In this investigation results from book-keeping farms are evaluated:

- EEC(10): of 33 000 farms broken down in 70 regions
- FRG: of 9 500 farms broken down by federal states
- Baden-Württemberg: of 4 500 farms broken down by 21 agro-ecological zones.

For the above regions, states, and zones it is necessary to have an associable extrapolation data base. Concerning the procedure, such an investigation needs firstly to define and to determine individually objective incentive thresholds. Based upon this it is possible to select the individuals in the potentially reacting groups according to age structure of farmers in regions. The results should be corrected according to acceptability if necessary. Thereafter the results should be extrapolated to region level, differentiated by valuation parameters (land seizure, market relief, income effects, household load etc.). Finally, an appraising valuation becomes necessary which includes economic as well as non-economic assessments.

The investigation centred around the change in use of agricultural land as suggested and co-financed to some extent by the EEC (1). The suggestion is an advanced retirement of farmers at the age of 55 under the proviso of a suspension of the farm for a minimum of five years against payment of a base subsidy amounting to 7 140.-- DM per farm plus a grant of 595.-- DM per hectare plus a milk rent of 0.70 DM per kg of milk. The grant per unit area is only given for owned land; rented land goes back to the land market. Base subsidy and the grant per unit area are parameterized in alternative calculations.

The appropriation of parts of farms is investigated as both, fallow within the rotation and stationary fallow. In the first case owned as well as rented land may be appropriated against payment of 700.-- DM per hectare plus 15.-- DM per point according to the German land valuation system. Stationary fallow is re-

garded for owned land only. The special treatment of leased land is necessary in order to reduce negative effects on the land market and in order to achieve sufficient structural effects.

The incentive threshold for relinquishment of whole farms is determined by the possible profit from continuation and by the available income after appropriation. The latter consists of the sum of subsidies and grants minus running expenses plus income from side-line occupations plus interest balance from current assets minus current liabilities. In case it is greater than the possible profit from continuation, the incentive threshold is exceeded and the farmer becomes a member of the potentially reacting group. The results of the calculations in the effect analysis on appropriation measures have been carried out for the EEC as a whole, for the FRG, and for agro-ecological zones within the FRG and are presented in comprehensive tables and graphs for the above valuation criteria.

Economic Validation of Early Retirement for the FRG

Assuming that the measure is accepted by the people concerned, the calculations show that - due to the high base subsidy - predominantly small farms below 20 hectares will be relinquished more frequently than average; amongst the larger farms especially those presently working under unfavourable economic conditions and those with a low portion of leased land will be relinquished. With a view to an alleviation in the market, the market for milk and beef will be eased to a relatively large extent because of the milk rent.

The funds necessary will be between 1 200.-- DM and 1 300.-- DM per hectare of appropriated land. In a system based upon fixed incentives the opportunity rent (= the amount of money by which the income after appropriation exceeds the income before) is comparatively high. On average about twice as much is paid in incentives than would be necessary to make up for the income losses. The departing owners of small farms benefit from the opportunity rent. The participating farmers are able to double their income. For the non-participating, i.e. the remaining farmers, a pro forma increase of their average incomes can be calculated due to the relinquishment of less successful farms, though their individual incomes do not change at all. However, the remaining farmers also benefit from the early retirement scheme as leased land is re-

turned from appropriated farms. It can be expected that per hectare of appropriated land about 0.6 hectares of leased land is set free for use in the remaining farms.

The main problem in the early retirement scheme with obligatory appropriation of land seems to be acceptance. This was supported by a recent questionnaire carried out by WILLSTACKE (1987). The withdrawal of the most scarce production factor (land) contradicts in principle a development strategy which aims at securing incomes and structural adaptation. Furthermore, appropriation of farms shows an admission that the philosophy of family farming with its long lasting tradition is being abandoned. Both these facts seem to cause extremely high acceptance thresholds. These disadvantages are not inherent in the EEC suggestion of a "structure improving appropriation" to farmers willing to increase acreage.

Macro-Economic Valuation

In the framework of a macro-economic valuation the EEC-independent welfare effects need to be separated from the changes of the production volume caused by EEC measures with the help of macro-economic valuation methods. It can be proved that the macro-economic value of a production of surplus in marginal locations does not normally cover the costs any more. Thus, under the present price relations, appropriation of land is economically supportable.

Furthermore, that part of the EEC-dependent welfare transfer needs to be quantified to ascertain what is affected as a consequence of the common internal market within the EEC and what is a result of the common agricultural funding. In the view of an individual member country, the national flow-back of EEC funds is lowered by the amount of price subsidies which occur as a result of production limitations caused by EEC measures. On the other hand, the EEC budget and thus the national budget of all member countries, are alleviated by such measures.

The balance of these fiscal effects due to changes in the use of agricultural land, is positive for the case of the FRG. Results for different measures and countries can be shown accordingly (sectoral income of agriculture, consumer effects, household effects) and may be used as a basis for valuation.

Apart from these economic parameters non-economic aspects also need to be included in the valuation. An open question remains as to whether there will be a tendency towards further intensification in plant as well as in animal production caused by the fact that the described measures with their predominantly positive income effects for the appropriated farms will release many capacities (increased portion of leased land) to the remaining farms.

Objections against the described measures could also arise from the expected increase of the control efforts and their doubtful efficiency. Finally, the question needs to be posed as to whether this kind of appropriation will contribute at all to a solution of the ecological problems, especially as the time horizon is only five years. It is certain that no land regarded as particularly worth protecting will be released from agricultural production. However, there are possibilities for dedicating land to such purposes by additional contracts.

No doubt the willingness to participate and the economic effects would be considerable within the EEC member countries. The calculations show that under no circumstances react regions considered as disadvantageous more strongly to measures to relinquish land than the less disadvantaged ones. It seems surprising that Denmark and Great Britain will draw more advantages from land appropriation than for example Greece and Italy. This has to do with the higher portion of leased land, with the age structure of farmers, with the level of gross margin, and with the prevalent production.

All measures with the aim of changing the use of agricultural land need to be judged in comparison with agricultural policy alternatives, especially measures in price policy, measures for reducing the special intensity, new points of departure aiming at the opening of alternative sales markets, and other concepts of agricultural policy. In the suggested form, measures to appropriated land, leave a remarkable space for different lay-outs - for different weighting of income, structure, and environmental objectives.

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