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HEINZ-ULRICH THIMM

*The Challenges for Western European Teachers of  
Agricultural Economics in Educating for Agrarian Change  
in their Own and Developing Countries*

INTRODUCTION

Some historical changes which seem to have influenced the teaching of agricultural economics at university level in Western Europe over the past fifty years are traced in this paper. An attempt is also made to point to some accomplishments of our profession as well as to challenge present teachers with issues felt to be of future importance on the European agricultural scene and in developing countries.

Three restrictions have to be kept in mind. (1) It is impossible to find a common denominator for the development of agricultural economics at all European universities. National history and differences of educational systems are frequently not comparable. Conclusions therefore only reflect a general tendency, not a detailed account. (2) Teaching agricultural economics can be treated in a very broad way including textbooks, journal publications, extension service. A narrower approach must be taken in this short paper; undergraduate and post-graduate curricula only are analysed. (3) Measuring teaching accomplishments is almost impossible. Neither particular agricultural policy decisions nor farm management performance can be traced back to teaching activities directly, except in individual case studies. Usually the general hope of all educators is that teaching accomplishes something good, leaving the definition of "good" to the students and to their employers.

ESTABLISHMENT OF THE DISCIPLINE

Agricultural economics at the university level in Europe was established before or shortly after World War I. The biological sciences of crop and animal production had reached their limitations and gave way to economic analysis of the real farm situation where plants and animals had

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to be produced for a market with a number of socio-economic determinants influencing the resulting prices, costs and incomes. It is interesting to note that the establishment of the first Chair of Agricultural Economics in Britain had to wait till 1929 while teaching economic subjects in agricultural curricula started much earlier. On the Continent and in Britain farm management won early recognition as the leading field. Agricultural Marketing, the first Chair of Agricultural Marketing in Europe was established also in 1929 at Berlin University, followed in importance, recognizing the general need for market information and policy advice on important state intervention schemes, e.g. marketing boards, deficiency payments, tariff agreements. The major agrarian changes of that period had certainly been the massive introduction of biological technologies into the production process and the instability of farm incomes, following the slow-down of economic activities ending in the Great Depression. Together with general economics, rural sociology (this not in Britain), and agricultural policy the macro fields of agricultural economics were firmly established before or shortly after World War II and were not further subdivided later. The separation of micro and macro disciplines however appeared to be irrevocable, reflecting the growing complexity of agricultural development.

The diversification of the micro field into production economics and farm management started before World War II but, under American influence, only reached its peak in the 1960s and 1970s. The introduction of mechanized technologies into the small family farm structure of European countries necessitated changes in the production pattern, farm sizes and the degree of enterprise specialization. This in turn demanded more theoretical analysis for the optimal combination of production factors as well as more guidance in applied farm problems. On the Continent, extension was introduced as a teaching subject, but it was not connected with the practical extension service, as was the case in the USA. The plant and animal production sciences had by now accepted the fact that agricultural economics would stay as part of the general degree structure. If there was any need to offer more hours of a particular subject field, the introduction of specialized undergraduate streams became unavoidable. In most parts of Europe, there remained at least a common basis for first and second year agricultural students before specialization starts. This contrasts again with developments in the USA where far reaching specialization was introduced quite early, reflecting job opportunities in a growing agribusiness sector, while in Europe the majority of graduates from agricultural faculties was absorbed by the public service for administration and extension. Only in Britain, because of larger farm sizes, a majority of graduates could hope for management positions in practical agriculture. A European agriculture, caught between rising land and labour productivity and decreasing income elasticities of demand, still needed graduates who were generalists in the sense of being able to find solutions to the totality of individual and social farm needs as well as to satisfy consumer demands for a balanced food supply.

TABLE 1 Establishment of major teaching disciplines in agricultural economics, Europe 1920-80

Time Period	before 1929	1930-45	1946-60	1961-80
Agrarian changes	Introduction of biological technologies	Introduction of intensive farm systems	Introduction of mechanised technologies	Increase in farm size and specialization
	↓	↓	↓	↓
		Production Economics	Economics →	Production Economics
			Enterprise Management →	Enterprise Management
Micro	Farm Management		Home Economics →	Farm Management
		Extension	Economics →	Home Economics
				Extension
				Environment Economics
				Regional Planning
FARM ECONOMICS		General Economics		General Economics
			Agricultural Marketing →	Agricultural Marketing
		Agricultural Policy		Agricultural Policy
Macro			International Development →	International Development
		Rural Sociology		Rural Sociology
	↑	↑	↑	↑
Agrarian changes	Instability of farm income low consumer demand, rural urban migration	Increasing state intervention, war production schemes, marketing boards	Rising purchasing power; agri-business growth, price and income policies	Increasing European integration, surplus production, development issues

While during the first post World War II period, teaching micro agricultural economics was mainly following events, the discipline was later able to catch up, anticipating more what will happen on the farm level if circumstances change. But it seems that the micro field has reached a certain stage where besides methodological advances particular new factual insights can be obtained only by turning purposefully to problem-solving techniques. The recent introduction of special enterprise courses such as livestock management, or the rediscovery of home economics, and entry into environmental fields as well as systems analysis and decision theory may indicate some new approaches. In contrast, the macro fields of agricultural economics had less difficulty of change anticipation, the problems of rural-urban migration, price policy issues, parity income demands, and structural changes of agriculture figured prominently in their teaching syllabuses which embrace forecasting future problem areas of the European Common Market. Interestingly, a final observation is that during the 1960s the micro fields of agricultural economics certainly lost ground as teaching subjects in favour of macro fields, especially in Britain.

The present structure of agricultural economics teaching disciplines in Europe is equally the result of agrarian developments and changes in educational policies which lead to large increases in educational expenditures to transform the "élite university" into a normal tertiary training institution. The latter allowed the employment of larger numbers of professors and lecturers who then looked for identification as specialists in research and, consequently, in teaching. This facilitated an additional interest in important subjects like international development, regional planning, resource economics and certainly into quantitative methods which made large inroads into all disciplines. At Tables 1 and 2 an attempt is made to summarize the stages of development of agricultural economics as teaching disciplines and to present a European example of a teaching syllabus for undergraduates leading to the degree of Bachelor of Science in Agriculture. In addition, of course, various programmes of post-graduate training are available leading to degrees of Master of Science or Doctor of Philosophy in Agricultural Economics.

### ACCOMPLISHMENTS

Over the last fifty years the accomplishments of agricultural economics as a teaching discipline may be summarized as follows: (1) Firm establishment of agricultural economics as an equal part of the general agricultural curriculum in competition with plant and animal sciences. (2) Firm establishment of agricultural economics as specialized streams of undergraduates and post-graduate training, turning out nearly the same number of specialists as in plant and animal sciences. (3) Firm establishment of agricultural economics as a distinct teaching profession with its own methods and technical language; not always understood and appreciated by our colleagues in other disciplines or by the public.

There are generally mixed feelings about the consequences of separating agricultural economics from the other disciplines. No doubt without specialization the contribution of agricultural faculties for solving complex farm problems would be minimal in a dynamic development process. Moreover there is no question that job specialization necessitated specialized training streams for job preparation. But one question should be allowed: will further specialization lead to isolation, where each discipline will concentrate on teaching its own students only, not any longer trying to find a total approach to agriculture? The real test of our accomplishments appears to lie in the attitude of the various disciplines to each other, looking for complementarity rather than differentiation. Is agricultural economics needed by other disciplines, or vice versa? Should a present trend be reversed that specialists are no longer aware that agriculture is a profession which combines biological, technical, economic, and social elements? Is there a danger that the profession turns to irrelevant fields because of too much specialization in agricultural economics? Is G. Johnson's "quest for relevance in agricultural economics"<sup>1</sup> a real issue in

TABLE 2 *A European example: syllabus of selected agricultural courses, Wye College, UK, Prospectus 1978/80*

*Economics:* Principles relating to the production, pricing and distribution of goods and services. An introduction to national income and international trade concepts. Theories of economic growth, demand and welfare economics. National income and social accounting. Inter-regional and international trade. Time and space dimensions of economic activities.

*Management:* The management function and the development of the firm; theory of the firm; decision-making criteria, risk and uncertainty. Structure, functioning and performance of organizations and the behaviour of individuals and groups within them. Information for marketing, production and financial planning and control. Analysis of the financial results of farm and horticultural businesses. Planning techniques: budgets, gross margins, programme planning, introduction to linear programming. Economic aspects of the main farm and horticultural enterprises. Resource Use Economics: mechanization, labour, capital. Labour management.

*Marketing:* Systems of marketing agricultural products and their evolution. Marketing institutions in Britain and the rest of the EEC. Marketing of the principal agricultural and horticultural commodities. Marketing of goods and services to farmers. The study of marketing as an activity. Marketing objectives, market research, measurement and forecasting of demand. Planning and organizational control of marketing. Examination of problems in marketing farm produce and in marketing of goods and services to farmers.

*Agricultural Policy:* The social significance of demographic structure and trends. Occupational and family structures. Labour mobility. Scope and methods of rural sociology. Social institutions in rural areas. Land tenure. Patterns of rural change in developed and developing countries. The background of European agriculture: geographical, historical, political and social. Agricultural regions, and the characteristics: farm size, land tenure, farming systems, production, income levels. Producers' groups, co-operatives and other forms of market integration. Food consumption patterns and trends. The impact of world trade.

*Land Use:* The spatial aspects of man's activities on land. Land use statistics and classification. Rural and urban land use structure and change in Britain and other countries. Comparative land use. Land conversion and competition. Living space and land use planning. the locations of agricultural and industrial production. The location of urban and rural land uses. Settlement patterns and central place theory. Principles of land-use planning appraisal. Rural and recreation planning. Regional planning.

*Agrarian Development:* Nature of traditional agriculture in developing countries. Problems of modernizing traditional agriculture. Role of agriculture in the development of tropical economies. Strategies for rural development. Rich countries' contribution to development.

*Statistics:* Introduction to the measurement of micro- and macro-variables. The major series of British economic statistics and their sources. Censuses and surveys. Problems of international comparison. Probability. Theoretical and empirical frequency distribution. Theory of sampling. Hypotheses and significance tests. Analysis of variance. Simple and multiple correlation and regression. Analysis of time-series. Introduction to the construction of macro-economic models. Illustrations from economic data.

*Operation Analysis:* Work study. Network analysis. Programming techniques. Simulation methods. Replacement theory. Systems analysis.

*Economics of the Agricultural Industry:* Agriculture and economic growth. Productivity and Incomes. Structural adjustment. Resource availability. The market for farm and horticultural products. World trade patterns; food surpluses and aid programmes.

*European Agriculture and Policy:* The background of European agriculture: geographical, historical, political and social. Agricultural regions and their characteristics: Farm size, land tenure, farming systems, production, income levels. Producers' groups, co-operatives and other forms of market integration. Food consumption patterns and trends. The impact of world trade.

the teaching field, to be taken to heart before new challenges lead to more specialization? The limits are reached where single facts and methods taught leave students in the dark about how to solve the total problem with which they are confronted in agriculture.

What have macro and micro agricultural economics accomplished in their particular fields? In general the contact hours devoted to each field are similar. In the macro subjects students get a fair introduction to the principles of income generation in agriculture, the links between agriculture and the economy as well as the determinants of economic growth. But is the concept taught: what a "healthy" agriculture might be? What is still typical rural? Are agrarian changes leading unavoidably to a non-agrarian society which, consequently, does not need agricultural economics as a separate field any longer?

In the micro subjects, students are introduced to a balanced view of the farm and its enterprises as business units, using gross margin analysis and dynamic programming methods. But in Europe there appears a danger of some agricultural economists becoming irrelevant model builders, creating illusions about attainable precision through statistical methodology. Or they break into the domain of other disciplines, instead of bringing into their own field the insights of the behavioural sciences to explain more realistically than economics alone can do the individual and social decision-making process.

Summing up this section of the deliberation, it appears that our profession has done an outstanding job in pushing our subject into agricultural curricula: the demand for our product (students) has steadily increased and usually agricultural economics graduates in Europe have so far no difficulty in finding jobs. But there is no evidence that teaching of agricultural economics has influenced any major agricultural policy decision in Europe. Nor do agricultural economists appear to have anticipated social and technical changes better than other disciplines. Many individual teachers may be convinced that they have; there is no way to answer this question for the profession in total.

## STUDENTS – THE RECIPIENTS OF TEACHING

Who are the students? Students of agriculture have changed all over the world during these fifty years. They come now with largely non-farm backgrounds, their entrance standards are lower compared with the previous élite university; they are looking for a wider range of careers in administration, research, and teaching as well as in agriculture and related business fields. They will frequently have to compete against graduates from economics, business, law, very often they may have to serve conflicting interests (farmers, commerce, administration). They have certainly other personal values about economic growth, politics, environment, and resource use, compared with a generation ago. Does this influence our teaching? Are the students élitists, generalists, special-

ists? Are they from developing countries? If students change, how are educational goals changed? Too many times the students may feel that they are not trained to be problem solvers in agriculture but merely recipients of our knowledge and they have to find its relevance for themselves. Will more emphasis on teaching skills in problem identification and definition avoid this impression? "The crucial agricultural problems and issues before our society make it desirable for agricultural economics teaching to be oriented to these problems and to appropriate approaches for solving them. Solving these problems also requires disciplinary excellence. For the most part, this means both (1) learning experiences with or in multi-disciplinary, problem solving studies and efforts and (2) hardcore disciplinary training in economic theory and quantitative techniques".<sup>2</sup> Are curricula in Europe following this line without reservation?

### TEACHERS – THE INSTRUMENT OF TEACHING

Who are the European teachers of agricultural economics? In the beginning teachers naturally came from the biological fields and turned to economics for personal interest, today nearly all are products of their own discipline, having spent most of their professional life at academic institutions. Links with practical agricultural problems are by research projects only, not through any prolonged management or executive position. They are normally: (1) free to teach and research what appears relevant, (2) used to lecturing instead of guiding (passive learning), (3) looking more for acknowledgement through publications than through teaching performance, (4) taking their teaching ability for granted, doing little for improvement, and (5) not interested to be organized as teachers and to evaluate their teaching performance.

Previously a few great personalities who shaped the start of our discipline dominated the field of teaching. The time period since World War II witnessed a rapid change from the old European university to an institution where larger numbers of younger lecturers were given the responsibility of teaching. Schools of thought are no longer a real issue, curricula look quite similar throughout Europe. The majority of agricultural economics teachers has international experience, reads foreign literature and sustains links with other countries. Freedom of teaching and research, the precious ideal of European universities, allows teachers to transfer their own research results into teaching material. Within certain limits this seems to be an advantage. However, there is no real feedback system telling the teacher that his selection of research topics and teaching subjects was good or bad. Can there be one? Assessment of the value of research for teaching may be achieved by an organized dialogue between the academician, policy decision-makers, and practical farming public. Agricultural economists in Europe could be more aggressive in taking their economic reasoning to their fellow biological and technical



scientists. They must insist that economics is as much an integral part of curricula in agriculture as any other subject presented to specialist students. As newcomers in the academic treatment of agricultural subjects, European agricultural economists have fallen into the same trap new disciplines usually do: they develop a language not understood by normal people. Will they remedy the situation as soon as possible? Finally, what is the teacher's greatest problem? Probably, to integrate into one person as teacher, specialized in agricultural economics, the necessary general knowledge to be relevant for the students and, as researcher, the acknowledged specialization to be promoted in an academic career. This does not seem to be a particular European problem only.

### COURSE-WORK – THE SUBJECT MATTER OF TEACHING

The previous habit of European professors to read to students (the British “reader” reminds us of this tradition!) what they should be able to read themselves in the library has not died out. Especially in undergraduate work the larger lecture has still its dominant place. In post-graduate work, it is the other way around. In contrast to the United States, coursework for PhD candidates is the exception, not the rule in Europe. Here seminars where students present their work from field data and literature reviews are more important. On both levels, other types of participatory approaches such as the use of case studies and team learning are experimented with. But there is no evidence that agricultural economists are most innovative to improve teaching methods and instruments. Overloaded timetables and dependency on classroom work for undergraduates are more a problem on the Continent than in the UK, where the number of contact hours with staff is, on average, only half that in Germany. Would it be a mistake to allow students to select more for themselves rather than to provide strict timetables? An MSc degree in agricultural economics by thesis and coursework has become accepted practice in Britain, not on the Continent where a two-level degree structure (diploma and PhD) prevails. The diploma, usually with a thesis requirement, takes a minimum of four years after thirteen years of primary and secondary education. Many continental universities, therefore, rate their first degree as equivalent to the American or British MSc or MA degrees.

Teaching and examinations are linked. If “agrarian change” matters in the later life of graduates, are European examination methods up-to-date to examine the capability of anticipating change? The oral and essay type examination dominates with the hope that thinking ability can be tested better this way than using multiple choice questions. Again there is no empirical proof. The fact that both systems work and give results which allow one to differentiate between good and less good students is interesting. In general European teachers still favour more (but not exclusively!) subjective types of examination, compared with the USA where “objectivity” is part of the educational creed.

## AGRICULTURAL ECONOMISTS IN DEVELOPING COUNTRIES

How have agricultural economists of the European teaching tradition performed while attached to foreign universities? Some people argue, that this type of partnership has been a great contribution. Others say that it had been the root of all evil because it prevents developing countries from creating (their own) indigenous institutions. The fact is that European teachers have taken heavy responsibility in duplicating their home university structures the world over. Have they produced the kind of graduate that society needs? Not everything has gone wrong but present trends in the rural development of a number of countries cast doubts on the ability of graduates to cope with the complex problems. If universities "are not rooted in local soil, except for the buildings"<sup>3</sup>) there is great danger that Western standards of teaching agricultural economics might not be relevant for development. The trouble is that there are so few people around who can say what is relevant. "We have to get beyond the idea of being missionaries for our own institutions and collaborate with the colleagues of developing countries in the invention of more appropriate institutions"<sup>4</sup>.

Agricultural economics curricula in poor countries seldom differ from the European universities of the teachers. Are the agrarian changes really so similar to justify this? If the quest for relevance in Europe is essential how appropriate must be such a quest in developing countries where training resources are so expensive and only available for the "happy few". If demand for knowledge in agricultural economics is derived from demand for more effective institutional performance, then Ruttan rightly demands the replacement of theories of consumer, entrepreneurs, firms and markets, at least partly, by theories of collective action, human capital formation, bureaucratic behaviour. Where many factors seem to be very static, induced social change becomes a major concern. The decision on direction and depth of social change is the responsibility of the country itself but the agricultural economist teaching there must be acquainted with the local problems of poverty and unemployment, equity and growth, bottlenecks and productivity increases, deficiencies of infrastructure and the reality of power struggle; subjects he would never touch in Europe. Who else is there to design agricultural curricula for development if not the agricultural economist?

In addition, agricultural economics teachers must insist on practical training periods for their students in order to keep them in touch with the real rural world; many students would just like to escape from rural life by obtaining the degree for which they are studying. agricultural economists can only avoid the danger of being too theoretical if they turn to a case study approach early on at the undergraduate level. This implies that teaching can only be relevant if the flow of knowledge is not a one-way affair: the teacher has to learn as much as his students. If the ultimate goal of his teaching is the induced change of the "rural village" then he must realize the reasons which may exist for rejecting any particular pro-

gramme, that the "rejection of an important technical package (the content of most extension messages) is normally a rejection of its social implication."<sup>5</sup> For example, many teachers have stressed the role of the progressive farmers and the impact of trickle-down effects in a society structure completely different from ours. Such teaching therefore remained wishful thinking in the majority of cases.

To plan coursework in developing countries necessitates a search for a different set of agrarian changes compared with Europe. They are less universal but more regional and local. They are less technical in the beginning but more of an institutional character. They are less stable but fluctuating quite heavily with frequent changes of political leadership and with world market developments. Where European countries are able to protect their farmers from income fluctuations, developing countries may not be able to at all. Does this very fact change our teaching? Training needs in agricultural economics must also be derived from the job needs which exist in the economy. It is therefore essential to know enough about the jobs graduates will be looking for in developing countries.

The question whether or not European agricultural economists should actively promote post-graduate studies in developing countries has recently received much interest. Surely, if the basic decision to have a university at all has been taken, then the university has to be a real one, with facilities for local research which can be fruitfully transformed into relevant teaching material. To attract highly qualified people for staff, opportunities for research and training for higher degrees become essential. Such programmes serve three additional purposes: (1) Support a university's international standing needed for its self-respect. (2) Enlarge considerably the country's potential for local applied research. (3) Keep many bright young students in the country who are lost to the development of their country if studying abroad. To be instrumental in the establishment of relevant post-graduate courses, especially in Africa and Latin America, seems to me one of the great challenges to agricultural economists who care to help developing countries to achieve their goals.

## CHALLENGES AHEAD FOR TEACHING AGRICULTURAL ECONOMICS

This final section contains a subjective view of future changes which will challenge the teaching profession. Their discussion here has the objective of clarifying how relevance can be achieved? To begin with I think we have to extend G. Johnson's "quest for relevance" to a "quest for proper institutions to determine what relevant is". Agricultural economists have to take part in creating them by shifting their emphasis from maximization-minimization analysis to dialogues with others about the ends of production and the social and environmental costs involved. The major concern of mankind is no longer the problem of productivity of factors as such but to decide whether or not certain things which technically can be

produced are needed at all. The same question is valid about teaching: is everything which is researched also to be taught? More and more selection is necessary because of the mass of material available. Values enter the argument and the responsibility of perceiving the total problem in full perspective. We will have to be fair to our students not only by admitting that economics is just one aspect of agriculture but also by encouraging them to look actively to other aspects of the problem. Institutions to determine what is relevant for future teaching cannot come from inside the university alone; a thorough cross-fertilization is needed from all the fields our students will have to work in. The minimum starting point is the immediate introduction of a regular exchange of ideas about syllabi contents among all colleagues of agricultural faculties, an exercise which is currently non-existent.

On the macro-level, important challenges to teachers can be identified as follows: (1) Regional rural decision-making processes will gain importance with a simultaneously diminishing role of agriculture in European integration policies. (2) Increasing awareness that individual and social values about the role of agriculture are in dynamic change with far-reaching impacts on policies and institutions will be needed by students. (3) Future agrarian changes may still have more differentiating impact than in the past and may lead to more disparities between farms and regions. (4) Agribusiness growth will continue, influencing the self-comprehension of agriculture considerably. (5) Agricultural potential in industrialized countries will adjust to a "new economic order" where developing countries demand an equal share of prosperity. (6) Insights into the finality of quite a number of inputs presently used in agricultural production will require new teaching content about environmental economics. (7) The still growing role of government in European agriculture will necessitate a larger share of teaching about bureaucratic behaviour and individual reaction. (8) More dependencies among nations will develop. Do we have an adequate theory of division of labour among rich and poor countries which anticipates world-wide needs for human dignity at the end of this century?

On the micro-level again eight major areas will challenge the future agricultural economics teacher: (1) While farm planning under uncertainty (especially weather risks) remains an issue, the European Community guarantees most prices, so certainty at that level has increased and teaching has to include this fact. (2) Further increases in enterprise specialization need special attention in teaching to look for risk distribution, also into non-agricultural activities. (3) Many small land owners need encouragement not to be full-time farmers any longer and to supplement their income from other employment. Is this a teaching issue? (4) Planning for further growth of the remaining farms should be an essential part of teaching, as long as farm size in most parts of Europe are far below the necessary income generating capacity. (5) Further growth means heavy financial investment for which students demand intensive instruction on liquidity problems, optimal debt volume, farm-household

and household-farm transfer problems. (6) Further agribusiness growth means need for information about possibilities of active partnership of farmers in larger commercial business firms, including corporative farming and processing. (7) Farm planning by objectives will necessitate emphasis on "teaching by objectives" to instruct for solving particular individual or regional farm problems with instruments of the decision theory. (8) The teaching of individual decision-making processes on farms may have to be complemented by advice how to motivate and to implement collective action in families, groups and institutions.

### SUMMARY

In this paper it has been argued that European teachers of agricultural economics have responded to agrarian changes by establishing relevant disciplines and designing appropriate syllabi. But accomplishments cannot be measured, except in individual case studies; they are assumed as long as graduates find suitable employment. Teaching performance of agricultural economists at university level still takes second place to research acknowledgement through publications. Challenges in the future will come from further political advances of the European integration policy and a worldwide "new economic order" influencing farm prices and investment decisions, and from the further growth of the agribusiness complex, as well as through changing individual and social values about production goals, resources use, and rural life styles.

### NOTES

<sup>1</sup> Glenn L. Johnson "The Quest for Relevance in Agricultural Economics", *American Journal of Agricultural Economics*, 53, 5 (December 1971), pp. 728-39.

<sup>2</sup> Glenn L. Johnson, op. cit., p. 733-4.

<sup>3</sup> Wu Ten-Yao "Higher education for whom and for what?" *Conference Proceedings: Higher Education and the masses*, Singapore Sept. 1977, p. 5.

<sup>4</sup> Vernon W. Ruttan "Technical and Institutional Change", *Proceedings of XVth Conference of the International Association of Agricultural Economists: Future of Agriculture*, São Paulo, Brazil 1974, p. 75.

<sup>5</sup> Philip M. Mbiti "Transfer of useful knowledge in agricultural development in Kenya", *Agricultural Administration*, Vol. 1, No. 4 (1974), p. 79.

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## DISCUSSION OPENING - CHRISTINA DAVID

I will focus my comments on the challenge for teaching agricultural economics for agrarian change on less developed countries at the graduate level.

The most insightful and significant part of Dr Thimm's paper, I think, is his observation about the performance of the agricultural economics programme and I quote, "Neither particular agricultural policy decisions nor management performance can be traced back to teaching activities directly except in individual case studies". Again, later he says, "there is no evidence that teaching of agricultural economics has influenced any major agricultural policy decision in Europe. Nor do agricultural economists appear to have anticipated social and technical changes better than other disciplines".

A similar view was expressed by Alex McCalla in reviewing the agricultural and food policy decision making process in LDCs: "Decisions relating to food and agriculture were made at the presidential and cabinet levels with the inputs of ministries of finance, commerce and central banks and much less with the input of ministries of agriculture - agricultural policy researchers doing micro-research are not connected with the policy process and macro-policy researchers lack contact with micro-research".

While I think that those observations reflect the basic shortcoming of agricultural economics programmes in LDCs, I have a somewhat differ-

ent opinion of what is the source of this problem and therefore what should be the direction for relevance of the programmes.

After reading Dr Thimm's paper and joining the discussion group on curriculum development, I think I am beginning to understand the limitations of the agricultural economic programme in developed countries to the needs of the rural sector in the LDCs. The problems are not only in the complete reliance on the traditional framework of perfect and independent markets, independent farm and household decision-making, lack of exposure to comparative economic systems, in the preoccupation with the study of American related institutions, in the relatively thin and declining expertise in international development issues and so forth. These problems have been articulated in previous conferences. Let me suggest, however, that the programme's emphasis on farm management and the consequent insufficient attention in training economists who will be capable of agricultural production and development analysis for policy-making as well as for educating future agricultural economists are important problems.

Although teachers may think farm management is a tool for understanding farm behaviour which can be used in policy-making, we frequently observe that students feel that through farm management courses, one can make better allocative decisions than the less educated farmers. In the context of the agricultural sector in many LDCs, especially in Asia where farms are very small and farm cultivation is relatively simple, training farm managers in universities is not a priority. They will not be hired by small farmers, they will feel too educated to go back to farming, and they will not necessarily be able to allocate resources more efficiently. At least in Asia, the fact that small farmers are allocatively efficient is well documented. Farmers make the kind of decisions that economists would recommend, using instinct instead of highly complex quadratic programming. Moreover, careful analysis of sources of inefficiency shows that technical inefficiency is more important than allocative inefficiency.

Agricultural economists cannot directly contribute to the development of new technology and it is not obvious that agricultural economists can teach the new farming technology more effectively than extension specialists, agronomists, rural sociologists or trained farmers. Farm management is no doubt useful in extension and agriculture programmes, but a broader economics training is required to analyse the nature of the appropriate technological development.

Thus I differ from Dr Thimm's prescription for increasing the contribution of agricultural economists towards improving rural welfare in LDCs. Dr Thimm suggests that we broaden the programme by more communication, agriculture, and sociology courses. That is, make agricultural economists more of an agriculturalist or extension specialist, or rural sociologist. More appropriate, I think in the LDC context is to broaden towards more economics, international trade, monetary theory, welfare, economics and produce agricultural economists who are stronger

*economists*. This judgement is based on my belief that small farmers in LDCs are poor not because they are not allocating resources efficiently but because they have much less initial wealth and opportunities, they have low productivity in the technical sense, they have less developed product, input, and financial markets, and they are victims of inappropriate policies and market interventions.

Let me make two other small points. First, you will note that I did not stress the teaching of quantitative methods. Of course it is very important but I feel that quantitative methods should be used in sharpening our analytical skills as economists. At this time many agricultural economics programmes in the US have not adequately taught students the limitations of quantitative methods. All too often graduate students learn more about programming techniques than about economic analysis.

Second, I have also often wondered why agricultural economists in less developed countries frequently equate research with data collection or surveys. This is not to say that data and field experience are not important. The mentality that surveys are a necessary part of a good agricultural economics programme, however, has detracted from more efficient and improved data collection efforts in LDCs, i.e. institutionalization of farm management surveys and research in reducing sampling and non-sampling errors. Agricultural economists have not adequately recognized the role of a sampling survey statistician nor the sociologist in this task. On the other hand, large data sets collected by agricultural economists are frequently under analysed.

#### GENERAL DISCUSSION – RAPPORTEUR: RICHARD F. BATES

The following points emerged in the general discussion. It was stated that the Wye College curriculum included in the paper was incomplete in two respects. Firstly, it was confined to undergraduate courses, but there are also post-graduate courses which go further than the courses listed. Secondly, the list omitted the following undergraduate courses: Mathematics for Economists; Concepts and Methods in Social Science; and Introduction to Computers and Computing.

In the paper it was stated that “There is no evidence that teaching of agricultural economics has influenced any major agricultural policy decision in Europe.” It may be true that no evidence on this point is available, but this does not mean that none could be obtained. It was suggested that many of the major policy decisions have been prepared mainly by members of secretariats of international agencies and by national civil servants and if these people were asked whether their training in agricultural economics had been of any professional value to them, the answer would generally be positive. As far as British policy is concerned, many consider that the 1947 Agriculture Act has been of fundamental importance in the history of postwar agricultural policy; and it is not difficult to trace in the drafting of that Act the hand of civil servants who had received formal



training in agricultural economics as part of their university education.

The division between micro and macro aspects of agricultural economics is not as clearly defined today as it was in the past, especially in the Eastern European countries. It was held that in the teaching of micro economics general problems should be looked at carefully.

With regard to macro economics the problems of the food industries and the agricultural industries must be dealt with.

The question as to whether the problems of LDCs, e.g. the equitable distribution of income, should not be included in the undergraduate courses in the United Kingdom was raised.

In reply, Professor Thimm agreed that agricultural economists have to accept that farmers in LDCs may be more rational than they have been given credit for with regard to the allocation of their resources. He stated, however, that there will have to be a change in the allocation of resources in these countries if the people are to produce for the market in the future. He therefore thought that there was a place for farm management courses in these countries.

He stated that there is a problem of how to measure the accomplishments of teachers. It is probably best to leave the definition of what is good to the employers of agricultural economists.

With regard to the division between macro and micro economics the Eastern European countries have gone further than any other countries in integrating the two fields. The problem has however been taken care of in the courses given in many Western European institutions.

He felt that the problems arising in LDCs have to receive greater emphasis in the teaching of agricultural economics in Western European institutions. The emphasis on these problems has up to now depended on the interests of teachers primarily and students only secondarily. Teachers are now showing a greater awareness of the problems associated with LDCs and hence we need not be too pessimistic about the inclusion of relevant courses in the future. At present there are a number of European students visiting LDCs and acquainting themselves with the problems. This knowledge will be brought back and used to benefit agricultural economics courses in the future.

Participants in the discussion included Denis K. Britton, Mieczslaw Adamowicz and John R. Raeburn.