

THE ARKLETON TRUST

EDUCATING FOR THE YEAR 2000-Agricultural Education and Training in the European Community

Report of a seminar held in Scotland from 3 - 10 June 1978

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PREFACE

This report is based on the discussions of a seminar held by the Arkleton Trust at its Seminar Centre in Langholm, Dumfriesshire, Scotland from 3 - 10 June 1978. The theme of the seminar was 'Education for the Year 2000 - Agricultural Education and Training in the European Community'.

The purpose of the seminar was to consider the requirements of agricultural education and training in relation to the changing shape of European agriculture. It is hoped that this report will help to focus attention on some of the major issues which now face the educational institutions of Europe in adjusting the structure and content of their courses to a rapidly evolving situation. The report is, however, not only directed to educators but also to national decision makers, the elected representatives of producers and consumers, and to all those who are concerned about the need for an efficient and viable agricultural policy within the Community.

During the course of the seminar, the Arkleton Lecture was given by Professor Sir Kenneth Alexander, Chairman of the Scottish Highlands and Islands Development Board. His title was, 'The Work of the Highlands and Islands Development Board with particular reference to the role of education and training'. Copies of the lecture are available from the Trust.

The Arkleton Trust wishes to acknowledge the assistance of the following in providing funds for both the holding of the seminar and the publication of this report, which is available, in English and French: the Commission of the European Communities, the Ernest Cook Trust, the Edward Cadbury Trust, and the Walter Higgs Charitable Trust.

The participants at the seminar are listed below. They represented between them a number of national and international agencies in the educational and policy fields, but attended the seminar in their individual capacities.

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The Secretariat for the seminar consisted of John Higgs, Kay Killingsworth and David Moore.

This report has been prepared by David Moore in consultation with seminar participants. After a review of the situation of agriculture in the European Community, of the place of the farmer in society and consideration of likely future trends until the end of this century, the report considers the task of education in promoting agricultural production and in making urban people aware of agricultural and rural questions. The final section identifies a number of areas in which action could, or should, be taken in response to the seminar's conclusion that regionally based rural development strategies are urgently needed, and will become essential after the entry into the EEC of Greece, Portugal and Spain.

SUMMARY OF CONCLUSIONS

I RURAL EUROPE

i Agriculture in the European Community (p.1)

There is enormous diversity in EEC agriculture both between and within countries, yet the Common Agricultural Policy is largely implemented as if this were not so.

ii The Farmer and Society (p.2)

Pressures on farmers are not only caused by the cost/price squeeze but also by the growing desire of urban people to enjoy the countryside. The farmers' traditional view of the countryside as being primarily for agriculture is being challenged.

iii Education and the Farmer (p.4)

Agricultural education and training systems which could assist farmers to respond to new opportunities fail to reach the majority including those who could benefit most.

iv Education for the Future (p.5)

It is impossible to predict the likely state of agriculture or rural society by the year 2000. Change is inevitable, yet those who will lead farming at the end of the century are being trained today as if the situation will remain the same.

v Enlargement of the Community (p.6)

Regional agricultural policies need to be implemented without delay and will be essential when Greece, Portugal and Spain join the EEC if serious structural problems are to be overcome.

vi A Rural Development Approach (p.7)

The full exploitation of Europe's rural resources and the regeneration of rural economy and society, especially in the marginal areas, can only be achieved through rural development strategies.

III AGRICULTURAL EDUCATION AND TRAINING

i Comparison of Systems (p.10)

Agricultural education systems in EEC countries are surprisingly similar. At all levels they disseminate technical knowledge and skills but only a limited amount of broader education. They rarely view agriculture in its societal and environmental context.

ii Educating for Agricultural Production (p.13)

Agricultural educators are under pressure to provide students with immediately usable skills. The opportunity to provide necessary wider perspectives is limited. Transferability of skills is essential, for many who are trained may start in farming but will leave within a few years. Graduates at the university and higher technical level rarely envisage a career in agricultural production. The number of people being trained at the secondary level is growing. The accelerating pace of technical change will create an increasing need for in-service and refresher training. Modern and more productive farmers obtain most benefit from agricultural advisory services.

iii Education about Agriculture (p.17)

General education systems tend not to teach about agriculture or rural problems, but are orientated towards urban and industrial society. There is evidence that many young people are dissatisfied with this bias. There is need for greater collaboration between agricultural and general educators.

iv Education for Rural Development (p.19)

Education and training must play a key role in preparing people for rural development. They will need broader knowledge and skills than at present provided. Rural development requires the participation of rural people in deciding what can and should be done. Conflict between micro- and macro-plans and needs is likely. This must be recognised and local community control of action and institutions supported.

v Institutional Change (p.22)

Any attempt to evolve a European-wide system with a degree of uniformity in educational provision would be counterproductive. Stronger formal and practical collaboration between agricultural and training institutions is necessary. In this context a European association of agricultural education institutions could play an important role.

III THE NEED FOR ACTION

i The Dynamics of Change (p.23)

Education is a key element in ensuring the consolidation of the more productive farming areas of Europe, the regeneration of those which are presently marginal, and in ensuring public understanding of the measures that must be taken. It is essential to encourage the evolution and adoption of new approaches which will ensure that education supports rather than hinders the types of changes that are required.

ii Supply and Demand (p.24)

It is incumbent on educators to find out why a large number of people within the rural economy is not receiving the education and advice that is needed, and what measures should be taken.

iii Content of Education (p.24)

Though the objectives and content of general and agricultural education differ at each level, curricula should ensure the transmission of a broad societal view of agriculture and rural life within a European perspective. Links between general and agricultural education should be strengthened. At higher levels more emphasis should be placed on courses and seminars on European agricultural and rural topics. Language remains one of the most serious barriers to achieving a sense of community.

iv Advisory Services (p.26)

Agricultural advisory staff are not trained for work in rural development. Socioeconomic training for those in the advisory services is essential. In-service training programmes should provide for regular visits to countries elsewhere in the Community.

v Educators and Structural Policy (p.26)

Many of the smaller farms on the European periphery must amalgamate; this may be increasingly by group and collective action and will increase the need for educators and advisory workers to appreciate structural policy.

vi The European Dimensions (p.27)

Agriculture should be seen as a Europewide industry playing a significant role in economic and social life. Agricultural educators have it within their competence to make agricultural integration as fast and painless as possible.

vii Small Fires (p.27)

Many innovations are being made in education and training within the countries

of the Community, but there is no effective means of communication among those who are working in the field. The Arkleton Trust will seek funding for the establishment of a regular service to link agricultural educators, extension workers and farmers organisations.

I RURAL EUROPE

i Agriculture in the European Community

Many critics of the European Community's Agricultural Policy (CAP) claim that it is planned and applied as if all farms in the Community are similar. They further allege that policies are often translated into national legislation with little or no regard for their implications for the majority of domestic farmers, and with little intention of making the structural adjustments which are necessary to ensure their effectiveness.

Agriculture in the EEC employs some eight million people in more than five million enterprises farming more that sixty per cent of the total land area. The majority of these farms are run entirely by the families which own or rent them. Labour productivity has been increasing at a faster rate than in the industrial sector during recent years. EEC agriculture produces about one twentieth of the Community's gross product.

Behind these figures, however, lies a situation of enormous diversity. Whilst the majority of farms, some seventy-eight per cent, are smaller than twenty hectares, only six per cent exceed fifty hectares. This structural disproportion exists, to a greater or lesser extent, in all countries and is one of the biggest problems facing the Community in framing its policies.

The numbers employed in agriculture also vary considerably between countries. In the United Kingdom, where farm size is considerably larger than elsewhere, less than three people out of a hundred work in agriculture, whilst nearly a quarter of the Irish and Italians earn their living from the land.

The number of small and relatively unproductive farms has decreased considerably during the past twenty years as a result of policies intended to facilitate amalgamation and enable the less productive farmers to retire or to find employment elsewhere. But, as has been seen, the small farm still predominates. The more productive, and usually the larger farms, are responsible for nearly seventy per cent of all agricultural production in the Community.

It is widely recognised that the impact of EEC policies has been to increase further the differentials between, on the one hand the most productive and most favoured in terms of climate and natural resources, and on the other the smaller and less favoured. These differentials have been increased even within individual countries. The President of the Commission, in October 1977, stated:-

"We must, I am afraid, admit that the policies which the present Community has pursued - or in some cases the lack of them - have led if anything to a widening rather than a narrowing in the gap between its poorer and richer regions."

EEC agricultural policy has been framed to embrace economic, social and structural objectives. The principal Directives have been based on a flexibility that permits national implementation to take account of, and compensate for regional differentials within count-To a certain extent Directives have been based ries. upon the assumption that so called 'modern' farmers can look after themselves, and have been selective in aiming at the farmers with intermediate and non-viable enterprises. But a Committee set up by the Commission in 1976 to look at the regional effects of efforts to encourage farm modernisation found that much of the money made available had ended up in the richer EEC regions. This is not surprising since the grants and loans available are given to farmers who can draw up a coherent and financially sound development plan. The problems of the Scottish crofter, of the French Breton farmer, or the peasant cultivator of southern Italy seem as far from solution as ever. The CAP is neither providing the farmers in less favoured areas with necessary assistance nor is it giving them an adequate income through the price support system.

ii The Farmer and Society

The farming lobby has traditionally exercised a considerable political influence in all the Community countries, and latterly also in Brussels. Farmers' representatives have for decades negotiated bilaterally with governments levels of price support and subsidies. Few other industries enjoy this privilege. This influence is now being challenged both at the national and at the Community level, in part because the rapid increases in food prices in most countries in recent years has led to increasing consumer consciousness.

Throughout Europe there have been demands from consumer organisations and industrial trades unions that they should be involved in negotiations on food price policy along with government and farmers' representatives. Antagonism towards the farming community and doubts about its integrity have been fostered at a time when the farmer, just as much as the consumer, has been under severe pressure from the effects of inflation and the cost price squeeze.

At the same time, the traditional isolationism of the farmer is being challenged by the desire of the urban people for greater access to the countryside. Increasing leisure time and mobility of urban workers means that land which the farmer has in the past regarded as being for his exclusive use must now be shared. The farmer is also challenged by growing interest in the environment and concern about its conservation. There is increasing criticism of some intensive farming practices and of the high inputs of energy which are required for modern farming.

Farmers have taken steps to counter such pressures. For example, the collective body of farmers' unions and farm co-operatives in the Netherlands has established a public relations unit to 'defend' the farming interest from burgeoning lobby and pressure groups, some of which have already seen their points of view expressed in legislation.

Decisions on such matters as the environment, transport and education have been made without reference to ministries of agriculture or farmers' and workers' organizations, even where those decisions will have direct and sometimes negative effects upon farming practice. Such pressures and decisions are coming from individuals and organizations having little relationship with farmers. Those involved lack knowledge and understanding of the rural environment since educational systems teach values derived from urban and industrial experience. Ignorance of the nature of agriculture is widespread. There is, as was pointed out in the 1978 Arkleton lecture, "a woeful lack of association between what stocks the supermarket shelves and what happens beyond the urban sprawl." Indeed some time ago a survey carried out in a British urban shopping centre showed that one in five of those questioned could not say which animal provided bacon.

In some countries it would appear that the administrative structures dealing with rural questions are often not geared to ensure rational planning in rural areas. They appear to underrate the effective potential of rural people. Decisions concerning high capital investment in dams and irrigation systems, as well as, for example, the construction of processing plants, are made without the involvement of farmers who are, presumably, among the people whom it is intended to benefit. In addition, the training and inputs necessary to enable farmers to advisory utilise such investments are, either, not made available, or are introduced without co-ordination with other inputs, thus detracting from their effectiveness.

It would be entirely wrong, however, to try to place the responsibility for the problems now facing the farming community on urban doorsteps alone. To a large extent farmers have failed to adjust their views to the realities of present conditions and must bear much of the blame. The decrease in the number of people actively engaged in agricultural production has contributed to a decline in the political influence of It has also seriously affected the dynamism farmers. Indeed, it is doubtful whether of rural communities. rural Europe can afford to lose many more of its younger and more dynamic sons and daughters. In many of the less developed areas of Europe, and to a lesser extent in those where agriculture is more productive, the rural economy has already been seriously weakened. In many areas today, the potential for rural regeneration exists, ironically, because of the growing demand by urban people for access to the countryside. It is often precisely those areas which have been most seriously affected by out-migration, isolation and social and economic under-development during the past hundred years where the greatest potential for and obstacles to development now exist. This can be seen clearly in the south of Italy, the French Midi and the Scottish Highlands and Islands.

iii Education and the Farmer

Agricultural education and training systems and advisory services which could assist farmers and their families to respond to new opportunities tend to be restricted to technical aspects of agricultural production, and principally reach only those farmers most able to use modern technology. Larger and more

productive farmers who gain most from price support, improvement grants and other aspects of policy, also gain the most from education and training.

EEC Directive 72/161/EEC Title I provided governments with the possibility to introduce advisory services aimed at the 'hard-to-reach' farmers and their families, but governments have been unwilling to change existing systems to apply the kinds of approaches which would be necessary. In general, present day farmers, planners and politicians tend to take a very narrow view of agricultural policy. Agricultural educational systems reinforce this narrowness of vision and approach by their emphasis upon the technological and economic aspects of agriculture. They could, and should be placing their technical subject matter in a broader societal and environmental context.

iv Education for the Future

Among those who are receiving agricultural education today are those who will be the farmers, educators, administrators and policy makers in the year 2000. No one can say what will be the shape of agriculture, or of rural Europe, at the time when they will have responsibility for it. For example, it is quite feasible that there will then be a far greater number of large agri-businesses requiring a highly complex management structure. Such a change may be paralleled by the widespread use of micro-electronics and computer technology requiring substantial changes in training Demand for agricultural graduates to work in the Third World may substantially decrease, perhaps to the extent of eliminating a traditional source of employment. Yet a third possibility would be greatly increased mobility of trained manpower between countries of the Community. A further possibility is that there may be such a dramatic decrease in the number of small family farms as to completely change the employment structure of European agriculture.

Whatever happens, it is clear that there will be considerable changes during the next twenty years or so, but only futurologists dare to predict what these changes may entail and their implications for man-power planning. It may be more productive to recognise that the future is largely unknown, and to ensure that the education and training provided now at least

enables students to grasp the present European reality, and motivates them to mould and change it as circumstances arise. They must have the ability to adjust to change in their individual circumstances by having skills which are transferable from one type of occupation to another. They must also have the intellectual flexibility to adjust to change in the structure of national societies and in their relations with the rest of the Community, and with the world. The changes which appear most likely during the next twenty or so years will arise in large measure from the impact of the enlargement of the Community and from Europe's evolving relations with the Third World.

v Enlargement of the Community

The enlargement of the Community will be in a southerly direction bringing in the Mediterranean agriculture of Greece, Spain and Portugal. Many present, and so far intractable farming problems will be considerably increased. In terms of gross national product per head, the level of Greece and Spain is only about half of the present Community average, and only about one third of that of the richest members. Portugal's level is substantially lower still. The problem of the economic gap, which has been a weakening factor in the process of integration in the present Community will be exacerbated. In human terms the number of farmers in the enlarged Community will more than treble with the addition of some fifteen million peasant farmers. These millions of prospective new members of the Community live in countries which, while traditionally affected by out-migration, still have a higher proportion of rural people than the present members of the EEC. For example, more than a third of Greeks work in agriculture. There is a very real danger of northern antagonism towards the measures which will be necessary to support the south. Such antagonism already exists, even among the farmers of the existing Community.

Traditional escape routes for surplus rural labour from the south are now far less open than they were, both because of the high levels of unemployment in northern Europe, and because further large scale migration from south to north is politically unacceptable, at least to the north. The entry of the southern countries may also lead to significant adjustments in the patterns of agricultural production in the Community. Mediterranean 'sun power' will come to

compete with northern 'petro-chemical power' in the production of a wide range of horticultural and other crops. Future policy will have to take account of these and other less easily predictable factors. It will have to encourage and when possible assist the adjustments which will be required. Beyond this, however, it will be essential for the general public to understand the changes which are inevitable if further antagonism towards the European ideal is not to be generated. For their part, farmers who have generally been slow to change, will have to be helped to respond to the adjustments which are coming. who are today educating for the future have a deep responsibility to consider how best they may ensure a breadth of vision, and an intellectual and professional flexibility in those they teach.

vi A Rural Development Approach

The rural periphery of the EEC includes the Highlands and Islands of Scotland, much of Ireland, southern France and Italy as well as certain areas of other countries. These areas are geographically peripheral to Europe's agricultural and industrial heartland. They are often climatically extreme and invariably lack a sound resource base. They have been seriously affected by the consequences of out-migration over many years and now suffer a serious lack of social provision. The size of such areas, and the number of people living in them will expand dramatically with the enlargement of the Community, but, even before this, policies are required which will support their economic and social development. An overall view of their potential is needed, and ways to achieve the balanced development of their limited natural but abundant human resources must be found.

Such new policies would promote strategies for rural development suitable for each region and community. There is nothing new about such approaches, they have been promoted in the Third World for years, but there have been few attempts in the European Community. More than a decade ago the Scottish Highlands and Islands Development Board stated among its objectives the need, "to maintain and if possible increase the settled population by helping to provide job opportunities and incomes roughly comparable with other rural parts of the country... contributing to this objective should be the most productive use of the land resources of the Highlands and Islands by agriculture, forestry and other economic activities which should be developed in

a planned and, as far as possible, complementary relationship to each other. Any land policy measure consistent with these aims should encourage an increase in output and value added...". Such measures must be carried out so as to maintain a balance between social and economic considerations. Professor Alexander noted that, "any acceptable definition of development must embrace factors affecting the quality Social aspects must be taken into account of life. and attempts made to arrive at a consensus on what constitutes 'quality' in life. There will always be a temptation to over-emphasise the economic - the quantity - aspects of development at the cost of the social - the quality - ones because by their natures one is measurable, more easily handled and more directly controllable than the other, which is composed of less than universally accepted elements and comparatively few statistically quantifiable concepts - the social is 'woolly' and nobody likes that".

There is no single prescription for effective rural development. To be successful those who promote it must work with those whom it is intended to benefit, to evaluate rural resources, identify constraints to social and economic improvement, and decide on the steps which must be taken to overcome them. Technology and sectoral inputs must be geared to an overall, balanced process of change which starts with what exists. In the past technological and economic aspects appear often to have been stressed at the expense of the social and structural thus creating an imbalance.

The experience of the Development Fund for the South of Italy (Cassa per il Mezzogiorno) in promoting rural co-operatives has shown, however, that a balance can be achieved. The technical efficiency of, for example, agricultural training, need not suffer - that, in fact, its impact is enhanced - if it is provided within a developmental context, and backed up by sensitive and appropriate support for the expansion of economic activities in tune with the social environment. In less than ten years more than one hundred and fifty large rural producers' co-operatives have been established in southern Italy by extension workers and technicians providing training within the context of the cooperative enterprise itself, rather than on an individual and institutional basis. The cost of this approach, which has generated new employment opportunities, is not high when compared with the cost of establishing industrial jobs. By comparison with, hitherto largely unsuccessful, attempts to create industrial employment in rural areas it is also most effective.

A standardised approach in applying developmental measures would, however, be inappropriate, and probably unsuccessful, as have been the bulk of measures taken so far by the EEC in support of farmers in less-favoured areas. Approaches must respond to the specific needs of individual communities and areas. They must also be sensitive to the fact that many rural people, and not just those on the periphery, feel alienated from, and out of touch with the central government and the administrative structure affecting most aspects of their Application of rural development approaches in Europe has however, been restricted to certain areas, for example in parts of France and in the Netherlands. Agricultural policies (and other policies for that matter) have usually been pursued as if such approaches did not exist.

There are some major implications if rural development programmes are to be established; they require immediate attention. The hard fact is that rural development is a long term and difficult process. Even given the accelerating pace of change in Europe such action must be planned and pursued for a generation or more if it is to be effective. Those who are at present being educated must be provided with the basic knowledge and the conceptual framework, as well as the professional flexibility to be able to respond to the potential and demands of such approaches.

Public awareness of the work of the Community, and of the idealism which underlay its creation must also be Community policies today appear often to be enhanced. a series of accommodations between national interests, rather than an expression of the unity of people working together in a common endeavour, as Jean Monnet saw Positive discrimination towards the less-favoured areas in terms of increased investment, perhaps at the expense of the richer, can easily create a backlash in public opinion. The proposed increase of 7.9% in the EEC's 1979 agricultural budget is almost entirely due to measures recently adopted in favour of the Mediterranean regions; if the less favoured regions and the applicant countries are going to benefit from special programmes then it is quite likely that further increases will be required. Unity and solidarity between people of different tongues and life-styles are essential if the European idea is to survive the strains that such measures impose. This will require a more determined effort by the Commission, by national governments and by all those concerned with education to ensure a clear, if critical awareness of what is happening, and why.

II AGRICULTURAL EDUCATION AND TRAINING

i Comparison of Systems

National systems of agricultural education and training have evolved during the past century in response to the increasing technology involved and recognition of the importance of agriculture to national economies. There has been little direct contact between institutions in the different countries in the EEC. It is therefore surprising that there is a great deal of similarity between the systems. Figures 1 and 2 give a generalised picture of the four levels which exist. This analysis applies to each country's system, with minor modifications to take account of, for example, differences in age for transition from general to specialised education.

The four levels are :

- a. the compulsory education systems through which all children pass and which provides the educational foundation;
- b. the second level at which children begin to participate in increasingly vocationally orientated learning. The Netherlands is the only country which has specific Secondary Agricultural Schools with entry at the age of twelve. general young people pass into technical agricultural training between the ages of fourteen and sixteen. This level is principally concerned with the preparation of young people who will work on farms or at a practical level in supporting industries. It has been considerably expanded in all countries in recent years;
- c. the third level encompasses the universities and higher technical institutes which award degrees and higher diplomas. Generally speaking those who will work in practical agriculture do not study at this level. In the United Kingdom and Germany the number of places in agricultural faculties has been decreased during the last decade;
- d. It can be argued that advisory services providing technical advice at the farm level should not be included as part of the education system. There is however, a strong case for including it within the nonformal system of education along with

Figure 1 GENERAL OUTLINE OF PRESENT COMMUNITY

AGRICULTURAL EDUCATION AND TRAINING SYSTEM

Level	Target Age Group	Type of Education	
First	5 - 16	Compulsory Education	
Second	14 - 19	Secondary Agricultural (Certificate and Diploma)	
Third	18 - 24	Higher Agricultural (Diploma and Degree)	
Fourth	16 +	In-service and recurrent (Certificate)	
		Nonformal education including advisory services and mass media (no qualifications)	

Figure 2 GENERAL SUMMARY OF TARGET GROUPS AND CONTENT OF PRESENT AGRICULTURAL EDUCATION

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ļ	Level	Target Social Group	Content
	First	All children and young people up to the end of compulsory schooling	General education with a low or non- existent agricultural content
and an interpretation of the state of the st	Second	A large proportion of new entrants into agri- culture and related occupations	Low general educ- ational content - primarily technical and vocational
	Third	A very small number of those going into farm- ing. Most future administrators, advisory workers and agricultural educators	Low general educ- ational content - primarily either high level technical or applied science
	Fourth	Those engaged in practical agriculture	In most cases little or no broader educ- ational content - purely technical and vocational

short term in-service training at agricultural colleges.

There is one fundamental difference in the philosophical approach to education between countries in the Community. This is especially marked at the second, vocational level. In Belgium, France and Italy education is a strictly hierarchical process in which the level of qualifications obtained is of paramount importance. Despite the fact that farming is largely an entrepreneurial activity where formal qualifications are less important that the acquisition of relevant skills, even those who will work in practical agriculture are expected to strive for higher and higher qualifications. Elsewhere the emphasis is upon skill training; in Denmark, for example, many of attendance vocational courses issue certificates to those who complete courses, but make no reference to the level of skill or attainment achieved. vast majority of Community farmers today have received very little, if any specialised agricultural training, or indeed, a great deal of education beyond the first level. However, in some countries, (especially Denmark and the Netherlands) a considerable number has: received training at some stage. Increasing attention is now being devoted to in-service training for farmers and farm workers who for various reasons received no specific technical training at entry. The work of the British Agricultural Training Board is a good example of this kind of provision.

It is generally recognised that new entrants should receive some degree of specialised training, and some countries such as Germany, provide economic inducements to encourage young farmers to study. It can be expected, therefore, that at least in the present Community an increasingly higher proportion of farmers and farm workers will have a technical background.

ii Educating for Agricultural Production.

Few would dispute that the broad objectives of education are to impart knowledge and to prepare the pupil for a fruitful life in whatever context. Education should enable people to grasp their reality, and to be motivated to change it. Putting these ideals into practice, however, leads to one of the principle dilemmas facing educators today. The increasing sophistication of industrial society (and of agriculture), the motivation of students for a training which prepares them for employment, as well as general

pressures from society that education be recognisably 'useful', mean that the educator is squeezed from two sides. On the one side, he must provide useable skills and a high level of technical or vocational content, whilst on the other, he has a responsibility to provide a general educational component in order to ensure that students have intellectual and social flexibility.

Beyond this, the educator must try to ensure that there is the possibility of skill transfer from one occupational sector to another. The importance of this should not be underestimated when discussing agricultural education. With the continuing decline in employment opportunities in farming throughout Europe, a great many of those who have received technical agricultural training will wish, or will be forced, to seek employment in the non-agricultural sector at some stage in their lives.

At the same time, it is noticeable that those who receive their training in their late 'teens or early twenties and who do stay in agriculture will rarely, if ever, be willing or able to return later to further agricultural education. The nature of family farming rules this out for the vast majority. Yet the rate of change in agricultural technology and in other factors affecting farming makes it desirable that a continuing process of education and retraining should exist in a form which suits the majority of those who most need This is especially important when it is realised that the majority of young people receiving training today will not be in a position to make management decisions on their own farms for a decade or more. appears almost universally true that, whilst some sons and daughters of farmers may be able to influence their parents to some extent, they invariably have to play a subordinate role for many years.

Second level agricultural education and training is concerned with the preparation of those who will have a career in agriculture. Educators working at this level are most affected by the technical versus general education dilemma. In most Community countries much has been done to adjust course structure and content to the changing circumstances and needs of agriculture, but general educational content, or even teaching about farming in a national, European, or world context has not been widespread. On the other hand the rapid increase of interest in, and demand for 'green' education in the past few years has led to competition for places in full time courses. One result, in the Netherlands, is that some institutions have decided to

give entry priority to students who come from a farming background or who have a clear possibility of employment in farming.

It is noticeable that the secondary level of agricultural education is often considered by urban employers as providing inferior training to that provided in other technical fields. This, despite the extreme sophistication of modern agricultural machinery and of plant and animal husbandry techniques, puts the agricultural technician at a disadvantage, when looking for employment outside farming.

The third level of agricultural education, encompassing the universities and higher technical institutions has the task of training the teachers, advisers and administrators in the agricultural sector of the economy. The vast majority of university graduates and holders of higher diplomas in agricultural sciences and economics will never be engaged in practical agriculture.

Under pressure even for academic education to provide immediately useful skills and to develop technological and scientific sophistication and excellence, many university courses in agricultural subjects have come to concentrate on the transmission of a vast store of factual information. Opportunities for a more problem solving and analytical approach to subject matter are simply not possible in many first degree courses due to the volume of basic data which must be absorbed.

In recognition of the limited opportunities for work in practical farming by agricultural scientists, many faculties have considerably broadened the scope of the course options open to students, including, for example food technology and amenity horticulture, along with more traditional agricultural subjects. In some countries, notably in Germany and the United Kingdom there has been a recent move to upgrade the level of the higher vocational courses so that they provide the equivalent of a university degree, although retaining their essentially vocational and technological character. In some instances this has come as the result of pressure from the most productive farmers, and from the ancillary industries which prefer their staff to have a practical rather than academic background. Germany this was one result of national educational reform.

Agricultural faculties are, of course, concerned primarily with technical education and are under

constant pressure to impart a growing body of technical information to their students. In the absence, however, of a general debate about rural policy, they are the best equipped to stimulate such debate in the university. Indeed, they should accept this as a responsibility, and seek to demonstrate the intersectoral implications of rural development to other faculties.

The fourth level of agricultural education and training is directed to those already working in practical farming and related trades and industries. It is fully recognised that such services will continue to be need-It is fully ed in order to assist the farmer and farm worker to keep abreast of technological change, and increasingly complex management. Just as, however, much of the money made available for farm modernisation has ended up in the richer EEC regions, so do the more modern and productive farmers receive the bulk of the advisory assistance provided. A majority of farmers throughout most of the Community benefit very little. From a strictly economic point of view there is justification for this bias; advisory services are largely paid for from public funds, and are directed towards those who are most able to show a return on the investment made. Yet this avoids the issue of what should be done to assist the less favoured regions and farmers. implicit in the attitudes of many responsible for agricultural education and training that they do not intend to aim at the majority of less productive farmers. Many see them as apathetic and lacking in motivation to change. But maybe a reason why the less productive do not use the services provided is because they reject the image of an advisory service staffed by graduates and aimed principally at the 'top' group of farmers. Whatever the reason present provisions would be inadequate if regional policies were to be established.

This problem is less acute in Denmark where local agricultural colleges and their associated advisory services are run and partly funded by local farmers; government provides some eighty per cent of the costs involved as a grant. In some areas of France farmers have come together, in reaction to the rigidity of the educational system, and instituted their own training programmes. Elsewhere governments have tried other ways of dealing with the situation, but their efforts have been limited in extent. They are not part of a strategic approach in which a programme of continuing education and training is related to the strengthening or regeneration of an often fragile rural economy.

Many services that the 'modern' farmer needs from the advisory services are and will be increasingly There is considerable justification in expensive. the proposition that some or all of these costs should be borne by the farmer as a charge to his bus-This is already happening to a certain extent whether the services come from the state or from the private sector. Never-the-less, there will remain a core of integrated advice, both technical and general, Never-the-less, there will remain a which will be useful to the successful large farmer, as much as to those whose businesses are less viable in terms of size and situation. It will be one of the tasks of agricultural administrators in the years ahead to make sure that the redistribution of resources, made possible by the introduction on a wider scale of charged services in agriculture, is sensibly used for promoting the changes in agricultural organisation and structure that are necessary.

Advisory services for the most productive will continue, if for no other reason that they not only provide advice, they also gather information for policy. The importance of this latter function should not be underestimated, but nor should the dilemma in which it places those who formulate policy. Is it surprising if present policies favour the most productive when it is realised that the bulk of the information on which policy is based comes from those self-same enterprises?

The need for continuing education and training has already been mentioned. Refresher training and updating courses will be essential for those already engaged in farming but who have not had management responsibilities since their initial training. This aspect of future provision, and its relationship with the advisory services is one of the most important questions which has to be faced in the coming years.

iii Education about Agriculture

When school children pass from the stage of basic education at the age of eleven or twelve and enter the vocational phase, they are generally channelled into increasingly specialised courses which to a large extent narrow their future choice and their vision of society. This channelling is, of course, based principally upon the wishes of the student and his or her parents, as well as upon aptitude. All systems try to be more or less flexible so that students may change course with the minimum loss of time. But this is not always as easy in practice as it is in theory.

Teaching about agriculture and rural life is rather limited at the first level. The educational system is largely oriented towards the values of an urban, technological and industrialised society. Teachers have themselves experienced a similar bias in their training, and rarely come from rural or agricultural backgrounds. Rather than seeking to create awareness of the values and potential of rural Europe, primary and early secondary schooling has tended to do the opposite. Professor Alexander, commenting on the role of education in the Scottish Highlands described, ".... what was regarded as 'successful' education for generations being the springboard which enabled children to leave the region and find work and a new life further south and abroad". In this sense education has actively encouraged migration from the rural areas, and continues to do so. It appears that rural to urban migration has been readily accepted as inevitable, and the view that agriculture and rural life are somehow inferior to industry and urban society has been given validity. Students have rarely been helped to see the potential for improving the quality of rural life, to recognise those aspects of it which are superior to the urban environment, or to appreciate the competing demands on the countryside.

Despite this, there has been a dramatic increase throughout Europe in recent years in the number of young people at the second and third levels of education wishing to study agriculture, or 'green' subjects in general, even though they have little intention, or perhaps no possibility, of pursuing a career in farming. For example, in Italy in 1975 there was a twentyfive per cent increase in enrolment in agricultural faculties over the previous year while the average increase for all faculties was seventeen per cent. There was a further thirty-five per cent increase in the agriculture faculty at Bologna University in 1977. There is enormous pressure for places at the secondary agricultural schools in the Netherlands, even though the first four years of the course are barely distinguishable, other than by name, from the normal courses provided in secondary schools run by the Ministry of Education.

Why this growth in demand should have occured is unclear, especially since it must be obvious to those who are enrolling, as well as to college administrators, that the vast majority stand little chance of employment in farming. In some cases, such as in Italy, it may be the result of pressures from young people simply to obtain a degree, any degree. In

other cases, where there is a higher level of agriculture and greater employment opportunities in the urban sector, students are seeking a training which is, or is ostensibly, more 'practically' orientated. The phenomenon is, without doubt, an implicit criticism of the structure and content of general education, and is, perhaps a facet of growing disenchantment with the urban environment.

Thus, whilst there is little or no realistic teaching about farming or rural subjects in most schools, many thousands of students are 'voting with their feet' in the hope that what they will be taught in the 'green' stream will prove more relevant to their future lives. Yet it is patently obvious that the agricultural education and training systems in Community countries are unable to provide the number of places to meet the demand. How can agricultural educators and others concerned with farming assist their colleagues in the general education system to adjust what they teach, and how they teach it?

It is the children of today who must be the prime target if, in twenty years time, there is to be a better understanding among the general public on the one hand of the conflicting relationship between agriculture, the rural environment and urban society, and on the other, of the ecological aspects of land use. Many of the politicians and senior level administrators of the early years of the next century are today being educated. Many of those who will determine and administer agricultural and rural policy at that time are being educated in non-agricultural faculties. total lack of agricultural and rural content in their studies, and the technological bias of agricultural teaching itself inspires little confidence in the ability of these future decision makers and opinion formers to respond to the kinds of changes which may take place in the agricultural and rural areas of Europe during the coming two or three decades.

iv Education for Rural Development

Present agricultural education and training systems provide technical training for an agricultural structure which is assumed to be largely static. Rural development is, however, a dynamic process of structural and socio-economic change. It demands a response from the educational system which has a key role to play. Education must, in some circumstances, be consciously planned to perform a role for rural change. Whilst it must still provide a central core of

technical and managerial training, it must do so within a broader context. A greater range of skills and a wider knowledge base will be required, and students must be helped to obtain practical experience of decision making.

Rural development involves the whole community, and aims to assist in its social and economic evolution. The rural village once consisted of people connected in one way or another with farming which provided an identity of interest that, in itself, formed the focus of the community. Today farming rarely provides the sole, or even the main, focus of life in rural areas.

The rural development planner is thus faced with competing needs and demands which are often difficult to reconcile. A balance must be achieved between agricultural, rural industrial and leisure requirements on the one hand, and environmental and conservation concerns on the other. In areas of predominantly small farming units clear guidelines on farm structure will be as important as the development of suitable marketing and distribution facilities. But rural development can only be achieved if there is full consultation with those who live, or wish to live and work in the rural community.

Educational inputs will necessarily have to go beyond the present general limitations imposed by the traditional time-bound and place-bound functions of school-Second level education and training will have to be far more closely related to nonformal provisions, such as those given by advisory services. Education for rural development demands that students are involved within their own communities in identifying, analysing and resolving problems and in examining the feasibility of potential new activities. approach has to be carried out in close association with planners, and representatives of farmers and farm Practical aspects of life, as well as knowworkers. ledge obtained in the classroom and at work will have to be complementary if the information and skills obtained are to be useful.

Thus, educational provision for rural development would have to be available to all. Second level schools and training institutions would, to a degree at least, have to let into the classroom those who would not normally be admitted, both as pupils and as

teachers. This would include the older generation, for its knowledge and experience of local conditions and their potential is extremely valuable and often overlooked.

Underlying all of this should be a basic assumption that rural development is not, and cannot be 'provided by government'. It must come from the people and requires their full partnership and participation. Rural development institutions, at the community level at least, should be controlled and run by the community. Government would have to provide the bulk of funding requirements, as in Denmark for agricultural colleges, but the rural community would also have to have a financial stake in them.

There would also have to be considerable changes in the training of staff of the advisory services to enable them to play a role as 'change agents', as well as in the structure of the services themselves. It may be necessary to adjust the content of some third level courses, or to establish special courses for those who will work in rural development programmes. The most effective method of preparing people for this difficult task is, however, on-the-job training where learning comes from interaction with real situations as much as, or more than from theory.

Structurally, present advisory services are organised so that career development of the individual tends to remove him or her progressively from contact and practical work with farmers. The demands of rural development are such that the individual field worker must remain in place for years rather than months in close and almost daily contact with the farmers and other rural entrepreneurs of the area. The worker must be able to obtain promotion and salary increases whilst remaining 'on-the-job'. In many instances field workers will be required to live in isolated and less developed areas of the Community. Conditions of service will need, therefore, to include incentive payments and other benefits such as help with the education of his or her children.

Due consideration will also have to be given to the ambiguous situation in which field workers will sometimes find themselves when conflict arises between micro-communally identified needs, and macro-national and Community-wide plans. A balance must be struck between the administrative and political requirements of simplicity and equity, and the achievement of a

significant impact in the more difficult areas, especially where farming is likely to remain a part-time occupation.

v Institutional Change

It would be undesirable to attempt to develop uniformity nationally, or throughout Europe, whereby carefully trained individual pegs would be somehow fitted into equally carefully planned employment holes. purely bureaucratic response would seriously detract from the creativity which will be needed in the coming decades if the challenge of regenerating Europe's rural areas is to be met. It is not justifiable to expect, or to desire, that institutions which provide and administer agricultural education and training should be the same throughout the Community, nor that ministries of agriculture or education should, as a matter of principle, have total control of the agricultural education system. Structures have arisen as the result of historical events, and in accordance with social and cultural patterns which are unique to each country. Institutional change, in any case, would not necessarily have any effect on the quality or orientation of the education provided. Rationalisation, in the sense of trying to amalgamate institutions or divide functions between countries, may actually detract from the flexibility of institutions in responding to change.

Nevertheless, the examination of the different institutional structures made by the seminar, revealed the extent to which they restrict themselves to technical aspects of agricultural production or of ancillary industries. Rural development will require a considerable broadening of their approach so that agricultural production, whilst remaining a key element, will be viewed in the broader context of the full economic and social potential of the rural areas of all the member countries. At the same time many aspects of agricultural education, especially at the second and fourth levels, will have to be planned in relation to the special needs of individual communities and regions if they are effectively to contribute to rural development.

III THE NEED FOR ACTION

i The Dynamics of Change

The need for education and training to be closely geared to the requirements of the different types of rural economy which exist in the Community must be Education is just as much a key element recognised. in ensuring the consolidation of the more productive rural areas as it is in the regeneration of those which are presently marginal. At least in these marginal areas, specific rural development strategies, based on an educational approach, are now needed and are long overdue in some countries. Educators have an important responsibility to present farming as only one aspect, albeit an important one, of overall land use in the Community and the world. General education must more explicitly seek to inform and educate about rural Europe. The present demarcation between the transfer of technical skill and the broader aspects of education must be bridged.

There is a natural, and possibly justified, reluctance to bring about rapid or radical change in education. This stems as much from institutional inertia as from tradition. It would, therefore, be unrealistic to call for fundamental reforms throughout the Community. It is more feasible to attempt to influence the evolution of education and training by encouraging those already engaged in promoting new approaches to analyse their work, to exchange their experiences across national frontiers, and to demonstrate their impact.

Agricultural educators are, however, in an important position to influence those who will, by the year 2000 be able to affect the course of change. Educators can help to ensure that their work supports rather than hinders the type of change that will be required.

It often appears that innovations, or modifications to existing provisions, come about in an ad hoc and piecemeal fashion with insufficient or inadequate discussion about fundamental questions such as the relationship of education to agricultural structural trends. Is enough known about the way in which changes in farm structures, or in the socio-economic base of the rural community, feed back to and influence the educational system? What are the underlying assumptions when establishing technical and management content of training systems and advisory services? To what extent do they take into account the extreme diversity of agriculture in the European Community?

These are important questions when considering the Community of nine, but take on a new urgency while the future enlargement of the Community is under discussion.

ii Supply and Demand

An increasing number of new entrants to farming are receiving at least some technical training at the second level. The majority of third level graduates will never work in practical agriculture. An increasing number of these trained people will, however, leave the agricultural field altogether within a few years of graduating.

The agricultural educator's first task is to improve the farmer's quality of life, but he must be increasingly aware that those whom he is teaching will require a degree of job flexibility and thus a broader range of knowledge and skills than has been provided in the past. If the marginal areas are to be regenerated then different kinds of skills will be required. Whilst, admittedly, courses cannot be organised to train people for jobs which are, as yet, few and far between, the basic conceptual and factual knowledge required for such a task should be provided.

An agricultural educator cannot be a passive provider of standardised information. If, as appears to be the case, a very large number of people occupied in one way or the other in the rural and agricultural economy are not receiving the full benefit of education and advisory services then it is incumbent on educators to determine why this is so, and to devise solutions, in consultation with those whom it is intended to benefit. The educator must promote the extent to which his services can benefit rural people.

iii Content of Education

The objectives of general education and of agricultural education and training at each level differ. Content and teaching methodology also, therefore, differ. Curricula at all levels should, nonetheless, attempt to ensure the transmission of a broad societal view of agricultural and rural life within a European perspective. In agricultural education itself special attention should be paid, side by side with specific technical subjects, to exploring how best to impart knowledge of, and insight into the potential of the rural areas, and the need and possibilities for achieving rural regeneration.

The already close links which exist in some places between agricultural educators and those concerned with general education should be strengthened and deepened. The necessity to impart to urban children knowledge about, and sensitivity towards, the countryside and the role which agriculture plays in it is recognised by many. The ways of achieving it are, however, not so well established. Farmers also have an important role to play. They should be more prepared to allow the farm and the countryside to be used as a teaching aid for urban children.

At the higher levels of education far more consideration of the European dimension is required. Consideration should be given to the establishment of special courses and seminars on European agricultural and rural topics. These should be aimed not only at students, but also at agricultural educators themselves and those working in the general educational system. Subjects to be covered would include not only the technical and economic aspects of farming, but also problems of land use and issues arising from rural to urban migration, and vice versa, and the particular educational, social and political problems that these phenomena create. Many such seminars, especially those concerning migration, should be run on an inter-country and Community-wide basis, rather than at the national level.

Not only in pursuance of the European ideal, but also as a matter of professional necessity, second language training should become far more widely a compulsory part of all courses at the third, and possibly even the second level of agricultural education. Language is one of the great barriers to achieving a sense of community; it is also a barrier to the free movement of technicians from one country to another. Knowledge can only stem from an ability to communicate, and European knowledge requires the ability to break down linguistic barriers. Inter country exchange should become an integral part of the European educational system, and complementarity of qualifications between countries should be seen as a priority in order to permit the exchange of technicians.

Much of the written material on agricultural and rural questions is at present being published in only one language. Ways of ensuring translations of important materials, at least into the most used, or understood, languages of the Community should be explored by educational institutions and the European Commission. The use of material from other Community countries in

third level agricultural education is essential if farming is to be viewed in anything other than a national context.

iv Advisory Services

If, as seems to be the case in most countries, those working in advisory services have not been trained for socio-economic work then consideration must be given to providing retraining for those who are, or will be working in regions which require more than a technical agricultural approach. The EEC is already taking some initiative in this, but far more needs to be done by national authorities. The establishment of a separate advisory service for marginal areas would not be greeted cordially by any ministry of agriculture. A far greater regional orientation in advisory work is however needed and a broadening of the basic task entrusted to the field worker. This will be especially important in areas where social and economic progress is unlikely to come simply from intensification and increased capital investment, either because of natural or structural disadvantage, or through resistance by farmers towards such innovations.

The value to field workers of being able to spend time outside their normal working environment to learn from the experiences of others should also be recognised, and study visits within their own countries and elsewhere in the Community should form part of in-service training programmes.

v Educators and Structural Policy

For economic and social reasons many of the smaller farms in the European periphery must amalgamate, and educators have a role to encourage this process. are also good reasons why such amalgamation should be carried out through group and collective action. will bring educators and advisory workers into the realm of structural policy, and it will be important that they become active in promoting changes in policy and practice in order to accelerate the present very slow pace of structural change. Far more study is required of the reasons why present policies tend to accentuate, rather than to decrease the differential between the most productive European farmers and the In this respect the need for effective majority. regional policies and institutional structures related to societal rather than solely individual farm or country needs should be highlighted.

vi The European Dimension

Throughout this report reference has been made to the need for agriculture to be seen as a European-wide enterprise. Farming is an entrepreneurial activity and as such is highly competitive and will remain so. The present tendency for the farmers of each country to see their enterprise as being competitive or in combat with the enterprise of farmers in the other countries is, however, one reason why the CAP remains a series of accommodations of national interest rather that a coherent strategy with complementary national parts. The need for quite massive transfers of funds to support the development of Mediterranean agriculture, as well as the eventual introduction of compre-. hensive regional policies, will require a substantial change of attitude. Not only farmers but also consumers must understand this European dimension. Greater integration of the Community's agricultural enterprise, and its economy generally, appears to be inevitable; the only questions are how long will it take, and how painful will it be? Agricultural educators have it within their brief to ensure that it is as fast and painless as possible.

One step which could be taken would be to strengthen present efforts to build practical cooperation between agricultural education institutions in different countries in the Community. There are surprisingly few examples of such collaboration today. Those who regard this as unnecessary or of low priority, and there are many who do, should be encouraged to participate, and should be informed of the assistance for such action which may be obtained readily from the European Commission. The need to establish an association of European agricultural education institutions might be explored.

vii Small Fires

Much is already happening throughout the Community along these lines. Few know about these small fires and there is no effective means of communicating with those who could learn from them. In the belief that knowledge is half-way to effective action, the seminar recommended that the Arkleton Trust should seek funding for the establishment of a regular service which will link agricultural educators, extension workers, small farmers' organisations and all others who may be interested in and concerned with these issues. Such a service will aim to provide an unbureaucratic

exchange of news, ideas and experience, as well as of detailed case studies, in at least two languages. For example, the experience of the extension workers of the Cassa per il Mezzogiorno in Italy, or of specific communities being assisted by the Highlands and Islands Development Board in Scotland, as well as of extragovernmental collective action, will be made available to a wider audience.

National seminars and workshops on the themes of the Arkleton Seminar will be encouraged and supported, and efforts will be made to follow up this report through more in-depth workshops looking at particular situations.

THE ARKLETON TRUST uses its resources for the study of new approaches to rural development with emphasis on education and training. It aims to promote dialogue between politicians, administrators and practitioners at all levels on the problems of Europe and the Third World.

The Trust's activities include the holding of high level seminars on specialised subjects of immediate relevance to Europe and/or the Third World and the collection and collation of relevant experience for its publications programme.

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