



agriculture

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THE
FURTHER
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COUNCIL

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agriculture

The purpose of the FEFC is to secure further education provision which meets the needs and demands of individuals, employers and the requirements of government in respect of the location, nature and quality of provision.

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In addition to the data included in the tables and figures listed above, further information is accessible through the FEFC website (www.fefc.ac.uk).

Executive Summary

Purpose of the Report

1 The Further Education Funding Council (FEFC) has a duty to secure sufficient and adequate facilities for further education. The Council and the regional committees regularly review provision to ensure that this duty is being met. This report contributes to that process.

2 The report is also intended to provide a newly collated source of information on education, training and skill development needs in agriculture and the land-based industries, in particular on the role that further education (FE) colleges play in meeting these needs.

Research for the Report

3 Support for the research and analysis for the report was specified and commissioned by the FEFC, with the work being undertaken by a consultant after a competitive tender process. A small steering group with members drawn from the college sector and from industry supported the work for this report.

4 The report is based on a review of literature, discussions and information provided by key bodies and an analysis of data held by the FEFC, including the individualised student record (ISR), for the years 1994-95 to 1997-98.

5 Whilst this research was being carried out, the National Skills Task Force produced reports which make reference to the difficulties reported by employers in recruiting skilled workers.¹

Structure of the Report

6 The report has six chapters:

- Chapter 1 provides an introduction to the report
- Chapter 2 presents a profile of the key characteristics of the agriculture industry, its workforce and skills demands
- Chapter 3 provides a description of the structure of education and training arrangements for the land-based industries and an analysis of the contribution of FE colleges (supply issues)

- Chapter 4 outlines key features and trends in labour market and skill requirements for sectors of the agriculture industry (broadly demand issues), and the consequence of these for provision in FE colleges (the match of supply and demand for skills)
- Chapter 5 highlights the particular features of the specialist land-based FE colleges, and their continuing importance for the industry
- Chapter 6 provides a summary and suggests issues for further consideration.

The Council website contains additional information and analyses used in preparing this report.

Agriculture and Land-based Industries

7 Agriculture continues to be a significant contributor to the national economy despite, or perhaps because of, its diversification in recent years in response to both national and international market forces. Within a total industry workforce of some 1.3 million, the numbers employed in the primary agriculture sector have declined but the network of allied sectors and those newly emerging have more than made up for this shift.

8 From a total of around 400,000 businesses in the industry, the majority (more than 90%) have fewer than 10 employees and many have no employed labour. The relatively few large employers tend to be from the public and voluntary sectors, often concerned with environmental conservation, landscape management or animal welfare.

9 Consistent with the findings of reports from the National Skills Task Force, employers in agriculture have recognised the need for new recruits and existing employees, across occupations ranging from craft to supervisory and management levels, to have well-developed key skills, most particularly skills in communication and basic information technology (IT). Some common themes on broader skill needs across the industry are apparent, including:

¹ *Towards a National Skills Agenda*, 1998 and *Delivering Skills for All*, 1999, reports from the National Skills Task Force, DfEE.

- flexibility, initiative and willingness to learn
- awareness of health and safety and other relevant legislation
- business management.

10 Medium- and longer-term demands from industry for qualified new recruits and for an updated, qualified existing workforce appear to be increasing overall. The largest National Training Organisation (NTO) for the agriculture and land-based industries, Lantra, has indicated that the two most common difficulties reported by businesses in relation to education and training for skills are access to provision locally and the cost of training. The challenge for colleges, other providers, and those with planning and funding remits, will be to ensure that those skill requirements can continue to be met through offering:

- accessible provision at reasonable cost to the student, employer or employee
- a span of provision which is appropriate to a range of occupational levels
- responsive provision which develops occupational (job-specific) and key skills relevant to the workplace.

The Contribution from Further Education Colleges to Agriculture and Land-based Training

11 Agriculture accounts for almost 2% of all provision in FE colleges. Specialist colleges of agriculture represent the largest proportion of land-based resources and attract around two thirds of students, many of them full-time and residential.

12 Recruitment of full-time students has been buoyant, showing an increase of 34% between 1995-96 and 1997-98. Realising the further growth of 17% projected by colleges by the year 2000-01 will be a challenge. However, changes to the arrangements for (and levels of) student financial support may help to improve access, and improved funding to colleges could help to resolve some difficulties raised by colleges.

13 In 1997-98 the FEFC funded 70% of enrolments on agriculture courses, including 90% of those on full-time courses (similar to the proportion for all enrolments). Characteristics of agriculture students are broadly similar to the industry's workforce profile, that is:

- more than half (54%) are male
- a significant proportion are aged 40 or over
- few are from ethnic minorities.

14 The geographical spread of agriculture provision in colleges ranges from 6% accounted for by those in the Northern and Greater London regions, to 40% from the combination of the South East and South West regions.

The pattern of provision broadly reflects the regional development of some relatively new sectors, for example floristry (North West and Greater London), as well as more traditional regional specialisms in primary agriculture, such as poultry production (Eastern) and pig production (Yorkshire and Humberside). In this context, it is notable that in 1997-98 more than half (55%) of enrolments on countryside management courses were concentrated in the South East and South West regions.

15 A wide range of courses can be studied, but the 'top ten' enrolling qualifications accounted for almost a quarter of enrolments in 1997-98. This excludes students on courses relating to the use of pesticides, who numbered almost 5,000 during that period.

16 Most enrolments in agriculture are for qualifications at either the equivalent of NVQ level 2 (40%) or NVQ level 3 and above (40%), although there are variations in the predominant qualification level across the different areas, for example, 55% of enrolments for qualifications in animal care were at NVQ level 3 or above, compared to 19% in floristry.

17 Over the period 1995-96 to 1997-98 total student numbers increased by some 16%. Over the same period the following shifts in the share of enrolments occurred:

- floristry reduced as the rapid expansion of the previous decade subsided
- countryside management reduced its share, particularly at NVQ level 2
- enrolments to agriculture and commercial horticulture showed an increased share, despite recent bleak economic conditions for the sector.

The Broad Match Between Provision and Demand

18 Labour market assessments across the industry are starting to become more coherent which will help in making a meaningful match between supply of provision and demand for skills. NTO reports on skills demands will be a welcome tool in this area of work. Lantra, and other industry and sector organisations, have drawn together assessments of the workforce, and skills gaps and shortages, although some information is based on best estimates rather than accurate figures at this stage.

19 For an industry as diverse as agriculture it is difficult to present a simple summary match of labour market requirements, skill shortages and the likely supply of skilled personnel in the foreseeable future. However, some key themes across the sectors have clearly emerged, including:

- the need to address skills gaps in job-specific, basic IT and communication skills

- continued programmes for full-time students which combine primary and secondary, additional, qualifications
- the need to address difficulties relating to cost and accessibility of training which are most commonly cited by employers.

20 Data constraints prevent a full analysis of the extent to which skill needs may be met from the variety of available sources. In reality, colleges will continue to contribute significantly to meeting the overall demand.

Agriculture Colleges

21 The specialist colleges of agriculture and horticulture represent around 6% of all colleges in the FE sector and have an established role in working to meet the education and training needs of agriculture and land-based industries. Most of these colleges enjoy a strong relationship with businesses and employers, not only in response to training needs but by common involvement in both curriculum and commercial developments.

22 The colleges have, on the whole, made efforts to develop a collaborative approach to working together and bidding for funds (University for Industry (Ufi), Centres for Excellence), and similarly to working with other partners, for example, on modern apprenticeship schemes and New Deal. Collaboration has evolved into merger for several agriculture colleges since incorporation in 1993 and, whilst there is no blueprint for the future structure of the sector, support is available through the rationalisation fund. Many colleges are considering the benefits of closer working and merger:

23 Residential accommodation for students is regarded by the agriculture colleges as a distinctive feature, critical to the delivery of some aspects of provision. This is particularly promoted as supporting study in areas which involve livestock, and animal care and welfare. The budget constraints on financial support to students placed pressure on these colleges both financially, through depressed occupancy rates, and educationally, as they planned provision to ensure students could access the practical experience sought by industry. There is some optimism to be drawn from the recent injection of additional funds from government to provide for more student support.

24 The financial profile of agriculture colleges is quite different to the sector overall, with features including:

- lower pay costs as a percentage of total income
- lower dependence on FEFC income
- higher dependence on training and enterprise council (TEC) and higher education (HE) income
- lower levels of cash holding
- financial health declining more rapidly than other college types.

25 As the proportion of FE provision in agriculture becomes increasingly dispersed across all college types, there is a need to consider the rationalisation of specialist resources to ensure that an appropriate level and range of provision can be maintained and developed, in accessible locations. This will require careful and rigorous review of the curriculum, its delivery and the underpinning institutional financial viability, by all of the specialist colleges in dialogue, as appropriate, with other FE colleges.

1.1 The Further Education Funding Council (FEFC) has a duty under the Further and Higher Education Act 1992 (the Act) to secure sufficient and adequate facilities for the provision of further education (FE) in England. An assessment and analysis of provision delivered and planned through the FE sector informs the Council's view on how it meets that duty.

1.2 In making its assessment the Council takes account of education and training delivered by other providers and funded through other sources. The Council also takes account of the government's requirement that further education is responsive to the government's objectives and targets regarding access, standards and skills in relation to its local labour market and skill needs, and is informed through the advice of its nine regional committees.

1.3 The Council has undertaken a number of reviews of education and training in its programme areas. This is a report on the sufficiency and adequacy of provision in agriculture and related areas of work. It is written to inform the Council and to provide information which might be useful to colleges and others with an interest in the planning of such provision.

1.4 One of the government's objectives is to enhance the competitive position of the United Kingdom in world markets by improving the skills base of the population. In this context the report seeks to draw some conclusions about how well the current range and volume of further education provision for agriculture meets demand, and to what extent planned provision is likely to meet the future skill needs of potential students and the agriculture industry. The aims of the report are to:

- map current and projected post-16 land-based provision within, and as far as possible outside, the FE sector
- assess evidence of need for provision in the agriculture programme area
- assist the Council in meeting its duty to secure sufficient and adequate provision in this programme area
- inform the Council and its committees concerned with, for example, rationalisation and collaboration, and qualifications and skills

- provide evidence to assist colleges and other interested parties in planning provision.

1.5 The report looks at all provision within the FEFC's programme area 2 (agriculture) whether in specialist colleges of agriculture or in other FE colleges, and makes use of data on students, finance and strategic planning which all colleges provide to the FEFC. Additional information on post-16 provision in agriculture has been made available by the Higher Education Statistics Agency (HESA). There is also some limited analysis of training and enterprise council (TEC)-funded provision. The Council is grateful to those colleges with residential accommodation which provided additional information for the purpose of this report.

1.6 The report presents an outline of each of the primary land-based and allied sectors which includes background information and data provided by industry and sector-related organisations. The current patterns of activity in agricultural education and training post-16, and projected numbers of students to the year 2000-01 are considered in the context of trends in employment and skill needs which are indicated in industry profiles.

1.7 Finally, the report suggests a number of issues for post-16 education and training in agriculture which merit future attention by the Council, FE colleges, and the agriculture industry and its related organisations.

2.1 This section of the report draws on information collected from national training organisations (NTOs) and sector employer organisations on labour market profiles and skill demands. The information draws on *The Interim Labour Market Report* (1999) recently published by Lantra¹ on skills and the labour market in agriculture.

2.2 Agriculture is a significant contributor to the national economy. Traditional sectors of the industry are currently adapting to massive changes arising from developments brought about by World Trade Organisations and from the European common agricultural policy, with further changes likely from reforms under Agenda 2000. Agriculture livestock businesses will take some time to recover from the BSE crisis and the impact of the consequent ban on British beef, despite the ban having been recently lifted. At the same time, increasingly significant sectors such as rural tourism, conservation, equine and animal care, have emerged from diversification of the rural economy. These sectors generate additional demand for the supply of new workers, while demand for skills accreditation and the upskilling of the existing workforce continues to increase. The demand for skills is significant in relatively new sectors where the qualification levels of the existing workforce are low, for example animal care and equine sectors.

2.3 Diversification in the land-based industry has created new opportunities. Sub-sectors have emerged which were previously unidentified within the industry. There are increased opportunities for employment in the environment and conservation sector; in the care of animals as pets for domestic purposes and in the equine world, which is now a significant element of the leisure industry. However, the rates of change and development in these sectors make it difficult to provide reasonable predictions of labour-force requirements. Interestingly, these new sectors often prove attractive to new entrants, especially those seeking an 'outdoor' occupation, but who are not attracted by conventional agriculture.

2.4 In agriculture and horticulture the numbers employed have been in decline for many years as have, until recently, been the numbers coming forward for education and training in those areas. A common feature of agriculture in fast-developing western economies is that its contribution to the gross domestic product falls in proportional terms as the rest of the economy expands. The consumer spends a smaller proportion of income on food and, when the effects of developing technology are also taken into account, the number of people producing food declines.

2.5 These features are symptomatic of a thriving economy but should not necessarily be interpreted as an agricultural industry in decline. Indeed, the dependence on a smaller workforce actually increases and, consequently, the value of the skills and abilities of those who are employed in the industry should rise accordingly. As a primary industry, agriculture also supports a network of allied sectors and industries, many of which employ staff with agriculture or related qualifications. The UK Agricultural Supply Trades Association (UKASTA) represents allied businesses and industries and has identified a need to encourage high quality new entrants to those sectors.

2.6 In part due to recent falls in the levels of unemployment, there appears to be increasing competition between separate industries to attract adequate numbers of appropriately skilled people. The representative bodies of those land-based sectors which might expect to experience a shortfall in skilled personnel, for example elements of agriculture and horticulture, may wish to consider how to support development of effective recruitment strategies, which may include a more public commitment to training. This may be in tension with employers' perception of cost of training as a key limitation to their support for employee training.

2.7 The industry sectors included in this report are listed below, together with an estimate of the size of the

¹ Lantra is the government approved NTO which covers most sectors in the agriculture industry. These include: agriculture, agricultural and garden machinery, environmental conservation, farriery, fish farming, fisheries management, fencing, floristry, game conservation, horticulture, lift truck operation, landscaping and turficulture.

workforce based on information from Lantra and other industry organisations. The accuracy of the information available is variable and some is based on estimates.

agriculture	543,000
commercial horticulture	60,000
amenity horticulture	200,000
forestry	18,500
environmental conservation	250,000
equine industry	125,000
floristry	30,000
animal care	45,000
aquaculture	5,000
countryside sports	60,000
total workforce	1,336,500

These workforce figures do not include those employed in allied industries, including the supply and service industries, and leisure and tourism. The figure for environmental conservation includes an estimated volunteer workforce of around 200,000.

2.8 A synopsis of each of the sectors is on the FEFC website with this report. These sectors have a number of common features, the most obvious being that each sector is made up predominantly by small businesses. The size of businesses ranges from self-employed one-person concerns to large companies with more than 100 employees. The majority of businesses, however, have single number employees. A further common feature of businesses in most of the agriculture industry sectors is the spread of diverse activities, sometimes across dispersed geographical areas. The combination of characteristic size and spread presents particular challenges to education and training providers, who work to raise skill levels and increase participation in education through flexible, responsive and efficient provision. Many larger employers in the industry tend to be public or voluntary sector organisations and are primarily involved with environmental conservation, landscape management or animal welfare. There are a limited number of large employers in primary agriculture businesses such as poultry and pig production.

2.9 The NTOs have a critical role to play in reviewing, defining and communicating employment needs through close liaison with sectors of the industry, training providers, careers advisers and other relevant bodies. The NTOs' assessment of need should provide a better understanding of the extent to which vocational competencies and key skills in land-based qualifications are relevant within and across sectors of the industry. The need for employees and new workers to have key skills has been identified by employers for occupations ranging from craft to management and supervisory levels.

Despite relatively slow uptake in the use of information technology in many sectors of the industry, employers have recognised that skills in basic IT will become increasingly important. This need for key skills is consistent with the findings of reports from the National Skills Task Force, *Towards a National Skills Agenda* (DfEE 1998) and *Delivering Skills for All* (DfEE 1999).

2.10 If the qualifications and skill levels of the existing workforce are to be improved, then the individual employers and businesses will need to be made aware of, and committed to, the benefits of staff training. They must also find ways of overcoming the difficulties caused by the release of staff who may represent a high proportion of the employer's workforce. Colleges continue to develop appropriate support for employers through increased flexibility of delivery and exploitation of information and communication technology (ICT). Nonetheless, employers continue to identify access to training as a major difficulty for small remote businesses. Where effective employer-led training networks exist, these present opportunities for the industry to work closely with colleges to ensure appropriate local response to training needs. The potential benefits of employer group networks was reinforced recently in recommendations from the National Skills Task Force *Delivering Skills for All* (DfEE 1999).

2.11 A number of key points affect the training and skill requirements for sectors in the industry, including:

- a need for multi-skilled employees. For example, the modern farm employee may need to have occupational competence in animal and crop husbandry, machinery operation and maintenance, health and safety procedures, IT, financial management and marketing
- a need for new entrants to have the ability to adapt to change and bring to the job the necessary key skills
- a need for a high proportion of the existing and potential workforce to have business and supervisory skills, and to be technically up-to-date
- a need in some cases to work antisocial hours and the constraints on time for training which this can present
- difficulty for trainees and new entrants to gain a full range of competencies in some skill areas, for example, seasonal constraints on harvesting
- difficulty for employers to organise training and assessment within the workplace and to release staff for off-the-job education and training, particularly where an individual may represent 100% of the employer's workforce

- a need to recruit employees with sound basic education and training, and professionally up-to-date skills.

2.12 The range of skills demanded by the industry is outlined in recent analyses of labour market and training needs surveys conducted by Lantra and other sector and employer organisations for the land-based sectors. Some common themes are highlighted:

- interpersonal skills, communication, adaptability
- technical updating
- understanding implications of health and safety, and other relevant legislation
- IT
- environmental appreciation
- business management and flexibility.

2.13 The extent of these common features suggests that many employers in the land-based sectors will continue to recruit students who have developed the broad range of competencies acquired through a programme of full-time study. The national diplomas and certificate programmes continue to receive support from the industry. In addition to the primary qualifications, the NTOs have acknowledged the value placed on secondary qualifications, often studied alongside full-time learning programmes. These include national proficiency tests and cover, for example, statutory certification on pesticide application and fork-lift truck operation. Further examples include National Vocational Qualifications (NVQs) combined with other qualifications such as British Horse Society stage awards. These combinations of skill requirements demanded by industry, and legislation, will need to be reflected in the structure of qualifications and flexibility in training and funding arrangements.

2.14 The picture emerges of a demand for students with a wide range of skills, which vary between sectors. The benefits of acquiring a transferable combination of key and vocational skills are evident in an economy which increasingly values, and needs, a qualified workforce.

2.15 In the medium to long term the demand from land-based sectors for further education qualifications is likely to increase both in terms of new entrants and for the professional updating of the existing labour force. This demand will be generated through sustained growth and expansion of some sectors (for example, horticulture), the continual drive to improve technology and enhance associated skills, the low proportion of qualified workers in some sectors (for example, animal care) and, in some regions, the replenishment of a relatively aged employed and self-employed workforce.

2.16 The balance between the demand for skills and the availability of trained personnel and training is markedly different in the various sectors of the agricultural industry.

For example, there has been a steady enrolment of students to animal care qualifications although the sector has relatively poorly defined needs. In some aspects of agriculture and horticulture, however, the needs of the industry are set to outstrip the projected demand for training places. The relationship between providers, industry sectors and the NTOs is critical if the supply of appropriately qualified entrants and employees is to match employers' requirements.

2.17 The challenge to those who fund and provide education and training will be to continue to ensure:

- adequate, accessible provision
- provision which spans the full range of qualifications and skill levels
- responsive provision which is technically sound, up-to-date and develops occupational and key skills relevant to the workplace.

3.1 Further education and training in agriculture and related subjects, leading to formal qualifications, is funded through four main sources. It is worth noting here that the government's proposals in the white paper *Learning to Succeed* (DfEE 1999) will significantly affect the structure of funding and planning arrangements for post-16 FE from 2001. The descriptions which follow represent the current funding arrangements for most provision.

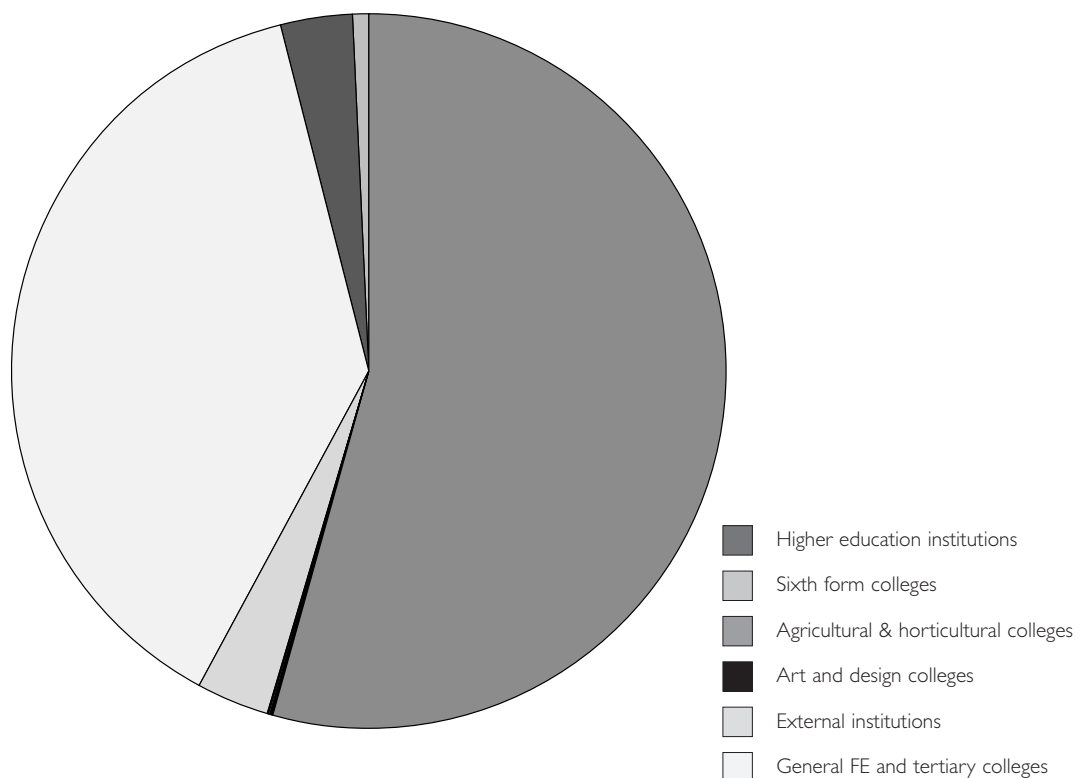
Further Education Funding Council

3.2 The FEFC funds a wide range of vocational qualifications. More than 400 FE institutions, including general, tertiary, sixth form and specialist colleges, receive funding from the FEFC to deliver provision, and in

1997-98 around 300 higher education (HE), specialist designated and external institutions also received funds from the FEFC.

3.3 It is estimated that around 2% of qualifications funded by the FEFC are included in programme area 2 (agriculture) and that approximately two thirds of the students studying for land-based qualification are enrolled at specialist colleges of agriculture and horticulture. As a result of mergers, mainly with non-specialist institutions, the number of specialist colleges has fallen from 34 at incorporation in 1993 to 26 at the present time. In all, the FEFC funds agriculture provision in about 180 institutions including a small number of external and HE institutions (Figure 3.1). Qualification aims in programme area 2 are grouped into six sub-programme areas:

Figure 3.1: Proportion of Council-funded Agriculture Provision in Each Type of Institution, 1997-98



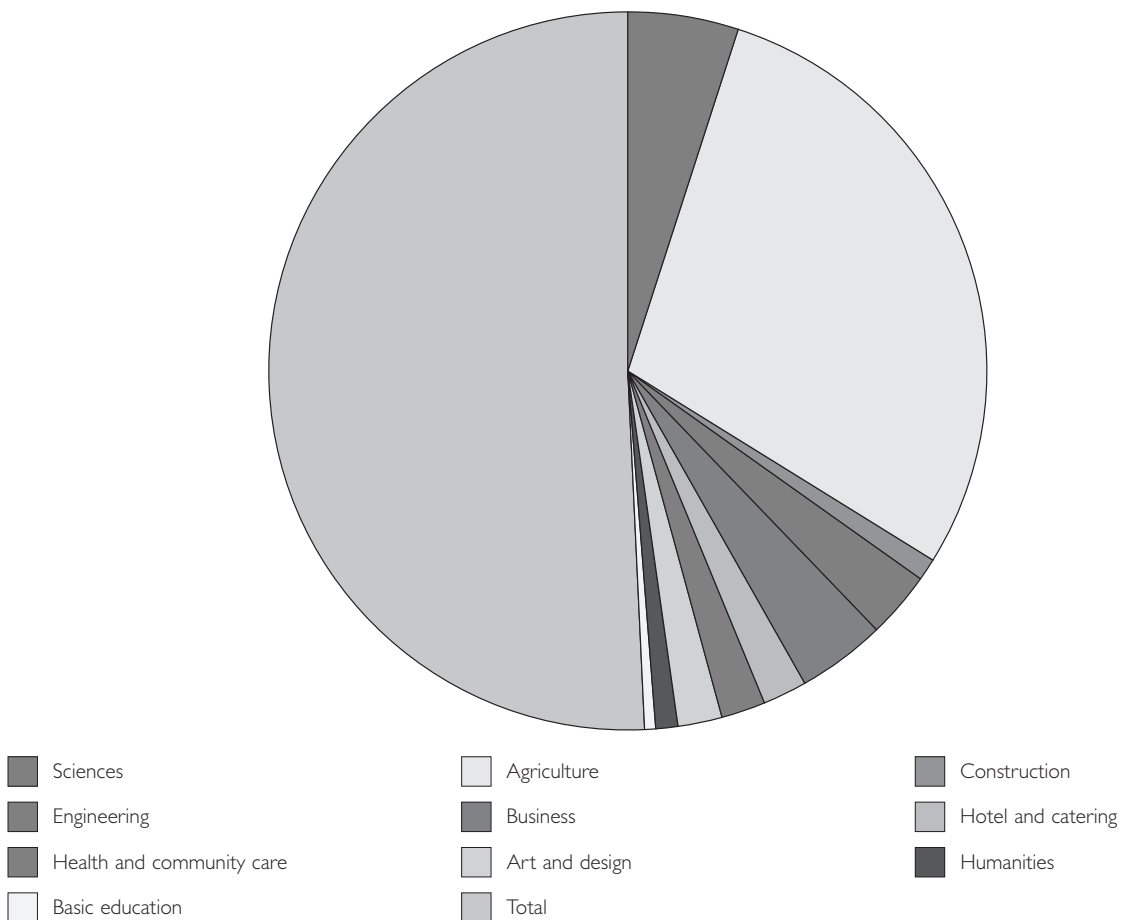
- 2A agriculture and commercial horticulture
- 2B amenity horticulture
- 2C floristry
- 2D equine studies
- 2E countryside management
- 2P animal care¹
- 2O other agriculture-related subjects.

3.4 The diversification of rural industries in the economy is now reflected in a breadth of qualifications relevant to agriculture and its related industries, such as business, agricultural engineering and IT. A growing number of these fall within other programme areas such as engineering, hotel and catering, and science. Their contribution to the skill needs of individuals and the industry, and their impact on the resource base of colleges is acknowledged, though they do not fall within

the scope of this report. Some of the qualifications offered in these other areas, and some relatively low-cost programme area 2 qualifications, have acquired greater significance in general FE colleges over recent years, even when mergers with specialist agriculture colleges are taken into account.

3.5 Specialist colleges of agriculture and horticulture have increasingly engaged in a strategy of diversification. Development of provision within programme area 2 has seen a substantial growth in equine studies, animal care and countryside management. Most specialist colleges have also significantly expanded provision in other programme areas, including business and science (Figure 3.2). Concurrent with this diversification in the specialist colleges, a marked growth in student numbers for programme area 2 in general FE colleges has developed across a relatively limited range of qualification aims.

Figure 3.2: All Students in Agriculture and Horticulture Colleges by Programme Area, 1997-98



Source: Strategic plans, July 1998.

¹ Where appropriate, qualifications in animal care have been identified as sub-programme area 2P, separately from 2O.

Higher Education Funding Council for England

3.6 The Higher Education Funding Council for England (HEFCE) funds degree, postgraduate and sub-degree programmes. Universities and HE colleges account for most of this provision but a significant proportion is located in FE colleges, where it is either directly funded by the HEFCE or operates through franchise arrangements with higher education institutions. Recent steps to implement recommendations of the Dearing report on HE on funding routes, means that initially at least, a larger number of FE institutions will receive direct funding from the HEFCE for students on Higher National Diploma (HND) and certificate programmes previously funded through the FEFC. A relatively small number of HE institutions have sufficiently broad facilities to deliver a full agriculture curriculum, although three FE colleges of agriculture have merged with HE institutions since incorporation. These continue to provide FE programmes funded by the FEFC alongside HE programmes.

Training and Enterprise Councils

3.7 The network of 81 TECs wholly or partially funds and supports a wide range of training programmes for the land-based sectors, to both young people and adults. These programmes are generally designed to lead to NVQs and are substantially work based. Programmes are delivered under a range of initiatives to promote youth and adult training. The modern apprenticeship and national traineeship routes, funded through TECs, are expanding vehicles for provision of work-based training, and land-based schemes are now available. The operating framework for modern apprenticeships and national traineeships is administered by Lantra for delivery through training providers.

3.8 TECs were not established to be providers. They contract with a large number of other organisations and institutions for the delivery of programmes. These include FE and HE institutions, private training organisations and businesses providing training for their own personnel.

Private Training Providers

3.9 Many training providers draw some funding from public sources, particularly where they deliver accredited qualifications. There is also an indeterminate amount of training funded through independent means, which includes companies' in-house training, for example through machinery dealerships, and training which students fund themselves.

3.10 The number of employees in the land-based industries who obtain formal qualifications through in-house training is likely to be low because most businesses are small and lack sufficient funds to support

training without a contribution from public funds. The significance of ongoing training and professional updating which does not lead to formal accredited qualifications is difficult to quantify but should not be underestimated.

The Contribution of Further Education Colleges

3.11 The generally small size and rural or dispersed nature of businesses in the agricultural industry and its related sectors means that it is heavily dependent on education and training providers, particularly colleges. The proportion of agriculture training delivered through FE colleges is high and encompasses a significant amount of work-based training, TEC-funded and HE courses, as well as full-time FE.

National

3.12 Colleges' strategic plans show that in 1997-98, of the 4 million students in FE, around 77,000, almost 2%, were on agriculture (programme area 2) courses. About 72% of these were studying part-time (Table 3.1). Students enrolled at the specialist colleges accounted for 60% of all agriculture students.

3.13 The number of full-time students increased by some 35% between 1995-96 and 1997-98 compared to a drop of 3% in full-time student numbers across all provision. Colleges have projected that full-time students in agriculture will number almost 25,000 by 2000-01, representing a further increase of 16%. Part-time student numbers are expected to increase at a similar rate, significantly more than the projected 10% increase in the total number of part-time students in the FE sector.

3.14 In 1997-98, around 70% of agriculture provision in FE colleges was funded through the FEFC, including 90% of students on full-time courses. This proportion of full-time students is projected to decrease to 86% by 2000-01, in part reflecting the change in funding source for some HE courses (Table 3.1). The FEFC funded 61% of part-time provision, a lower percentage than for part-time students overall (81%). Students on courses related to agriculture have generally accounted for less than 1% of all students enrolled on collaborative, or franchised, courses.

3.15 Analysis of the ISR database for 1997-98, which records enrolments to specific qualifications rather than student numbers, shows almost 78,000 enrolments on agriculture courses, an increase of 4% on the previous year. The figure is slightly higher than the number of students as some enrol for more than one qualification or course.

Regional

3.16 There is considerable variation in the geographical spread of agriculture provision. The smallest share is in

the Northern and Greater London regions which between them account for 6%, while the South East and South West regions together account for 40%.

3.17 Projected growth in student numbers masks some marked regional variations, for example, within the overall growth of 17%, colleges in the North West region have forecast that student numbers will increase by 33% compared to no projected growth in Greater London.

Students

3.18 The comparison of student characteristics in agriculture with all students highlights a number of points. In 1997-98 full-time students represented 28% of all agriculture students compared to 18% for all students. Further key points can be drawn from the analysis (Table 3.3):

- 54% of students are male
- 25% are aged over 40 years
- few are from ethnic minority groups.

These features are similar to those of the industry's workforce, although some variations between sectors do occur.

Other funded provision

3.19 The range of other funding sources and providers for agriculture courses has already been outlined. There are insufficient comparable data to comment with any confidence on the contribution of other providers to agriculture training overall. The rest of this chapter provides a more detailed analysis of FE provision based on Individualised Student Records (ISR) data. Until similarly reliable and detailed data are available on other provision a complete analysis of agriculture training in England will not be possible.

Analysis of ISR data

3.20 There are almost 1800 agriculture-related qualifications on the ISR database and the 78,000 enrolments in 1997-98 were spread unevenly across these. Some qualifications attracted single numbers of enrolments while, at the other extreme, courses relating to legislative controls on the use of pesticides attracted almost 5,000 enrolments. Twenty-four qualifications accounted for 40% of enrolments. The most popular qualifications, other than those relating to use of pesticides, accounted for almost a quarter of all enrolments in the programme area (Table 3.4). Overall, national diplomas and certificates continue to attract large numbers of full-time students.

3.21 The vast majority of enrolments were on courses with a notional NVQ level 2 (40%) and NVQ level 3 and above (40%) (Tables 3.5 and 3.6). There are some variations in the predominant level of courses between the sub-programme areas, for example 55% of enrolments in animal care were at level 3 and above,

compared to 19% in floristry. These variations are important in ensuring that the supply of provision is appropriate to the needs of the sectors of the agriculture industry (Chapter 4).

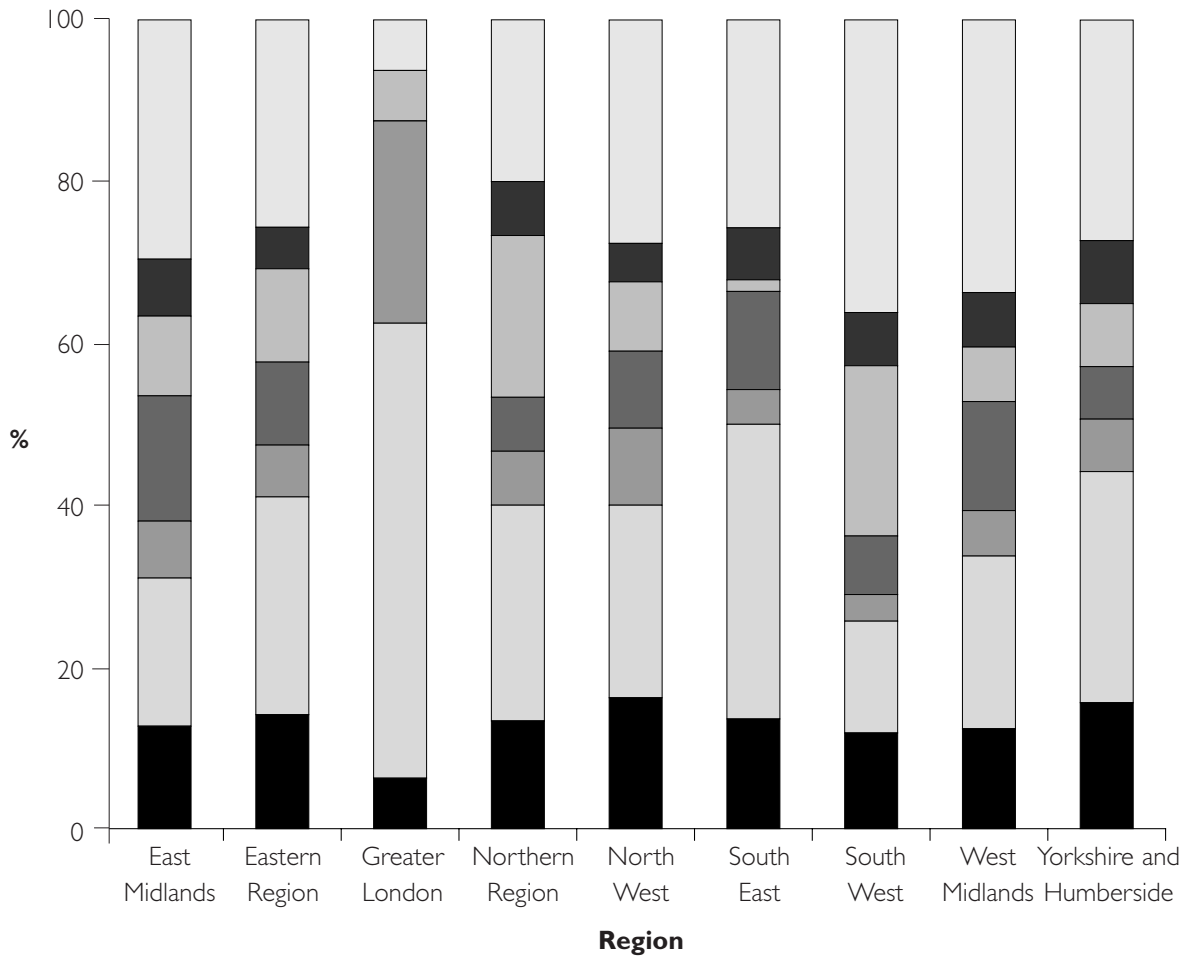
3.22 Analysis of changes in the share of enrolments across the sub-programme areas over the period from 1994-95 to 1997-98 shows that no year-on-year shifts appear significant, although the downturn in the proportion of students in floristry suggests that the rapid development of that sector in recent years, in response to customer demand, has passed its peak (Table 3.7). Agriculture and commercial horticulture courses continue to have a relatively small share of the total number of enrolments, perhaps reflecting the currently quiet employment market.

3.23 Regional variations are to some extent a reflection of the number and size of specialist colleges and their relative proximity to centres of high population, but they also reflect some regional differences in specialisms in some of the land-based sectors (Table 3.8). The regional distribution of enrolments is illustrated in Figure 3.3.

3.24 More than half (54%) of enrolments on countryside management courses were concentrated in the South East and South West regions. This provision has become more significant than amenity horticulture in the South West region. A majority of students in Greater London were enrolled on courses in floristry (23%) and amenity horticulture (56%) reflecting closely the social patterns in this highly populated urban region.

3.25 Despite diversification of the industry and training courses consistent with developments nationally, student enrolments on courses in agriculture and commercial horticulture form a significant proportion of provision in the North West region (17%) and Yorkshire and Humberside (16%).

Figure 3.3: Student Enrolments on Agriculture Courses by Region and Sub-programme Area, 1997-98



- Other agriculture
- Animal care
- Countryside management
- Equine studies
- Floristry
- Amenity horticulture
- Agriculture and commercial horticulture

Table 3.1: All Council-funded Students and Students Funded from Sources other than the Council on Agriculture Courses by Type of Institution, 1997-98 to 2000-01

Type of institution	Council-funded students				Other funded students				Council-funded students				Other funded students			
	Actual student numbers	Projected student numbers	Actual student numbers	Projected student numbers	Actual student numbers	Projected student numbers	Actual student numbers	Projected student numbers	Actual % change	Projected % change	Actual % change	Projected % change	Actual % change	Projected % change		
	97-98	98-99	99-2000	2000-01	97-98	98-99	99-2000	2000-01	97-98	98-99	99-2000	2000-01	97-98	98-99	99-2000	2000-01
Full-time																
Agricultural & horticultural colleges	11,035	10,437	11,189	11,603	1,668	1,748	2,285	2,687	n/a	n/a	n/a	n/a	5	31	18	
Art & design colleges	0	0	0	0	0	0	0	0	314	20	2	n/a	n/a	n/a	n/a	
External institutions	42	174	208	212	0	0	0	0	4	5	3	1	17	11		
General FE and tertiary colleges	7,129	7,395	7,784	7,979	636	645	753	835	48	10	5	n/a	n/a	n/a		
Higher education institutions	673	997	1,100	1,160	0	0	0	0	12	13	6	-100	n/a	0		
Sixth form colleges	200	223	252	266	5	0	1	1	1	7	3	4	27	16		
Subtotal (full-time)	19,079	19,226	20,533	21,220	2,309	2,393	3,039	3,523								
Part-time																
Agricultural & horticultural colleges	17,951	16,503	17,509	18,063	16,123	15,826	17,415	17,850	-8	6	3	-2	10	2		
Art & design colleges	31	27	26	26	0	0	0	0	-13	-4	0	n/a	n/a	n/a		
External institutions	1,706	1,891	1,940	2,005	0	0	0	0	11	3	3	n/a	n/a	n/a		
General FE and tertiary colleges	13,145	20,074	19,093	16,609	5,239	7,107	7,661	7,824	53	-5	-13	36	8	2		
Higher education institutions	1,054	2,134	2,171	2,202	0	130	137	137	102	2	1	n/a	5	0		
Sixth form colleges	189	306	467	508	55	148	185	201	62	53	9	169	25	9		
Subtotal (part-time)	34,076	40,935	41,206	39,413	21,417	23,211	25,398	26,012	20	1	-4	8	9	2		
Full-time and part-time																
Agricultural & horticultural colleges	28,986	26,940	28,698	29,666	17,791	17,574	19,700	20,537	-7	7	3	-1	12	4		
Art & design colleges	31	27	26	26	0	0	0	0	-13	-4	0	n/a	n/a	n/a		
External institutions	1,748	2,065	2,148	2,217	0	0	0	0	18	4	3	n/a	n/a	n/a		
General FE and tertiary colleges	20,274	27,469	26,877	24,588	5,875	7,752	8,414	8,659	35	-2	-9	32	9	3		
Higher education institutions	1,727	3,131	3,271	3,362	0	130	137	137	81	4	3	n/a	5	0		
Sixth form colleges	389	529	719	774	60	148	186	202	36	36	8	147	26	9		
Total	53,155	60,161	61,739	60,633	23,726	25,604	28,437	29,535	13	3	-2	8	11	4		

Note: includes students on outward collaborative provision (delivered within and outside the region); data exclude specialist designated colleges
Source: institutions' strategic plans, July 1998, April 1999

Table 3.2: Council-funded Students and Students Funded from Sources other than the Council in all Programme Areas in Colleges of Agriculture and Horticulture, 1995-96-2000-01

Programme area	Council-funded students					Council-funded students							
	Actual student numbers		Projected student numbers			Actual % change		Projected % change					
	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	95-96 to 96-97	96-97 to 97-98	97-98 to 98-99	98-99 to 99-2000	99-2000 to 2000-01	2000-01 to 2001-02
Full-time													
Sciences	1,718	917	709	627	586	636	672	(47)	(23)	(12)	(7)	9	6
Agriculture	9,642	11,113	11,035	10,437	11,189	11,603	11,762	15	(1)	(5)	7	4	1
Construction	199	250	230	242	257	282	297	26	(8)	5	6	10	5
Engineering	588	607	540	447	546	611	644	3	(11)	(17)	22	12	5
Business	455	557	407	434	396	407	407	22	(27)	7	(9)	3	0
Hotel & catering	636	503	497	573	605	656	690	(21)	(1)	15	6	8	5
Health & community care	34	35	70	55	92	115	149	3	100	(21)	67	25	30
Art & design	29	56	43	54	79	98	108	93	(23)	26	46	24	10
Humanities	73	52	45	64	78	102	121	(29)	(13)	42	22	31	19
Basic education	0	6	56	67	87	119	153	n/a	833	20	30	37	29
Subtotal (full-time)	13,374	14,096	13,632	13,000	13,915	14,629	15,003	5	(3)	(5)	7	5	3
Part-time													
Sciences	2,515	3,639	3,823	4,022	4,126	4,209	4,275	45	5	5	3	2	2
Agriculture	16,770	17,323	17,951	16,503	17,509	18,063	18,380	3	4	(8)	6	3	2
Construction	474	325	627	797	867	901	973	(31)	93	27	9	4	8
Engineering	912	1,733	2,378	1,568	1,782	1,864	1,944	90	37	(34)	14	5	4
Business	3,072	3,630	4,035	3,489	4,249	4,337	4,466	18	11	(14)	22	2	3
Hotel & catering	733	1,246	1,636	921	1,509	1,557	1,592	70	31	(44)	64	3	2
Health & community care	2,071	2,360	2,020	1,557	2,529	2,612	2,660	14	(14)	(23)	62	3	2
Art & design	1,297	1,436	1,504	1,248	1,191	1,235	1,268	11	5	(17)	(5)	4	3
Humanities	268	989	1,043	864	1,122	1,130	1,152	269	5	(17)	30	1	2
Basic education	256	284	422	626	691	847	919	11	49	48	10	23	9
Subtotal (part-time)	28,368	32,965	35,439	31,595	35,575	36,755	37,629	16	8	(11)	13	3	2
Total	41,742	47,061	49,071	44,595	49,490	51,384	52,632	13	4	(9)	11	4	2

Note: includes students on outward collaborative provision (delivered within and outside the region);

Source: institutions' strategic plans, July 1996 to July 1999

Table 3.2: Cont.

Programme area	Students funded from sources other than the Council					Students funded from sources other than the Council								
	Actual student numbers		Projected student numbers			Actual % change		Projected % change						
	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02	95-96	96-97	97-98	98-99	99-2000	2000-01	2001-02
Full-time														
Sciences	647	1,169	1,167	951	1,304	1,482	1,587	81	(0)	(19)	37	14	7	
Agriculture	1,992	1,902	1,668	1,748	2,285	2,687	2,893	(5)	(12)	5	31	18	8	
Construction	16	16	23	20	18	33	33	0	44	(13)	(10)	83	0	
Engineering	47	46	23	23	22	23	25	(2)	(50)	0	(4)	5	9	
Business	155	172	238	145	213	244	247	11	38	(39)	47	15	1	
Hotel & catering	104	0	1	0	0	0	0	(100)	n/a	(100)	n/a	n/a	n/a	
Health & community care	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	
Art & design	27	71	78	94	92	92	92	163	10	21	(2)	0	0	
Humanities	2	0	1	0	0	0	0	(100)	n/a	(100)	n/a	n/a	n/a	
Basic education	0	0	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	n/a	
Subtotal (full-time)	2,990	3,376	3,199	2,981	3,934	4,561	4,877	13	(5)	(7)	32	16	7	
Part-time														
Sciences	1,003	1,311	1,110	1,316	1,691	1,828	1,871	31	(15)	19	28	8	2	
Agriculture	15,333	14,476	16,123	15,826	17,415	17,850	18,117	(6)	11	(2)	10	2	1	
Construction	452	844	1,080	1,011	1,114	1,125	1,148	87	28	(6)	10	1	2	
Engineering	1,758	2,025	2,581	2,066	2,353	2,479	2,542	15	27	(20)	14	5	3	
Business	860	830	845	765	948	1,002	1,041	(3)	2	(9)	24	6	4	
Hotel & catering	2,404	1,830	1,280	1,250	1,273	1,288	1,294	(24)	(30)	(2)	2	1	0	
Health & community care	717	454	455	447	569	570	571	(37)	0	(2)	27	0	0	
Art & design	4,486	3,722	3,770	2,326	2,473	2,502	2,517	(17)	1	(38)	6	1	1	
Humanities	106	630	590	353	367	377	388	494	(6)	(40)	4	3	3	
Basic education	59	173	248	260	260	270	280	193	43	5	0	4	4	
Subtotal (part-time)	27,178	26,295	28,082	25,620	28,463	29,291	29,769	(3)	7	(9)	11	3	2	
Total	30,168	29,671	31,281	28,601	32,397	33,852	34,646	(2)	5	(9)	13	4	2	

Note: includes students on outward collaborative provision (delivered within and outside the region);

Source: institutions' strategic plans, July 1996 to July 1999

Table 3.3: Number of Students Undertaking a Qualification in the Programme Area, Agriculture in all Colleges by Age and Ethnicity, 1997-98

Age	Full-time full-year			Full-time part-year			Part-time			Total		
	F	M	Total	F	M	Total	F	M	Total	F	M	Total
	under 16	22	30	52	39	52	91	84	162	246	145	244
16-18	5,857	5,165	11,022	126	288	414	1,595	3,962	5,557	7,578	9,415	16,993
19-20	709	1,127	1,836	62	137	199	561	1,230	1,791	1,332	2,494	3,826
21-24	601	761	1,362	101	280	381	867	1,733	2,600	1,569	2,774	4,343
25-39	1,584	1,652	3,236	329	1,073	1,402	5,246	5,770	11,016	7,159	8,495	15,654
40-59	765	851	1,616	201	523	724	5,569	3,624	9,193	6,535	4,998	11,533
60 and over	29	36	65	9	33	42	947	474	1,421	985	543	1,528
missing age	26	30	56	15	93	108	340	382	722	381	505	886
Total	9,593	9,653	19,246	882	2,479	3,361	15,209	17,336	32,545	25,684	29,468	55,152
Ethnicity												
Bangladeshi	4	5	9	0	0	0	1	3	4	5	8	13
Black African	9	14	23	1	0	1	33	8	41	43	22	65
Black Caribbean	27	16	43	5	1	6	76	36	112	108	53	161
Black other	20	12	32	0	2	2	18	15	33	38	29	67
Chinese	9	3	12	0	1	1	24	10	34	33	14	47
Indian	22	30	52	2	1	3	66	26	92	90	57	147
Pakistani	11	17	28	0	1	1	12	15	27	23	33	56
White	8,803	8,692	17,495	787	2,133	2,920	13,141	14,911	28,052	22,731	25,736	48,467
Other – Asian	61	10	71	4	9	13	51	14	65	116	33	149
Other	58	38	96	6	9	15	92	62	154	156	109	265
Not known/provided	570	813	1,383	68	310	378	1,348	1,964	3,312	1,986	3,097	5,073
Missing	0	1	1	9	12	21	348	271	619	357	284	641
Total	9,593	9,653	19,246	882	2,479	3,361	15,209	17,336	32,545	25,684	29,468	55,152

Source: ISR database, 31 July 1998 (1997-98)

Notes: figures may not sum exactly to totals due to rounding

F = female M = male

Table 3.4: Top Enrolling Agriculture Qualifications, 1997-98

Qualification title	Notional NVQ level	Sub-programme area	No. of enrolments
National diploma in agriculture	3	2A	1,166
RHS general horticulture	2	2B	3,872
C&G certificate in gardening (0061)	1/entry	2B	3,509
NVQ amenity horticulture	1/entry	2B	1,429
BHS horse knowledge & riding stage 1	1/entry	2D	1,083
GCE A level environmental science	3	2E	2,127
Certificate in competence : chainsaw operation	2	2E	1,283
NVQ agriculture (estate maintenance)	2	2E	1,102
National diploma in animal care	3	2P	2,094
First diploma in animal care	2	2P	1,317
TOTAL			18,982

Source: ISR database, 1997-98 (July 1998)

Table 3.5: Agriculture Qualifications Studied in FE Colleges in England in 1994-95, 1995-96, 1996-97 and 1997-98 by Notional NVQ Level and Sub-programme Area

Notional level	Sub-programme area	Enrolments													
		Council-funded						Other-funded						All	
		1994-95	1995-96	1996-97	1997-98	1994-95	1995-96	1996-97	1997-98	1994-95	1995-96	1996-97	1997-98		
1	2A Agriculture and commercial horticulture	600	400	700	700	100	200	100	200	700	600	800	900		
	2B Amenity horticulture	3,100	4,400	4,300	5,200	400	500	400	400	3,500	5,000	4,700	5,500		
	2C Floristry	1,500	1,800	1,300	600	100	100	100	—	1,600	1,900	1,300	600		
	2D Equine studies	1,600	2,300	2,200	2,300	100	100	100	200	1,700	2,400	2,400	2,500		
	2E Countryside management	—	200	400	400	—	—	—	—	—	200	500	400		
	2O Animal care	300	400	500	600	—	100	100	100	300	500	500	700		
	2O Other agriculture	0	700	1,200	2,500	0	—	100	100	0	700	1,300	2,500		
	Total	7,100	10,200	10,500	12,200	700	1,100	900	1,000	7,800	11,300	11,400	13,200		
	2	2A Agriculture and commercial horticulture	2,900	2,600	2,700	2,900	600	1,100	1,300	1,600	3,500	3,700	4,000	4,500	
		2B Amenity horticulture	6,000	7,600	8,500	7,400	500	900	900	1,000	6,600	8,500	9,400	8,400	
2C Floristry		2,100	2,600	2,900	2,900	100	300	200	300	2,200	2,900	3,100	3,200		
2D Equine studies		1,200	1,400	1,500	1,900	100	300	300	400	1,300	1,700	1,900	2,200		
2E Countryside management		2,000	3,600	4,500	3,200	300	700	400	400	2,300	4,200	4,900	3,600		
2O Animal care		1,300	1,700	2,200	1,400	100	300	400	—	1,400	2,000	2,600	1,400		
2O Other agriculture		—	200	300	2,500	0	100	—	600	—	300	300	3,200		
Total		15,600	19,800	22,500	22,200	1,800	3,600	3,600	4,300	17,300	23,300	26,100	26,400		
3		2A Agriculture and commercial horticulture	1,500	1,600	1,700	2,800	400	300	400	700	2,000	2,000	2,100	3,500	
		2B Amenity horticulture	1,900	2,700	2,800	2,900	100	100	200	200	2,000	2,900	3,000	3,000	
	2C Floristry	600	500	500	600	—	—	—	100	600	500	500	700		
	2D Equine studies	900	1,400	2,000	2,400	—	100	100	100	900	1,400	2,000	2,500		
	2E Countryside management	3,800	4,100	4,200	4,400	100	100	—	100	3,900	4,200	4,200	4,400		
	2O Animal care	800	1,200	1,800	2,500	—	—	—	—	800	1,200	1,800	2,500		
	2O Other agriculture	2,000	3,600	4,000	5,800	400	400	700	1,100	2,400	4,000	4,700	6,900		
	Total	11,500	15,100	16,900	21,400	1,100	1,100	1,400	2,300	12,500	16,200	18,300	23,600		

Source: ISR database, 31 July 1995; 31 July 1996; 31 July 1997; 31 July 1998

Coverage: 1994-95, 411 colleges; 1995-96, 414 colleges; 1996-97, 409 colleges; 1997-98, 435 colleges

Table 3.5: *Cont*

Notional level	Sub-programme area	Enrolments																				
		Council-funded						Other-funded						All								
		1994-95	1995-96	1996-97	1997-98	1994-95	1995-96	1996-97	1997-98	1994-95	1995-96	1996-97	1997-98	1994-95	1995-96	1996-97	1997-98					
4, 5 & HE	2A Agriculture and commercial horticulture	100	100	200	100	200	100	100	100	100	100	100	200	100	100	200	200	300				
	2B Amenity horticulture	100	300	300	400	400	400	400	400	400	400	400	100	400	400	400	300	600	800			
	2C Floristry	400	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200			
	2D Equine studies	0	100	100	100	100	100	100	100	100	100	100	0	100	100	200	0	200	300			
	2E Countryside management	100	200	300	200	200	200	200	200	200	200	200	100	100	100	200	300	300	400			
	2O Animal care	100	100	0	0	0	0	0	0	0	0	0	0	0	0	100	100	100	100			
	2O Other agriculture	300	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	300			
Total	1,100	1,000	1,300	1,300	1,300	1,300	1,300	1,300	1,300	800	800	800	1,100	500	800	800	1,100	1,500	1,800	2,100	2,400	
Not known	2A Agriculture and commercial horticulture	500	200	600	700	700	700	700	700	300	200	200	300	300	200	200	200	700	200	800	900	
	2B Amenity horticulture	100	0	100	1,000	1,000	1,000	1,000	1,000	100	0	100	600	100	0	200	0	200	200	0	200	1,600
	2C Floristry	100	0	200	200	200	200	200	200	100	0	0	200	100	0	0	0	100	100	0	200	200
	2D Equine studies	200	0	100	200	200	200	200	200	200	0	0	200	200	0	0	0	200	200	0	200	200
	2E Countryside management	—	0	400	500	500	500	500	500	0	0	0	300	0	0	0	0	—	0	0	500	800
	2P Not known	7,100	8,500	8,600	6,600	6,600	6,600	6,600	6,600	800	1,500	1,700	2,100	2,100	800	1,500	1,700	2,100	7,900	10,000	10,300	8,700
	Total	8,000	8,600	10,100	9,000	9,000	9,000	9,000	9,000	1,100	1,600	2,000	3,300	3,300	1,100	1,600	2,000	3,300	9,200	10,200	12,100	12,300
All levels	2A Agriculture and commercial horticulture	5,600	4,900	5,900	7,200	7,200	7,200	7,200	7,200	1,600	1,700	2,200	2,900	2,900	1,600	1,700	2,200	2,900	7,200	6,600	8,000	10,200
	2B Amenity horticulture	11,300	15,100	16,000	16,900	16,900	16,900	16,900	16,900	1,200	1,900	1,900	2,600	2,600	1,200	1,900	1,900	2,600	12,600	17,000	17,900	19,400
	2C Floristry	4,700	5,000	5,100	4,500	4,500	4,500	4,500	4,500	200	500	300	500	500	200	500	300	500	4,900	5,500	5,400	5,000
	2D Equine studies	3,800	5,100	5,900	6,700	6,700	6,700	6,700	6,700	300	600	700	800	800	300	600	700	800	4,100	5,700	6,600	7,500
	2E Countryside management	6,000	8,100	9,800	8,700	8,700	8,700	8,700	8,700	500	900	600	900	900	500	900	600	900	6,500	9,000	10,400	9,600
	2O Animal care	2,400	3,400	4,500	4,500	4,500	4,500	4,500	4,500	100	400	500	100	100	100	400	500	100	2,500	3,800	5,000	4,600
	2O Other agriculture	9,400	13,100	14,200	17,500	17,500	17,500	17,500	17,500	1,200	2,100	2,500	4,100	4,100	1,200	2,100	2,500	4,100	10,600	15,200	16,800	21,600
Total	43,200	54,700	61,400	66,000	66,000	66,000	66,000	66,000	5,200	8,100	8,700	11,900	11,900	5,200	8,100	8,700	11,900	48,400	62,800	70,100	78,000	

Source: ISR database, 31 July 1995; 31 July 1996; 31 July 1997; 31 July 1998

Coverage: 1994-95, 411 colleges; 1995-96, 414 colleges; 1996-97, 409 colleges; 1997-98, 435 colleges

Table 3.6: Distribution of Enrolments by Notional NVQ Level and Sub-programme Area, 1997-98

	1/entry	Notional NVQ level		Total
		2	3 and above	
Sub-programme area				
Agriculture & commercial horticulture	900	4,500	3,800	9,200
Amenity horticulture	5,500	8,400	3,800	17,700
Floristry	600	3,200	900	4,700
Equine studies	2,500	2,200	2,800	7,500
Countryside management	400	3,600	4,800	8,800
Animal care	700	1,400	2,600	4,700
Other agriculture	2,500	3,200	7,200	12,900
Total	13,100	26,500	25,900	65,500

Source: ISR database, July 1998, excluding qualifications for which notional NVQ level is not known

Table 3.7: Percentage Distribution of Enrolments Across Sub-programme Areas, 1994-95 to 1997-98

	1994-95 %	1995-96 %	1996-97 %	1997-98 %
Sub-programme area				
Agriculture and commercial horticulture	15	11	11	13
Amenity horticulture	26	27	26	25
Floristry	10	9	8	6
Equine studies	9	9	9	10
Countryside management	13	14	15	12
Animal care	5	6	7	6
Other agriculture	22	24	24	28
Total	100	100	100	100

Source: ISR database, July 1998

Table 3.8: Distribution of Enrolments by Region and Sub-programme Area, 1997-98

Region	Sub-programme area										Total
	Agriculture & commercial horticulture	Amenity horticulture	Floristry	Equine studies	Countryside management	Animal care	Other agriculture				
East Midlands	900	1,300	500	1,100	700	500	2,100	500	700	2,100	6,900
Eastern Region	1,100	2,100	500	800	900	400	2,000	400	900	2,000	7,800
Greater London	200	1,800	800		200		200		200	200	3,300
Northern Region	200	400	100	100	300	100	300	100	300	300	1,500
North West	1,700	2,500	1,000	1,000	900	500	2,900	500	900	2,900	10,500
South East	1,900	5,100	600	1,700	2,000	900	3,600	900	2,000	3,600	15,700
South West	1,800	2,100	500	1,100	3,200	1,000	5,500	1,000	3,200	5,500	15,300
West Midlands	1,100	1,900	500	1,200	800	600	3,000	600	800	3,000	9,200
Yorkshire and Humberside	1,200	2,200	500	500	600	600	2,100	600	600	2,100	7,700
Total	10,100	19,400	5,000	7,500	9,600	4,600	21,700	4,600	9,600	21,700	77,900

Source: ISR database, July 1998

The Match Between Sectoral Demands and Provision: Sector Profiles

4.1 Research commissioned by the National Rural Education and Training Strategy Group (NRETS) and conducted by Reading University in 1994 concluded that 'given the substantial restructuring of the rural economy, vocational education and training has a vital role to play in facilitating this process [of restructuring]'. Some sectors attract a high number of students even though the needs of that sector, for example animal care, are not well defined. Others attract fewer students and there is evidence of industry needs potentially outstripping supply; for example, some aspects of agriculture and horticulture.

4.2 Any attempt to assess the ratio of supply to demand in relation to skills should take account of labour market information, with particular reference to the size and structure of the workforce, and identified trends in education and training. While the assessments of skill needs and strategies to support ways of addressing them fall within the remit of regional development agencies (RDAs), a significant role in the production and assessment of workforce information is largely the responsibility of NTOs. Lantra is currently engaged in a major study of the agricultural labour market and the development of an economic forecasting model for the industry.

4.3 Providers of education and training are challenged with responding to the requirement for skills by offering courses from foundation to higher levels to meet the needs of industry, balanced with a responsibility to enable students with a wide range of abilities, experience and aspirations to access appropriate provision.

4.4 The relationship between sector demands and provision of related education and training is outlined below and draws on information made available by NTOs and sector organisations, as well as on data collected by the FEFC through the ISR.

Agriculture and Commercial Horticulture

4.5 While the numbers employed in agriculture have markedly declined, so have the numbers of potential new recruits. This fall in recruitment, combined with the high age profile for existing employees in agriculture, could lead to a potential shortfall in qualified personnel. The shortfall could be particularly marked in some specialist areas, for example, commercial horticulture, livestock production

(with particular reference to pig production), agricultural secretarial work, agricultural engineering, food processing. There might also be shortfalls in particular regions, for example, the poultry industry in the Eastern Region and pig production in Yorkshire and Humberside, although the latter may reflect a response to the recession in pig production.

4.6 Employer responses to Lantra surveys have shown skills gaps in agriculture to be associated with those employees in highly skilled occupations. Job-specific and basic IT skills are those which are most commonly mentioned as needed for this group.

4.7 Given the overall size of the workforce in agriculture and commercial horticulture (more than 600,000), and considering the demand from some allied trades for people with agricultural qualifications, the number of students completing national diplomas and certificates each year seems relatively modest (around 1,500) although the employment market is quiet except for the normal seasonal casual recruitment.

4.8 There has been traditionally good support from employers in the sector for continuation of existing national diplomas and certificates, and related qualifications, and equally strong employment demand for those students successfully achieving these qualifications, although the dropping of the pre-entry work-placement requirement and sandwich years has been less well received by employers. There is also support for the introduction of the land and environment General National Vocational Qualification (GNVQ) but not at the expense of existing vocational qualifications.

4.9 The majority of provision is in specialist colleges in which the substantial resource base is an essential component of delivery. Industry sector representatives are closely involved in the commercial and educational operation of college farm resources. A high proportion of part-time provision is work-based, incorporating a large network of relatively small businesses. There has been concern expressed by industrial representatives in some areas about the difficulties of accessing 'off the job' training provision. There is a need for further consideration of how college resources can best be organised and located to ensure appropriate levels of provision which take account of specialist skills requirements and regional variation.

Amenity Horticulture

4.10 Further education provision in amenity horticulture continues to expand and this is consistent with the growth in this sector, which represents around 15% of the total number of employees in the land-based industries.

4.11 Numerically this represents the largest sub-programme area of agriculture-related provision. Highest concentrations of provision are in regions with a large urban population, such as the South East and Greater London, indicating the ability of those regions to sustain landscape businesses, golf/green-keeping and employment in gardens and grounds. A significant proportion of enrolments are to entry and level 1 qualifications (30% in 1997-98), and the Royal Horticultural Society (RHS) general certificate in horticulture which represented almost 20% of enrolments on amenity horticulture qualifications in 1997-98. Some of the entry-level work relates to provision for students with learning difficulties and/or disabilities for whom this subject area is often popular. Almost one third of provision, including students with learning difficulties and/or disabilities, is delivered in general FE colleges. The attraction to recreational domestic gardeners of some qualifications delivered through part-time mode can mask the numbers of employees from this sector who are seeking to improve skills or gain an accredited award.

4.12 There is a need for more up-to-date labour market research, including skill needs, for this diverse sector, although there appears to be a positive approach towards training and support for promoting NVQs and the need for many of the current workforce to have existing competence recognised. The Horticulture Trades Association (HTA) has identified a need to upskill the current workforce, especially in customer services for the retail section.

4.13 The HTA has also estimated that the combined garden centre and hardy ornamental nursery stock sectors require access to at least 400 national diplomates annually. This is approximately the current number of amenity horticulture students completing diplomas each year.

Equine Sector

4.14 The National Horse Education and Training Company (NHETC), now part of the Animal Care and Equine NTO (ACENTO) has indicated that only 16% of employees in the sector hold equine qualifications. An urgent need has been identified to establish and promote realistic training targets through the NTO. The NHETC estimate 70% of the workforce is under 40, has a high turnover and consequently creates a need for a ready supply of educated and trained new entrants.

4.15 This is an area of growth in student numbers, with enrolments to courses rising to 7,500 in 1997-98, representing an increase of more than 80% since 1994-95. The rate of growth in student numbers in the general FE sector was almost double that in the specialist agriculture colleges during that period, some of that growth being accounted for by transfer of provision from specialist colleges through merger. The number of students enrolled at FE colleges on full-time national diploma and certificate courses is less than 1,000 annually, and the rapid expansion of the leisure-related equine sector up to the early 1990s looks set to stabilise at a level where demand will be met.

4.16 A significant proportion of qualifications studied are at level 3 and above, 37% in 1997-98, and with growth in HE provision, progression patterns are now well established. Many equine qualifications are validated by the British Horse Society (BHS). Many riding school employers are also training providers, some of whom have formed collaborative arrangements with general FE and agriculture colleges.

4.17 Many of the national diploma and certificate programmes include additional qualifications which provide, for example, skills in IT and business, to enhance the wider transferability of these qualifications to other sectors within and outside the agriculture industry. There is an expectation from employers that full-time students will have taken elements of the BHS scheme in addition to their primary qualification. Colleges have structured programmes to accommodate this.

Floristry

4.18 The Floristry Training Council (FTC), now part of Lantra, has defined skill requirements which have become an integral part of a well-established structure of relevant NVQs which account for the majority of floristry qualifications. Through rigorous labour market analysis the FTC has estimated that from a total workforce of 30,000 there is an annual turnover of 19% (5,700). Customer service and communication skills present the key skills gaps noted by employers.

4.19 Although it is included in agriculture as a land-based sector, floristry is substantially an urban-based, population-centred sector. It is perhaps not surprising, then, that significant proportions of enrolments in 1997-98 were in the North West (20%) and Greater London (15%), both regions with large urban populations. Nearly all the FTC-approved centres are colleges and the sector is heavily dependent on FE colleges to deliver its education and training. The number of floristry-related qualifications studied was around 5,400 in 1996-97, declining to fewer than 5,000 in 1997-98.

Animal Care

4.20 Animal care is a relatively new emerging sector within the industry. It comprises two main areas of activity: primary animal care (kennels, catteries, pet stores) and acute animal care (veterinary nurses, animal technicians). ACENTO has carried out labour market research which indicates a workforce with a low age profile. More than a third (38%) of the labour force is under 25, suggesting a need for work-based education and training from age 16 upwards. The same research indicated a low level of NVQ qualification in the sector and ACENTO has acknowledged the need to establish clear training and qualification targets.

4.21 The sector has attracted high levels of interest from students: between 1994-95 and 1996-97 the number of related qualifications studied in colleges increased by 50% to around 5,000. However, the total number of enrolments declined to 4,600 in 1997-98, of which almost three quarters were on first and national diplomas. These remain popular, providing a progression route to HE as well as to employment.

Environmental Conservation and Management

4.22 This is a rapidly expanding area of activity but with no official classification as an independent sector or industry. Much of the education and training related to the sector is described as countryside recreation and management.

4.23 Lantra has estimated the number of employees in the sector at 250,000, including around 200,000 volunteers. Lantra's assessment of the sector sees an increasing proportion of the workforce pursuing NVQs and a relatively low staff turnover. The sector appears to recruit a significant number of graduates, and evidence from the NTO indicates a commitment to continued training for employees, often in the form of courses lasting one to three days on legislation and skills updating. Colleges are generally perceived to be responsive to these training requirements although links with the sector could be strengthened to ensure the continued relevance and accessibility of the training offered. Management training for employees has been noted as less accessible than training in skills at other levels, although basic IT again presents the most significant skills gap.

4.24 The number of enrolments on qualifications increased by 60% between 1994-95 and 1996-97. In 1997-98 enrolments declined by 8% but remained at nearly 10,000. GCE A levels in environmental science subjects accounted for 29% of these. A further 18% were enrolled for qualifications relating to chain-saw operations and 5% for forestry qualifications. The number of full-time students was fewer than 1,000 in 1997-98, mainly on courses for national diplomas and certificates.

4.25 Almost 55% of countryside management enrolments were at agriculture colleges in the two Southern regions (South East and South West) and more than 50% of the qualifications studied were at levels 3 and above. There is a well-developed progression structure to higher education, some of which is delivered by the specialist FE colleges. Evidence indicates that the age profile of students studying qualifications in this sub-programme area is higher than the average for the whole programme area.

Related Sectors

4.26 There are a number of other significant land-based and related sectors in the agriculture industry, such as, the agriculture supply industry, forestry, aquaculture, gamekeeping and food processing. Others have qualifications and courses which fall within other programme areas of FE provision including leisure and tourism (hotel and catering), agricultural engineering (engineering) and agriculture secretarial work (business). There are indications from some sector organisations, for example from those connected with secretarial work, of a shortfall in new entrants. Some garden machinery businesses also report indications of future workforce growth. Numbers recruited to colleges in these areas overall have declined in recent years and there has been a corresponding shift in college resources; for example, lower level integrated mechanisation has replaced some of the more specialist provision in agricultural engineering.

4.27 Providers will need to remain sensitive to the business climate and technological developments for these sectors, for example anticipating the need for more IT skills in the machinery workforce.

Historical Development and Current Role

5.1 Most of the land-based colleges were established during the first half of the twentieth century to combine education and training with experience in commercial practice. The approach fostered close links between colleges and the agriculture industry which continue, and were most recently recognised in the Council's curriculum area survey report for agriculture (FEFC February 1997). The nature of employment patterns in the industry has encouraged colleges to offer a blend of education and training by making the operation of college farms and estates, and other commercial enterprises, an integral part of the curriculum. The focus for the colleges as they were established tended to be almost exclusively FE. Consequently, residential accommodation at the colleges was developed with this group of students in mind.

5.2 The location of many specialist colleges, and the fact that many students still live at home, ensure that the issue of access is of particular significance. Few of the colleges are easily accessible by public transport and, for students living in rural areas, transport is a real determinant of access to FE provision. For those who study at specialist land-based colleges the cost of transport may also be significantly higher than for students from more urban areas.

5.3 Most FE colleges are now significantly sized businesses in the context of their local economy. This is particularly the case with rural colleges where, by comparison with most rurally located businesses, they are often the largest rural employer. They continue to provide a location for a wide range of rural organisations and agencies; for example, the Young Farmers Club County Office or the Farming and Wildlife Advisory Group (FWAG). Additionally, while the concept of a community college is more often used in the urban context, the significance of many rural colleges to their local communities should not be underestimated. Many colleges are also the centres for local clubs and community activities.

5.4 Teaching and residential resources in land-based colleges have developed in response to the growth in student numbers on both FE and HE courses in agriculture and related subjects. Since incorporation,

growth in HE has been funded mainly through franchise agreements with universities. Colleges' strategic plans indicate that HE appears to be a key development strategy for many land-based colleges but the extent to which this is realised may be dependent on a number of factors, not least the arrangements and funding of provision through the HEFCE in response to recommendations made in the Dearing Report on HE, *Higher Education in the Learning Society: Report of the National Committee on Inquiry into Higher Education*, (DfEE July 1997).

5.5 Opportunities for mutually beneficial relationships between land-based colleges and agriculture and allied industries have continued to develop during recent years. An increasing number of companies, such as animal feed manufacturers, fertiliser, chemical and seed companies, machinery manufacturers, banks and others, collaborate with the colleges on market research, trial work and staff development. The benefits these concerns bring to the commercial operation of the colleges is reflected in their use as a curriculum resource. It is recognised that the land-based colleges have played a distinctive role, especially in responding to rural industries. They have provided a substantial proportion of the education and training for agriculture and related industries. It is also clear that there is a continued demand for a broad and increasing range of agricultural qualifications which justifies the continuation of a separate programme area.

5.6 The land-based colleges successfully recruited students to government-funded work-based training initiatives during the 1980s. The high level of employer support for these developments has ensured that they remain a key feature of new entrant training for the agriculture industry, most recently embracing the modern apprenticeship scheme. Private training providers compete effectively for some provision in horticulture, equine studies and floristry, but few have the resources and capacity to deliver a full range of land-based programmes. Many land-based colleges continue to have significant contracts with TECs, and access other sources of government funding through contributing to the development and delivery of other initiatives, for example the New Deal options and University for Industry (Ufi).

5.7 In order to meet the future demands for skills in the land-based sectors, the colleges will need to further build

on their considerable strengths while accepting that in some cases it will be necessary and appropriate to adopt more flexible structures and strategies for teaching and learning, for example, by producing flexible learning materials in specialist subjects where low volume demand makes delivery expensive. Some work in this area has already been effectively undertaken through the national consortium of land-based colleges. There are already initiatives aimed at overcoming difficulties, for example the use of video conferencing to meet the challenge of low numbers of students in wide geographic areas. Opportunities have already been taken in some regions to benefit from the FE competitiveness (and more recently rationalisation and collaboration) funds. Colleges have responded positively to opportunities to bid for funds to support lifelong learning and widening participation through, for example, the Ufl, Centres for Excellence and the National Grid for Learning.

5.8 These and other collaborative developments are likely to lead to a further blurring of the boundaries between the post-16 sectors. Whatever new structures and frameworks develop, it is vital that the distinctive features of the specialist agriculture colleges are used to full effect in widening participation and increasing the cost-effective delivery of high-quality provision.

Performance Indicators and Inspection Grades

5.9 An analysis of performance indicators for the period from incorporation up to 1996-97 indicates several key

comparisons between the agriculture colleges and the sector overall including (Table 5.1):

- PI 1: agriculture colleges have exceeded funding targets to a greater extent than other colleges, particularly up to the withdrawal of demand-led element funding in 1996-97. This outcome was achieved against a background of reduction in learner support through discretionary awards
- PI 3: in-year retention rates compare favourably with the levels for the whole sector
- PI 4: maintaining relatively high achievement rates will require close monitoring by the colleges, particularly in the context of the government's quality improvement policy for education
- PI 6: convergence of funding levels has been more rapid for the land-based colleges than for the sector overall, reflecting the relatively high levels of funding which transferred for most of those colleges at incorporation.

5.10 An analysis of college inspection grades for the cycle 1993-1997 indicates that, for both curriculum areas and cross-college aspects of provision, land-based colleges have a slightly lower proportion of grades 1 and 2, and a higher proportion of grade 3s than the average for all colleges. Cross-college grades 4 and 5 were more concentrated in land-based colleges than for the sector overall, reflecting weaknesses in governance, management and quality assurance (Table 5.2).

Table 5.1: Performance Indicators 1996-97: a Comparison of Specialist Colleges with all Colleges¹

Performance indicator	Median for	
	Specialist colleges	All colleges
PI 1 achievement of funding target	113%	108%
PI 2 % change in student numbers	1%/14%	1%/14%
PI 3 in-year retention rates FT/PT	88%/86%	87%/84%
PI 4 achievement rates (% all qualifications)	84%	73%
PI 5 contribution to national targets (student numbers) ²	(1) 96	(1) 113
	(2) 78	(2) 256
	(3) 59	(3) 186
PI 6 out-turn average level of funding (ALF)	£19.09	£17.41

¹Specialist colleges include art and design and agriculture colleges; the latter group makes up the largest proportion of specialist colleges.

²(1) 16 to 18-year-olds achieving NVQ level 2.

(2) 16 to 20-year-olds achieving NVQ level 3.

(3) Adults aged 21 years and older achieving NVQ level 3 and above.

Source: Performance Indicators 1995-96 and 1996-97, FEFC, 1998

Table 5.2: Inspections 1993–97: Grade Comparisons Between Agriculture Colleges and all Colleges

	Agriculture colleges	All colleges
Programme area grade average: overall	2.35	2.25
Programme area grades 1 and 2: agriculture ¹	52%	54%
Cross-college provision grade average: overall	2.34	2.25
Governance and management grades 1 and 2	40%	60%
Quality assurance grades 1 and 2	28%	38%

¹Grades for agriculture accounted for 80% of all curriculum grades awarded in agriculture colleges, compared with 3% for all curriculum grades awarded in all colleges.

Source: published college inspections 1993-97 (FEFC)

Rationalisation and Collaboration

5.11 Prior to incorporation in 1993, a few specialist agricultural colleges had already merged with general FE institutions or had been developed as major departments of such institutions. The main examples are:

- Cornwall College
- Oaklands College
- West Oxfordshire College.

5.12 Other general FE colleges had developed significant agricultural provision, especially at the lower levels, although their investment in commercial farm and estate resources has been relatively limited. In many cases, students attended these institutions for part-time courses at levels 1 and 2 and then progressed to full-time programmes at the specialist colleges, often on a residential basis. The opportunity for this progression appeared to decline with the number and value of discretionary awards.

5.13 At the time of incorporation, Writtle College (Essex) transferred to the HE sector while continuing to offer Council-funded FE provision. Lincolnshire College of Agriculture and Horticulture merged with De Montfort University, the first merger post incorporation, and so also transferred out of the FE sector while continuing to offer FE provision. Recent mergers of specialist land-based colleges include:

- Warwickshire College of Agriculture, Horticulture and Equine Studies with Mid-Warwickshire College to become Warwickshire College, Royal Leamington Spa and Moreton Morrell
- Worcestershire College of Agriculture and Pershore College of Agriculture to become Pershore and Hindlip College
- Newton Rigg College with University of Central Lancashire

- Cambridgeshire College of Agriculture and Horticulture and Norfolk Colleges of Arts and Technology to become College of West Anglia
- Durham College of Agriculture and Horticulture and East Durham Community College to become East Durham and Houghall Community College
- Brackenhurst College with Nottingham Trent University
- Pershore and Hindlip College with Holme Lacey College to become The Pershore Group of Colleges.

5.14 Since incorporation, and consequent upon the issues identified in the curriculum area report, more colleges have considered, or are considering, merger. The number of agriculture colleges listed at incorporation was 34. The equivalent figure in 1998-99 is 26, with a number of other land-based colleges in the sector known to be considering their strategic position. The imperative of government policy to rationalise post-16 provision and providers has been embraced by the specialist agriculture colleges. Most were actively involved in a series of regional projects, funded through £80,000 from the rationalisation element of the collaboration fund, to identify ways in which they can work more closely, effectively and efficiently, to meet the skill needs of the industry and its sectors, and the students and communities which they serve.

5.15 The extent to which residential provision and accessible transport form part of deliberations on rationalisation cannot be underestimated to ensure continued availability of specialist centres of agriculture and related education and training provision.

5.16 There is no blueprint for the rationalisation of the diverse further education sector. A variety of models have been proposed and implemented, some of them identified prior to incorporation. Colleges consult the Council from time to time on prospective new

operational models, for example procurement consortia, staff-development partnerships, as well as on proposals for merger. In 1998, the Council revised its procedures and criteria for considering merger proposals and introduced 'fast-track' arrangements where proposals are straightforward and non-contentious. The Council will also consider other types of proposals for funding collaborative activity between colleges.

5.17 There are examples of collaboration between land-based colleges and higher education institutions which have been to the benefit of both institutions and their students. Where an FE/HE merger has taken place the Council currently continues to have responsibility for the inspection of FE provision.

5.18 Some land-based colleges, as well as others in the sector, consider that they are vulnerable because of their small size. Anecdotally, this appears to be based less on the relative efficiency of a college and more on the pressure brought to bear on small management teams with a smaller resource base from which to draw professional and technical support.

5.19 Land-based colleges have identified particular difficulties as a result of the impact of the decline in local authority student support in recent years, and from their relationship with an industry perceived to have a declining workforce. Evidence elsewhere in this report suggests that the latter perception cannot be sustained. Collaboration and/or merger to rationalise provision may have the potential to improve the quality, effectiveness and development of qualifications in programme area 2. Where merger does occur, however, the programmes and resources for land-based provision must continue to address the requirements of the various sectors of the industry and meet the demand for skills.

5.20 The diversification of provision in land-based colleges and increased programme area 2 provision in general FE colleges could benefit from the establishment of networks of locally and regionally based providers to ensure that demand can be met through a co-ordinated and cost-effective approach. Such networks could build on the remit of local learning partnerships launched by the secretary of state for education and employment, and on the existing good links with industry. The development of plans through Lifelong Learning Partnerships and the role of the proposed Learning and Skills Council (*Learning to Succeed* DfEE 1999) should enhance this co-ordination and effective targeting of funds.

Residential Accommodation

5.21 Most FE students have traditionally attended centres of study close to their home or work-base. Exceptions to this are those students who are recruited (locally, regionally and nationally) to programmes of study delivered through specialist colleges. Land-based colleges

have evolved in this context from their early days as almost entirely residential, small, agriculture-focused institutions. The environment of the colleges provided a practical 'green' laboratory resource with the facility to provide teaching/instruction in a typical animal care schedule including, for example, twice-daily milking, 24-hour animal feeding and care, and monitoring birth.

5.22 A second dimension to the residential facilities at land-based colleges relates to the student. Accommodation has contributed to ensuring accessibility to specialist resources which could not be provided in every locality. Personal development opportunities arising from residential provision have complemented students' technical and vocational programmes.

5.23 Two recent developments have had an impact on demand for residential facilities: the diversification of provision reflecting the emergence of broader agriculture industry sectors (within and outside programme area 2), and the increase in the number of colleges which deliver provision that falls within programme area 2. The impact of both of these has been to generate increased opportunities for participating in education and training and a less critical requirement for residential facilities for students attending those programmes, some of which are more locally delivered. Some of the programmes of study relating to recently recognised sectors, for example countryside management, do not demand input to 24-hour schedules of livestock/crop care on a regular basis.

5.24 From information available from land-based colleges, there is an indication that those with relatively little or no HE were experiencing the greatest difficulties in sustaining acceptable occupancy rates in student accommodation. The profile of FE students who live in the colleges has also altered to include those following first diplomas, GNVQ intermediate level qualifications, many of whom are under 18 and require a greater degree of supervision than their older colleagues. At least four general FE colleges and two HE institutions with significant programme area 2 provision also have student residential facilities.

5.25 Many of the factors which relate to residential accommodation at the specialist colleges are issues of concern outside the remit of this review to consider but which cannot be excluded from note. A number of these are commented on below.

5.26 In considering how further rationalisation of provision might lead to more effective delivery, land-based colleges and others in the sector may propose more defined centres specialising in specific aspects of provision related to programme area 2. Proposals would have to take account of the location, accessibility and cost of residential facilities. The significance of access to farms and estates as key curriculum resources is likely to influence developments

to rationalise provision. Land-based colleges will also want to take account of the extent to which the residential experience contributes a valuable part of the students' overall learning programme.

5.27 The increase in the number of HE students in residential accommodation at the FE land-based colleges may simply reflect an increased demand in proportion to the increase in HE student numbers at the colleges. Alternatively, it could be a marketing response by colleges to declining numbers of FE students who can meet the costs of residence. This balance may change again as arrangements are implemented to distribute additional access funds for student support and residential bursaries.

5.28 Land-based colleges have already demonstrated imaginative ways of increasing the use of residential facilities. The colleges could consider further opportunities to diversify use, for example to deliver an extended range of provision which accommodates students with learning difficulties and/or disabilities.

5.29 There is evidence that the proportion of activity in programme area 2 which is delivered through the residential land-based colleges has reduced. It is acknowledged that development of provision in general FE colleges does not provide a substitute for that in the specialist colleges but should be complementary. It is this complementarity which could provide scope for reinforcing the links between particular aspects of agricultural provision and the need for associated residential facilities.

Financial Indicators

Funding learning

5.30 Funding for qualifications within programme area 2 is concentrated in cost weighting factors E and D, the higher cost bands of the tariff which underpins the Council's funding methodology. This acknowledges the inherently higher relative costs of delivering education and training in these subjects, though there are differences between the sub-programme areas which take account of, for example, higher levels of investment for machinery resources for agriculture courses. The factors contributing to these high costs include:

- the practical nature of the provision and the consequent need for small group sizes. For example, some animal-husbandry skills (milking, calving, veterinary tasks and crop-mechanisation tasks) need instruction in small groups
- the health and safety and animal welfare requirements and their implications on group size
- the high levels of investment required for a wide range of essential plant and specialist equipment.

5.31 In response to the government's policies to combat social exclusion and increase participation in education and training, from 1997-98 the Council introduced an enhancement to funding for colleges which enrolled students from areas defined against specific criteria as being disadvantaged. Few of the land-based colleges attract significant levels of enhanced funding for widening participation because of their generally rural locations and recruitment from areas outside those described as disadvantaged in this context. This may change as the Council's criteria for enhanced funding for disadvantaged students are further developed.

5.32 Non-participation in education is not just a factor of social deprivation but a matter of accessibility. Rural areas, with their lack of public transport, create real impediments to study for many who would not be described as socially deprived. Flexible patterns of learning and imaginative ways of solving transport difficulties are required if there is to be increased participation within rural areas.

Funding learners

5.33 A second element of funding is that related to financial support available to students. The potential costs of learning to students are listed by the Policy Studies Institute's recent report *The Funding Lottery* (1998) as course fees, transport, childcare, add-on costs (eg, books, examination fees, registration fees), direct personal and family support (living expenses), residential costs, opportunity costs (forgone earnings), technical support costs (especially for students with learning difficulties and/or disabilities).

5.34 These costs will, to varying extents, apply to all those participating in FE, but there is little evidence of their being quantified. The government's advisory group on FE student support, chaired by Councillor Graham Lane of the Local Government Association, produced a report, *New Arrangements for Effective Student Support* (DfEE 1998), and recommended an overhaul of the existing arrangements for discretionary awards made by local education authorities (LEAs) under section 2 of the 1992 Education Act. The group took account of the report from the Policy Studies Institute and the evidence provided to the Council's committee on widening participation chaired by Helena Kennedy (*Learning Works*, FEFC 1997). In addition the group reviewed LEA transport policies for supporting post-16 students and arrangements for the distribution of the FE access fund, which has increased each year since its introduction in 1990-91 and is managed for the DfEE by the FEFC.

5.35 The government's response to the recommendations in the Lane report was reflected in the outcome of the comprehensive spending review and the settlement for the FE sector. There is a commitment to target funding at those students who need it most, both

16–19s and adults, in order to boost the planned expansion in participation. The improved financial support for students includes an additional £63 million over the two years 1999-2000 and 2000-01, to be allocated to:

- pilots to test education maintenance allowances for 16 to 19-year-olds
- a significant increase in the further education access fund, more support for childcare and specific support for students who need to be in residence at a college
- a new access fund for 16 to 19-year-olds in schools to be administered by LEAs
- support for the coordination and integration of transport for post-16 students.

5.36 Colleges of agriculture will be concerned that consideration is given to issues particular to participation and provision in programme area 2 when arrangements for the distribution of the new student support funds are reviewed. These issues will include:

- the number and location of providing colleges or centres, and the consequent distance for students to travel and availability of public transport
- the home location of many potential students, particularly where this is in relatively remote rural areas
- the relative need for, and associated cost of, residential facilities
- the relatively few small colleges which offer childcare support.

5.37 The costs of funding of learning and learner support for provision in programme area 2 have relatively little impact on the financial status of general FE colleges, where provision in this programme area represents a small part of total provision. In the specialist land-based colleges, provision in programme area 2 continues to represent a substantial proportion of total provision, although this proportion has reduced in recent years as a result of the broader range of courses offered across other programme areas.

Funding and financial health

5.38 The impact of funding levels and activity in colleges has varied according to the local circumstances and the inherited financial position at incorporation. This has influenced the extent to which the Council's policy to converge funding levels has affected individual colleges. The decision to slow the process of convergence to 2001-02 should assist those colleges, including colleges of agriculture, which have relatively high levels of funding, particularly those which are currently in a weak or vulnerable financial position. The challenging targets attached to this slower pace of convergence, however,

are to continue to widen participation and raise standards.

5.39 There are considerable variations in the extent to which colleges have developed farms and estates to generate income rather than seeing them as resources to be subsidised, which has become a particular issue as lower farm produce prices have had an adverse impact on farm profitability in recent years. For example, a land-based college in the south has developed a commercially successful reputation for its rural attractions while a land-based college in the north has not developed its resources and is in a considerably weakened financial position. The issues of continued ownership of farms and estates, and rented farms, is a key consideration for many specialist land-based colleges.

5.40 The financial profile of land-based colleges has not changed significantly compared to the profile for all colleges despite a reduction in median level of funding of 27% between 1995-96 and 1997-98 compared with a reduction of 10% for all colleges during the same period. Comparisons of the profile of agriculture colleges with all colleges from financial forecasts from July 1998 include (Table 5.3):

- lower dependence on Council income (47% compared to 72%)
- higher dependence on TEC and HE income (13% compared to 6%)
- higher proportion of income from catering and residence (11% compared to 2%)
- more significant income from farming and other activities (15% compared to 6%)
- lower level of cash holdings (41 days compared to 57 days).

5.41 In addition, the average European funding to land-based colleges is forecast to have more than doubled in 1997-98 from the previous year compared with a slight drop in the average for all colleges.

5.42 Inevitably, the comparison of expenditure profiles reflects the relative costs associated with farms, residential accommodation and catering. Despite a slight increase, pay costs in agriculture colleges continue to be significantly lower as a proportion of income than for the sector overall (52% compared to 61% from July 1998 financial forecasts).

5.43 Financial constraint and the drive for further improvements in efficiency are critical strategic influences for all colleges but present a particular challenge for smaller institutions. Land-based colleges show a trend of financial health worsening more rapidly than other colleges using the same indicators as those for the rest of the sector: 29% were assessed as financial health category C on the basis of forecasts made in July 1998, compared to 19% for the sector overall. In general, the

Table 5.3: Dependency on Income and Key Financial Ratios for Agriculture and Horticulture Colleges Compared with all Colleges, 1997-98

Income source	All colleges		Agriculture and horticulture colleges	
	£000s	% dependency	£000s	% dependency
FEFC	2,511,338	72	59,231	47
TEC/HE	207,744	6	15,907	13
Catering and residence operations	76,087	2	14,205	11
Farming and other	133,867	6	19,033	15
Total Income	3,637,061	100	130,104	100

Ratio	Average	
	Sector	Agriculture and horticulture colleges
Current ratio	1.81	1.75
Cash days in hand	57.06	40.96
Pay as % income (before restructuring)	60.97%	52%

Source: finance record 1997-98

financial health of land-based colleges has become more precarious than that of other colleges across the sector. There are also concentrations of land-based colleges experiencing difficulties within particular regions, though the picture may be skewed by the decreasing number of specialist colleges as mergers are implemented.

5.44 There is no evidence to indicate that financial health has worsened more rapidly in those general FE colleges with large commercial land-based resources than in other general FE colleges.

5.45 As the provision for some qualifications in agriculture becomes more dispersed in different types of colleges, particularly in the case of floristry, amenity horticulture and some countryside and environmental studies, the need to consider rationalisation of specialist resources becomes more apparent in order to ensure a level of investment consistent with delivering the type, level and quality of provision required by students and the industry. To achieve continued financial viability colleges must constantly review expenditure, looking for increased efficiency and additional income generation. They must also recognise the benefits to be derived from effective management and the use of benchmarks.

6.1 This report has brought together an analysis of the provision of agriculture courses in the FE sector and a broad analysis of skills requirements from the industry and its sectors. The report highlights the difficulties in establishing current and future requirements of a diverse industry which is perceived with a traditional image but which includes an array of sectors, some of which remain poorly defined.

6.2 The establishment of NTOs in agriculture and the land-based sectors, as in other industries, presents an opportunity to bring coherence to the assessment of the labour market and the potential impact on identified demands brought about by changes to key social and economic indicators.

Recommendation 1: employer and industry organisations should be encouraged to collaborate with the NTOs to establish an integrated analysis of skill requirements in individual sectors, with flexibility in modelling and reporting through a common format.

6.3 The report further highlights difficulties in collating an accurate and complete analysis of provision due largely to inconsistent data collections and incompatible reporting systems used by providers.

Recommendation 2: through the establishment of lifelong learning partnerships (LLPs) and the proposed Learning and Skills Council, the opportunity should be taken for providers and those who fund education and training in agriculture to put in place common data collection and reporting arrangements on post-16 provision.

6.4 The distribution of course provision in agriculture should be reviewed by the delivering colleges to find options for further collaboration and rationalisation. LLPs will be developing local learning plans which will provide some context for review, for example, to ensure that agriculture provision in general FE colleges is complementary to the range of courses at specialist agriculture colleges rather than duplicated or unnecessarily competitive. It will be equally important to ensure that specialised skill requirements of the

industry can be met at regional and national level as they become better defined.

Recommendation 3: colleges and other providers should find ways of working together locally to respond effectively to LLP plans, ensuring that unnecessary duplication and competition are avoided.

Recommendation 4: agriculture colleges should actively review how highly specialised, often small-scale, skill requirements can best be addressed efficiently from available resources. This is likely to require review at both regional and national level, taking account of regional economic priorities and the overview of the industry from the NTOs.

6.5 The key messages to providers from employers are that cost and access to training are the main difficulties for the small, often remote, businesses so characteristic of the industry. With a requirement on the FE sector to support the government's wish to increase the contribution to training from employers, there is potential tension which must be faced and resolved if the needs to broaden and develop skills are to be met.

Recommendation 5: the NTOs, providers and industry employer organisations should work together to consider imaginative ways of overcoming barriers to training and education within the context of prevailing government policies.

6.6 The analysis of FE provision in agriculture creates a useful base from which to consider whether, and how far, the skill requirements of the industry are being, and might be, met. There is scope to develop further the analysis which is included in this report.

Recommendation 6: the FEFC should publish annually a summary analysis of provision, to inform the sector, and the industry and its associated organisations, of developments and trends, for example the extent to which agriculture at NVQ level 2 and above is contributing to the national learning targets.

Recommendation 7: the FEFC (or its successor body) should disseminate the experiences and good practices of collaboration and mergers involving specialist colleges together and with other college partners.

