

Agri-Food Industry Workforce Skills and Development Strategy

June 2018

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EXECUTIVE SUMMARY

The Agri-Food industry requires an ambitious skills strategy in order to inspire the industry itself and to inform policymakers and funding agencies. It is a key part of repositioning the industry within a changing world. While there needs to be a strategy which covers the whole sector, this report concentrates on skills and infrastructure support for the agricultural and horticultural industry. This is arguably different in nature, due to specific skills needs and the fact that 95% of businesses employ fewer than 10 people and therefore lack professional human resources support.

UK agricultural productivity lags behind other countries and the lack of the right skills has been widely identified as a key factor. While the agricultural and horticultural industry is highly skilled, the level of qualifications is low by comparison with other sectors, there is poor uptake of continuing professional development (CPD) and less than 35% of UK farmers have any formal management training. This is largely due to lack of awareness of options and benefits, a mismatch in funding and industry needs and a general inertia to develop people. There is recognition of the need to bring more professionalism to the industry and that this is necessary to meet public expectations for post-Brexit support for agriculture to continue. The impending implications of Brexit means that there is a recognised urgency to address the situation in a transformational manner.

The current agriculture and horticulture skills landscape is fragmented and characterised by the involvement of a wide range of bodies. A significant amount of work has already been undertaken and numerous reports have been written covering various aspects. While some of these have included action plans, the action plans have not been undertaken in a coordinated manner, monitored or followed through, resulting in insufficient progress.

The AgriSkills Forum has been instrumental in trying to bring together the various parties and has undertaken significant work to win over hearts and minds. However, while there have been good intentions, in reality, matters are not that much further forward. Over a year ago, the AgriSkills Forum achieved agreement with a number of organisations to work in a collaborative manner, but they have not stepped up to the mark and the agreed actions have not materialised. The fragmentation of bodies, their discrete agendas and lack of realised collaboration is therefore a major cause for concern and has arguably been, and is likely to continue to be, an obstacle to progress.

The Industrial Strategy, the UK Government consultation on 'Health and Harmony: the future for food, farming and the environment in a Green Brexit' (the Command paper) and Brexit offer the opportunity for transformational change which should be seized. Continuation of the same approaches will not achieve change and, consequently, it is timely to think differently.

The policies from the government departments (Defra, BEIS, DFE and DFID) with interests in the success of the agricultural and horticultural industry need to be coordinated and actively engaged across all aspects of the sector. While the Industrial Strategy presents this opportunity, there is a real need for the industry to be engaged with the Department for Education (DfE) to ensure that funding is directed to support courses and qualifications which are aligned with increasing productivity, competitiveness and export potential. This needs to include recognition of subjects involved as STEM to attract greater funding and also to improve perception in order to encourage participation in industry-relevant courses and careers.

There has never been formal agreed collaboration between the range of bodies involved to devise and implement a coherent strategy and to make a real attempt to professionalise the industry at all levels. The current informal approaches have not delivered sufficient results. Continuation of the same is likely to result in slow, inadequate progress and be hampered by a proliferation of vested interests

Agri-Food Industry Workforce Skills and Development Strategy - Executive Summary

with a lack of overall ownership. In order to drive forward the strategy, appropriate governance will be pivotal to its success. It will require an industry-wide formal approach, in the form of an overarching independent structure, supported at the highest level, which presents a coordinated position not only internally to the industry but externally as well, which holds the various parties to account. The agreement to support such a structure needs to be robust in order to be able to withstand the continuous adaptation which will be required to meet future and changing demands, all of which, in reality, are likely to pose many challenges. So, as an absolute minimum, the industry must respond to the need for **change** and **collaborate** in a formal manner.

However, it is recommended that the theme of coordination and collaboration is further developed in order to take a transformational step forward to professionalise the industry. It is proposed that serious consideration is given to the development of the **concept** of a new independent professional body as a medium- to long-term objective. In the short term, a Senior Leadership Group should be formed to **coordinate** current activity, encourage and facilitate **collaboration** to reduce duplication and drive forward the business case for the professional institute. The new independent, dedicated Institute for the Agriculture and Horticulture Industry (IAHI), working title, would work in an integrated way with the new Food and Drink Council, in terms of both the Agricultural Productivity and Workforce work streams. The IAHI, the 'Institute', would be the vehicle to coordinate the following:

A professional framework for standards; a professional register A careers and recruitment portal Continuing Professional Development information Business support and research information

The Institute would provide the governance structure to monitor and implement the strategy, which would be delivered either through its own resources or by contracting with other bodies to provide various aspects. By encouraging membership of the Institute, both corporate and individual, it would bring a further professionalism to the industry and also indicate industry and personal ownership of the need for **continuing professional development**. It would provide a vehicle for agriculture and horticulture, like other industries which have professional bodies, to set standards and promote **career** paths and undoubtedly drive change within the industry. Indeed, in due course, the Chartered Farmer concept could be considered and developed. The business case for the Institute needs to be developed, but it needs to be an independent, wide, overarching body which is attractive to join.

It is recognised that this model is transformational and also potentially controversial as initially it would be seen as the creation of yet another body. However, it could bring formality to the work done by the AgriSkills Forum, provide added focus to some of the work of AHDB, act as an attractive vehicle to bring together other bodies and provide a focal point for joint investment by industry and government in skills and careers, now and into the future.

This report recommends the adoption of a vision and objectives, consistent with the Food and Drink Council; the immediate establishment of a cross-agricultural and horticultural formal Senior Leadership Group to take ownership of the creation of an inclusive environment to: establish an industry vision, commission a formal labour market intelligence study and to drive forward the work streams identified above. For the strategy to be successful, it will require full, industry-wide support, including endorsement from the Food and Drink Sector Council.

Key stakeholders have already been involved and consulted on the development of this report, which it is intended will then be more widely consulted upon before finalisation and implementation. The report draws on previous work and makes reference to other industries and nations.

INTRODUCTION

The objective of this report is:

'To develop an ambitious vision of skills within the Agri-Food industry which is adopted industry-wide and informs government policy, with particular reference to the current command paper and industrial strategy discussions.'

Given the publication of the Industrial Strategy¹, the subsequent establishment of the Food and Drink Sector Council, including the resultant opportunities for sector deals and the recent UK Government consultation document on 'Health and Harmony: the future for food, farming and the environment in a Green Brexit', February 2018 (the Command paper)², there has never been a better opportunity to drive transformational change. This is recognised at the highest level in government. The Secretary of State for the Department of Food, Environment and Rural Affairs (Defra), Michael Gove, called for a funding shake-up to help land-based industries fill a skills shortage and close the productivity gap, at the event organised in November 2017 by Lord Curry, on behalf of the National Land Based College (NLBC).³

The Agri-Food sector is an important part of the UK economy, employing between 1 in 7 and 1 in 8 people, contributing over £100 billion. About £9 billion of this is attributable to farming (which currently receives about £3 billion annually in EU subsidies) and the Food and Drink manufacturing sector, which delivers £26.5 billion GVA (the UK's largest manufacturing sector) while continuing to grow exports.⁴

A strategy and vision for skills is necessary in order to ensure that the industry has the appropriate workforce now and into the future. As technological change continues to impact the industry, further emphasis on the development of the right skills will also be necessary. The AHDB, working in association with the AgriSkills Forum⁵ and members of the Agri-food Technology Leadership Council (AFTC) responsible for skills, is keen to facilitate the development of such a strategy, which will contribute to the sector deal for agriculture and food production as part of the wider Industrial Strategy initiative.

This report was commissioned as a result of a joint meeting involving Lord Curry, Judith Batchelar (Co-Chair, Agri-food Technology Leadership Council (AFTC)), Beverly Dixon (G's), Tess Howe (Senior Skills Manager, AHDB), Richard Longthorp (Chair, AgriSkills Forum) and Professor Bob Webb (Skills Lead for the AFTC), the 'Commissioning Group'. The Group recognised the need to work together to develop a skills strategy for agriculture and horticulture which fits into the wider food and drink context, to review existing work and put forward proposals.

strategy/supporting documents/buildingourindustrialstrategygreenpaper.pdf

¹ https://beisgovuk.citizenspace.com/strategy/industrial-

²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684003/future-farming-environment-consult-document.pdf

³ https://ahdb.org.uk/documents/Horizon_Driving%20Productivity_Jan2018.pdf

⁴ AFTC Paper on 'A UK Vision and Strategy for Skills and Training for the Agri-Food Sector', Webb, Ryan, Noble, Batchelar

⁵The AgriSkills Forum was created in 2009 to provide industry leadership on skills development and professionalism in agriculture and production horticulture and to challenge other organisations to deliver against a vision for a skilled and professional industry. It has been bringing together representatives of various organisations.

Agri-Food Industry Workforce Skills and Development Strategy – Introduction

This report concentrates on the agricultural and horticultural industry as fundamental components with specific skills needs. However, it is envisaged that some of the themes and proposals may apply in a wider context and that some activities may act as a pilot for other segments of the sector as part of the wider Food and Drink Sector Council strategy.

This report will define the problem, describe and consider some of the key reports, draw on their recommendations, analyse success achieved to date and make recommendations for future implementation.

While AHDB has responsibility for some matters on a UK-wide basis, it is recognised that agriculture is a devolved matter. This report is predominantly aimed towards England and Wales but may also apply to the devolved nations.

2. THE NEED FOR AN AGRICULTURAL AND HORTICULTURAL INDUSTRY SKILLS STRATEGY

Productivity growth and rewarding careers are at the heart of the need for a dedicated strategy for agriculture and horticulture. Productivity growth is important to ensure that the industry is able to compete and grow markets, particularly in a post-Brexit scenario. The prospect of rewarding careers is essential to be able to attract and develop the workforce on which the industry depends, particularly in a very competitive market for future talent.

The AHDB Horizon document on 'Driving productivity growth together'⁶, January 2018, provides evidence that UK productivity has fallen behind other nations (see Figure 1 below).

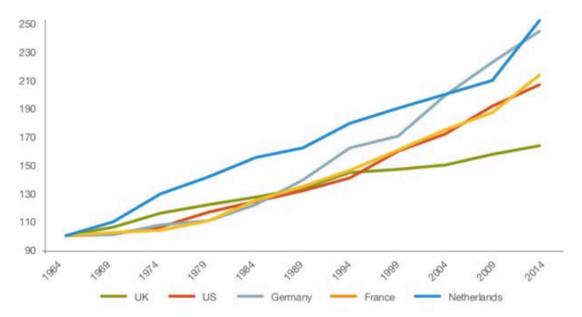


Figure 1: Total Factor Productivity (TFP) annual growth 1964-2014

The report also shows that the Agricultural Labour Productivity (ALP) performance — the amount of output per worker — is behind other nations (see Figure 2 below).

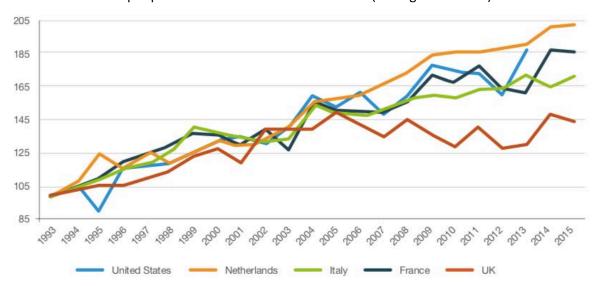


Figure 2: International comparisons of Agricultural Labour Productivity (ALP) performance

⁶ https://ahdb.org.uk/documents/Horizon Driving%20Productivity Jan2018.pdf

Agri-Food Industry Workforce Skills and Development Strategy – The need for an Agricultural and horticultural industry skills strategy

The document draws on Organisation for Economic Cooperation Development (OECD) analysis of the factors which affect productivity and identifies 'People' as one of the six factors. It states that: 'Improving the skills of the workforce and the ability to harness them via effective leadership are critical to productivity growth. A correlation exists between business performance and levels of skills and education.'

However, quoting from the Horizon document: 'British farmers and growers under-invest in new skills and training relative to their competitors.'

	2013	2013 (Under 35s)
Germany	68%	63%
France	62%	77%
Netherlands	72%	84%
United Kingdom	32%	48%

Figure 3. Percentage of farm managers who have undertaken some formal training in selected EU member states Source: Eurostat, EU Farm Structure Survey

'In 2011/12, 59 per cent of farm businesses in England were either unaware, had not considered becoming, or were not a member of a Continuous Professional Development (CPD) scheme. Only 25 per cent had a formal business plan which they reviewed annually and only 25 per cent regularly reviewed their budget. Better-performing farmers are more likely to have qualifications, participate in professional development schemes and undertake risk management practices. In 2013, only 18 per cent of farm managers in England had full agricultural training, with 61 per cent having only practical experience⁷. This may help explain the wide variation in farm business performance and profitability in the UK.

To some degree, the under-investment in skills and training reflects low levels of demand by producers that could be unlocked by generational change. In addition, it also reflects coordination failures in a crowded landscape characterised by limited cooperation between beneficiaries (farmers), providers, accrediting bodies and funders.'

The document also recognises that some of the solutions lie in 'better skills and training, farmer-to-farmer learning and better coordinated knowledge exchange' as part of a plan which addresses how government and industry jointly invest in innovation, how funding is governed and strategic direction. Bringing about more effective coordination of knowledge exchange through the private and public sector and addressing under-investment in professional development by farmers and growers.

The need for a skills strategy has been actively addressed by a number of organisations over the years and there has been no shortage of activity. However, there is lack of progress, no overall strategy and no plan of action of what needs to be achieved. The onset of Brexit has brought a renewed emphasis and an urgent need for action.

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⁷ Defra Farm Business Survey 2011–12, Farm Structure Survey 2013

3. THE CURRENT LANDSCAPE

Having defined the problem, the purpose of this section is to describe the current position and consider how this might inform the design of a future solution.

It will consider:

- 1. Work and reports to date
- 2. Industrial Strategy and the Food and Drink Sector Council
- 3. Defra Health and Harmony consultation paper
- 4. Careers and Education policy
- 5. Labour Market Information
- 6. Other nations

3.1 Work and Reports to date

- 3.1.1 The Agri-Food sector, and in particular the agricultural and horticultural industry is characterised by the involvement of a large number of bodies which are fragmented in nature. A list of the main organisations with an interest in the sector is attached as **Appendix A**.
- 3.1.2 There has been varying activity about skills and future needs. There has been consideration at a national level by bodies such as the Agri-food Technology Council (AFTC), AHDB and the AgriSkills Forum. The various bodies have produced a number of papers and action plans. This report does not intend to reproduce those papers but rather to consider some of the key ones; to consider what might be done to bring them together into a single, bold and uncompromised strategy; to try to analyse what has been missing to make them deliverable and whether there are any lessons which might be learnt.
- 3.1.3 In order to compile this report, consultation has taken place with a number of key individuals to agree consensus on the work upon which to draw. Discussions have been held with the Commissioning Group, AHDB, Defra, Landex and Lantra.
- 3.1.4 The existing strategies which inform this report are as follows:

AgriSkills Progress – Business Case – Developing People and Business – June/July 2017 (Appendix B)

AgriSkills Progress – Workshop Report – March 2017 (Appendix C)

AgriSkills Strategy – Professionalism in Agriculture – People Progression Profit – November 2013⁸

Agriculture and Horticulture Development Board (AHDB) Skills Strategy 2016–20219

Agri-food Technology Council (AFTC) – a UK Vision and Strategy and Training for the Agri-Food Sector – 2016

National Land Based College (NLBC) Strategy 2017–2022 – February 2017¹⁰

3.1.5 An overview of the aims and key recommendations from each report is attached as **Appendix D**.

⁸ https://ahdb.org.uk/projects/documents/documents/IndustrySkillsStrategyNov2013.pdf

⁹ https://ahdb.org.uk/documents/AHDB Skills Strategy2017.pdf

¹⁰ https://nlbc.uk/wp-content/uploads/2017/09/NLBC-Strategy-Web-1.0.pdf

- 3.1.6 In summary, there is considerable consistency across the strategies, both in terms of aims and recommendations:
 - AgriSkills in 2013 stated the aims as:
 - 1. A more profitable, sustainable and adaptable industry capable of meeting the future demands and challenges of agriculture and land management
 - 2. An industry that recognises skills development and continual professional development is fundamental and integral to all businesses
 - 3. An industry that has clear paths of progression for staff and simple access to demandled provision, regardless of sector or location
 - 4. A world-class, competent, innovative and highly skilled workforce, at every level, whose professionalism is recognised and rewarded
 - 5. An industry that forms a robust skills development partnership with the wider food chain. This will allow supply chain leverage and joint working with government so there is a maximum integration of policies and practice, with reduced repetition

The 2013 AgriSkills report called for 'the coordination of activity – an overarching but non-specific, voluntary strategy'. Professionalism is defined as 'the participation in an activity for gain or reward with a high degree of competency that is clearly demonstrable, inspiring confidence'. AgriSkills has worked hard over the years to win over hearts and minds and has been successful in bringing a range of parties to the table. In 2017, considerable progress was achieved as a number of organisations agreed to work together, as is evidenced in the draft business case. However, in practice, this has not happened, and the informal arrangement has not delivered the level of progress required.

- AHDB seeks to take a leadership role and develop a framework which will recognise and secure a professional and confident workforce for the industry which is constantly learning and adapting, acquiring new skills, taking up technologies and innovating.
- AHDB and the AgriSkills Forum held a workshop in March 2017 which was attended by representatives from a number of industry bodies. Attendees considered a proposed toolbox of activity and support in terms of audience, content and expectations around the six elements of Agriskills Progress, and also agreed for each element who was best placed to take forward activity, as outlined below, with the report containing details for each of the areas (Appendix C):

Activity Area	Lead Body
Business support	AHDB
Job standards	AgriSkills Forum / Institute of Apprenticeships / Lantra / AHDB
Training records	NLBC
Career pathways	Bright Crop
Skills needs and	Lantra (AHDB/Edge/NLBC)
training providers	
Project management	AHDB

Subsequently, a draft business case was developed by Agriskills Progress in June 2017 and further amended in July 2017 (**Appendix B**). Despite there being agreement by the parties to take matters forward, this has not happened. It should also be noted that the Bright Crop project has subsequently been wound up (see 3.1.8).

- AFTC, launched in July 2013, stated 'Build skills and leadership' as one of its three objectives. It clearly recognised the need to build a stronger skills base and stated that progress would be measured by the number of agricultural jobs created, the number of apprenticeships and the number of graduates in related subjects. AFTC recognised the approach taken by the Institute of Food Science and Technology (IFST) which has a clearly laid out strategy to support its members, which forms a useful basis upon which to build (see Appendix E).
- NLBC was established in 2015, and formally launched in May 2016. It seeks to champion land-based vocations as a professional career, increase industry engagement, develop qualifications to deliver the skills which employers need and maximise the use of learning technologies and blended learning to aid skills development. To date, NLBC has formed a successful relationship with City and Guilds, which, together with Landex, has provided substantial funding. Considerable progress has been made in establishing a useful portal for careers information which brings together links to a number of organisations operating in the sector. It provides a platform upon which to build. NLBC is wholly owned by the land-based colleges and some specialist universities. The management and secretariat of NLBC has recently reverted to Landex.
- 3.1.7 In addition to the above documents, it is relevant to draw upon the following:

Bright Crop Careers End of Project Report and Recommendations – September 2017 (Appendix F)

Careers Collaboration Event – August 2017

Landex Mix and Balance of Land-Based Education and Training in England – March 2016 Harvesting the future for young farmers – How we enable them to thrive – NatWest – February 2017^{11}

- 3.1.8 **Bright Crop:** The Bright Crop Careers initiative was set up in 2012 to address the shortages of new talent being recruited across the agriculture and horticulture industries. The project was wound up in 2017 and a final report was produced. The report is particularly relevant with regard to observations in terms of careers. The key observations include:
 - 'Research (Careers Development Institute 2015) tells us that the poor perceptions of our industry among teaching and careers professionals negatively impacts the quality and quantity of young people that are signposted to the land-based industries during their 'moments of choice' in careers education. Employer interactions in schools are more successful if delivered with the qualification pathway context in place and the providers of Further Education (FE) and Higher Education (HE) engaged in that partnership approach from the beginning. (Education and Employers Taskforce 2016).
 - The sector-specific approach, in a fragmented offering, has limited ability to deliver real
 impact and realise the investment made. The time is right to develop a new holistic
 approach to careers, skills and talent. With high levels of interest in careers across all
 sectors, there is a need for facilitation and leadership across the land-based sector and
 improved collaboration to prevent duplication acting as a barrier to success for all
 involved.
 - Collaboratively, land-based initiatives have the opportunity to develop high-quality careers outreach provision, with better signposting to our land-based colleges and HE providers. They should provide a service that our employers can easily engage with and support; by

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¹¹ https://natwest.contentlive.co.uk/content/b1a9a104-1dff-a9be-89a5-fe6a99ef3a42

- mobilising their organisation to deliver meaningful careers activity and creating a sustainable funding structure that delivers benefit to the whole of the land-based industries.
- Bright Crop is one of 31 land-based careers initiatives, all independently funded and governed by bodies across the sectors. Over 200 non-industry specific websites designed to provide career inspiration for young people. In the last 6 months alone, 14 reports/reviews have been produced by interested organisations. Since its inception, Bright Crop has worked alongside many of these land-based initiatives. While the direction of most initiatives is similar: attract high-quality people into their sector, each initiative working independently has led to competition for investment, but more importantly a diverse and complicated range of offerings for careers professionals and new entrants to access, which is not conducive to improving engagement. All of which have resulted in Bright Crop struggling to create a clear and consistent voice around careers in this highly fragmented market.'

The key recommendations were for a more **collaborative initiative** that is **widely supported** by all sectors and their employers and is capable of **promoting the sector as a career of choice** for the next generation. Specifically, to assign existing careers initiatives into a single project; reflect the government education and careers policy and regional approach to skills; utilise existing infrastructure to connect with schools; and use economic modelling and industry liaison to reflect current/future skills needs of the industry.

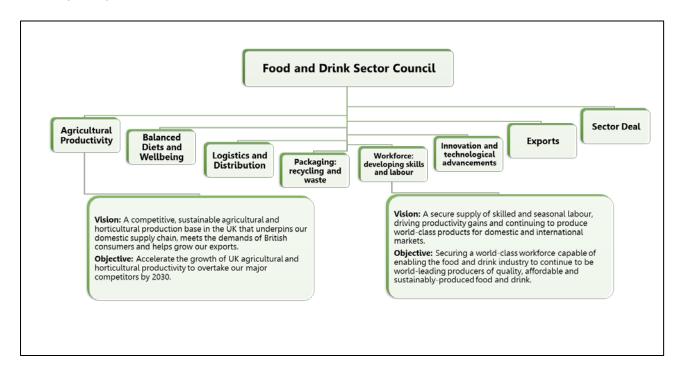
- 3.1.9 Careers Collaboration event August 2017: The workshop was organised by NLBC and funded by AHDB and brought together for the first time 20 attendees from a wide community of organisations committed to the development of land-based skills. The conclusions were to: create the cooperative, get a great website, determine the exact value proposition and create a recruitment strategy that is pulled together from the various stakeholders. The next steps identified were to: create a cooperative under the leadership of NLBC, define the value proposition, lobby Defra for a round table and develop a great website as a portal for land-based careers using NLBC as the model of good practice.
- 3.1.10 While there was agreement to drive forward careers strategy with a land-based approach, the agricultural and horticultural industries are also aligned to the food and drink sector. Consequently, there is a need to ensure that there is a coordinated strategy and maximum exposure across both sectors.
- 3.1.11 Landex: In 2016, Landex was invited to undertake a national review of the mix and balance of land-based provision in England, the results of which fed into the area review process. The review included a brief introduction to the land-based and associated food-processing industries and their workforces, together with an assessment of likely future labour and skills demands. It considered industry and infrastructure, patterns of provision, supply and demand and the case for the specialist provider base and strategically significant provision. It recognised that although some Local Enterprise Partnerships (LEPs) have rural strategies, 'the sector only infrequently appears as a priority for any individual LEP area, making it apparently invisible to this part of the economic development and skills planning system'. Therefore, it is important that a national picture of the needs of the industry is taken into account. The report covers all of the land-based industries, with agriculture, horticulture, land-based engineering, trees and timber accounting for about 40% of students. It was very comprehensive in nature and draws on the work of the AgriSkills Forum and Lantra.

3.1.12 Conclusions which can be drawn from the work to date:

- Some bodies, but not all, evidently have an understanding of the nature of the issues which need to be addressed
- There is no lack of analysis of the problems
- There is broad agreement about the aims and objectives of a skills strategy
- Arguably, previous initiatives have failed to make the optimal progress for the following reasons:
 - o an inadequate, universal understanding of the need for change
 - o the number and fragmentation of bodies operating in the skills arena with discrete agendas but without overall industry ownership
 - o the voluntary approach has failed to deliver the necessary results
 - o action plans which have been drawn up have neither been fully implemented nor closely monitored
 - lack of formal coordination of collaborative activity to promote an exciting long-term vision of the agriculture and horticulture industries with attractive career paths and continuing professional development and consequent inadequate workforce planning

3.2 Industrial Strategy – Food and Drink Sector Council

- 3.2.1 The Industrial Strategy has led to the establishment of the Food and Drink Sector Council, an industry-led board, which presents a key opportunity to drive change within the sector. The terms of reference of the Sector Council cover the entire farm-to-fork food chain, including farming, manufacturing, retail, hospitality and logistics and packaging. It is intended that it delivers industry-led approaches and solutions to boost growth and productivity across the food chain.
- 3.2.2 At the first meeting in January 2018, eight work streams were established and two of the three priority ones are particularly relevant, namely Agricultural Productivity and Workforce. The diagram below shows the various work streams, with some further detail on the two relevant priority work streams.



- 3.2.3 The vision and objective statements for the two work streams provide a fundamental steer to the Agri-Food Skills strategy and clearly provide the framework within which to operate. There is a close interrelationship between these two streams, which is why it is envisaged that the chairs, Sir Peter Kendall (Agricultural Productivity) and Dame Fiona Kendrick (Workforce), will work closely together.
- 3.2.4 The Agricultural Productivity work stream, through the stakeholder forum that the National Farmers' Union (NFU) and AHDB have jointly convened, will identify transformational propositions that will unlock productivity growth in agriculture and horticulture. One of the six key areas identified is: increasing the agility of our workforce to increase dynamism and skills.
- 3.2.5 The Workforce work stream will work across the whole food and drink sector.
- 3.2.6 It is envisaged that the recommendations in this report, if adopted, will feed into both work streams, but specifically in relation to the Workforce work stream, to ensure that the specifics of agriculture and horticulture are appropriately recognised.

3.3 Defra consultation on the Future for Food, Farming and the Environment

The UK Government, through Defra, is currently consulting on food, farming and the environment. The consultation document specifically mentions skills and presents a policy opportunity for transformational change.

'Health and Harmony: the future for food, farming and the environment in a Green Brexit' February 2018, the Command paper 2 – Extracts from the Executive Summary

11. There is a huge opportunity for UK agriculture to improve its competitiveness – developing the next generation of food and farming technology, adopting the latest agronomic techniques, reducing the impact of pests and diseases, investing in skills and equipment and collaborating with other farmers and processors. We want our future policy to provide an enabling environment for farmers to improve their productivity and add value to their products, so they can become more profitable and competitive.

A skilled workforce

26. Making sure that our agriculture, horticulture, forestry and food supply chain industries have access to sufficient and suitably skilled labour is essential to industry growth and competitiveness. We will take the opportunity to stimulate a forward-thinking agricultural industry that invests in the future through innovative practice and automation. We want to help attract more of our graduates and domestic workforce into this vibrant industry.

Consultation Questions which specifically seek information on:

- how the take-up of knowledge and advice by farmers and land managers can be improved, options to be ranked in preference order, including:
 - a) encouraging benchmarking and farmer-to-farmer learning;
 - b) working with industry to improve standards and coordination
 - c) better access to skills providers and resources
 - d) developing formal incentives to encourage training and career development

 $https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/684003/future-farming-environment-consult-document.pdf$

¹²

- e) making Continuing Professional Development (CPD) a condition of any future grants or loans
- the most effective ways to encourage new entrants and more young people into a career in farming and land management
- the main barriers to adopting new technology and ideas on-farm, and how we can overcome them
- the priority skills gaps across UK agriculture (business/financial, risk management, leadership, engineering, manufacturing, research or other)
- what can industry do to help make agriculture and land management a great career choice
- how can government support industry to build the resilience of the agricultural sector to meet labour demand?

It is envisaged that the output from this consultation will be extremely useful to inform further the development of the strategy and priorities. For example, the analysis of the responses to point e) above, concerning whether CPD should be a condition of any future grants or loans, will be particularly informative. In discussions while preparing this report, on this point alone, a spectrum of views have been expressed, ranging from 'there should not need to be any sticks in order to encourage further training' to 'it is a real opportunity which should be seized to formalise training' and 'it was time to move to the requirement of a licence to practise to bring us on a par with other nations'.

Given the importance and relevance of this consultation, it is considered essential that the outputs are taken into account to develop further the strategy.

3.4 Careers and Education Policy

- 3.4.1 In recent years, the government has introduced a number of changes which impact on the careers and education landscape and there have been a number of reports. Drawing on existing work, the Bright Crop Careers Report (**Appendix F**) provides a brief description of the following policy changes, their impact and opportunity:
 - the Technical and Further Education Bill, October 2016, The Post-16 Skills Plan
 - access to young people through secondary education careers
 - the Apprenticeship Levy
 - careers outreach
- 3.4.2 The Post-16 Skills Plan aimed to radically simplify vocational and technical qualifications. The government's ambition was that every young person, after a grounding in the core academic subjects and a broad and balanced curriculum to age 16, would be presented with two choices: 'the academic or the technical option'. The technical option would include T-levels and apprenticeships, offering two different but equally valid routes to skilled employment. A detailed consultation on T-levels ended at the start of the year. However, the department's analysis of the responses has yet to be published. The draft route maps developed by the Gatsby Foundation were also subject to consultation at the turn of the year. T-level panels will be responsible for developing the outline content for the qualifications forming part of the new T-levels. Each T-level panel will sit at pathway level and the department is currently recruiting people with direct experience of occupations in Agriculture, Environmental and Animal Care. At present, the first T-levels are due to be available in 2020/21, with a roll-out to all pathways by 2022/23. The 'Agriculture, Environmental and Animal Care' route or pathway is due for implementation from September 2022. However, there is speculation that this programme is likely to be delayed by a year.

- 3.4.3 One of the most notable recommendations which was agreed under the Bill, was that all schools must provide opportunities for young people to interact with Further Education (FE) providers as part of their careers provision. The impact of this is a new, direct route into mainstream secondary education for industries like agriculture and horticulture that have specialist education provision at Further Education and Higher Education Institutes. It offers massive potential for the land-based industries, particularly when considering, on average, there are five times more high-skilled technical roles than in other sectors (UKCES '16 update) and a growing trend for automation and digital technology.
- 3.4.4 In terms of the apprenticeship standards, concern has been expressed about the exceedingly slow development and approval of land-based apprenticeship standards and their associated assessment plans. (The following are awaiting final approval: Land-Based Engineering Standards (level 2 and level 3), Stockperson (level 2), Crop Technician (level 3) and Packhouse Line Leader (level 3)). Even when approved, concern has been raised that these standards will not cater for the majority of agriculture apprentices who require a broader-based apprenticeship. Some enrolments, in consultation with employers, are currently suspended until appropriate standards are in place. The change in approach by the Institute for Apprenticeships (IfA) in allowing the inclusion of formal qualifications within the standards is viewed by education providers as a positive step by helping to ensure that sufficient underpinning knowledge will be included to allow progression to further study. This will be particularly important if the standards are to be used as the starting point for developing T-levels, but it is probable that few of the standards currently going through the approval process will include a long qualification until a full review takes place.
- 3.4.5 Other relevant reports which have been published include the following:
 - Skills Commission report on 'Going Places', December 2016¹³, recognises 'the importance of collaboration and developing strong partnerships', that 'the sharing of problems and solutions is central to successful engagement'. It argues for a more thorough evidence base to support adequate skills provision and planning for the future and the need to facilitate clear pathways and transferable skills and the innovative use of digital technology.
 - UK Government Report on 'Future of Skills and Lifelong Learning', November 2017¹⁴, recognises among its key findings that:
 - Employers believe labour market entrants are not properly prepared for the workforce; the UK compares poorly against other countries
 - o The UK has relatively large mismatches between supply of and demand for skills
 - Participation in formal learning declines with age. Adult learning is in overall decline and is disproportionately taken up by wealthier, more highly skilled individuals
 - UK Government report on 'Careers Strategy: making the most of everyone's skills and talents', December 2017¹⁵, sets out its objectives as:
 - o Inspiring encounters with further and higher education, and with employers and workplaces
 - o Excellent advice and guidance programmes

¹³ http://www.policyconnect.org.uk/sc/research/going-places-innovation-further-education-and-skills

¹⁴https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/662149 /foresight-future-of-skills-lifelong-learning.pdf

 $^{^{15}} https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/664319/Careers_strategy.$ pdf

- Support and guidance tailored to individual needs
- Using data and technology to help everyone make choices about careers, including a single digital route to careers information

Much of the delivery of this strategy will be undertaken by the Careers and Enterprise Company (CEC)¹⁶ which was established in 2014 to be the strategic coordinating function for employers, schools, colleges, funders and providers and to provide high-impact careers and enterprise support to young people.

- Hays report on 'Gen Y and the World of Work'¹⁷ provides a useful insight into the expectations of Generation Y, currently aged 20–35, which makes up 18% of the population. According to their research, what this group seek most from their career is interesting work and job security; while base salary is important, the next highest ranked factor is flexible hours and working; they have a thirst for knowledge and the highest ranked factor when deciding on a potential employer was training and development; they want leaders who can help them to fulfil their full potential by coaching and mentoring them.
- 3.4.6 In considering the above policy context and changing environment, all are pertinent to the food and drink sector. However, specifically in terms of agriculture and horticulture, consideration needs to be given to how to approach the number of policy changes and implications of other national reports. Resource within the industry is limited to be able to sufficiently keep abreast of developments, fully understand them and then act on them. Agricultural and horticultural bodies, both industry and providers of education and training, need to collaborate more strongly in order to ensure that the Agricultural and Horticultural industry is suitably positioned to carry the weight which it deserves within the food and drink sector and that it itself competes alongside other sectors.

3.5 Labour Market Information (LMI)

- 3.5.1 A key aspect will be to consider how future skills requirements can be accurately determined, particularly as only skilled staff can unlock the full potential of research and innovation.
- 3.5.2 Current methods used to inform labour market information and skills requirements are detailed below, including an indication of their future potential to inform the Agri-Food industry strategy:
 - a) Office for National Statistics (ONS) The Labour Force Survey (LFS) is designed to be a study of the employment circumstances of the UK population. The survey collects information about education and training opportunities and skills information at the level of whether the qualification is high, medium or low. A recent ONS article on 'Labour in the agriculture industry, UK', ¹⁸February 2018, recognises that it is difficult to know the size of the agriculture labour market and that official estimates undercount workers in the agricultural industry. The article indicates that there is an intention for the ONS to work

¹⁶https://www.careersandenterprise.co.uk/

¹⁷ http://www.hays.co.uk/geny/index.htm

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 $^{^{18}} https://www.ons.gov.uk/people population and community/population and migration/international migration/articles/labour in the agriculture industry/2018-02-06$

with the Government Statistical Service (GSS) and Defra to strengthen existing data sources over the next two years. The LFS does not act as a source to inform future Agri-Food industry skills strategy needs. However, in discussion with ONS, there was further recognition that the information captured was not detailed enough to be able to understand properly the industry and that it had obtained information directly from NFU¹⁹ and the British Growers Association²⁰ for work on migration statistics. It should be noted though that other sectors such as construction are also finding that the level of detailed information available is inadequate for skills forecasting. Industries are undertaking their own research, for example the Home Builders Federation is running its own census on its website.

- b) Defra The Department for Environment, Food and Rural Affairs (Defra) June Survey of Agriculture and Horticulture surveys a representative sample of farms in England. Defra brings together similar surveys from Northern Ireland, Scotland and Wales to form a UK estimate. The data is designed to measure the changing structures of British farms. It is a compulsory survey that collects detailed information about land use, livestock numbers and the agricultural workforce. The survey asks each farmer about employees on the farm. At the moment, it is not believed that any information on skills is collected; should this be collected is a consideration as to whether the information presents a future opportunity.
- c) Lantra The Sector Skills Assessment (SSA) reports were produced to a common specification developed by the UK Commission for Employment and Skills (UKCES) to provide authoritative LMI in order to inform the development of skills policy across the UK. Lantra's 2012 SSA report which focused on agriculture, forestry, fishing and veterinary activities was updated in Spring 2014. UKCES ceased to exist from 31 March 2017; the research functions of Labour Market Information for All (LMI), the Employer Perspectives Survey, the Employer Skills Survey and Working Futures were transferred to DfE via a business transfer agreement in October 2016.

The Prince's Countryside Fund funded Lantra to produce a report on 'Improving Rural Livelihoods in Northern Ireland: Skills Survey', ²¹ 2016, which includes useful sections giving analysis on approaches to innovation and training needs. This was obtained by one-to-one telephone interviews with 206 businesses in Northern Ireland.

Lantra is currently undertaking some work for Scotland and Wales in support of their skills strategies.

d) The land-based college sector colleges and universities and the Education and Skills Funding Agency hold a wealth of information about levels of interests in courses and the numbers of students following qualifications at different levels. An integrated approach to how this information might be used more widely should be considered.

¹⁹ Following the abolition of the Seasonal Agricultural Workers Scheme (SAWS) in December 2013, NFU established a labour monitoring tool to gather evidence on the supply and demand of seasonal workers

²⁰ BGA has created an annual survey to measure the non-UK seasonal labour force to monitor the supply of seasonal and permanent labour because of a lack of other data sources

²¹https://www.lantra.co.uk/system/files/Improving%20Rural%20Livelihoods%20in%20Northern%20Ireland%2 0-%20Skills%20Survey%202016.pdf

- e) Other nations: The UK Government report on 'Future of Skills and Lifelong Learning' 22, November 2017, includes a section on labour market information. It points out that many countries have LMI systems in place to anticipate changes in labour markets and inform stakeholders of these predictions. The US, Germany and the Netherlands are cited as examples of large networks. In the UK, the Longitudinal Education Outcomes (LEO) dataset is beginning to generate experimental statistics, which it is envisaged could inform future career choices as it provides historic evidence of the benefits of studying specific courses in specific places at a higher education level. See also section 3.6.6 on New Zealand below.
- 3.5.3 In summary, most of the information available is retrospective and there is a lack of current information about future skills requirements. The most recent detailed analysis of requirements is referenced in the Lantra report, 'The UK Land-based and Environmental Sector: Skills Assessment Update Spring 2014'. It would appear that there is no more recent information about future sector skills requirements but that there is a strong argument to develop this information.

3.6 Other Nations

In preparing this document, it is relevant to look at what is happening elsewhere, for example in the devolved nations and beyond.

3.6.1 **Scotland:** In Scotland, the Scottish Funding Council (SFC) funded Scotland's Rural College (SRUC) to work with other colleges and employers to develop a 'National Strategy for Land-Based Education and Training' 23, which was published in January 2015. The project was funded against the background of the establishment of regional colleges and the merger of the Scottish Agriculture College (SAC) with the three land-based colleges, Barony, Elmwood and Oatridge, to form SRUC. Its aim was to ensure a cohesive land-based curriculum strategy for the sector. The approach taken was to consider individually 12 of the 16 land-based industries recognised by Lantra and to make recommendations specific to each sector but for these to be overseen by a joint SFC/SRUC and colleges working group. The research undertaken included desktop, one-to-one interviews and industry-sector surveys. The joint working group has the responsibility for taking forward the strategy.

Subsequently, the Scottish Government published a vision for agriculture and nine desired policy outcomes. In early 2017 four Agriculture Champions were appointed, including one specifically for education and training. In November 2017, 'An Interim Discussion Document from the Scottish Government's Agriculture Champions'²⁴ was published and widely welcomed. This identified six key priorities, including 'illustrating the huge opportunities for careers in the rural sector'. It further proposes to take forward this area faster than the others by developing a Rural Skills Action Plan. It also recognises that there are lessons to be learned from programmes in Ireland. 'A Future Strategy for Scottish Agriculture: Final Report by the Scottish Government's Agriculture Champions' was published in May 2018²⁵. It recommends transformational change, including 'the mindset needed is one of a professional, modern businessperson', and a significant number of recommendations with regard to careers.

²²https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/662149 /foresight-future-of-skills-lifelong-learning.pdf

²³ http://www.sfc.ac.uk/web/FILES/ReportsandPublications/national_land_based_strategy.pdf

²⁴ http://www.gov.scot/Publications/2017/11/6588

²⁵ http://www.gov.scot/Publications/2018/05/4376

As one of its three key priorities, the Scotland Food and Drink Strategy, March 2017²⁶, identifies, 'People and Skills: raising attractiveness of the industry as a career destination and investing in the existing workforce'. This is clearly aligned with the overall Scottish Government strategy.

Lantra is currently being funded to undertake some sector skills council work in Scotland to drive forward their strategy.

- 3.6.2 **Wales:** Food and Drink Wales Industry Board earlier this year published 'Transforming Skills in the Welsh Food and Drink Industry' 27, which identifies the following as the four key skills for Wales:
 - 1. Address the skills shortages that constrain productivity
 - 2. Increase the uptake of apprenticeships in Wales through fit-for-purpose, industry-designed, appropriately funded and well-communicated apprenticeships
 - 3. Improve the perception and understanding of the food and drink industry in Wales as offering an exciting career of choice
 - 4. Address the challenges of a tightening labour market through innovation

Develop Wales as the home of innovation in food and drink (not necessarily skills)

The strategy includes the proposed actions to address each of the themes, with clear objectives, mechanisms and tactics, which provides a model upon which to build.

In addition, Lantra is working with the Welsh Government to deliver several strands of their Farming Connect programme²⁸ which supports farmers to create development plans as a precursor to accessing funded training. It is interesting to note that although the Welsh Government encourages training in higher-level management skills, the vast majority of the uptake is practical skills training (telehandler, spraying, etc).

3.6.3 **Northern Ireland:** In 2013, the Northern Irish Agri-Food Industry joined forces to set up a board to tackle the challenges across the industry and create a strategic action plan²⁹. This board established 10 Industry Sector Groups that had a focus on seven themes: Growing Market Share; Working Together; Sustainable Growth; Innovation/Entrepreneurship/Skills; Better Regulation; Financing Growth; and Food Fortress. The board was responsible for reviewing the industry challenges and providing recommendations; the outcome was a report that listed 118 recommendations that covered not only what the government is required to do but also the Agri-Food Industry. The main messages in the report are 'There is only one supply chain' and 'The many and varied organisations and interest groups representing the industry are collapsed on a phased basis over an agreed timescale to form only 4

²⁹ https://www.daera-ni.gov.uk/sites/default/files/publications/dard/going-for-growth.pdf

http://www.scotlandfoodanddrink.org/media/78130/strategy-brochure-smaller-size.pdf?Action=download
 https://businesswales.gov.wales/foodanddrink/sites/foodanddrink/files/180209%20F%26D%20Industry%20

Skills%20A4%20ENG 1.pdf

²⁸ <u>http://www.businesswales.gov.wales/farmingconnect</u>

organisations, each representing Marketing, Innovation Funding, Skills/Entrepreneurship and Industry'.

In relation to the specific objective of this paper, the challenges and recommendations for Skills were defined as follows.

Key challenges on skills

- A poor perception of the industry, lack of understanding of agriculture and food production, lack of awareness of the career options, and difficulty in recruiting graduates, particularly those with scientific and technical skills. We must position ourselves as an attractive career option – from semi-skilled to technical to business management, with opportunities for graduate talent
- Management and leadership training must be enhanced, and industry must increase their uptake of the support on offer
- There is a need for business skills in the industry, both at primary and processing levels cost analysis, commercial viability and application of technical skills
- A lack of marketing skills and failure to appreciate the need to meet or exceed customer expectations throughout the supply chain
- The need to better harness the fresh talent at Further Education colleges, universities and CAFRE through apprenticeships opportunities, on-farm, in the factory and in skilled occupations such as the bakery sector

Recommendations - Skills

- All Agri-Food skills and entrepreneurship development must be the responsibility of a single dedicated group which must match provision to requirements
- Agri-Food must be introduced into the curriculum at pre-school, primary and secondary level to enhance the understanding of agriculture and food. The scope for development of primary and secondary level curriculum-based training in agriculture and food to GCSE exam level must be examined
- There should be a significant increase in training places in Agri-Food at all levels. We will commit to:
 - Provide placements for all industry trainees, including farm apprenticeships/farm management development opportunities for those currently being trained in CAFRE, as an integral part of their development
 - o Provide training to career staff on Agri-Food training opportunities
 - Resource and expedite implementation of the Food and Drink Future Skills Action Group (FSAG) Action Plan
 - Establish an action group to reassess on-farm training needs (in conjunction with FSAG) and develop a holistic action plan for skills development in the farming and fishing industries; Support industry to ensure supply of skilled staff
 - Provide ICT skills development and infrastructure on farms to support the implementation of revised business models
- 3.6.4 **Ireland:** In 2015, the Irish Government created the Food Wise 2025 strategy, a ten-year strategy with a key focus on growth in the Agri-Food Sector: 'Local Roots, Global Reach'³⁰. The strategy provided over 400 recommendations on how the future of the Irish Agri-Food Industry could tackle their challenges. These recommendations were categorised into four 'Delivering Growth' themes: Human Capital, Competitiveness, Market Development and Innovation.

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³⁰ https://www.agriculture.gov.ie/foodwise2025/

In particular reference to this paper, the 'Human Capital' theme focuses on skills. The key strength of the Food Wise strategy is the approach in which it aims to attract entrants and skills in the Agri-Food industry. The method is to work with the entire supply chain collectively; through emerging dialogue with other connecting industries and subsectors, such as pharmaceutical, tourism, IT and precision technology. There is recognition that 'Agriculture' sits outside the usual parameters of pre-farm gate work. As a result, all actions and recommendations span across from the start of the journey in education, to the producer, the processor and the end of the journey with the marketing of the industry.

The outcome of the strategy is a series of 'Skills Needs' and 'Recommendations/Actions'; the table below is an adaptation of the results of the report:

	Skills Needs	Recommendations/Actions
Producer Level	 Financial and Business Development Knowledge transfer of the latest research and technological innovation Availability of skilled labour Management training 	 Review the existing curricula in Agriculture; to be completed by Teagasc, with the aim to identify each career step and the skills required in a matrix format Review and develop eligibility into Agriculture courses/subjects and allow more flexibility for access for nonagriculture background entrants Review and update current CPD for Professional Agricultural Advisors
Agri-Food Companies	 Attract and develop management and leadership capability Lack of 'in-company' capability to accelerate market development and direct market access Capability to access finance through business and financial planning expertise Lack of technical capacity to absorb new research and innovation from research bodies Inability to develop management teams, implement succession planning, plan for mergers and acquisitions and professionalise corporate governance structures Limited ability to attract and access third-level graduates with skill sets to address these gaps Lack of skilled operatives in certain key areas, such as engineering, maintenance and technicians 	 Reconvene the Expert Group on Future Skills for Industry and update the report on Future Skills Needs in the Food and Drink Sector at management, financial, innovation and operational levels DAFM, through its research-funding programmes (Stimulus, FIRM and CoFoRD), to continue to support the development of the new thought and technology leaders for the Agri-Food sector through supporting Agri-Food Masters and PhD students on suitable scientific and impactful research projects The DAFM-funded Agri-Food Graduate Development Programme to be used as a platform to develop a model to deliver continuous professional fevelopment to graduates in Agri-Food companies through short, themed, modular courses and work-placed Masters and PhD programmes

3.6.5 **Germany:** During discussions, reference was made to the qualifications framework in Germany which leads to Master Farmer and whether this would ever be achieved in the UK. In researching this system, the report on 'Vocational Education and Training in the Agricultural Sector of Germany and China'³¹, 2016, included clear diagrams on education pathways. The report itself covers the work which Germany is undertaking with China to develop the Chinese agriculture sector.

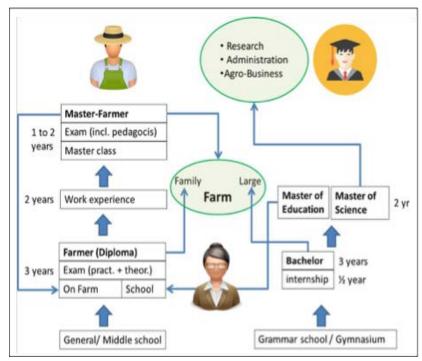


Figure 4: Basic structure of vocational education in Agriculture

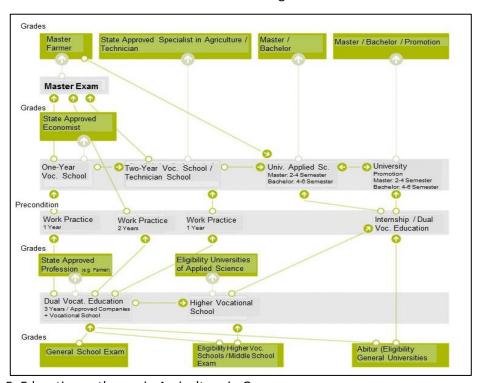


Figure 5: Education pathways in Agriculture in Germany

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³¹ http://dcz-china.org/wp-content/uploads/2016/05/VET-in-Germany-and-China-.pdf

3.6.6 **New Zealand**: In New Zealand, the Primary Industry Training Organisation (Primary ITO) is funded by government under the Industry Training Act 1992 to set standards and arrange workplace training for people working in the New Zealand primary sector. It develops and maintains national standards for the achievement of more than 290 industry qualifications and arranges training for delivery of those standards – including the assessment of trainees and the monitoring of training quality. The Primary ITO works with industry to develop training and qualifications that align with best practice and to meet current and future skills needs. It also encourages the educational and work–life aspirations of trainees and supports the productivity and profitability of organisations employing them. In 2016, it worked with more than 7,000 employers and more than 28,000 trainees. Its training and qualifications help people achieve their goals in over 30 primary industries, including: Dairy, Meat and Fibre, Horticulture and Viticulture, Seafood, Equine and Sports Turf.

Work was undertaken on 'Future capability needs for the primary industries in New Zealand' for the Ministry for Primary Industries in April 2014³². The report begins by saying 'Understanding future capability needs and determining how we build this capability is critically important for lifting the productivity and profitability of New Zealand primary industries'. It further states that there is a common goal between the industries and government to double export returns by 2025 and that human capability is a core asset underpinning each industry's strategy. The report is detailed and considers employment by industry, occupation and qualification level, field of study, region, ethnicity and gender. The report identifies the high-level themes from the industry strategies which are used to inform the skills forecasting. The key findings about meeting future capability needs fall into three major areas: attract, train and retain. The report identifies that an increased focus by everyone on capability improvement is necessary and, interestingly, poses a number of questions which it would be useful to follow up on to see how these have been progressed.

The methodology used for investigating the future capability requirements of the primary industries involved:

- Reviewing strategies developed by individual primary industries
- Collecting historical information about the industries' recent skill requirements
- Preparing detailed employment forecasts up to 2025 based both on the implementation of the strategies and on a business-as-usual basis
- Consulting with stakeholders to expand understanding of industry prospects and allow a critical review of the employment forecasts
- Revising industry narratives and employment forecasts

It is suggested that a follow-up is undertaken to establish the extent to which this work has been adopted four years on, lessons learnt and an indication of cost.

³²https://www.mpi.govt.nz/funding-and-programmes/other-programmes/future-skills/

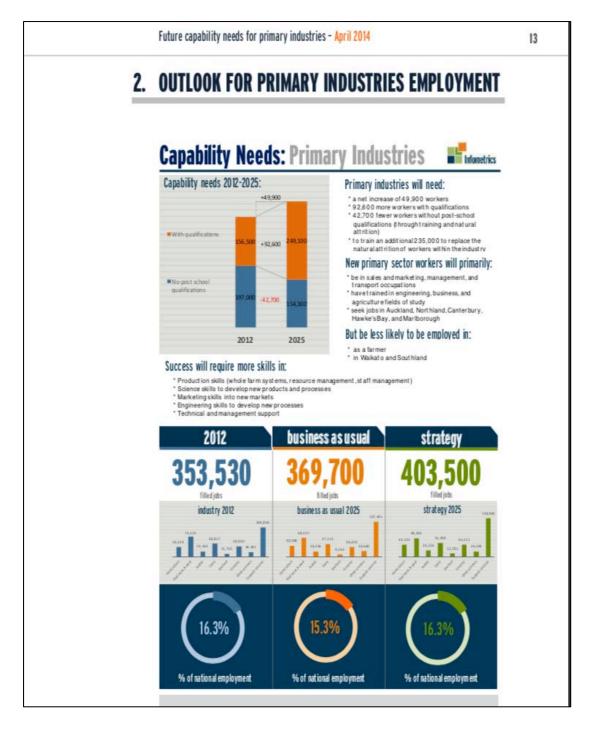


Figure 6: Extract from the report which provides a useful indication of the information which could be helpful in a UK context as a result of a study

3.6.7 **USA**: As a result of increasing gaps in the agriculture industry for technical employees on research programs, the United States Department of Agriculture (USDA) formed an education portfolio. It was recognised that across the education pipeline, there were various stages where the relevant subjects relating to agriculture were losing student interest. In particular, NCES Digest of Education Statistics reported that the STEM Pipeline reduced from a potential 4 million students in 2001 down to only 166,530 students that actually graduated in any of the STEM subjects. The USDA gained recommendations that the 'talent pipeline' needed to be extended across all the years of education. With most of the focus on college years, the recommendation was to concentrate on subjects relevant to Agriculture in high school and,

Agri-Food Industry Workforce Skills and Development Strategy - The Current Landscape

for postgraduates, there should be more opportunities for involvement in the current fellowship programme. To assist with the recommendations of widening the talent pipeline, USDA formed an Education Coordinating Committee, with the objective of collating the activity of the 18 agencies that supply research and development on behalf of the USDA. An outcome of their 'Listening Meeting' in 2013 was a pipeline map that aligns the support mechanisms available at each stage of education. Therefore providing the transparency of available Agriculture learning resources to all stakeholders involved in the education industry.

One of the agencies that works on the USDA missions is the National Institute of Food and Agriculture (NIFA). Its mission is to discover, translate, innovate and provide solutions. It does this through an 'Extension Service', utilising already existing knowledge transfer mechanisms at universities and colleges. With a total of 356 Land-Based colleges available to work through, NIFA focuses on gaining funding to research complex issues facing the industry. This research is used to educate schools and universities through training the potential future agriculture workforce. Finally, NIFA provide this knowledge and learned practices to the workforce in the agricultural industry to put the theory into practice.

4 TOWARDS AN AMBITIOUS STRATEGY – THE PROPOSAL

Change, collaboration, coordination, concept for Continuing Professional Development (CPD), capability and careers – the six Cs

4.1 Change

- 4.1.1 Having defined the problem and described the current situation in the previous sections, it is now necessary to design the future solution. In compiling this report, a clear, consistent message that has come across is the need for transformational change and a bold approach.
- 4.1.2 A continuation of the current structure and same approaches is not going to deliver change. The industry has a strong union, NFU, a levy body, AHDB, a former sector skills council body, Lantra, and a land-based college and university membership body, Landex and its virtual National Land Based College, and there are a significant number of other organisations, but there is no overarching body as you would find in other industries.
- 4.1.3 There have also been prior agreements to work together and collaborate. However, in practice, while there has been progress, it has not been at the pace required and the silo approach has remained. The proliferation and fragmentation of bodies with their own specific interests does not provide a transformational model. There have been attempts over many years to implement various activities with limited success.
- 4.1.4 The Industrial Strategy, with emphasis on improving productivity, and the establishment of the Food and Drink Council and other associated initiatives, such as the UK Government Careers Strategy, present opportunities which need to be seized by the industry.
- 4.1.5 Agriculture and horticulture needs to accept the need for change and for the industry to take ownership of its workforce skills and development strategy and, arguably, it is deeply regrettable that this has not been adequately addressed to date.
- 4.1.6 In preparing this report, consultation was undertaken with the AgriSkills Forum. At a meeting on 8 May, attended by representatives of AHDB, City & Guilds, Landex, Lantra, NFU, NLBC, RASE and Red Tractor, there was unanimous agreement that incremental change was no longer good enough and that it was timely to take a quantum leap with respect to the approach to skills.

4.2 Collaboration

- 4.2.1 As can be seen from the work over the years, there has been no lack of activity, with numerous reports and initiatives. As has already been stated:
 - some bodies have a good understanding of the nature of the issues which need to be addressed, but this is not universal
 - there is no lack of analysis of the problems, but it has been undertaken on a voluntary, informal, piecemeal basis without senior-level endorsement
 - there is no single industry vision and strategy for skills and development and a fragmented approach dominates

On a very positive note:

- analysis shows that if the various strategies are considered alongside one another, there is broad agreement about the aims and objectives of a skills strategy
- some of the work clearly points to the need to work together, for simple frameworks and for single strategies

- 4.2.2 Building on the collaboration, it is recommended that the industry adopts a single unified vision and objectives, consistent with the Food and Drink Council but which are enhanced to reflect the industry position. In addition, as is evidenced throughout the report, there has long been widespread support for a number of common themes which could be brought together as common aims for adoption.
- 4.2.3 The following vision, objective and aims are proposed to the industry for adoption:

Agri-Food Industry Skills Strategy

Food and Drink Sector Council Workforce Work Stream

Vision: A secure supply of skilled and seasonal labour, driving productivity gains and continuing to produce world-class products for domestic and international markets.

Objective: To secure a world-class workforce capable of enabling the food and drink industry to continue to be world-leading producers of quality, affordable and sustainably produced food and drink.

Building on, and consistent with, the above, the following is proposed:

Agriculture and Horticulture Workforce Skills and Development Strategy

Vision: An industry-wide evolution to develop a professionalised industry, capable of driving productivity, competitiveness and sustainability by producing world-class products via a skilled workforce.

Objective: To develop an adaptable and talented workforce capable of enabling the UK food and drink industry to be world-leading producers of quality, affordable and sustainably produced food and drink.

Key Strategic Aims:

- To professionalise the sector through an independent professional framework
- To ensure the provision of industry-led, fit-for-purpose qualifications and continuing professional development (CPD), both technical and business
- To develop and market clear industry career paths and progression opportunities
- To provide professional business support
- 4.2.4 Subject to agreement to adopt a common vision, objective and strategic aims, then, essentially, a lot of the detailed work already undertaken can be drawn upon. However, the problem in the past is that while the voluntary collaborative approach has made some progress, it has failed to deliver the necessary results. There appears to be no lack of willingness at an operational level to collaborate in order to promote an exciting long-term vision of the agriculture and horticulture industries with attractive career paths and continuing professional development and there is clear agreement about inadequate workforce planning. To move forward and drive transformational change, senior-level ownership and prioritisation of the skills and development agenda is essential.

4.3 Coordination

- 4.3.1 In order to build on the willingness to collaborate, it is strongly recommended that a formal coordination approach is adopted, ideally with immediate effect but certainly as soon as possible. A very Senior Leadership Group should be formed to take ownership and responsibility for the workforce skills and development strategy for agriculture and horticulture. The group will require strong leadership in order to support an evolution in attitude and the membership would need to include key stakeholders, including government.
- 4.3.2 The Senior Leadership Group would take responsibility for overseeing the further development of the strategy, including its implementation and monitoring on a proactive basis. It would work and contract with other bodies to deliver and hold them to account.
- 4.3.3 By collaborating in a coordinated manner, joined-up messages would be fed into the work streams of the Food and Drink Sector Council and there would also be a forum for consideration of the workforce implications of the Health and Harmony consultation.

4.4 Concept for Continuing Professional Development

- 4.4.1 However, it is questionable whether in the long term a Senior Leadership Group is enough. A further common theme which has emerged in many documents and conversations is the need to professionalise the industry. There is a requirement for a framework and approach to do so
- 4.4.2 There appears to be some understanding that there is a need for a shift change and a new dialogue with farmers/growers that is motivational, inclusive and, most importantly, mainstreamed to everyday farming operations. However, it is necessary to encourage a culture of lifelong learning and CPD to develop individuals. Many farmers and growers, particularly the younger generations, are thirsty for the success of their businesses and are to be encouraged in the development of their personal, business and management skills.
- 4.4.3 The ability to implement new innovations will be pivotal in the future. For the full value of the research to be achieved, one of the desired outputs should include an indication of the type of skills required to implement the research. An agile, adaptable workforce capable of responding to changing requirements will be needed.
- 4.4.4 In discussion about how to professionalise the industry, comments have been made that most industries have professional bodies and require CPD for continued membership. Indeed, the following comment from a senior industry figure provides a clear view of some of the comments expressed:

"I feel sure that some form of professional association is the way that agriculture needs to move if it is to address the current wide variations in farm performance and attract the professional workforce that it needs. For me this means:

- a mechanism for setting and maintaining technical and professional standards ('what good looks like')
- a means of recognising those people who demonstrate that they achieve and work by those standards
- a commitment to ongoing development (CPD)

Until now the biggest barrier to achieving this has not been cost or technology, it is politics. Some bodies have staunchly resisted what they see as 'a licence to farm', but maybe that's exactly what we need."

- 4.4.5 There is recognition that there is no one body which is looking at skills and, consequently, there is a lack of succession planning on behalf of the industry. It is against this background that serious consideration should be given to the establishment of a dedicated independent professional institute. The UK Government website states that 'A professional association (also called a professional body, professional organisation, or professional society) is a non-profit organisation seeking to further a particular profession, the interests of individuals engaged in that profession, and the public interest.' This definition fits with the desired objective.
- 4.4.6 The proposed Institute would be the independent professional body providing the focal point for the following:

Professional Framework: as the professional body for agriculture and horticulture, it would set and maintain standards and the industry-recognised professional register. This would capture individuals at the start of their careers and subsequently be used as their online, lifelong training record of qualifications and CPD, including compliance training. A professional body would bring added status to the profession and therefore likely aid recruitment. Membership would provide income streams.

Careers and recruitment: to act as the recognised professional source of information about careers and opportunities in the agricultural and horticultural industry, eliminating the proliferation of bodies and fragmented landscape and thereby implementing the recommendations of the Bright Crop end-of-project report. If the funding which is currently used to support the widely dispersed activities were to be channelled into this single source, it would show a greater return on investment. It is recognised that this would require a major change by the 30 or so bodies identified in the Bright Crop report. The recruitment portal would be likely to attract advertising revenue and therefore possibly be self-supporting.

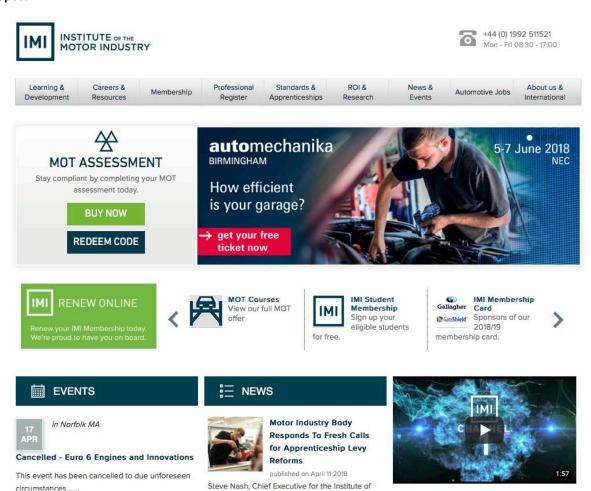
CPD: an online resource would bring together CPD opportunities which are available and actively promote future learning opportunities. It would aid progression and ensure up-to-date knowledge. The incentives to undertake CPD to improve business performance need to be a key feature. A training-needs analysis tool may be able to be developed which could identify requirements to achieve future necessary competencies. CPD would apply not only to practising farmers but also to those providing advice. A return-on-investment calculator could be included. This area could be developed in time to lead to the establishment of a Chartered Farmer award.

Business support: to enable individuals and businesses to adopt best practices, including understanding improving their staff recruitment and talent management. Essentially, a HR hub to support the 95% SMEs that are too small to have their own dedicated HR staff. A base level of support would be covered by the membership subscription with enhanced levels available for additional fees.

4.4.7 An example of the type of entity which might be achieved is the Institute for the Motor Industry (IMI), as per the following screenshot of their homepage³³:

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³³ https://www.theimi.org.uk



- 4.4.8 As there must be recognition that a different approach is required to deliver transformational change, it is proposed that industry backing is sought for the Institute and that a proof of concept is developed as soon as possible in order to be able to present more detail for consultation. Ultimately, a full business case would be required, including a sustainable business model. In the meantime, the proposed Senior Leadership Group should take responsibility for development of the work streams to establish detailed action plans and approaches to ensure progress.
- 4.4.9 It may be appropriate to engage with government about the sector approach to be taken to the monies which might be available and how these best fit with future plans. The Senior Leadership Group, acting as an independent entity, would be a useful body to lead on these discussions. For example, in liaison with the Department for Education, how can the monies available for the new Institutes of Technology, a bid for which was submitted by Landex recognising that any funding might flow to a derivative of NLBC, be best awarded and utilised? How might unspent Apprenticeship Levy funding be used?
- 4.4.10 In addition, consideration should be given to applications for trust funding, which have been helpful in the past in sponsoring other studies and initiatives.
- 4.4.11 Noting that NatWest funded the Young Farmers study, it may be that commercial funding might be available from a bank or an accountancy firm/s, particularly as the objective is to professionalise the industry and provide business support which will need to be professionally underpinned, for example to provide model business planning.

4.5 Capability

- 4.5.1 However, to be able to develop a skills strategy, it is necessary to have a very clear long-term vision of the future agriculture and horticulture industry and in researching this study this has been difficult to find. While this is understandable, given uncertainty with regard to Brexit, without a view of how the industry will be made up, it is very difficult to plan for skills needs. If we look to other nations, we can see, for example, that New Zealand invested in 2014 in a forward strategy to 2025.
- 4.5.2 While it is widely considered that in future the industry will employ fewer people, be more capital-intensive and need to embrace more rapidly technological advances to retain competitive advantage, a clearer strategic vision of the future is necessary in order to define the skills agenda and also to provide a basis for improved labour market intelligence.
- 4.5.3 It is proposed that a future capability study for agriculture and production horticulture should be commissioned at a level of detail to provide evidence to inform the skills strategy, with contributions from the industry sector groups such that the output can be supported widely by all parties. It could be jointly funded by industry, through AHDB and Government (Defra).
- 4.5.4 There is a widely held view within the industry that current funding policies promote popular courses with students but do not openly link to employer demand/feedback and that they are not coordinated with recruitment needs to meet skills gaps. The approach is not sufficiently strategic to reflect the urgent need to gear funding to courses which will deliver against the productivity agenda. It is proposed that the Senior Leadership Group, through the professional framework work stream, works with the land-based colleges and universities to engage with DfE to establish if agriculture can be recognised as a STEM subject and to understand how changes could be made to ensure that funding flows to courses improving productivity.

4.6 Careers

- 4.6.1 In consultation, while drafting the report, there was considerable consistency of comment that in agriculture the career ladder is missing and that perceptions by the public about the range of careers available need to be changed.
- 4.6.2 Other professions were cited, such as accountancy, where there are clear and recognised progression paths which are attractive in encouraging new entrants. The development of a professional body would go a long way towards providing such a framework and providing clear information on career paths.
- 4.6.3 In terms of perceptions, points have been made that the sector should be attractive to those who are currently divorced from it or do not recognise the opportunities, with possible new entrants often deterred because they believe that land is required to be involved in the sector.
- 4.6.4 Accepting that it will take time to develop a professional body, there is a need for coordinated action to take place as soon as possible. The work undertaken by Bright Crop provides a useful strategy, which it is proposed is adopted by the Senior Leadership Group, together with building on the NLBC website work, and that an operational work stream is formed to drive it forward.
- 4.6.5 The Senior Leadership Group, and the associated work stream, would also provide a focal working point for interaction with the national careers agenda and ensure that a unified and meaningful input is being made into the job profiles which are to be included in the National Careers Service Information, to be made available in October 2018.

4.7 Request of Industry

Drawing on the Agri-food Technology Council paper of 2016 and updating it to reflect developments and the proposals in this document, the role of industry is to:

- Provide leadership and look for collaborative solutions
- Work with all stakeholders to develop and own the concept of the proposed professional institute, including how it will be funded sustainably
- Engage with the work to develop a clearer understanding of the future shape of the agriculture and production horticulture industries in order to inform labour market intelligence work, which will in turn identify current and future skills needs
- Take more responsibility to engage proactively in skills-gap analysis at the farm-business level and act on findings
- Contribute proactively to opportunities to design apprenticeships and technical routes, course design and content to ensure that it is fit for purpose
- Be the demanding customer to ensure that education and training provision of the right quality exists
- Engage with apprenticeships to leverage existing training and development available
- Continue and extend the existing training relationships with universities and institutes to
 energise high-calibre graduates across all technical disciplines from Physics to
 Epigenetics, from Metabolomics to Material Science, to engage in the UK's largest
 manufacturing sector
- Promote careers and engage with potential applicants and their advisers at an early stage in their education

4.8 Request of Government

4.8.1 The food and drink industry operates with interests which span a number of government departments. From the perspective of the agricultural and horticultural industries, Defra is the lead body. However, relationships with the Department for Business, Energy and Industrial Strategy (BEIS) and the Department of Education (DfE) are also key. Operating across a number of departments is bound to present some challenges and it is recognised that it falls to the industry itself to try to coordinate matters as much as possible. However, Government is requested to ensure that there is engagement by the relevant departments and public-sector organisations and to remove barriers where appropriate. The establishment of the Food and Drink Sector Council is welcomed as a vehicle to strengthen partnership between Government and industry.

4.8.2 In terms of specific requests:

- Support for the proposal to professionalise formally the industry and work with the Leadership Group to develop the concept of the 'Institute', which may require pump priming funding
- Undertake immediately, with support from the industry, a labour market information (LMI) study on agriculture and horticulture in order to inform future skills needs to, say, 2030 and consider how to work together in the future to update and evolve
- Review of education funding to ensure that provision is geared towards activity which
 enables the improved productivity agenda and adaptation to innovation and new
 technologies, including recognition of appropriate agriculture courses as STEM subjects
 to improve student recruitment
- Ensure that rural broadband is in place as soon as possible and as a matter of urgency to enable e-learning
- Reduce number of initiatives/policy changes to enable activity to be embedded
- Encourage LEPs to work beyond their boundaries as the provision of land-based education and training needs to be viewed from a national perspective

5 SUMMARY AND RECOMMENDATIONS

In summary, the rationale for an ambitious strategy is evident and for it to be successful it will need to be widely supported and endorsed. There must be a recognition and acceptance of the need for **change** and to seize the current opportunities. Stakeholders need to **collaborate** to be more effective in the wider competitive environment. In order to do so, a formal **coordination** Leadership Group needs to be formed immediately. The industry should adopt a single high-level vision and objective, which is progressed by the Leadership Group initially but with the responsibility to develop the **concept** of an industry professional body in order to promote and provide lifelong learning and **continuing professional development** opportunities and **careers** information and to ensure future **capability**.

Agriculture and horticulture are important industries, but they are competing alongside much larger ones. There is already strong competition with other industries to attract talent, particularly at the technical and more senior levels. Agriculture and horticulture needs to position itself to be as attractive as possible to do so and therefore must act now with a unified professional voice.

No.	Recommendation	Time frame	Responsibility
		(Short/Med	nesponsione,
		ium/Long)	
	Change	,g,	
1	The agricultural and horticultural industry should come	S	All key players
	together and adopt a unified vision, objective and aims for		
	agricultural and horticultural workforce skills and		
	development, as set out in section 4.2.3.		
	Collaboration		
2	The industry should recognise the need for leadership and	S	All key players
	agreement for key stakeholders, including Government, to		
	work together formally in the interests of workforce skills and		
	development and to present a unified contribution to the		
	work of the Food and Drink Sector Council to ensure that the		
	agriculture and horticulture position is fully understood and		
	represented.		
	Coordination		
3	Given that previous informal collaborative approaches have	S	
	fallen short, a formal Senior Leadership Group should be		
	established immediately to take responsibility for the		
	agricultural and production horticulture skills and		
	development strategy.		
	Proposed terms of reference:		
	1. To be aligned to the Agricultural Productivity and		
	Workforce work streams of the Food and Drink Sector		
	Council		
	2. To develop further, oversee and monitor the		
	implementation of the strategy, reviewing the objectives		
	to ensure relevance to improved productivity and fit-for-		
	purpose supply of labour		
	3. To hold the various bodies to account for the delivery of		
	the agreed objectives and milestones		
	4. To work with relevant bodies to research, on as quantified		
	basis as possible, the future structure of agriculture and		

			1
	horticulture to inform future industry size and technological developments, to oversee the development of labour market information and refine the skills strategy accordingly 5. To establish working groups to take forward and report back on specific aspects of the strategy, namely professional framework, including education strategy, careers and recruitment, CPD and business support		
	Membership: to include senior representatives from key		
	industry bodies and stakeholders, chaired by a senior industry		
	figure as the English Champion of skills but with a young,		
	upcoming deputy to represent the future generation and		
	bring new blood to the table		
	Secretariat: could be supported by AHDB		
1	Concept of a Professional Institute	N A /I	Conics
4	Drawing on the AgriSkills business case, a more detailed proposal should be developed to inform a proof of concept for an independent professional institute to provide a visible and meaningful approach to professionalise the industry and take forward the following: a) Professional framework, including education strategy b) Careers and recruitment c) CPD d) Business Support The proposed Senior Leadership Group should be empowered to take responsibility for the development of the Institute proposal and to oversee the development of detailed plans to develop the various work streams. There should be dialogue with government about funding options and other avenues should be explored.	M/L	Senior Leadership Group
	As proposals develop, there should be consultation with stakeholders.		
	Capability		
5	A future capability study for agriculture and production	S/M	Senior
	horticulture should be commissioned at a level of detail to		Leadership
	provide evidence to inform the skills strategy, with		Group
	contributions from the industry sector groups such that the		
	output can be supported by all parties. It could be jointly		
	funded by industry through AHDB and Government (Defra). Continuing Professional Development		
6	The Professional framework work stream should work with	S/M	Senior
	the land-based colleges to engage with DfE to establish if	J) 1¥1	Leadership
	agriculture can be recognised as a STEM subject and to		Group –
	understand how changes could be brought about to ensure		Professional
	that funding flows to courses which will improve productivity.		framework
	Caroors		work stream
	Careers		

Agri-Food Industry Workforce Skills and Development Strategy: Summary and Recommendations

7	The recommended Careers strategy in the Bright Crop report	S/M	Senior
	(p6) should be adopted and delivered by the Careers work		Leadership
	stream of the Leadership Group, which should ensure that the		Group –
	agricultural and horticultural industry is represented in both		Careers work
	land-based and food and drink initiatives.		stream

In summary:

Why is this strategy necessary? We are in a period which will require transformational

change in the industry; past approaches will not work.

What needs to happen? Industry must accept and embrace the need for change, with

greater collaboration and coordination.

How? Leaders, current and future, must work together to develop

the common vision and future action plan.

When? Now, with clear milestones for achievement.

Acknowledgements

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Commissioning Group:

Lord Curry

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Beverly Dixon (G's)

Tess Howe (AHDB)

Richard Longthorp (Chair, AgriSkills Forum)

Professor Bob Webb (Skills lead, AFTC)

AgriSkills Forum Meeting on 8 May 2018:

Attendees:

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Louisa Bagshaw (Defra)

Wynn Davies (City and Guilds)

Beverly Dixon (G's)

Helen Ferrier (NFU)

Tess Howe (AHDB)

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Sue Lockhart (Red Tractor)

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Bob Webb (Agri-Tech)

By invitation:

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