

Teagasc Education Strategic Vision Project

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Abstract: Teagasc (the Irish Agriculture and Food Development Authority) is a state agency incorporating agricultural research, extension and education functions. Teagasc is the primary provider of vocational agricultural education and training in Ireland. Teagasc also has a significant input into agricultural undergraduate and postgraduate education through partnerships with the higher education sector. In 2016 Teagasc initiated a Teagasc education strategic vision project involving extensive consultation with land sector stakeholders. The overall aim of the education vision project is to help Teagasc to position its education and training function to meet changing land sector competency requirements and new education needs for the decades ahead. The Teagasc education vision project is a continuing process; however the overall themes and the key recommendations emerging to date are presented in this paper. The vision process has identified the following themes to be of particular relevance to Teagasc education and its stakeholders for the future. These are: profiling of land-based occupation competency requirements; stepping stones for career progression; fostering of learner transversal skills and entrepreneurial mind-sets; identification of new competency requirements such as sustainable farming principles and smart farming applications; development of future education and qualification pathways; continuous professional development opportunities for farmers; a gender pro-active approach to promoting agricultural education and land based careers. The Teagasc vision project has also identified the need to reshape approaches to teaching and learning, and to Teagasc education staff training and professional development.

Key words: Teagasc, Vision, Agriculture, Education, Occupation, Competency

Introduction

Teagasc (the Irish Agriculture and Food Development Authority) is a state body established under the Irish Agriculture (Research, Training and Advice) Act of 1988. It employs approximately 1,100 staff at 55 locations throughout Ireland. Teagasc operates in partnership with the Irish land-based sector, the food industry, state agencies, rural development bodies and higher education institutions. It has developed alliances with research, advisory and training agencies throughout the world.

Teagasc's mission is to support science-based innovation in the agri-food sector and wider bio-economy so as to underpin profitability, competitiveness and sustainability. Teagasc incorporates research, knowledge dissemination and education and training functions. The organisation is structured into three directorates (research, knowledge transfer and operations). The organisation is overseen by the government appointed Teagasc Authority who in return report to the Irish Department of Agriculture, Food and Marine (DAFM).

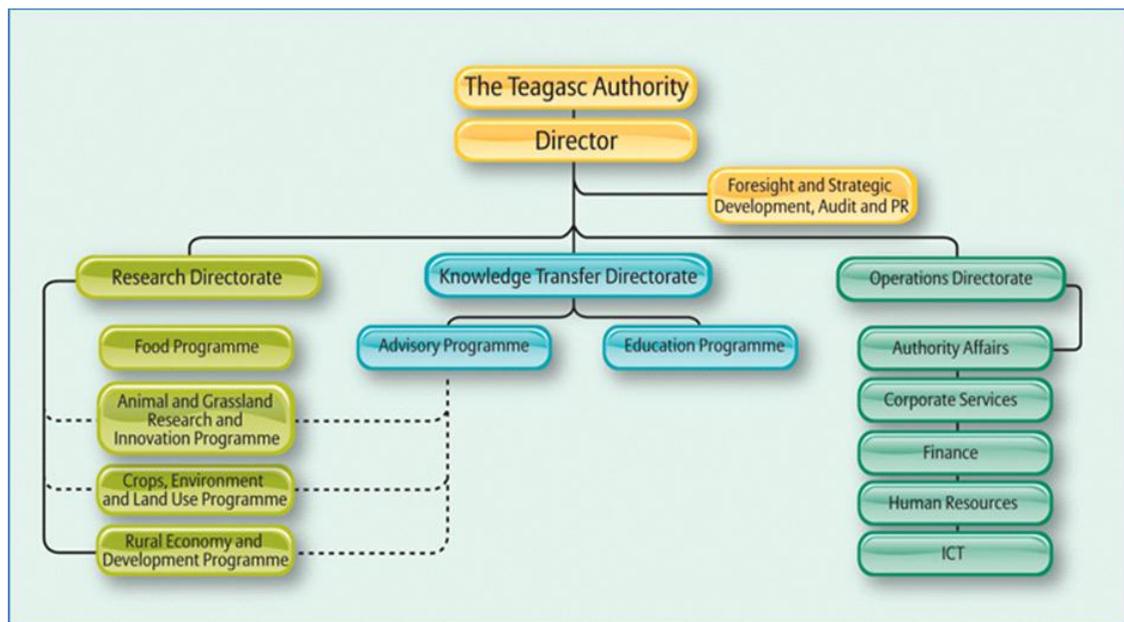


Figure 1: Teagasc organisational structure

Teagasc has a statutory remit under the establishment of Teagasc Agriculture (Research, Training and Advice) Act, 1988 to provide and procure education and training and to have 'particular regard to the need for and the importance of agricultural training and education for young persons'. Teagasc is the primary provider of land-based accredited further (vocational) education and training at education levels 5 and 6 on the Irish National Framework of Qualifications (NFQ) corresponding to levels 4 and 5 on the European Qualification Framework (EQF).

These vocational programmes are provided on a full-time basis to second level school leavers (typically 17 to 19 years of age) and through part-time or distance education modes of delivery to adults. Teagasc through its partnership with the higher education

sector has a substantial input into higher agricultural education delivery in Ireland at NFQ levels 6,7 and 8 (EQF levels 5,6,7).

Overall annual participation levels in Teagasc vocational and Teagasc linked higher education is typically circa 3,500 learners. Overall annual participation levels have however ranged from 5,000 to 6,000 learners since 2014. This increase arises from an exceptional spike in demand for adult vocational programmes. The requirement (in Ireland) to have a formal agricultural education to avail of certain EU and national farm schemes and incentives directed at young farmers has been a primary factor for this recent spike in demand.

Teagasc has a significant collaborative involvement in postgraduate education provision studies at NFQ level 9 (Masters) and at NFQ level 10 (PhD) with typically over 250 postgraduates participating in Teagasc research and knowledge transfer studies annually.

Teagasc education, advisory and research services have a substantial involvement in both accredited and non-accredited short training courses and continuous professional development for adult farmers, operatives and others operating across the land based and food sectors. Typically 2,000 to 3,000 adults attend such courses annually though this figure has been substantially higher for certain years. Additionally Teagasc's farm extension service organises and facilitates a national network of over 800 farmer discussion groups and knowledge transfer groups. Teagasc through its recently launched Teagasc ConnectED initiative is strengthening its networking and education activities for rural professionals and agri-food linked businesses.

Returns to agricultural education

A Teagasc research study on the economic returns to formal agricultural education (Teagasc, 2014) concluded that there were positive returns to Teagasc education for the individual farmer and for the national economy as broadly summarised below:

- 9% private rate of return to the individual farmer
- 14% social rate of return arising from improved farm productivity across farms
- 25% social rate of return from the multiplier effect of higher farm productivity across the overall supply chain.

Context for the Teagasc education strategic vision project

The national vision and strategic plan for the Irish agri-food sector is set out in the *Food Wise 2025* report (DAFM, 2015). Human capital is identified as one of the essential pillars necessary for the Irish agri-food sector to deliver and maximise the growth opportunities in the years to 2025:

- Human capital
- Sustainability
- Competitiveness
- Market development
- Innovation

The *Food Wise* report highlights the need for the agri-food sector to attract 'ambitious educated and motivated people'. At producer level this will require '... the adoption of

the latest production technologies and processes’, and ‘... improving the financial management capabilities of producers’. Such developments according to the *Food Wise 2025* vision will require ‘...enhancements and investments in knowledge transfer and educational supports...’ The *Food Wise 2025* report makes specific action recommendations to be undertaken by the Teagasc education and training service.

Likewise, the *Teagasc Technology Foresight 2035 Report* (Teagasc, 2016) highlights the emerging technologies and activities that will significantly impact on Irish farming and drive competitiveness and sustainability of the Irish agri-food sector over the next two decades. These include:

- Plant and animal genomics and related technologies
- Human, animal and soil microbiota
- Digital and smart farming technologies
- Food processing technologies
- Transformation of the food value and bio-economy chain

The *Teagasc Technology Foresight 2035 Report* underscores the need for agricultural education programmes to incorporate the new technology driven competency requirements that future generations of farmers will require.

A European Parliament report (2016) on the likely impact of precision agriculture technologies on European farming identified key opportunities and concerns regarding precision agriculture or precision farming. It could actively contribute to food security and safety and support sustainable farming. Precision farming may however trigger societal changes along with its uptake. It will require new skills to be learned.

The next generation farmer

The new knowledge, skill and competency requirements of the next generation farmer call for a rethinking of how agricultural education addresses 21st century needs and is maintained fit for purpose in regard to:

- new competency requirements
- transversal skills development
- entrepreneurship and initiative encouragement
- workplace learning
- prior learning recognition
- learner diversity challenges
- lifelong learning and up-skilling
- digital technologies to enhance learning and education delivery
- pedagogical and technical professional development of educators

Currently Teagasc education is directed at equipping future Irish farmers with technical knowledge, practical skills and an understanding of financial management. There has been less emphasis on developing future farmers in terms of their transversal skills (e.g. critical, innovative and reflective thinking, problem solving, interpersonal skills, intrapersonal skills, and personal well-being). Neither has there been an overt emphasis in Teagasc education on fostering an entrepreneurial mind-set even though the majority of Teagasc learners, as future farm holders, become the owners of small to medium sized

businesses. EU education strategic policy however emphasises the need to inspire entrepreneurial potential among future learners (EU Strategic framework – Education & Training 2020).

Teagasc education strategic vision project

In context of new and evolving competency requirements at farm level and changing perspectives of how education should operate in the 21st century, Teagasc initiated the Teagasc education strategic vision project. The overall thrust of the project is to position Teagasc agricultural education and training to meet the future human capital needs for the land based sector in Ireland with an emphasis on the next generation farmer. The broad terms of reference set for the Teagasc education and training strategic vision project are to:

- assess future land based occupation role profile in regard to knowledge, skills and competency requirements
- review education approaches and developments both in the general education sector and also in international agricultural education
- identify specific innovations and trends in education including: opportunities for learner progression, prior learning recognition, early career development thinking, teaching and learning approaches and delivery strategies; trends that Teagasc could effectively and efficiently harness for the future
- identify the most appropriate and relevant education pathways and qualification pathways for next generation entrants to the land-based sector
- make recommendations detailing key strategic and operational measures that are actionable and that will enable Teagasc education to meet the future education needs of the land based sector.

Teagasc education and training strategic vision steering group

An overall steering group comprising representatives from government institutions, the education sector and the agri-food sector was established to guide and monitor the Teagasc education strategic vision project. Representatives from three overseas agricultural education institutions acted as international peers for the project. These institutions were the Scottish Rural University College (SRUC), Scotland; the Green Academy, Denmark; Wellant College, the Netherlands. Day to day management of the project was assigned to a Teagasc education project team.

Project consultation processes

An extensive consultation and review process was put in place to support the Teagasc education strategic vision project. Key elements included:

- direct invitation to key stakeholders to make submissions
- submission invitations advertised in the national farming press and the issue of a press release to national and local media
- publishing of an online submission template on the www.teagasc.ie education vision webpage to facilitate submissions. (In total 109 electronic submissions

- were received, with 85 from individuals and 24 from groups or organisations)
- establishment of dedicated internal Teagasc working groups
 - holding of stakeholder consultation workshops
 - meetings with farm organisations, agencies and groups
 - briefing to the Teagasc education and training forum, (Teagasc's formal education stakeholders' consultative group)
 - study trips to peer agricultural education institutions in Northern Ireland, Scotland, Denmark and the Netherlands to inform the Teagasc strategic vision project
 - review of key national and international reports and policies relating to future needs of the land based sector and of future approaches to teaching and learning.

Teagasc working groups and stakeholder workshops

Eleven Teagasc staff working groups were established to explore future education needs across different farming sectors and topics. The working groups included staff from Teagasc education and Teagasc linked private colleges, knowledge transfer/extension and Teagasc research. The sector working groups were as follows: dairy, beef, sheep, tillage, horticulture, forestry, equine and pigs/ poultry. Three generic working groups were established in regard to future teaching and learning approaches, lifelong learning and gender balance in agricultural education and careers.

Each Teagasc working group attended an initial common standardisation workshop and also held an initial group meeting to explore the issues and to prepare a stakeholder consultation workshop. Each Teagasc working group subsequently organised a stakeholders' workshop (in the main but not exclusively attended by farmers and growers). A total of 151 individuals attended the stakeholder workshops, with 84 of these being external to Teagasc; (67 Teagasc staff from education, knowledge transfer and research units attended)). In excess of 100 farmers, graduates and current learners were also consulted regarding their continuing professional development and lifelong learning needs. All working groups were requested to submit a short report on the initial themes and issues emerging under a common set of headings.

In the region of 400 host farmers (providers of practical learning placements for Teagasc students), who attended Teagasc host farmer meetings, were briefed and provided feedback on emerging vision process proposals.

Review of relevant demographic, structural and policy trends in Irish farming

The Teagasc education strategic vision project reviewed land sector demographic, structural and policy likely to impact on future agricultural education demand and needs.

Long-term decline in farm numbers but increasing farm size

Irish Central Statistics Office (CSO, 2013) data indicate that there were 139,600 farm holdings in Ireland in 2013. The average farm holding size was 33 hectares. Corresponding previous CSO data indicates an overall decline in farm holdings from 171,600 holdings in 1991 representing an overall decline of 18%. This decline however mainly occurred in the period 1991 to 2000. If the long term decline in farm numbers

continues at the rate that prevailed in the period 1991 to 2013, then the number of farm holdings will be likely to decline to about 92,000 by 2050, and average farm size should increase to about 50 hectares, all other factors being equal. A more accelerated rate of decline in farm numbers (as occurred within the period 1991 to 2000) could see farm numbers decline to just over 60,000 with average farm size likely to increase to 75 hectares by 2050.

Increasing agricultural education penetration in the Irish farming sector

The CSO data (2010) indicate that about two thirds of all farm holders do not have a formal agricultural education. Agricultural education penetration is increasing markedly with each successive generation. Almost half of farm holders who are under 35 years of age have a formal agricultural education.

Table 1: Trends in agricultural education penetration by farm-holder age

Age	3rd Level (%)	Green Cert (%) (or equivalent)	Other Courses (%)	Practical Experience Only (%)
< 35	13.4	27.1	11.1	48.5
35-44	6.1	25.9	14.0	54
45-54	3.8	11.0	20.1	65
55-64	3.3	5.2	16.6	74.9
65 and over	2.6	3.6	10.6	83.2

Source: CSO Agricultural Labour Input Survey 2010

Ageing farming workforce

The farming workforce is ageing. Half or more of Irish farm holders are over 55 years of age. Less than 6.0% of all farm holders are under 35 years of age compared to 13% in 1991 (CSO 1991, 2013). For dairy farming the figure barely exceeds 5.0%, even though dairy sector is the sector mostly likely to sustain farming as a sole occupation in Ireland. There will be a need for trained entrants to the land sector for regeneration purposes.

Expected workforce shortages in the dairy farming sector

A rapid expansion is occurring in the Irish dairy farming sector. The national dairy herd has increased from 1.07 million cows in 2010 to just under 1.4 million in 2016 (CSO 2010, 2016). Average dairy herd size stood at 41 cows in 2005 (CSO 2005) and is estimated to be 81 cows currently and is expected to approach 100 cows in the immediate years ahead (Farm Ireland, 2017). Dairy farmer numbers have remained relatively static since 2010 at about 18,000. The proportion of herds however having greater than 100 cows has increased from 13% in 2005 to 47% in 2016. Further dairy expansion is forecast with the Irish national dairy herd likely to increase by an additional 0.2 m cows by 2025. Both a skills and workforce deficit are emerging in the Irish dairy farming sector. The major expansion in Irish milk production offers opportunities for skilled people in a variety of different career positions from farm assistants to herd managers, farm

managers to young people seeking to establish collaborative farming arrangements (Teagasc National Dairy Conference, 2016).

Part-time farming

A Teagasc review of the viability of the farming sector in 2014 (Teagasc, 2015) proposed that less than 40% of the circa 80,000 farms represented by the Teagasc National Farm Survey population were economically viable in their own right. CSO data indicate that the percentage of farm holders indicating farming as their sole occupation is in the region of 50%. Specialised dairy farms had the highest share (80%) of farm holders describing farming as their sole occupation.

The percentage for specialised beef and sheep farms was 47% and 43% respectively (CSO 2010, 2013). Part-time farming will likely remain a prominent characteristic of Irish farming. Past experience in an Irish context indicates that many part-time farmers do pursue an agricultural education but perhaps more frequently as an adult than as a school leaver.

Policy, regulatory and overall economic drivers

The abolition of EU milk quotas in 2015 has already initiated major structural change on Irish farms and will be a significant change driver for Irish farming sector in the decade ahead. Policy, regulatory and market driven influences are impacting on the knowledge, skills competency and behaviour requirements at farm level. Key areas include environmental measures, sustainable farming approaches, food safety, sustainable use of pesticides, product traceability, bio-security, animal welfare and occupational health and safety.

Over recent decades, Irish national policy has prioritised young farmers for the purposes of farm grant schemes, farm partnerships, EU basic payment entitlements allocation and for certain taxation reliefs. Young farmers are required to obtain a formal agricultural education qualification ('young trained farmer' status) to avail of such incentives. More recently the EU has incentivised young farmers through the introduction of the Young Farmers' Scheme and in Ireland this scheme has been linked to young trained farmer status. In summary Irish national policy encourages and incentivises young farmers to have a formal agricultural education.

Economic recovery

The Irish national economy is recovering following a severe recession that has had a prolonged impact. The seasonally adjusted Irish unemployment rate for April 2017 was 6.2% versus 15.1% in February 2012 (CSO 2012, 2017). The overall economy is once again directly competing with the land sector for labour and human capital and in doing so is providing attractive career alternatives.

Brexit

The Teagasc Statement of Strategy 2016-2019 (Teagasc, 2016) identified the 2016 Brexit vote as a major threat to the future of the Irish agri-food industry. While the full impact of Brexit remains for now uncertain, the implications do not bode well for the Irish agri-food sector and are likely to adversely impact on land sector career prospects.

Potential impact on future Teagasc education enrolments

Teagasc education comprises three core strands: full time vocational education for second level school leavers, delivery to higher education programmes of other higher education institutions, and provision of accredited programmes to adults on a part-time or distance education basis.

Vocational entry level enrolments for full-time vocational education courses at Teagasc-linked agricultural colleges have shown considerable volatility since 1990. A rapid decline occurred in the late 1990's with agricultural college entry level enrolments bottoming in 2005 and recovering well in subsequent years. Full-time vocational enrolments have now plateaued and are again commencing a downward trend.

Key demographic, structural and policy trends already indicated above highlight the need for a young educated workforce to sustain a dynamic farming sector. However the Teagasc vision process has concluded that recovery in the overall economy will adversely and substantially impact on future full-time vocational enrolments to Teagasc linked agricultural colleges.

Enrolment trends for Teagasc linked higher education programmes and Teagasc adult education programmes are expected to remain relatively robust in the medium term.

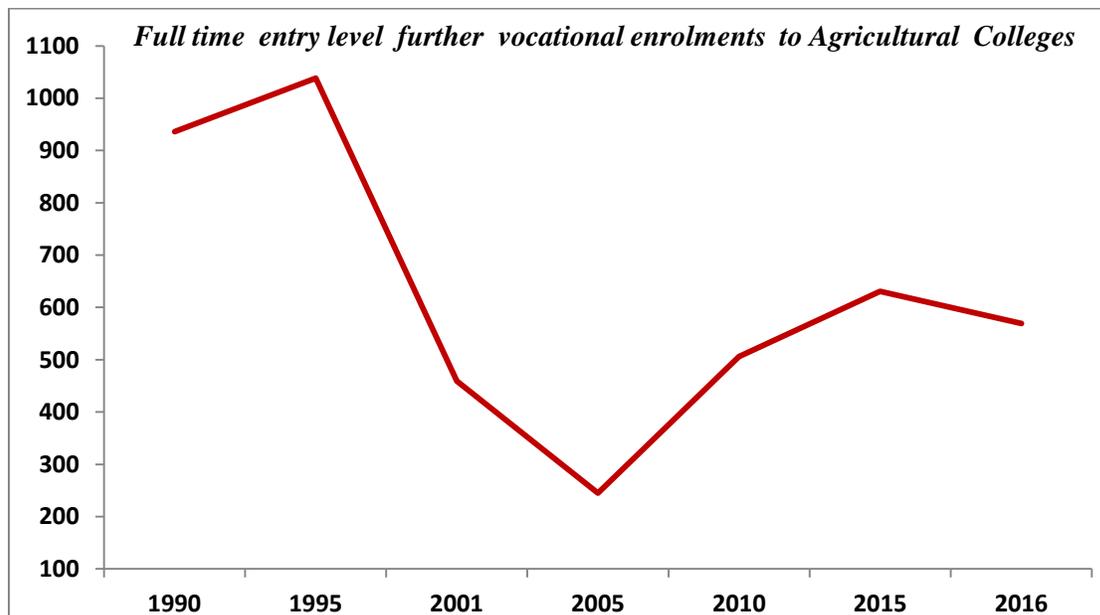


Figure 2: Trends in entry level full-time vocational to agricultural education colleges

Future partners for Teagasc education

The substantial majority of graduates from Teagasc agricultural courses become farm holders at some point in their lives. The Teagasc education vision project reaffirmed that Teagasc's primary education activity will continue to be the education and training of future part-time and full-time farmers. The provision of lifelong learning opportunities and continuous professional development programmes for active farmers will remain a key element of Teagasc's knowledge transfer and extension activities. The education, training and up-skilling of farm employees (be it family members or hired employees)

will be a core Teagasc education activity.

The vision process recognises both the importance of, and future education needs of other Teagasc partners including:

- Those seeking employment in the wider agri-food sector
- Related sectors (horticulture, equine, forestry, pigs, poultry)
- Practical learning-host farms
- Food industry training
- Rural professionals , industry and service sector personnel
- Postgraduate students
- Teagasc staff

The vision process also reaffirms the need for on-going close interaction with other stakeholders including collaborative education partners, other providers and awarding bodies; the Department of Agriculture, Food and the Marine and state agencies; farm organisations, industry employers and farm families; school guidance counsellors and second level agricultural science teachers.

Key recommendation arising from the Teagasc education strategic vision project

Being indigenous and export oriented the land sector will continue to be one of the core economic and social pillars of rural Ireland. Both part-time and fulltime family farms will continue to be a dominant feature of Irish farming. The Irish land-based sector will require new skillsets to meet 21st century needs. This has implications for: the promotion of future land based careers, agricultural education curriculum design, future education pathway provision, and future approaches to teaching and learning. The Teagasc education strategic vision project put forward the following strategic goals to meet future needs in an Irish farming context. For the purpose of this paper the recommendations are in the context of the farm occupations rather than the wider land-based sector.

Promote Farming Career Options and career progression stepping stones

Farm occupation role profiles are likely to segregate into more clearly defined roles on larger Irish farms, particularly in the dairy farming sector. Core farm occupations will include farm manager, enterprise manager and farm operative. Farm contract service provider roles are also likely to become more important. The Teagasc vision project recommended that farm occupation roles profiles be more clearly defined in terms of their competency and qualification requirements. Likewise career stepping stone opportunities and associated education progression pathways need to be visible and attractive to prospective entrants to farming. For larger scale Irish dairy farms the career stepping stone opportunities may be broadly as illustrated below.

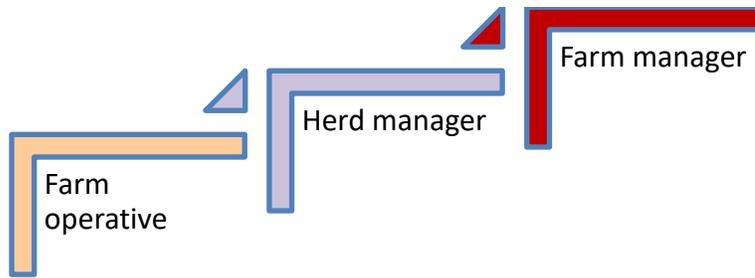


Figure 3: Competency and career stepping stones for entrants to dairy farming

The vision process recommends that Teagasc and farming sector stakeholders actively promote viable career stepping stone opportunities and associated competency requirements to inform and attract new entrants as opposed to promoting education programmes in isolation from careers.

Foster an entrepreneurial and problem solving mind-set

The Teagasc education vision consultation process highlight the need to balance the current technical driven content approach to agricultural education with a more holistic approach that develops learners’ transversal skills such as problem solving, critical thinking, reflective thinking, collaboration and communication and other life-skills. There was a notable emphasis from stakeholders of the need for agricultural education to promote personal wellbeing and resilience in the context of future farmers operating in a challenging and sometimes more isolated social environment.

The need to foster an entrepreneurial mind-set also emerged as a common theme from the consultation process. A substantial majority of Teagasc learners own or become the owner of farms and making them business owners. Fostering learner initiative and encouraging learners to pursue opportunities beyond the resources they currently control should be a more embedded feature of future Irish agricultural education programmes.

Identify new and/or changing competency requirements of farm based occupations

While technical and husbandry competency was seen as a prerequisite for farm occupations, stakeholders recognised that overall competency requirements are evolving and expanding for the next generation farmer. The Teagasc education vision process concludes that the following knowledge skills and competency sets will be essential for future entrants to farming:

- sustainable production and bio-economy principles
- technical knowledge and skills
- business and financial management
- risk management and governance
- market and consumer driven assurance
- digital, smart technologies and precision farming technologies

Stakeholders also recognised that many of these topics are already embedded in Teagasc curricula but need to be considered in terms of what specific competencies graduates will

require at a given education level to ensure that there is a fit with expected occupations and roles.

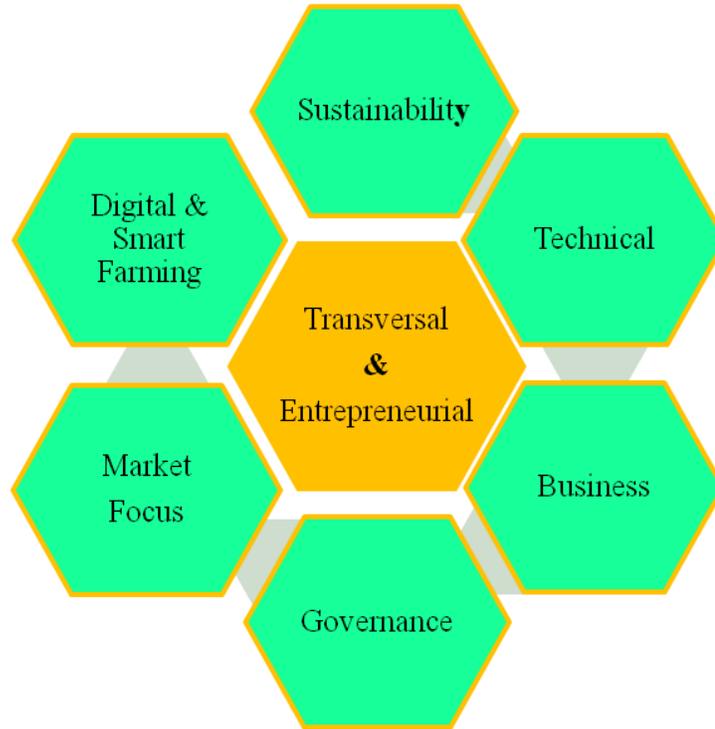


Figure 4: Core knowledge, skills and competency sets for the next generation farmer

Provide education pathways that align with the next generation farmer requirements

The Teagasc education vision proposes the following Teagasc education and qualification pathways to meet future knowledge, skills and competency needs of farm operative, farm enterprise manager and farm manager for an Irish farming and agricultural education context. These pathways are not mandatory or exclusive as many higher education providers also provide their own agricultural education pathways. However the proposed Teagasc pathways are intended to be more specific to farm level occupations. It should be noted that many farmers’ farm schemes and incentives in Ireland require the applicant to have an agricultural qualification at EQF level 5 at a minimum.

<i>Table 2: Proposed Teagasc education pathways for farm occupation roles</i>		
Farm operative	Enterprise manager	Farm manager
Certificate in Agriculture (EQF level 4) One year at agricultural college with work based practical learning period or customised sector specific skills training	Advanced Certificate in Agriculture (EQF level 5) Two year agricultural college based programme with work based practical learning periods.	Degree in Farm Management (EQF level 6). Two year work based programme with contact based modules.(Progression from EQF 5)

The importance of work based experience as a component of agricultural education programmes was also reaffirmed in the Teagasc vision process. The recommendations

call for training to be provided to the host farmers (who provide work experience opportunities to learners); and also to further clarify expected learning outcomes for work experience and to further develop the instruction role of the host farmer.

Develop a formal professional development programme for experienced farmers

Stakeholder consultation identified the need to provide an accredited professional development route for experienced farmers. It was recognised that young learners may have difficulty in mastering those competency sets that require farm management experience. This difficulty appears to be more pronounced for areas such as farm business management and evaluation, strategic farm planning, people management and the adoption of more advanced technologies and sustainable farming systems. The Teagasc vision process proposes that an accredited professional development programme be developed to meet the future needs of experienced farmers. This programme would parallel existing Teagasc farmer knowledge group networks and workshops. In tandem with this approach, it was recommended that a ‘moving into farming support programme’ be offered to young agricultural education graduates taking up farming. This would involve initial ‘mentoring’ visits to young farmers by Teagasc extension advisers and also encouraging these young farmers to attend Teagasc farm extension and research events and networking activities.

Adopt a more proactive approach to female participation in agricultural education

Internal Teagasc data indicates that female participation for Teagasc full-time vocational agricultural courses (EQF levels 4 and 5) typically does not exceed 10%. Feedback from higher education institutions suggests that female participation is higher and in the range 20% to 40% at EQF levels 6 and 7. CSO data (2013) indicate that in the region of 12% of Irish farm holders are female. The Teagasc vision education process recommended that a more proactive approach be taken to encouraging greater female participation in farm manager and farm ownership roles. Agricultural education and farm based careers should be promoted in a gender proactive way that avoids career stereotyping and highlights female role models who are actively and successfully involved in farming.

Reshape Teagasc education teaching and learning approaches for the future

The importance of effective teaching and learning was a constant theme throughout the Teagasc vision consultation process. National and EU policies and strategies underscore the need to reshape teaching and learning approaches for the future. Key recommendations from the Teagasc vision process focus around:

- ensuring active engaged motivational teaching and learning approaches that foster the development of both ‘hard’ (technical) and ‘soft’ (transversal) skills and that empower the learner
- developing problem based learning approaches appropriate to a Teagasc context
- catering for learner diversity range that occurs in a vocational education context
- putting in place online technology resources that enhance teaching and learning, learner digital competency and that support Teagasc’s education delivery
- reviewing Teagasc recognition of prior learning policies to take account of prior

formal, non-formal and informal learning whilst ensuring robust recognition procedures.

Prioritise Teagasc education staff training and professional development

The Teagasc education vision process identified effective teaching and learning as the key ingredient in an education system. The critical importance of pedagogical training and professional development for Teagasc education staff was universally highlighted throughout the consultation process. Teagasc education staff have a key role in developing the right skill and competency sets for the next generation farmer. Formal teaching qualifications are not a recruitment requirement for Teagasc teaching staff. The current Teagasc staff recruitment requirement is for an EQF level 7 (or higher) degree in agricultural science or equivalent. The Teagasc vision process proposes that teaching and learning training should be a mandatory requirement for Teagasc education staff within a designated period following recruitment.

Conclusions

There is a need to adapt and shape agricultural education content and teaching and learning approaches to the needs of the next generation farmer. In an Irish context, the Teagasc education strategic vision project has identified the need for Teagasc to place greater emphasis on embedding the development of learner transversal skills and an entrepreneurial mind-set. Evolving technologies such as digital and smart farming applications will create new competency requirements for farm occupations. Sustainable farming will become a core competency area. Reshaping Teagasc education approaches will take time. Enabling and supporting Teagasc frontline education staff to transition to a more learner empowered education approach is seen a crucial factor to successful implementation of the Teagasc education vision.

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