



Dearbhú Cáilíochta
agus Cáilíochtaí Éireann
Quality and
Qualifications Ireland

QQI AWARDS STANDARDS.

Agriculture

December 2023



Foreword

The Qualifications and Quality Assurance Act 2012 requires QQI to ‘determine the standards of knowledge, skill or competence to be acquired, and where appropriate, demonstrated, by a learner before an award may be made by the Authority’. QQI award standards are based on the level indicators and award type descriptors of the National Framework of Qualifications (NFQ) and are governed by QQI Policy for the Determination of Award Standards.

Based on systematic engagement with subject matter expertise and public consultation, award standards for certain broad fields of learning were developed for QQI awards at level 1-4 on the NFQ. These standards represent an elaboration of the generic descriptors of the NFQ. They should facilitate experts in particular fields of learning to create the link between their programmes’ intended learning outcomes and the NFQ. Each award standard is cumulative, the statements of knowledge, skill and competence at NFQ levels 2, 3 and 4, build on the attainment of standards at lower levels, which are not necessarily reproduced at the higher level(s). The implementation and use of these standards is subject to QQI Policy and Criteria for the Validation of Programmes and QQI Policy for the Making of Awards. Whenever an award standard changes, programmes must be updated and validated against the new standards.

These standards are not programme specifications. It is through these, however, that the relationship between a programme, its component parts and the NFQ should be evident. The standards are a reference point and a point of comparison against which individual programmes may be justified.

They are intended to provide general guidance for articulating the learning outcomes associated with a particular field of learning. In designing programmes, providers must take cognisance of the standards for specific fields of learning where they generally relate to the programme being developed. It is, however, recognised that there is a significant growth in multi-disciplinary/inter-disciplinary programmes; there are emerging fields of learning; and in addition, within each field there is the vast spectrum of programmes possible based on a wide range of purpose. In this context, it is not possible to have a standard, or multiple standards, that cater for the complete range of programmes possible. It is therefore expected that the standards for specific fields of learning will be used as reference points for the design of programmes. In designing programmes, providers can draw from more than one standard.

In drafting the standards every effort has been made to ensure that they will provide for flexibility and variety in the design of programmes and therefore encourage innovation within an overall agreed framework. It is not expected that all programmes will include every learning outcome identified in a standard. It is, however, expected that many programmes will include learning outcomes that are not included in the relevant standard.

When designing a programme, each learning outcome in the standard should be considered. Where departure from these is necessary, it should be justified in the context of the specific orientation of the programme and other facts pertaining to it. Each programme provider should be able to demonstrate how the design and content of its own programmes has been informed by the standard.

The level descriptors of the Framework, the award type descriptors and consequently the standards for the specific fields of learning are divided into three different types of learning outcomes - knowledge, skill and competence. These strands are further subdivided into eight sub-strands. Each strand/sub-strand is important. The relative weighting of each strand in a programme will vary from programme to programme. The weighting will be determined by many factors, including for example, the practical nature of a programme, or otherwise.

Each strand/sub-strand should be addressed appropriately in every programme. Where a programme is multidisciplinary or inter-disciplinary in nature, the use of more than one standard may be necessary. In such cases, the scope, depth and balance of knowledge, skill and competence should be attended to.

The titles of awards made by QQI on foot of these award standards shall be consistent with QQI Policy on the Making of Awards with an exception in the case of major awards where the named award stem shall have the following form: 'Level X Certificate in Lifelong Learning in' [specialisation].

These standards are determined by QQI under section 49(1) of the Qualifications (Education and Training) Act 2012.

AWARD STANDARDS – AGRICULTURE AT NFQ LEVELS 3 TO 4

Purpose

The purpose of this broad award standard is to enable design of a variety of programmes enabling the learner to develop the relevant knowledge, skill and competence relating to agriculture at NFQ Levels 3 and 4.

Note: The indicators at each level build on the skills from the previous one.

The outcomes at each NFQ level include those of all the lower levels in the same sub-strand unless stated otherwise.



KNOWLEDGE

NFQ	LEVEL 3	LEVEL 4
Knowledge breadth	Knowledge moderately broad in range	Broad range of knowledge
Knowledge kind	Mainly concrete in reference and with some comprehension of relationship between knowledge elements	Mainly concrete in reference and with some elements of abstraction or theory
	The learner should be able to show the following:	The learner should be able to show the following:
Breadth	Knowledge of science and technology that are relevant to the principles and practices of modern and sustainable agriculture.	Knowledge and understanding of science and technology that support the principles and practices of modern and sustainable agriculture.
Environment	Knowledge of: <ul style="list-style-type: none"> the long-term sustainability of natural resources, including the land, plants, and animals and places, particularly the sustainable use of these resources for the benefit of humanity how we use the Earth's natural resources and environment to produce food and non-food materials the importance of biodiversity, animal welfare and care of the environment the effect of agricultural practices on the environment the ethical issues in animal husbandry and crop management. 	Knowledge and understanding of: <ul style="list-style-type: none"> the long-term sustainability of natural resources, including the land, plants, and animals and places, particularly the sustainable use of these resources for the economic and social benefit of humanity how we use of Earth's natural resources and environment to produce food and non-food materials agricultural principles and practices to improve quality and protection of the environment through science and technology the importance of biodiversity, animal welfare and care of the environment the effect of agricultural practices on the environment biodiversity (wildlife, flora and fauna, water, archaeology) ethical issues in animal husbandry and crop management.



Economy	Knowledge of: <ul style="list-style-type: none">• the contribution agriculture makes to the economy of the locality, region, and globally.• modern agriculture and agri-food issues locally and globally.	Knowledge and understanding of modern agriculture and agri-food issues locally and globally.
Health and safety	Knowledge of: <ul style="list-style-type: none">• health and safety risks associated with agricultural practices• controls and precautions needed to prevent accidents, injury and ill health• health and safety issues to consider when using agricultural machinery and equipment.	Knowledge and understanding of: <ul style="list-style-type: none">• health and safety risks associated with agricultural practices• controls and precautions needed to prevent accidents, injury, and ill health• health and safety issues to consider when using agricultural machinery and equipment.
Soil	Knowledge of the role and function of soil and how important it is to the growth of grass and other crops.	Knowledge of the role, function and management of soil and its importance in the growth of grass and other crops.
Plants	Knowledge of common plant species (trees, weeds, grasses) and wildlife on the farm.	Knowledge of common plant species associated with the work setting.
Crops	Knowledge of the role and importance of a variety of crops, including: <ul style="list-style-type: none">• crops as forage• producing crops for human consumption.	Knowledge and understanding of: <ul style="list-style-type: none">• the role and importance of a variety of crops• producing and managing crops and how crops contribute to sustainable development.
Animals	Knowledge of characteristics and features of traditional milk or meat farm animals like cattle, sheep and pigs.	Knowledge and understanding of: <ul style="list-style-type: none">• the characteristics and features of farm animals like cattle, sheep, pigs, horses and poultry• typical feeding management and housing practices for farm animals• how to assess the condition of livestock.



Forestry	Knowledge of: <ul style="list-style-type: none">• the biology of trees• the forestry industry (scale, contribution and legislation)• the effect of forestry on local communities and on the physical environment.	Knowledge and understanding of: <ul style="list-style-type: none">• the biology of trees• the forestry industry (scale, contribution, prospects and legislation)• the effect of forestry on local and global communities and on the physical environment.
Grass	Knowledge of grass and the importance of grass in Irish agriculture.	Knowledge of grass and an understanding of the importance of grass in Irish agriculture, including how to manage and conserve grassland.
Land use conflict	Knowledge of the possible conflict between competing land uses.	Knowledge of the possible conflict between competing land uses and ways of bringing together agricultural, leisure and forestry needs.
Sustainability, biosecurity and environmental hazards	Knowledge of: <ul style="list-style-type: none">• the role of public bodies in relation to pollution, disease control and disposal of wastes• key pieces of legislation in the agricultural sector• the biosecurity measures needed for an agricultural business• environmental risks associated with work activities• current and possible future effect of agriculture on the environment• importance of protecting the environment• sustainable work practices• basic connections between human and ecological system.	Knowledge and understanding of: <ul style="list-style-type: none">• the role of public bodies in relation to pollution, disease control and disposal of wastes• the implications of key pieces of legislation in the agricultural sector• the biosecurity measures needed for an agricultural business• environmental and other possible risks associated with work activities• current and possible future effect of agriculture on the environment and how this can be managed• importance of protecting the environment• sustainable work practices.• connections between human and ecological system.



KNOWLEDGE

NFQ	LEVEL 3	LEVEL 4
Know-how and skill range	Demonstrate a limited range or practical and cognitive skills and tools	Demonstrate a moderate range of practical and cognitive skills and tools
Know-how and skill selectivity	Select from a limited range of varied procedures and apply known solutions to a limited range of predictable problems	Select from a range of procedures and apply known solutions to a variety of predictable problems
Selectivity	Able to select a limited range of appropriate procedures from known solutions to solve a variety of agricultural work problems.	Able to: <ul style="list-style-type: none">• select a range of appropriate procedures from known solutions to solve a variety of agricultural work problems• select from a broad range of specialised skills and tools and use them to solve problems in agricultural work problems (these problems are usually predictable, but can change).
Research skill	Gather information related to agriculture, using a variety of sources: media, websites, agri-food events and experts.	Gather, evaluate, and communicate information related to agriculture, using a variety of sources: media, websites, agri-food events and experts.
Analysis	Able to: <ul style="list-style-type: none">• analyse and interpret routine agricultural data• design and plan investigations of plant and animals (with support).	Able to: <ul style="list-style-type: none">• analyse and interpret a range of agricultural data• form hypothesis and design and investigations.



Inquiry and problem-solving	Able to: <ul style="list-style-type: none">• solve routine problems through guided discovery, field work, experimental investigations and field-based assignments (with support)• use routine handling and observation skills when investigating plants and animals.	Able to: <ul style="list-style-type: none">• solve a range of problems, using field work, experimental investigations and field-based assignments (with support)• select and use appropriate handling and observation skills when investigating plants and animals• develop arguments and reach a conclusion about common agricultural issues and challenges• use known solutions to solve predictable problems in agricultural work.
Work safely and responsibly	Able to: <ul style="list-style-type: none">• work safely, using the right materials, tools and equipment for agriculture in the correct way (with support)• carry out daily and routine agricultural tasks, including maintenance and cleaning (with support)• help to complete records for daily and routine agricultural tasks• identify routine biosecurity measures and regulations.	Able to: <ul style="list-style-type: none">• select and use tools and specialised agricultural equipment (with support)• effectively and efficiently carry out routine daily tasks, for example cleaning and maintenance, in line with best practice• keep records for daily and routine agricultural tasks in line with best practice, regulations and protocols• follow safe procedures to handle and store chemicals or medicines in an agricultural setting• carry out work in line with known biosecurity measures and regulations.
Work with livestock	Able to: <ul style="list-style-type: none">• carry out routine daily feeding and water supply for livestock• help to tag and register animals in line with welfare regulations• with support, use safe manual / animal handling and movement practices.	Able to: <ul style="list-style-type: none">• explain daily feeding and water supply needs of livestock• select and use safe animal handling and movement practices• help with seasonal activities, including monitoring and checking animal health and welfare.



Forestry work	Able to: <ul style="list-style-type: none">• carry out routine manual tasks to maintain young trees (cleaning, weeding, filling in, fertiliser application)• with support, use safe plant handling when moving trees• identify external tree and plant parts• identify common tree and plant species• identify common commercial tree species.	Able to: <ul style="list-style-type: none">• help with seasonal activities, including monitoring and checking tree and plant health and protection• select and use best practice in tree and plant handling and distribution• identify common commercial tree species• identify the significance of selected commercial tree species, including their effect on forestry• identify signs of stress or ill health in trees and plants.
Communication	Communicate routine agricultural data and information.	Select and use correct communication channels and reporting procedures for agricultural data and information.



KNOWLEDGE

NFQ	LEVEL 3	LEVEL 4
Competence context	Act within a limited range of contexts	Act in familiar and unfamiliar contexts
	Function within a familiar range of agricultural settings.	Function within a familiar and unfamiliar range of agricultural settings.

KNOWLEDGE

NFQ	LEVEL 3	LEVEL 4
Competence role	Act under direction with limited autonomy; function within familiar, homogenous groups.	Act with considerable amount of responsibility and autonomy
	Able to: <ul style="list-style-type: none">with support, work as part of a team in a learning and / or work settingtake limited responsibility for own behaviour in relation to colleagues, the wider agricultural community, and the natural environment.	Able to: <ul style="list-style-type: none">work independently and as part of a team, in a learning and / or work settingtake considerable responsibility for own behaviour in relation to colleagues, the wider agricultural community, and the natural environment.



KNOWLEDGE

NFQ	LEVEL 3	LEVEL 4
Competence learning to learn	Learn to learn within a managed environment	Learn to take responsibility for own learning within a supervised environment
	<p>Able to:</p> <ul style="list-style-type: none">• use curiosity and insight to develop personal growth• use structured feedback and personal experience to learn and develop the learner's contribution in a learning setting.	<p>Able to:</p> <ul style="list-style-type: none">• take responsibility for personal learning in a structured way to improve knowledge and skills about agricultural matters• use feedback, self-awareness and reflection to develop professional skills, personal growth and knowledge.

KNOWLEDGE

NFQ	LEVEL 3	LEVEL 4
Competence insight	Assume limited responsibility for consistency of self-understanding and behaviour	Assume partial responsibility for consistency of self-understanding and behaviour
	<p>Able to:</p> <ul style="list-style-type: none">• understand attitudes, values and behaviour and their effect in agricultural work settings• respect all (people, animals, crops, land, and so on).	<p>Able to:</p> <ul style="list-style-type: none">• respect the integrity and value of all (people, animals, crops, land, and so on)• behave in line with ethical and professional standards when working in agricultural settings• commit to sustainable agricultural work practices.



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