

BETA CONSERVATION MANAGEMENT

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BETA CONSERVATION MANAGEMENT SYLLABUS & INFORMATION

BACKGROUND

BETA Conservation Management Core

Key goals of the UK farming sector include conservation and improvement of the environment, along with biodiversity on farms coupled with sustainable farming practices.

Legislation related to sustainable ways of farming, Integrated Farm Management (IFM), environmental protection, conservation issues (on farm) and guidance literature developed to help farmers to meet the statutory requirements has produced an enormous volume of reading. Many farmers are finding it difficult to comprehend the scale of what is required and the depth of knowledge needed to achieve the rewards for Environmental Stewardship Schemes. Most farmers are excellent production managers but they are now expected to have knowledge and practical skills for countryside management works.

Currently, the majority of the environmental advice on farm is provided by BASIS qualified agronomists that successfully passed their training and examination of the following modules “BASIS BETA - Biodiversity and Environmental Training for Advisers” and “BASIS Conservation Management”.

Due to the fact that there is a substantial crossover between the two modules, it was decided to merge them and create a new course that will deliver a complete and up to date content on conservation and environmental issues across the UK and farming, environment and natural environment sectors. In order to meet the requirement of both sectors, the training was structured in three units: a core module that will cover all the general aspects related to the subject and two skill areas, one with Agronomic Specialism for on-farm Advisers and one with an Environmental Specialism designed for non-farmed areas.

This descriptor is for the core module that is designed to deliver all necessary knowledge and information for farm Advisers and environmental Advisers in the UK. This module can be followed either by one or both of the specific skill modules Agronomic Specialism for farm Advisers and Environmental Specialism for natural environment experts.

BETA Conservation Management – Agricultural Specialism

BASIS BETA Conservation Management – The agricultural specialism is designed to outline aspects of integrated farm management. It covers a wide variety of topics including but not limited to importance of pollinators and predatory insects, soil biology and practical pest management plans. This specialism is designed and aimed at professionals involved in providing environmental advice on farms and the farmed environment.

BETA Conservation Management – Environmental Specialism

BASIS BETA Conservation Management – The environmental specialism builds on management of the natural environment for both conservation and commercial use. It will include identification skills, landscape management planning and habitat structure. This specialism is designed and aimed at professionals, including agronomists, land agents and environment advisers, providing environmental advice in farming and countryside management.

WHISTLEBLOWING POLICY

BASIS Registration Ltd is committed to the highest standards of openness and accountability. Therefore, we expect employees, candidates and others who work with BASIS, who have serious concerns about any aspect of our work to voice those concerns.

To this effect, BASIS has a Whistle Blowing Policy. This procedure is designed to allow concerns of a public interest kind within BASIS to be raised, investigated and where appropriate, acted upon. Complaints may be made by any member of staff, candidates or those contracted to provide services to BASIS.

To view the full Whistle Blowing Policy go to:

<http://basis-reg.co.uk/Portals/1/Resources/Professional-Reg/BASIS%20Whistle-blowing%20Policy.pdf>

DYSLEXIA POLICY

BASIS Registration Ltd allows students diagnosed with dyslexia to request special examination arrangements. Proof of dyslexia is required a **minimum of 4 weeks** before the exam date so that BASIS can provide special examination arrangements if required.

For a full copy of our Dyslexia Policy please go to:

<http://www.basis-reg.co.uk/Portals/1/Resources/Student%20Resources/TM%2017%20BASIS%20Dyslexia%20Policy%20-%20Sept%202011.pdf?timestamp=1468593429115>

COMPLAINTS POLICY

For a full copy of our Complaints Policy please go to:

<http://www.basis-reg.co.uk/Portals/1/Resources/Secure/Trainer%20Area/TM%2048%20Complaints%20Procedure%20Report%20Form.pdf?timestamp=1534331662892>

THE EXAM

Examinations are conducted by BASIS for training providers who run training courses for the BETA Conservation Management module in various parts of the UK. The exam procedure and structure for the core module and for the specialism areas are covered in this booklet.

MULTIPLE CHOICE QUESTION PAPER

Questions for the paper have been submitted by the industry and are validated by a Technical Panel. There will be 1 paper consisting of 25 multi-choice questions and 5 short answer questions on the core modules, to be completed in 2 hours. There will be 1 paper for each specialism area consisting of 10 multi-choice questions and 3 short answer questions, to be completed in 1 hour each.

The pass mark for this section - 70% in each paper

GENERAL NOTES

It is recommended that prior to the exam candidates acquire enough practical experience with the full range of topics applicable to the examination. Theoretical knowledge without an understanding of its practical application would not be sufficient for a candidate to pass the exam.

In order to be successful at the exam and be awarded the certificate, the candidate must pass the assessment elements for all the examined modules.

Candidates may sit an additional specialism area at a pre-arranged exam instance anywhere in the UK provided there are adequate facilities and by agreement with the provider of the exam. This should reduce the need for excessive travel for candidates and allow them to attend a local exam venue.

BETA CONSERVATION MANAGEMENT

Examination Procedure and Structure

The programme for the examination set out below is not “cast in stone” but it is the format that has been used on a number of exams and it has proved successful.

9:00	Examination starts
Time Allowed - 2 hours	25 multi-choice questions and 5 short answer questions relating to the core module (2 compulsory and 3 selected from 6 available)
11:00	30-minute break
11:30	Specialism area 1 examination starts
Time Allowed - 1 hour	10 multi-choice questions and 3 short answer questions relating to the first specialism area chosen
12:30	Examination ends
Total examination time	
3 hours	

YOUR QUESTIONS ANSWERED

DO I NEED TO TAKE A TRAINING COURSE IN ORDER TO SIT THE BETA CONSERVATION MANAGEMENT CERTIFICATE EXAMINATION?

Not necessarily, if you feel you already have enough technical knowledge and on-site / in-field experience. However, candidates should ensure that they have been trained satisfactorily, either in-house or externally, and have had sufficient supervised on-the-job experience prior to the examination so that they are capable of giving clear, concise recommendations for the use of pesticide products.

WHAT FORM DO THE TRAINING COURSES TAKE?

That will depend on the trainer/training provider, the chosen course and on the candidate's previous experience to date. **Courses can run for a minimum of 4 days.**

WHERE ARE TRAINING COURSES HELD?

Details of trainers and locality can be obtained on Pages 27 - 30.

HOW DO I APPLY TO TAKE A TRAINING COURSE?

Contact the Training Provider of your choice and complete a training course application form or contact BASIS for advice.

WHEN AND WHERE ARE EXAMINATIONS HELD?

Examinations are held when there are sufficient numbers to make them viable, usually following a training course and at a venue chosen by the training provider and agreed with BASIS.

WHAT DOES THE EXAMINATION ENTAIL?

Details can be found in this booklet on pages 5 - 6.

IF I FAIL THE EXAMINATION, CAN I RE-SIT?

Yes, you can re-sit the exam; however, BASIS examinations are accredited on the Higher Education qualifications framework. One consequence of this is that we need to ensure procedures are in place to improve candidates' chances of success in subsequent examinations following a previous failure.

Where candidates have been examined unsuccessfully on two occasions, they will be required to retrain before attempting the exam for the third time.

Candidates and trainers will be required to complete a form to confirm that they have retrained, particularly covering areas that were identified as 'areas of weakness' at previous exams.

The form should be presented to the exam invigilator at the third exam attempt. Failure to confirm that retraining has taken place will result in a subsequent 'no result' for the exam.

Please help us to help you by asking your training provider to evaluate your training needs and undertake the training required to ensure you can pass the exam.

WHEN WILL I RECEIVE MY EXAMINATION RESULTS?

We aim to issue results and feedback within 20 working days of the date of examination. **Please note results will not be given over the telephone.**

BETA CONSERVATION MANAGEMENT OBJECTIVE SYLLABUS

The syllabus has been designed to allow individual modules of training to be treated as separate units for training purposes. This will permit the choice of the most appropriate time of year in which to undertake such training. Some indication of the time required to cover each section of the syllabus is given in the contents page of this booklet. Those concerned with the delivery of training will thus be able to assess the depth of tuition for each subject and establish their training programme accordingly, taking account of the prior experience and knowledge of the course candidates.

BETA CONSERVATION MANAGEMENT - CORE MODULE

MODULE 1 - FARMLAND WILDLIFE AND HABITATS – CONSERVATION AND IMPROVEMENT

1.1. Competence

Candidates must be able to demonstrate an understanding of why farmland wildlife populations should be conserved and where practical, increased. They must also be able to demonstrate an understanding of the key farmland habitats and the measures required to protect, link and enhance these areas.

1.2. Performance Criteria

Candidates must be able to:

- Define the term 'biodiversity' and understand its history in terms of both international conventions and national agreements e.g. Rio Summit / Johannesburg Sustainability Summit.
- Understand the principles behind the development of a planned approach to species and habitat conservation. This will include the development of policy from the Rio Convention in 1992 through to the delivery of the Natural Environment White Paper objectives.
- Explain the key targets outlined in England's Biodiversity 2020 strategy and recognise the key delivery mechanisms in place to help achieve these targets.
- Recognise the key wildlife habitats present on farms, the species they support and the importance of both habitats and species to Biodiversity 2020 Targets.
- Recognise which key species have declined and those which have increased in agricultural landscapes; describe the likely causes which will include quality of habitat, changes in agricultural practice, changes in rural management, climate change and external influences such as loss of overwhelming habitats overseas.
- Recognise the key non-native invasive species, what issues they cause and the primary means of controlling them.
- Recognise the importance of species and habitat conservation to wider society.
- Specify what conservation measures can be introduced to help farmland wildlife and to protect and enhance habitats.
- Explain how agri-environment schemes work and how funding can be accessed by farm businesses.

- Describe and demonstrate knowledge of the conclusions from important farmland and cluster farms wildlife research projects. These will include SAFFIE, 3DFarming, Farm4Bio, the Allerton Project, Grange (Hope) Farm, the Eye Brook Catchment Project and the Integrated Local Delivery Approach, Sustainable Intensification Platform (SIP), Agricology project.
- Show an understanding of Cross Compliance Guidelines and Good Agricultural, Environmental Conditions and Greening as they relate to maintenance of habitats and landscape features.
- Understand the principles and delivery mechanisms of the key aspects of wildlife and biodiversity management within the industry led cluster farms and initiatives including the Voluntary Initiative on Pesticides (VI), Professional Nutrient Management Group (Tried & Tested), the Campaign for the Farmed Environment (CFE), Greenhouse Gas Action Plan (GHGAP), Sustainable Intensification Platform (SIP).
- Have awareness of changes to wildlife legislation affecting wildlife law.

1.3. Essential Knowledge & Skills

Candidates must be able to demonstrate their knowledge in the three key areas outlined below.

1.3.1. Wildlife and Biodiversity Policy

Candidates must have the ability to:

- Describe the key wildlife and biodiversity policy issues and demonstrate how and why they are relevant to agriculture.
- Understand how the key targets and milestones in place to implement wildlife and biodiversity policy, with particular reference to Biodiversity 2020 and National Pollinator Strategy. Impacts on the requirements on agriculture to help deliver on a national, regional and local level.

3.3.2. Species and Habitat Management

Candidates must have the ability to:

- Understand the basic best practice management requirements to enable key farmland habitats to achieve a good ecological status and maximise their support of healthy populations of associated species.
- Understand the breeding, feeding and habitat requirements of a range of key farmland species and the type of management required to help support healthy populations of these species.
- Identify a range of key non-native invasive species and demonstrate an understanding of the threats they pose and main management control methods for each.
- Explain the importance of species and habitat conservation for wider society and demonstrate why this is important to agriculture.

3.3.3. On-Farm Conservation Management

Candidates must have the ability to:

- Understand the importance of identifying the key habitats and species present on a farm and in the immediate locality.
- Identify the key management techniques and options that could be implemented to protect those habitats and species.
- Recognise how the key habitats could be linked and describe the benefits that these connections can bring to both increase the range and population of associated species.
- Recognise opportunities to enhance and expand important habitats within the constraints of a farm business.
- Understand how the full range of requirements for identified species can be put in place by providing the correct variety of land management and habitat options.
- Recognise how the required management can be provided through the utilisation of Agri-environment Schemes and other incentives and how this can be fit within the constraints of farm business.
- Understand how Cross Compliance, Good Agricultural practice, Greening and Environmental Conditions underpin good environmental management.
- Appreciate how on-farm solutions and the implementation of on farm conservation management can impact on a landscape scale.
- Be able to advice farms on managing biodiversity based on Countryside Stewardship (CS), including Wild Pollinator & Farm Wildlife Packages.

MODULE 2 - FARMING AND THE WIDER ENVIRONMENT

2.1. Competence

Candidates must be able to demonstrate a broad understanding of a range of integrated farm management approaches, the key requirements of certified farming standards and the range of opportunities the wider rural environment offers both farm businesses and general public. They must have an understanding about climate change challenges to the farming sector and wider environment.

2.2. Performance Criteria

Candidates must be able to:

- Understand the principles behind the development of the main integrated approaches to farm management.
- Demonstrate a working understanding of environmental legislation affecting agriculture.
- Appreciate energy usage and efficiency of farm businesses and on-farm renewable energy opportunities.
- Demonstrate an understanding of the environmental requirements of the food supply chain in the UK.
- Recognise the importance of the provision of public goods, the importance of education, and raising the general public's awareness of agriculture's positive contribution to the environment.
- Recognise the opportunities and the implications that leisure and sporting activities can have on farm businesses and the environment.
- Demonstrate knowledge on how the climate is already altering and predicted to change further.
- Discuss how climate change may affect the world in general and the UK in particular.
- Describe ways of building resilience into biodiversity to deal with extreme weather events.

2.3. Essential Knowledge & Skills

Candidates must be able to demonstrate their knowledge in the three key areas outlined below.

2.3.1. Farming Systems and Legislation

Candidates must have the ability to:

- Discuss the development and implementation of integrated approaches to farming, which will include Integrated Pest Management (IPM), Integrated Crop Management (ICM), Integrated Farm Management (IFM) and Conservation Agriculture.
- Understand the basic principles of organic farming systems, the productivity and environmental impacts of such systems.
- Compare the relative merits of organic and conventional farming practices with an understanding of the economic and environmental aspects of each.

- Understand the broad requirements of Cross Compliance and the Basic Payment Scheme.
- Understand the requirements of Waste Regulations and their impact on farm management; this will include:
 - Farm exemptions – what is required and how to apply.
 - Moving and disposing of agricultural waste.
 - Manure & Slurry.
 - Hazardous waste – how this applies to farms.
 - Spreading waste on land – what you can and can't do.
- Discuss the environmental benefits of minimising farm waste and maximising recycling opportunities.
- Identify and discuss the efficient use of energy.
- Discuss maximising on farm energy efficiency.
- Discuss on farm renewable energy opportunities, including an awareness of funding opportunities.
- Discuss biofuels and future opportunities.
- Understand the present and future role of farms and farming sector in dealing with climate change challenges.
- Discuss the way of calculating & managing carbon emissions on farms and promoting low carbon practices.

2.3.2. Farming Standards, Provision of Public Goods and Education

Candidates must have the ability to:

- Understand key principles and requirements behind Farm Assurance Schemes and protocols in the UK and recognise the major schemes (Red Tractor, Tesco Nurture, LEAF Marque, Conservation Grade) and their main attributes.
- Understand the certification process for organic farming systems and the importance of this.
- Discuss the provision of public goods by agriculture and recognise the key elements of environmental delivery by agriculture.
- Recognise the importance of encouraging good environmental management in all agricultural operations.
- Recognise the important part played in promoting public awareness and education of agriculture's contribution to our environment by organisations such as The Country Trust, Farming & Countryside Education (FACE) and Linking Education and Farming (LEAF) and campaigns such as Open Farm Sunday.

- Be aware of the development Payments for Ecosystem Services (PES).

2.3.3. Leisure and Sporting Activities

Candidates must have the ability to:

- Appreciate the principal legal requirements of statutory access through Public Rights of Way and the CRoW Act.
- Appreciate the opportunities and possible difficulties associated with permissive access.
- Understand the opportunity for sporting and/or leisure activity on the farm including:
- Awareness of the principals of best practice shoot management, including awareness of different ammunition sources.
- Understanding the code of practice relating to Shooting and Game Management.
- An awareness of best practice predator control and snaring.
- An appreciation of the principals of best practice in the control of vermin and the work of the Campaign for Responsible Rodenticide Use (CRRU) and Wildlife Incident Investigation Scheme (WIIS).
- An awareness of best practice management of equine grazed pasture.

MODULE 3 - SOIL MANAGEMENT

3.1. Competence

Candidates will know the principles governing the maintenance and increasing of soil organic matter content, the maintenance and improvement of good soil structure and methods for the prevention of erosion by water and wind. They must have knowledge of the legal and good agricultural practice requirements for the protection of soil, the maintenance of soil health and agricultural productivity.

3.2. Performance Criteria

Candidates must be able to:

- Demonstrate knowledge of the basic principle soil types and their key features.
- Demonstrate a basic understanding of Agricultural Land Classification.
- Recognise features of soil structure (compaction, panning, capping, slumping, etc.).
- Recognise the features of soil erosion (sheet erosion, soil wash, rills, gullies, deposition).
- Demonstrate an understanding of the requirements for soil management as set in “Protecting, our Water, Soil and Air – A Code of Good Agricultural Practice for farmer’s growers and land managers”.
- Understanding the soil related aspects of ‘cross-compliance’ within the framework of the Basic Payment Scheme.
- Understand the duty of care for soil management under cross compliance; this will include an assessment of erosion and runoff risk.
- Demonstrate a good knowledge of methods used to reduce the risk of soil erosion by water and wind, with specific reference to cultivation techniques and countryside stewardship options.
- Understand the principles, and effects on the soil, of different cultivation strategies ranging from no-till through to full inversion ploughing.
- Demonstrate awareness of good livestock husbandry practice and its importance with regard to soil management in grass-based farming systems.

3.3. Essential Knowledge & Skills

Candidates must have the ability to:

- Explain how soil type and soil structure influence productivity, erosion and runoff risk.
- Discuss the techniques which can be employed to reduce soil erosion and the importance of identifying crops, rotations, soil types and topography which pose the greatest erosion risk.
- Understand the reasoning behind soil related ‘cross-compliance’ requirements appropriate to the UK region they work in.

- Understand the Good Agricultural and Environmental Condition (GAEC) standard for soil management with particular reference to the Duty of Care and be aware of the EU Thematic strategy for soils.
- Understand how to prepare a 'Soil Management Plan'.
- Understand the impact soil material has on the aquatic environment.
- Understand how to increase soil organic matter levels to improve soil structural stability using cover cropping and organic additions.
- Show working knowledge of cover crops establishment and management.
- Explain the key soil cultivation techniques used in crop production and the impact of each of them on the soil structure and properties.
- Understand the importance of the job that worms and micro-organisms play within soils and how they can help to impact crop yields.
- Understand the importance of crop rotations and crop selection linked to erosion and runoff risk.
- Understand how to manage livestock grazing, feeding, density, timing and location to reduce soil loss, particularly to water.
- Identify the methods which can be used to protect river banks from erosion and understand why this is important.
- Understand the pathways by which soil can reach watercourses (e.g. roads, ditches, etc.) and demonstrate knowledge of what mitigation measures can be put in place.
- Show understanding of the key results from the following research projects:
 - SOWAP (Soil & Water Protection) project.
 - Mitigation for Phosphorous and Sediment (MOPS).
 - PARIS Project.
- Reducing risks associated with autumn wheeling of combinable crops.
- Explain how Campaign for the Farmed Environment (CFE), Voluntary Initiative on Pesticides (VI), Professional Nutrient Management Group (Tried & Tested) and the Greenhouse Gas Action Plan (GHGAP) reference good soil management.

MODULE 4 - WATER AND ENVIRONMENTAL PROTECTION

4.1 Competence

Candidates must understand the relationships between land management and water quality to enable the best use of land and the minimisation of both point source and diffuse pollution. They must have knowledge of the legal and good agricultural practice requirements for the protection of water and the maintenance of water quality. They must be able to understand and discuss the issues relating to the use of Plant Protection Products and Biocides in the context of Environmental Protection. Be aware of the importance of Environmental Information Sheet (EIS) for pesticide products.

4.2. Performance Criteria

Candidates must be able to:

- Understand the two classifications of water bodies Ground Water and Surface Water and recognise the relevant pathways by which agriculture and other activity on farmland (Fracking) could cause pollution of each classification.
- Recognise the basic relationships between soil, water & wildlife and describe the management practices to conserve all in good condition.
- Demonstrate an understanding of the requirements for water management as set in Protecting our Water, Soil and Air – A Good Agricultural Practice for farmers, growers and land managers and in the Farming Rules for Water.
- Understand the controls for diffuse and point source pollution of water whilst recognising the principals associated with the Source / Pathway / Receptor approach.
- Understand the basic principles of field drainage and an outline of the methods of drainage used.
- Understand the implications of Groundwater, Nitrates, Drinking Water and Water Framework Directives, the quality standards set and the impacts these have on the current and potential legislation and Advisory requirements.
- Demonstrate a clear understanding of water management issues as they affect agriculture.
- Understand the processes involved in sedimentation and eutrophication and the principal sources of agricultural and domestic phosphate in rural watercourses.
- Understand the principles and delivery mechanisms of the key aspects of water protection within the industry-led initiatives including the Voluntary Initiative on Pesticides (VI), Professional Nutrient Management Group (Tried & Tested), the Campaign for the Farmed Environment (CFE) and the Greenhouse Gas Action Plan (GHGAP).
- Understand and give examples how the choice of pesticide products is influenced by label requirements.
- Understand the environmental risk management highlighted by the Environmental Information Sheet (EIS).

- Identify the risks to non-target species and sensitive areas which need to be taken into account when applying pesticide products.
- Provide clear advice to the spray operator on the precautions required.
- Identify environmentally sensitive areas and suitable protection options.

4.3. Essential Knowledge & Skills

Candidates must have the ability to:

4.3.1. Water protection:

- Understand the need for good water quality.
- Understand how to reduce diffuse pollution of water by:
 - Cultural methods and rotations appropriate to varied soil types and cropping systems.
 - Management and orientation of tramlines, field drainage systems, river, stream, and ditch bank protection, tracks, roadways and hard surface areas.
 - Effective use of land management techniques such as buffer strips, beetles banks, sediment traps/ponds and in-field grass areas and the utilisation of Environmental Stewardship options where appropriate.
- Understand the basic principles of water management of farm with specific reference to:
 - Abstraction Licencing and best practice for water abstraction.
 - Water storage on farm.
 - Best practice irrigation principles.
 - Management of rainwater and grey water as a resource.
- Understand the basic principles of nutrient and manure management with specific reference to:
 - The NVZ Regulations and implications of bad nutrient management on the environment.
 - The importance of knowing soil PH and nutrient values and how this can affect input strategies.
 - Nutrient & Manure Management Plans.
 - The utilisation of bio-solids, sewage sludge (including the cross compliance regulations) green waste and other organic amendments.
- Understand the basic principles of pesticide management including:
 - The approvals process.
 - Emergency authorisations and off-label approvals.

- Advice / recommendations.
- Correct storage, transportation, filling and application.
- Sprayer cleaning, wash down, disposal and biobeds.
- Risks of pollution.
- Benefits of use.
- Product Stewardship e.g. Metaldehyde Stewardship, Nematicide stewardships, and others.
- Understand how livestock management can impact on water quality through:
 - Medication and treatments such as sheep dip and worming agents.
 - Storing, handling and spreading wastes.
 - Animal feed.
 - Poaching and soil compaction.
 - Access to watercourses.
- Understand the implication and impacts of existing regulation and delivery initiatives, this will include:
 - Cross-Compliance.
 - Water Protection Zones.
 - Catchment Sensitive Farming.
 - CFE, Tried & Tested, VI and GHGAP.

4.3.2. Environmental protection:

- Breakdown different risk categories specified on the Environmental Information Sheet (EIS): Wildlife; Mammals and Birds; Bees; Non Target Insects and Other Arthropods; Aquatic Life; Soil and Groundwater, Earthworms and Soil Micro-organisms; Non Target Plants.
- The relevance of the Environmental Information Sheet (EIS) to the approved label phrases specified on the appropriate crop protection products.
- The principles of risk management which apply to conventional crop protection.

BETA CONSERVATION MANAGEMENT – AGRICULTURAL SPECIALISM

MODULE 5A - NATURAL AND BIOLOGICAL CONTROL, POLLINATORS AND SOIL LIFE

5A.1. Competence

Candidates must be able to demonstrate an understanding of the identification, role and biology of pollinating insects, pest predators, hyperparasites and disease antagonists. They must also be able to demonstrate an understanding of the role and biology of soil macro and microbiota in relation to soil health and nutrient cycling.

5A.2. Performance Criteria

Candidates must be able to:

- Explain the importance of pollinating insects for relevant agricultural crops.
- Appreciate the importance of habitat and of responsible crop protection practices in enhancing and protecting pollinator populations.
- Recognise common predators of agricultural pests.
- Demonstrate an understanding of the biology of key predators of pests. Also, an understanding of the importance of both habitat and responsible IPM practices in optimising their effect.
- Show awareness of naturally occurring parasites of important crop pests.
- Demonstrate knowledge of the factors affecting crop pest and predator populations including the weather and farming practices.
- Appreciate the role of antagonistic microorganisms in the management of plant disease.
- Discuss the role of microorganisms in nutrient cycling with reference to nitrogen.
- Understand the importance of earthworms in relation to soil structure and soil organic matter. Also, show awareness of the effects of agricultural practices on earthworm populations.

5A.3. Essential Knowledge & Skills

Candidates will have knowledge and understanding of:

- Habitat requirements of pollinating insects.
- The importance of plant protection product choice, good application practice and liaising with local beekeepers in protecting bees; BeeConnected platform.
- Techniques for pest and predator identification.
- Effects of habitat provision and management on the populations and the effectiveness of agriculturally beneficial species.
- Techniques for assessing pest and beneficial insect populations.

- Crop/variety choice and the role they can play in avoiding pest/disease attack.
- The benefits and importance of good crop rotations.
- The practical application of economic thresholds for pests and diseases.
- The impact of frequency of cultivation, and choice of cultivation technique on earthworm populations.
- Factors affecting the activity of soil microorganisms involved in the nitrogen cycle.

MODULE 5B - ENVIRONMENTAL HAZARDS AND RISK MANAGEMENT OF USING PESTICIDES ON FARM

5B.1. Competence

Candidates must be able to demonstrate how the use of an Integrated Pest Management Plan (IPMP) on farm can ensure that the use of pesticides is considered in the context of avoiding pollution and promoting and protecting farmland biodiversity. Successful completion of the LEAF audit also covers this competence area.

5B.2. Performance Criteria

Candidates must be able to:

- Explain what the Integrated Pest Management Plan (IPMP) is seeking to achieve.
- Be competent to advise on how the Integrated Pest Management Plan (IPMP) should be completed on farm.
- Recommend how best practice can be achieved on farms.
- Demonstrate awareness of specially designated areas e.g. Sites of Special Scientific Interest (SSSI's) and other areas where pesticides use is restricted.

5B.3. Essential Knowledge & Skills

Candidates will have knowledge and understanding of:

- The importance of variety choice and associated pest and disease problems.
- Importance of the BASIS Crop Protection Certificate, BASIS Professional Register and use of formal agronomy advice.
- Relevant Codes of Practice and guidelines.
- Thresholds and the need to treat crops, including the adoption of cultural control methods.
- Management of cover crops in relation to crop protection issues.
- Choice of crop protection products and associated recordkeeping requirements and available methods.
- Best practice in the application of pesticides including the use of different sprayer equipment/nozzles to prevent drift and/or exposure and cleaning /emptying sprayers.
- The need to protect on-farm ground and surface water features, awareness of water catchment and sensitive areas on farm and downstream.
- How to prevent diffuse pollution and point source water contamination.
- The need to protect groundwater and Groundwater Protection Zones (GPZs).
- Arthropod buffer zones and aquatic and restrictions on pesticide use near watercourses.

- Sources of available environmental and conservation advice.
- The H2OK campaign, its aims and content.
- How to reduce exposure of non-target organisms to pesticides including vertebrate control products and molluscicides.

BETA CONSERVATION MANAGEMENT – ENVIRONMENTAL SPECIALISM

MODULE 6 - ENVIRONMENTAL SPECIALISM

6.1. Competence

Candidates must be able to demonstrate an understanding of ways of creating habitats for given Bable to demonstrate an understanding of the importance of species conservation and the benefits wildlife management can have on the rural environment.

6.2. Performance Criteria

Candidates must be able to:

- Identify key wild flora and fauna and be aware of their environmental preferences.
- Demonstrate a working knowledge of creating habitats to encourage pollinators, wild birds and mammals.
- Show an understanding of methods used to encourage natural regeneration of various ecosystems.
- Show an understanding of main principles for creating and managing specific habitats on farms and in rural areas and demonstrate how this can fit within profitable farming businesses.

6.3. Essential Knowledge & Skills

Candidates will have knowledge and understanding of:

Habitat creation/management;

- How to identify, manage, protect and link important existing habitats.
- Ways of creating relevant new habitats based on landscape characteristics, soil type, and actual location.
- Typical floristic associations of different natural habitats and ways of managing their natural regeneration.
- Wetland habitats, their structure, roles and management.
- Wildlife species (especially protected wildlife) that are typically associated with farmed land and their typical lifecycle requirements; this will include those species found in or around unpopulated or derelict buildings.
- Ways of selecting, siting, establishing and managing agri-environment options and features.
- Understand the basics of payments by results (PBR) and biodiversity offsetting.

Woodland:

- Managing woodland habitats, including mature and new woodland, shelterbelts, grazed woodlands, riparian woodlands.
- An understanding of woodland structure and inclusion of rides/open space.
- Management of existing woodland and the importance of that management, species choice, dead wood, coppicing, for specialist woodland species such as dormouse, bats, bird and butterfly.
- Knowledge of planting of trees and shrubs in the landscape.
- An understanding of the principals of agroforestry.

Grassland:

- Understanding of uplands and lowland grassland. Flood meadows/heathland/Chalk grassland/hay meadows/silage/permanent v rotational etc.
- Knowledge of different grazing regimes: differences between key livestock types understanding, how they graze, the impact they can have on sward structure and composition and the different timings of grazing.
- Understand the key principals behind different grazing regimes - Extensive grazing versus mob grazing.
- Knowledge of grassland production systems such as haymaking and silage production. How these systems can benefit the environment and how any potential environmental impacts can be minimised.
- A knowledge of the potential benefits and impacts of livestock and grassland management system of soil health; including soil structure and soil biology and the subsequent influence on water quality. Understand how different leys can influence soil health and livestock production.
- Specific agri-environment options for grassland farming systems.
- Have a knowledge of best practice equine grazing.

Landscape and Catchment Scale Delivery:

- An understanding of how farmer clusters work, from formation of a group through to delivery of outcomes.
- Knowledge of landscape-scale approaches to soil, water & wildlife management. An understanding of the facilitation fund and current agri-environment help to support landscape and catchment scale delivery.

SAMPLE MULTI-CHOICE QUESTIONS FOR THE BETA CONSERVATION MANAGEMENT EXAMINATION

The following sample questions give a guideline of the type and presentation of questions candidates will have to answer when taking the BETA Conservation Management examination. They are purely intended as a guide and consist of superseded questions from actual past papers.

- 1. An EIS is intended to help:**
 - (a) Identify the hazards and manage the risks of a product to the environment
 - (b) Identify the hazards and manage the risks of a product to the operator
 - (c) Minimise the residue level in the crop
 - (d) Help minimise the impact of pesticides on pollinators
- 2. Access to damp pasture land is of benefit for:**
 - (a) Skylarks
 - (b) Yellowhammers
 - (c) Lapwings
 - (d) Corn buntings
- 3. A herbicide sprayed onto an arable crop adjacent to a field growing horticultural crop is more likely to cause damage if it is:**
 - (a) Leachable
 - (b) Persistent
 - (c) Of a high mammalian toxicity
 - (d) Volatile
- 4. The Voluntary Initiative is:**
 - (a) An NFU/CLA initiative for the management of voluntary set-aside land
 - (b) A stewardship initiative for the use of crop protection products
 - (c) A stakeholder group involving the manufacturers and distributors of pesticides
 - (d) A stakeholder group from across the agricultural industry seeking to enhance biodiversity
- 5. Which is the best type of trap to use in the control of foxes?**
 - (a) Self-locking snare
 - (b) Free running snare
 - (c) Spring traps
 - (d) Dead drop trap
- 6. Under the CRRU code for responsible rodenticide use, which of the following is incorrect?**
 - (a) Never leave bait exposed to non-target animals and birds
 - (b) Never use more than one baiting point
 - (c) Always have a planned approach
 - (d) Always collect and dispose of rodent bodies
- 7. The Expert Committee for Pesticides (ECP) is responsible for:**
 - (a) Providing advice to Ministers as to whether pesticides should be approved for use
 - (b) Reporting exceedances of The Maximum Residue Levels (MRL) to Ministers
 - (c) Withdrawing pesticide products from the market where a safety or environmental problem has occurred
 - (d) Advising the Food Standards Agency (FSA) of the appropriate Maximum Residue Level (MRL) for each approved product

USEFUL WEBSITES AND PUBLICATIONS

Most of the recommended reading can only be accessed online. This list directs you the relevant web pages.

Recommended Reading:

- Guide to Cross Compliance in England 2018, link [here](#)
- Protecting our Water Soil and Air, the Code of Good Agricultural Practice, link [here](#). A hard copy can be ordered from The Stationary Office (TSO), Tel: 0870 600 5522 or email www.tsoshop.co.uk quoting ISBN 9780112432845 or PB13558
- Managing uncropped land in order to enhance biodiversity benefits of the arable farmed landscape - The Farm4bio project; link [here](#)
- The Greening rules for 2018, link [here](#)
- Countryside Stewardship Manual, link [here](#). The key sections are the scheme overview and Annex.3 wild pollinator and farm wildlife package

Additional Reading:

- Fields for the Future - The Allerton Project - A winning blueprint for farming, wildlife and the environment, link [here](#)
- The farm wildlife handbook – this can be ordered from the RSPB [here](#)
- Wildlife and Farming – Wildcru – Link [here](#)
- Habitat Management and Creation for Pollinators – Link [here](#)
- Think Soils, link [here](#)

BASIS APPROVED TRAINERS

The following Colleges, Trainers and Training Providers are successfully running BETA Conservation Management examinations and have been accepted as BASIS Approved Trainers for BETA Conservation Management.

Alasdair Lowe Limited

Grange Barn
Birds Lane
Epwell
BANBURY
Oxfordshire OX15 6LQ

Contact: Alasdair Lowe
Tel: 01295 788006
Email: alowe@alasdairlowe.co.uk
Trainer: Alasdair Lowe
Web: www.ruralagriculturalconsultants.co.uk
Modules: Environmental and Agricultural Specialisms

Boston & North Wash Training Group

Kiln House
West Fen
Stickney, BOSTON
Lincolnshire,
PE22 8BH

Contact: Margaret Dawson
Tel: 01205 480898
Email: dawsonm@dialstart.net
Trainer: Simon Goodger
Web: <http://boston--north-wash-training-group.mytrainingwebsite.co.uk/>
Modules: Agricultural Specialisms

Chelmsford & West Essex Training Group

2 Salisbury Cottages
Maldon Road
Hatfield Peverel
CHELMSFORD
Essex CM3 2HS

Contact: Debbie Wedge
Tel: 01245 381193
Email: debbiewedge@aol.com
Trainer: Debbie Wedge
Web: www.cwetg.co.uk
Modules: Environmental and Agricultural Specialisms

Dorset Training Ltd

Unit 3
Deverel Farm
Milborne St Andrew
BLANFORD FORUM
Dorset DT11 0HX

Contact: Anna Chambers
Tel: 01258 837197 / 07734 079495
Email: enquiries@dorsettraining.org.uk
Trainer: Alasdair Lowe
Web: www.hampshire-training.co.uk
Modules: Environmental and Agricultural Specialisms

Hampshire Training Providers Ltd

c/o Hampshire Grain Ltd
Overton Road
Micheldever Station
WINCHESTER
Hampshire
SO21 3AN

Contact: Catherine Mercer
Tel: 07884 260798
Email: catherine@hampshire-training.co.uk
Trainer: Alasdair Lowe
Web: www.hampshire-training.co.uk
Modules: Environmental and Agricultural Specialisms

Harper Adams University

Edgmond
NEWPORT
Shropshire
TF10 8NB

Contact: Lisa Plant
Tel. 01952 815300
Email: lplant@harper-adams.ac.uk
Web: www.harper-adams.ac.uk
Trainer: Alastair Leake

Modules: Environmental and Agricultural Specialisms

James Christian-Ilett

8 Painshall Close
Welton
LINCOLN
LN2 3NU

Contact: James Christian-Ilett
Tel: 01673 860925
Email: christian.ilett@btinternet.com
Trainer: James Christian-Ilett

Modules: Agricultural Specialisms

Landbased Training

Garth Cottage
Wintringham
MALTON
North Yorkshire
YO17 8HX

Contact: Linda Bower
Tel: 01944 758379
Email: linda@landbased-training.com
Trainer: Alasdair Lowe
Web: www.landbased-training.com

Modules: Environmental and Agricultural Specialisms

Mid Kent Training

Kempes Corner Farm
Boughton Aluph
ASHFORD
Kent
TN25 4ES

Contact: Dianne Qusted
Tel: 01233 813688
Email: info@mkt.uk.net
Trainer: Debbie Wedge
Web: www.midkenttraining.co.uk

Modules: Agricultural Specialisms

**The Game & Wildlife Conservation Trust:
The Allerton Project**

Loddington House
Loddington
LEICESTER
LE7 9XE

Contact: Amelia Woolford
Tel: 01572 717220
Email: awoolford@gwct.org.uk
Trainer: Jim Egan / Alastair Leake
Web: www.allertontrust.org.uk

Modules: Environmental and Agricultural Specialisms

The Training Association (East)

High Cottage
St Andrews Lane
Congham
KINGS LYNN
Norfolk, PE32 1DS

Contact: Rob Tarry
Tel: 01485 600225
Email: jayne@traineast.co.uk
Trainer: Dr Simon Goodger / Alasdair Lowe
Web: www.traineast.co.uk

Modules: Environmental and Agricultural Specialisms

The Training Association (West)

Northfield
The Row
Wereham
KINGS LYNN
Norfolk PE33 9AY

Contact: Jo Bruce
Tel: 01366 500050
Email: jo@traineast.co.uk
Trainer: Dr Simon Goodger
Web: www.traineast.co.uk

Modules: Agricultural Specialisms

The Vale Training Group

Marsh Hill Farm
Marsh
AYLESBURY
Buckinghamshire
HP17 8ST

Contact: Kate Mason
Tel: 01296 612201
Email: kate.mason@valetraining.co.uk
Trainer: Debbie Wedge
Web: www.valetrainingservices.co.uk
Modules: Agricultural Specialisms

University of Lincoln

Riseholme Park
LINCOLN
Lincolnshire
LN2 2LG

Contact: Simon Goodger
Tel: 01522 835295
Email: sgoodger@lincoln.ac.uk
Trainer: Dr Simon Goodger
Web: <http://www.lincoln.ac.uk/home/>
Modules: Agricultural Specialisms

The following Colleges, Trainers and Training Organisations have expressed an interest in running some, or all, of the training modules and/or the BETA Conservation Management examination.

CAFRE Greenmount Campus

22 Greenmount Road
ANTRIM, Co Antrim
Northern Ireland
BT41 4PU

Contact: Steven Wallace
Tel: 02894 426935
Email: steven.wallace@daera-ni.gov.uk
Trainer: Steven Wallace
Web: www.cafre.ac.uk

Duchy College

Stoke Climsland
CALLINGTON
Cornwall
PL17 8PB

Contact: Alex Stephens
Tel: 01208 873220
Email: alexstephens@uwclub.net
Trainer: Alastair Leake / Alex Stephens
Web: www.cornwall.ac.uk/duchy

DJL Agronomics

Highgrove House
Cassbrook Drive
Fulstow
LOUTH, LN11 0XR

Contact: Jim Lewis
Tel: 07831 120363
Email: djlagronomics@gmail.com
Trainer: Dr Jim Lewis
Web: www.djlag.co.uk

SRUC

Ferguson Building
Craibstone Estate
Bucksburn
ABERDEEN
Aberdeenshire AB21 9YA

Contact: Gavin Elrick
Tel: 01888 569649
Email: gavin.elrick@sac.co.uk
Trainer: Gavin Elrick
Web: www.sac.co.uk

Many companies may wish to arrange their own in-house training, however, those who do not have suitable examination facilities should contact colleges/trainers listed in this booklet. All examinations must be booked in advance with BASIS to ensure sufficient time is available to appoint an independent examiner.

19 November 2018