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BASIS FOUNDATION AWARD IN AGRONOMY (AGRICULTURE)

AND

BASIS FOUNDATION AWARD IN AGRONOMY (VEGETABLES)

SYLLABUS AND INFORMATION BOOKLET

Introduction.

The course is a sound introduction to agronomy, integrated crop protection and crop nutrition.

For some delegates with limited crop experience and knowledge it serves as a preliminary course for the BASIS Certificate in Crop Protection (Agriculture or Vegetables) Course.

For others, who have a role which will not involve giving agronomy and crop protection advice, it is a stand alone course providing them with a level of understanding and knowledge appropriate for their work. This is a diverse group including some farm staff, quality assurance officers, machinery manufacturer personnel and others.

The qualification, awarded to those successful in the examination, would be of particular value to those for whom this may be an end point in agronomy training. It would also serve to encourage those considering progression to other courses such as the BASIS Certificate in Crop Protection and FACTS.

Course delivery

The course duration is between four and six days which are ideally spread over the calendar year so that farm crops can be seen at different stages.
Participatory training techniques are to be used throughout.

Examination

The examination is a written paper consisting of 40 multiple choice questions (40% of the total marks) and three structured short-answer questions (60% of the total marks). A minimum of 70% is required to pass.

SYLLABUS CONTENT

MODULE 1 - CROP PRODUCTION

For each of the major UK crops (Agriculture option; Cereals, Oilseed Rape, Peas & Beans, Potatoes, Sugar Beet and Grassland), (Vegetables option; Brassicas, Alliums, Umbellifers, Potatoes, and Outdoor Salads) the following apply;

1.1 Competence

Develop an ability to recognise the major crops and to outline the crop cycles, production systems and end market requirements

1.2 Performance Criteria

Candidates must be able to:

- Recognise the major crops and outline their life-cycles
- Demonstrate knowledge of end uses and key market requirements
- Appreciate the factors involved in successful crop establishment, management and harvesting.

1.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Identify the crops
- State typical planting/sowing and harvesting dates for the different crops
- List end uses / markets and demonstrate an appreciation of customer requirements
- Outline key factors in successful crop establishment
- State key decisions and operations necessary for good crop management
- Describe the important criteria for successful harvesting of the crops
- State typical crop yields

MODULE 2 - WEEDS

2.1 Competence

Ability to recognise the most important grass and broad-leaved species and have a basic understanding of the biology, importance and integrated control of weeds.

2.2 Performance criteria

Candidates must be able to:

- Identify some major weeds of crops
- Develop an understanding of weed biology
- Explain the reasons for weed control
- Outline the components of integrated weed control

2.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Use keys and books to identify major weeds of crops
- Explain key aspects of weed biology relevant to their importance, spread and control
- State the problems caused by weeds
- Communicate the importance of an integrated approach to weed control with reference to particular control techniques

MODULE 3 - PESTS

3.1 Competence

Ability to recognise the main pest and beneficial animal types and have a basic understanding of the biology, importance and integrated control of pests.

3.2 Performance criteria

Candidates must be able to:

- Identify some major pests of crops and also beneficial species.
- Develop an understanding of pest biology
- Explain the reasons for pest control
- Outline the components of integrated pest control

3.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Use keys and/or books to identify major pests of crops
- Explain key aspects of pest biology relevant to their importance, spread and control
- State the problems caused by pests
- Communicate the importance of an integrated approach to pest control with reference to particular control techniques

MODULE 4 - DISEASES

4.1 Competence

Ability to recognise the main types of crop diseases and have a basic understanding of the biology, importance and integrated control of plant pathogens.

4.2 Performance criteria

Candidates must be able to:

- Identify some major diseases of crops.
- Develop a basic understanding of the types of organisms which cause plant diseases and their biology.
- Explain the reasons for disease control
- Outline the components of integrated disease control

4.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Use keys and/or books to identify major diseases of crops
- Explain key aspects of pathogen biology relevant to disease importance, spread and control
- State the problems caused by plant diseases
- Communicate the importance of an integrated approach to disease control with reference to particular control techniques

MODULE 5 – SOIL AND CROP NUTRITION

5.1 Competence

Ability to recognise the main soil types and have a basic understanding of soil texture, soil structure, pH and plant nutrition.

5.2 Performance criteria

Candidates must be able to:

- Identify sandy, silt, and clay soil types
- Develop a basic understanding of the importance of soil types and of soil structure in crop production
- Outline a sound approach to crop nutrition decisions
- Explain what is meant by pH and the role of liming
- Understand what is meant by essential plant elements/nutrients

5.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Recognise sandy, silt, and clay soil textures
- Understand what is meant by soil texture and by soil structure
- Explain key aspects of soil management relevant to crop production and environmental protection
- Outline the role and recognise the deficiency symptoms of some crop nutrients
- Communicate an understanding of soil pH and soil Indices and their importance to crop production
- State key sources of information and advice on crop nutrition

MODULE 6 – PLANT PROTECTION CHEMICALS AND FERTILISER PRODUCTS

6.1 Competence

Ability to explain the way in which plant protection and fertiliser products are categorised, and to demonstrate some understanding of the practical importance of the chemical and physical properties of products.

6.2 Performance criteria

Candidates must be able to:

- Demonstrate some understanding of key terms used to describe plant protection and fertiliser products
- Demonstrate a basic understanding of the importance of the mode of action of a plant protection product
- Develop a basic understanding of the importance of the chemical form of a plant nutrient
- Explain what is meant by resistance to pesticides and demonstrate an appreciation of anti-resistance strategy
- Demonstrate some understanding of the importance of the formulation of plant protection and fertiliser products
- Understand what is meant by an adjuvant

6.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Recognise the practical importance of product formulation types
- Understand the importance of nutrients being in different chemical forms
- Explain of the meaning of some basic terms used to categorise plant protection and fertiliser products. For example, residual, systemic, selective, blend…
- Communicate an understanding of why adjuvants are used
- State key sources of information and advice on plant protection and nutrient products

MODULE 7 - PROTECTING PEOPLE ANIMALS AND THE ENVIRONMENT

7.1 Competence

Ability to explain the best practices employed by operators, farmers, advisors and product manufacturers to keep people, animals and the environment safe.

7.2 Performance criteria

Candidates must be able to:

- Outline the framework of pesticide legislation applicable in the UK
- Outline the framework of legislation relevant to fertiliser use
- Demonstrate an understanding of the role of the codes of practice
- Explain the importance of the plant protection product label
- State the main criteria for best practice in the storage of plant protection products on farms
- State the main criteria for best practice in the storage of fertilisers on farms
- Explain how consumers and bystanders are protected from harm
- Outline how accidental poisoning of wildlife is avoided and also how illegal poisoning is addressed
- Understand what is meant by a COSHH assessment

7.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Communicate the aims of the Authorisation Directive and of FEPA
- Outline the purpose of the Water Framework Directive
- Give examples of how legislation and codes of practice contribute to protection of people and the environment
- Demonstrate an understanding of the information on a plant protection product label
- Identify appropriate conditions for pesticide and for fertiliser storage on farm
- State key sources of information and advice on legislative issues

MODULE 8 - APPLICATION OF PLANT PROTECTION PRODUCTS AND FERTILISERS

8.1 Competence

Ability to state the key issues in effective and responsible use of plant protection products and fertilisers.

8.2 Performance criteria

Candidates must be able to:

- Explain the basic requirements sought in fertiliser and pesticide application machinery and their effective use.
- Demonstrate a basic understanding of the importance of spray quality and water volume
- Develop a basic understanding of the different types of fertiliser application machinery
- Explain what can cause pesticides and fertilisers to get beyond the intended area of application
- Outline best practice for disposal of wastes

8.3 Essential Knowledge & Skills

Candidates must have the ability to:

- Communicate key factors to assess before application of pesticides and fertilisers
- Outline how application machinery can be tested for rate and evenness of spreading
- Give examples of how drift can be avoided
- Demonstrate an understanding of what should be achieved when applying fertiliser and plant protection products
- State key sources of information and advice on application and disposal.

BASIS APPROVED TRAINERS

The following Colleges, Trainers and Training Providers are successfully running Foundation Award in Agriculture examinations and have been accepted as BASIS Approved Trainers for the Foundation Award in Agronomy.

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

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

DJL Agronomics
Highgrove House
Cassbrook Drive
Fulstow
LOUTH
LN11 0XR

Contact / Trainer: Dr Jim Lewis
Tel: 01507 363698
email: jim.lewis@fsmail.net
Web: www.djlag.co.uk

James Christian-Ilett
8 Painshall Close
Welton
LINCOLN
Lincolnshire
LN2 3NU

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

Landbased Training
c/o Garth Training
Garth Cottage
Wintringham
MALTON
North Yorkshire
YO17 8HX

Contact: Linda Bower
Tel: 01944 758379
email: linda@landbased-training.com
Web: www.landbased-training.com

Mid Kent Training
Kempes Corner Farm
Boughton Aluph
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Kent
TN25 4EN

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8 September 2009