

HR930-10 Introduction to BASIS (British Agrochemical Standards Inspection Scheme)

22/23

Department

Life Sciences

Level

Taught Postgraduate Level

Module leader

Rob Lillywhite

Credit value

10

Module duration

45 weeks

Assessment

100% coursework

Study location

University of Warwick main campus, Coventry

Description

Introductory description

The BASIS Certificate in Crop Protection has been established since 1978 to provide training and certification for sellers of agrochemicals and those giving advice on their use. In 1985 the Food & Environment Protection Act (FEPA) made certification a statutory obligation for pesticide sellers. The BASIS Certificate in Crop Protection has been approved by Ministers to meet the requirements of Schedule 2 of FEPA for certification for those involved in sale and supply of pesticides.

[Module web page](#)

Module aims

The principal aim of the module is to provide students with the foundation training in order for them to progress to a full BASIS Certificate in Crop Protection. The certificate requires students to work for a year in industry before qualification is accredited, and this module will provide them with all the necessary academic training and experience. BASIS is an essential career qualification for

agronomists, trials managers, consultants and employees of any company prescribing crop protection chemicals, including sales staff.

In order to be successful in their careers, students must be able to give sound technical advice in the field. For this reason the syllabus and training programme has been devised to provide practical instruction wherever possible. Consequently, there will be in-field training throughout the course which will be split up to cover all stages of field preparation, crop establishment, phases of growth and maturation and harvesting. This will include learning field-identification of weeds, pests and diseases of all the major crop groups in the UK. Further, it will teach how to prepare a programme for the control of weeds, pests and diseases within safe, economic and environmental parameters. An appreciation of the options between chemical types and formulations from different companies, of the benefits of treatment vs non-treatment, of symptom-analysis and tools for diagnosis and the weighting of benefits over remediation will all be covered within the framework of Health and Safety on the farm.

Outline syllabus

This is an indicative module outline only to give an indication of the sort of topics that may be covered. Actual sessions held may differ.

This is a field/farm-based module of practicals and interactive discussions with the trainer. It exemplifies real, day-to-day commercial agronomy testing, sampling, dialogue and exploration of practical options for crop protection.

The syllabus is listed against topic, but the delivery will be spread throughout the year in order for the students to experience the differing challenges and treatment options as the crop grows, as the weather changes and as the markets vary.

- Soils: classification, structure, nutrient analysis, mapping (including yield mapping).
- Plant growth regulators: history of development, stem and root effects, case study of eg. the benefits of triazole (fungicide) in providing PGR effect.
- Oilseed Rape: Crop establishment techniques including Autocast and Direct Drilling. Control of weeds, pests and diseases. Desiccation and harvesting techniques.
- Cereal Agronomy (Wheat, Barley and Oats): variety selection, seed treatments, seed cleaning and seed rates. Weed control for grass weeds and broadleaf weeds. Disease and pest control. Awareness of strategies for managing resistance to herbicides and fungicides. Harvesting and storing.
- Sugar Beet: Weed, disease and pest control – options, treatments, applications and analysis of options.
- Potatoes: Weed, disease and pest control - options, treatments, applications and analysis of options.
- Peas, Beans Linseed: Weed, disease and pest control - options, treatments, applications and analysis of options.
- Use of farm sprayers: construction, mounted/trailed. Boom stability, nozzle selection, induction method for mixing, volumes of water. Personal protection equipment (PPE). Disposal of packaging. National Sprayer testing Scheme (NSTS). National Register of Sprayer Operators (NRoSO)
- Legal requirements of written recommendations. Legislation on Label Approvals. Storage of

- crop protection products on farm and distribution premises. Crop Assurance schemes.
- Tutorial, revision and assessment day.

Learning outcomes

By the end of the module, students should be able to:

- To identify the main growth stages of arable crops and be aware of the agronomic operations required at each stage.
- To recognise, diagnose and propose solutions, for weed, pest and disease problems in arable crops.
- To evaluate the benefits of different crop protection options.
- To communicate diagnosis and remediation options.

Indicative reading list

- ADAS Crop Action progress notes (approx. 36 electronic issues per year)
- AHDB Recommended lists for cereals and oilseeds
- Lockhart & Wiseman's Crop husbandry including grassland (9th edition, 2014). Ed's Finch S, Samuel A & Lane GP. Woodhead Publishing.
- The Agricultural Notebook (21st edition, 2014). Softe RJ. Butterworths, London.

Subject specific skills

Identify the main growth stages of arable crops and be aware of the agronomic operations required at each stage

Identify the main growth stages of arable crops and be aware of the agronomic operations required at each stage

Recognise, diagnose and propose solutions, for weed, pest and disease problems in arable crops

Evaluate the benefits of different crop protection options and communicate diagnosis and remediation options

Transferable skills

Evaluation and communication

Study

Study time

Type	Required
Lectures	1 session of 1 hour (1%)
Total	100 hours

Type	Required
Seminars	2 sessions of 1 hour (2%)
Tutorials	4 sessions of 1 hour (4%)
Practical classes	7 sessions of 6 hours (42%)
Fieldwork	(0%)
Private study	51 hours (51%)
Total	100 hours

Private study description

Independent research

Costs

Category	Description	Funded by	Cost to student
Field trips, placements and study abroad	Must have suitable warm, waterproof outdoor clothing for field trips.	Student	£50.00
Field trips, placements and study abroad	Transport	Department	£0.00

Assessment

You must pass all assessment components to pass the module.

Assessment group A3

	Weighting	Study time	Eligible for self-certification
Assessment of Field Skills and Knowledge	100%	25 hours	No

A two-part in-module test to assess knowledge and field skills: (1) A written short-answer test, and (2) an oral examination.

Feedback on assessment

Field test. Feedback (and marks) are provided by two assessors. Feedback is provided within 20 days of submission.

Availability

Courses

This module is Core for:

- Year 1 of THRA-D4A2 Postgraduate Taught Sustainable Crop Production: Agronomy for the 21st Century