

<b>CONTENTS</b>	<b>Page</b>
<b><u>General Information</u></b>	
Introduction	3
<b><u>Integrated Crop Management Objective Syllabus</u></b>	
<b>Modules</b>	
1.    Intro to ICM	5
2.    Site, Crop Rotation and Varietal Choice	5
3.    Soil Management and Crop Nutrition	5
4.    Crop Protection	6
5.    Wildlife and Landscape Management	6
6.    Auditing and Management	7
7.    Quality and Safety within the Food Chain	7
8.    Energy, Farm Waste and Pollution Management	7
Where to go for Help	8
Useful Sources if Information	9
Soil / Fertiliser References	11
BASIS Approved Trainers	12

© BASIS (Registration) Ltd  
BASIS is a trade mark of BASIS (Registration) Limited. All rights reserved.  
Registered in England No.: 1365343 Charity No.: 1077006 VAT Reg No.: 242/5497/56

# THE BASIS/LEAF INTEGRATED CROP MANAGEMENT COURSE

## Introduction

The implementation of Integrated Crop Management (ICM) is a progressive step towards developing a system that truly addresses the concerns of consumers, environmentalists and farmers - a system that can produce quality food with sensitivity for the environment, whilst maintaining a financially profitable business for farmers.

Building on the *Codes of Good Agricultural Practice*, Integrated Crop Management is a whole farm approach that is practical and achievable for farmers, acceptable in the eyes of the consumer and is a key option for government for the responsible use of pesticides in the UK and throughout Europe. Furthermore ICM provides a sound basis for the development of farm assurance schemes.

The BASIS/LEAF ICM course has been designed to provide an insight into Integrated Crop Management for anyone who is involved, directly or indirectly, in food production. The course has been developed to ensure a common standard for Integrated Crop Management understanding and uptake through promotion and advice. The course does not qualify the individual to be BASIS or FACTS certificated but it plays a fundamental part in the development of any adviser.

## About ICM

Integrated Crop Management (ICM) is a **common sense** approach to farming. It combines the best of traditional methods with appropriate modern technology, balancing the economic production of crops with positive environmental management.

The fundamental approach of ICM is that of informed management across the whole farm, which focuses on attention to detail in all practices.

It is also dynamic in that it can be adapted to incorporate new concepts as they are perfected. Precision farming methods which are being developed will almost certainly be compatible and consistent with Integrated systems.

## **About LEAF**

Linking Environment and Farming (LEAF) develops and promotes Integrated Crop Management (ICM). It aims to:

- Encourage the uptake of ICM through the development of practical guidelines and the LEAF Audit;
- Promote ICM through the setting up of LEAF Demonstration Farms and LEAF Innovation Centres by arranging visits to these farms for both farmers and non farmers.

LEAF is a charitable body working with many other organisations. There are similar organisations to LEAF working in other European countries.

## **About BASIS**

BASIS is an independent registration, standards, certification and training organisation (serving pesticide, fertiliser, horticulture, forestry and other relevant interests), working with and through industry organisations to implement relevant sections of 'The Food and Environment Protection Act 1985' and other legislative and industry Code of Practice requirements.

Other activities of BASIS include the annual assessment of pesticide supply stores under The Food & Environment Protection Act 1985 and the running of training courses and examinations for industry staff. It also administers a certification scheme for sales and advisory staff working in the fertiliser industry (FACTS). More recently BETA (Biodiversity and Environmental Training for Advisers) and the BASIS Soil & Water Management Certificate have been added to provide advisers with a more rounded agronomy profile.

The BASIS Professional Register and PROMPT (Professional Register for Managers and Pest Control Technicians) are recognised industry schemes for Continuing Professional Development (CPD), recognised by Government.

# **BASIS /LEAF INTEGRATED CROP MANAGEMENT**

## **OBJECTIVE SYLLABUS**

### **MODULE 1 - INTRODUCTION TO ICM**

The candidate will:

- appreciate the features, components and benefits of ICM (based on the module in the training pack)

### **MODULE 2 - SITE, CROP ROTATION AND VARIETAL CHOICE**

The candidate will:

- assess the effect of site features when selecting a crop rotation
- consider the significance of the various factors influencing choice of rotation
- appreciate the environmental impact of contrasting rotations
- assess the effect of varietal choice and seed quality on achieving the aim of ICM.

### **MODULE 3 - SOIL MANAGEMENT AND CROP NUTRITION**

The candidate will:

- identify and assess soil properties in relation to agricultural management and for the prevention of soil erosion
- appreciate the value and use of technology in planned cultivation systems
- be aware of the factors to be taken into account for fertiliser management plans for a field situation
- assess the environmental impact of management decisions and the policy adjustments required by legislation and Codes of Good Practice
- appreciate the value and use of technology in water resource and irrigation management
- evaluate the efficiency of operation and safety of a range of equipment
- evaluate the suitability and legality of fertiliser storage and associated signs

- appreciate and understand the content of RB209 (fertiliser recommendations for agricultural and horticultural crops)
- understand the appropriate law and good practice procedures for the transport of fertilisers
- understand the importance of protecting non-crop areas from fertiliser applications
- appreciate the relationship between ground-water and Nitrates / NVZ's and the protection of water quality
- understand the situation relative to phosphate and eutrophication

#### **MODULE 4 - CROP PROTECTION**

The candidate will:

- appreciate the importance of crop monitoring in evaluating crop protection problems and in the design of integrated control strategies
- understand the value of existing information technology and expert systems used in crop protection decision making
- evaluate the consequences of pesticide application and the significance of reduced/restricted use and developments in biotechnology
- specify the conditions and procedures required for safe, accurate and economic application
- be familiar with techniques for the safe disposal of chemicals and their containers
- appreciate the requirements of legislation, Codes of Conduct and safe working practices

#### **MODULE 5 - WILDLIFE AND LANDSCAPE MANAGEMENT**

The candidate will:

- appreciate the inter-relationships between enterprises in a land use system
- understand the role of government and non-government organisations involved with conservation issues
- be aware of the factors which contribute to the conservation status of an area
- consider the criteria involved in selecting specially protected areas
- be aware of the agronomic benefits of conservation practices

## **MODULE 6 - AUDITING AND MANAGEMENT**

The candidate will:

- appreciate the importance of detailed records, planning and good management in a successful ICM system
- identify long and short term farm business objectives
- familiarise staff and contractors with farm policies and objectives
- consider methods of evaluating current farm practice and of reviewing performance with targets and timescales for improvement
- identify key management functions to achieve best practice in line with safety and legal requirements

## **MODULE 7 - QUALITY AND SAFETY WITHIN THE FOOD CHAIN**

The candidate will:

- understand the issues of key importance to quality and food safety within the food chain
- identify the main legislation and regulations
- consider the key systems and standards for managing food quality and safety
- discuss the philosophy and principles underlying these systems and standards

## **MODULE 8 - ENERGY, FARM WASTE AND POLLUTION MANAGEMENT**

The candidate will:

- appreciate the range and scale of farm waste production, the likely re-use and recycling opportunities and potential pollution risks
- analyse the practical, environmental and financial implications of such wastes
- be conversant with the appropriate legislation and Codes of Good Agricultural Practice
- understand the need to improve the efficiency of energy use
- identify waste minimisation and resource management techniques
- initiate a specific farm waste and energy management plan based on the information provided.

## WHERE TO GO FOR HELP

Who are they? Where are they? What do they do?

- BASIS
- LEAF (Linking Environment And Farming)
- Game Conservancy
- Allerton Research and Educational Trust (ARET)
- Farming and Wildlife Advisory Group (FWAG)
- National Farmers Union (NFU)
- Crop Protection Association (CPA)
- ADAS
- Manufacturing companies
- National Association of Agricultural Contractors (NAAC)
- Consultants
- Distributor companies
- DEFRA
- The Pesticide Forum
- Pesticide Safety Directorate (PSD)
- LANTRA
- NPTC
- Health and Safety Executive (HSE)
- The Environment Agency (EA)
- Scottish Environment Protection Agency (SEPA)
- Agricultural Industries Confederation (AIC)
- Environment & Heritage Service Northern Ireland (EHSNI)

## USEFUL SOURCES OF INFORMATION

### England & Wales

MAFF Code of Good Agricultural Practice for the Protection of WATER, AIR and SOIL  
MAFF Codes of recommendations for the welfare of livestock

### Scotland

SOAFD Code of Good Practice for the Protection of Environmental Pollution from  
Agricultural Activity

### Northern Ireland

Countryside management booklets: Trees, Water and Field Boundaries

### Other information

FEPA (Part III) 1985 and COSHH regulations 1994

Pesticides: Code of Practice for the Safe Use of Pesticides on Farms and Holdings 1997

Control of Pesticides Regulations 1986

The Food Safety Act 1990

Guidelines for Integrated Crop Management (LEAF 1995)

A Practical Guide to Integrated Crop Management (LEAF 1994)

The LEAF Audit (LEAF 1997)

Integrated Crop Management (BAA, LEAF, ATB Landbase, Sainsbury's 1996)

Guidelines for Environmentally Responsible Farming (FWAG 1991)

Arable Farming and Set-aside (FWAG 1993)

Guidelines for the Protection of Non-target species (BAA 1997)

MAFF - Pesticides & Integrated Farming

### **Using Pesticides: A Complete Guide to Safe, Effective Spraying (Oct 1999)**

(ISBN 1-901396-01-0)

The BCPC Publications Sales, 7 Omni Business Centre, Omega Park, Alton, Hampshire, GU34  
2QD (Tel: 01420 593200)

### **Guidance on Storing Pesticides and Farmers and Other Professional Users.**

Agricultural Information Sheet AIS No. 16

HSE Books, PO Box 1999, Sudbury, Suffolk, CO10 6FS (tel: 01787 881165)

### **Pesticides: Code of Practice for the Safe Use of Pesticides on Farms and Holdings**

(ISBN-0-11-242892-4)

The Stationery Office, PO Box 276, London, SW8 5DT

### **Boom Sprayers Handbook**

(ISBN 0-948404-50-7)

The BCPC Publications Sales, Bear Farm, Binfield, Bracknell, Berkshire, RG42 5QE  
(tel: 0118 943 2727)

### **Guidelines for the Safe Formulation and Packaging of Pesticides**

GIFAP, Avenue Albert Lancaster 79A, 1180 Brussels, Belgium

### **Guidelines for the Safe and Effective Use of Pesticides**

GIFAP, Avenue Albert Lancaster 79A, 1180 Brussels, Belgium

### **Weed Guide**

Bayer CropScience Ltd, Hauxton, Cambridge, Cambridgeshire, CB2 5HU

### **FWAG Farming and Pesticides**

Farming and Wildlife Advisory Group, NAC, Stoneleigh, Kenilworth, Warwickshire, CV8 2RX

### **Understanding Buffer Strips: An Information Booklet**

The Environment Agency, Rivers House, Waterside Drive, Aztec West, Almondsbury, Bristol, Avon, BS12 4UD (tel: 01454 624400)

### **Publications by Crop Protection Association**

Crop Protection Association, 4 Lincoln Court, Lincoln Road, Peterborough, PE1 2RP (tel: 01722 349225)

- Think Water - Keep It Clean
- Container Rinsing Leaflet
- Glove Hygiene
- Pesticide Disposal
- The COSHH Assessment: A Plain Man's Guide
- Good Agrochemical Storage
- Pesticides and Water Quality
- Pesticides and Human Health
- Pesticides and Food Safety
- Integrated Crop Management

### **Weed Control and Environmental Protection**

Department of the Environment ISBN 011 752708 4

### **Guidance for Control of Weeds on Non-Agricultural Land**

Department of the Environment 92 EP 240

## SOILS/FERTILISER REFERENCES

Fertiliser recommendations for Agricultural and Horticultural Crops (RB209) 7th edition, 2000 (TSO)

Crop Nutrition and fertiliser use - John Archer

Soil management - D B Davies, D J Eagle and B Finney

Schering field crops nutrient disorders guide

Fertilisers and manures - Ken Simpson

Soil Assessment - SAWMA, ADAS & BP

Diagnosis of mineral disorders in plants - principles - MAFF/ARC (HMSO)

Fertiliser Reviews (FMA)

FMA Publications

Lime and Liming - MAFF Book No 35 (HMSO)

Code of Practice for Agricultural Use of Sewage Sludge (HMSO)

Trade leaflets e.g The Hydro Agricultural and Fertiliser Handbook - Immingham

Farming, Fertilisers and the Nitrate Problem - T M Addiscott  
- A P Whitmore  
- D S Powlson

### **General**

Crop husbandry - Lockhart and Wiseman (New Ed in press)

Halley's - Agricultural notebook

## BASIS APPROVED TRAINERS

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

### **Alasdair Lowe Limited**

Grange Barn  
Birds Lane  
Epwell  
BANBURY  
Oxfordshire  
OX15 6LQ

Contact: Alasdair Lowe

Tel: 01295 788006

Email: [alowe@alasdairlowe.co.uk](mailto:alowe@alasdairlowe.co.uk)

### **Chelmsford & West Essex Training Group**

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

Contact / Trainer: Debbie Wedge

Tel: 01245 381193

Email: [debbiewedge@aol.com](mailto:debbiewedge@aol.com)

### **David Godsmark**

Swallowfield  
Eastergate Lane  
Eastergate  
CHICHESTER  
West Sussex, PO20 6SJ

Contact / Trainer: David Godsmark

Tel: 01243 543834

Email: [dgodsmark@lineone.net](mailto:dgodsmark@lineone.net)

### **Dorset Training Ltd**

PO Box 5002  
DORCHESTER  
DT1 2WD

Contact: Amanda Smith

Tel: 01305 263125

Email: [dorsettraining@btinternet.com](mailto:dorsettraining@btinternet.com)

### **Hampshire Training Providers Ltd**

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

Contact: Jenny Lewis

Tel: 01962 774430

Email: [jenny@hampshire-training.co.uk](mailto:jenny@hampshire-training.co.uk)

Trainer: Julian Lewis

### **James Christian-Ilett**

8 Painshall Close  
Welton  
LINCOLN  
Lincolnshire, LN2 3NU

Contact: James Christian-Ilett

Tel: 01673 860925

Fax: 01673 860925

Email: [christian.ilett@btinternet.com](mailto:christian.ilett@btinternet.com)

**Mid Kent Training**  
Kempes Corner Farm  
Boughton Aluph  
ASHFORD  
Kent, TN25 4EN

Contact: Dianne Quested  
Tel: 01233 813688  
Fax: 01233 813533  
Email: [info@mkt.uk.net](mailto:info@mkt.uk.net)

**Scottish Agricultural College**  
Kings Buildings  
West Mains Road  
EDINBURGH  
EH9 3JG

Contact: Moyra Farquhar  
Tel: 0131 5354090  
Email: [moyra.farquhar@sac.ac.uk](mailto:moyra.farquhar@sac.ac.uk)  
Trainer: Rob Fuchs & Martin Richards

**The Training Association (East)**  
57 Low Road  
Grimston  
KINGS LYNN  
Norfolk, PE32 1AF

Contact: Jayne Parsey  
Tel: 01485 600225  
Email: [jayne@traineast.co.uk](mailto:jayne@traineast.co.uk)  
Web: [www.traineast.co.uk](http://www.traineast.co.uk)

**The Vale Training Group**  
Marsh Hill Farm  
Marsh  
AYLESBURY  
Buckinghamshire  
HP17 8ST

Contact: Kate Mason  
Tel: 01296 612201  
Email: [kate@valetraining.co.uk](mailto:kate@valetraining.co.uk)

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

**Bishop Burton College**  
Bishop Burton  
BEVERLEY  
East Yorkshire  
HU17 8QG

Contact / Trainer: Annie Lightfoot  
Tel: 01964 553044  
Email: [annabel.lightfoot@bishopb-college.ac.uk](mailto:annabel.lightfoot@bishopb-college.ac.uk)  
Web: [www.bishopb-college.ac.uk](http://www.bishopb-college.ac.uk)

**CAFRE Greenmount Campus**  
22 Greenmount Road  
ANTRIM  
County Antrim  
Northern Ireland, BT41 4PU

Contact / Trainer: Kevin O'Donnell  
Tel: 02894 426631  
Email: [kevin.o'donnell@dardni.gov.uk](mailto:kevin.o'donnell@dardni.gov.uk)

**Duchy College**  
Stoke Climsland  
CALLINGTON  
Cornwall  
PL17 8PB

Contact: Kath Strang  
Tel: 01579 372222  
Email: [kath.strang@duchy.ac.uk](mailto:kath.strang@duchy.ac.uk)  
Trainer: Alex Stephens

**Holbeach Marsh Training Group**

Hawthorne Farm  
Station Road  
Swineshead  
BOSTON  
Lincolnshire  
PE20 3NZ

Contact: Lynne Richardson

Tel: 01205 821628

email: [lynne@hmtg.co.uk](mailto:lynne@hmtg.co.uk)

**Ian Gower Associates Ltd**

7 Blean Square  
Vinters Park  
MAIDSTONE  
Kent, ME14 5QU

Contact: Ian Gower

Tel: 01622 675130

Email:

[ian@pesticides-safetytraining.co.uk](mailto:ian@pesticides-safetytraining.co.uk)

**Martin Glenn Consultants**

Holme Hill Farmhouse  
Waddingham Road  
South Kelsey  
MARKET RASEN  
Lincs, LN7 6PN

Contact: Martin Glenn

Tel: 01652 678864

Email: [martin@martinglenn.com](mailto:martin@martinglenn.com)

**North Cheshire Training**

The Bothy  
Dunham Town Gardens  
Dunham Massey  
ALTRINCHAM  
Cheshire  
WA14 4SH

Contact: Carolyn Hewitt

Tel: 0161 9283120

email: [hewittcarolyn@btconnect.com](mailto:hewittcarolyn@btconnect.com)

**Plumpton College**

Ditchling Road  
Plumpton  
LEWES  
East Sussex  
BN7 3AE

Contact: Rae Notman

Tel: 01273 890454

Email: [enquiries@plumpton.ac.uk](mailto:enquiries@plumpton.ac.uk)

**Royal Agricultural College**

Stroud Road  
CIRENCESTER  
Gloucestershire  
GL7 6JS

Contact: James Foster

Tel: 01285 889873

Email: [rsc@rac.ac.uk](mailto:rsc@rac.ac.uk)

Trainer: Tom Overbury

**University of Lincoln**  
Riseholme Park  
LINCOLN  
Lincolnshire  
LN2 2LG

Contact / Trainer: Dr Simon Goodger  
Tel: 01522 5895295  
Email: [sgoodger@lincoln.ac.uk](mailto:sgoodger@lincoln.ac.uk)

27 November 2009