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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
Epswell
BANBURY
Oxfordshire
OX15 6LQ

Contact: Alasdair Lowe
Tel: 01295 788006
Email: 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

David Godsmark

Swallowfield
Eastergate Lane
Eastergate
CHICHESTER
West Sussex, PO20 6SJ

Contact / Trainer: David Godsmark
Tel: 01243 543834
Email: dgodsmark@lineone.net

Dorset Training Ltd

PO Box 5002
DORCHESTER
DT1 2WD

Contact: Amanda Smith
Tel: 01305 263125
Email: 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
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

Mid Kent Training

Kempes Corner Farm
Boughton Aluph
ASHFORD
Kent, TN25 4EN

Contact: Dianne Qusted
Tel: 01233 813688
Fax: 01233 813533
Email: 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
Trainer: Rob Fuchs & Martin Richards

The Training Association (East)

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

Contact: Jayne Parsey
Tel: 01485 600225
email: jayne@traineast.co.uk
Web: www.traineast.co.uk
Trainer: John Purslow

The Vale Training Group

Marsh Hill Farm
Marsh
AYLESBURY
Buckinghamshire
HP17 8ST

Contact: Kate Mason
Tel: 01296 612201
Email: 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.

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

Duchy College

Stoke Climsland
CALLINGTON
Cornwall
PL17 8PB

Contact: Kath Strang
Tel: 01579 372222
Email: 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

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

Royal Agricultural College

Stroud Road
CIRENCESTER
Gloucestershire
GL7 6JS

Contact: James Foster
Tel: 01285 889873
Email: 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

21 October 2011