

Internet resources for

agriculture, food and forestry



intute : health & life sciences

www.intute.ac.uk/healthandlifesciences/

The best of the Web

Welcome to this guide to the best of the Web for Agriculture, Food and Forestry.

In these pages you will find a selection of some of the most useful websites for students, lecturers and researchers of Agriculture, Food and Forestry.

The selection is by no means exhaustive, but it should give you a flavour of the range of resources available on the Internet for education and research.

Supporting your Internet research

For those interested in exploring the wider Web, we offer free Internet search and training services for further and higher education via *Intute* – details of these can be found at the end of the guide.

Contents

Online learning and teaching materials	1
Databases	2
Electronic journals and other full-text materials	4
Discussion lists and newsgroups	6
Resources for practical skills and knowledge	7
Organisations	10

All images from US Dept. of Agriculture, Agricultural Research Service Image Gallery, except page 14 which is from 123royaltyfree.com

Intute

This booklet is brought to you by *Intute*, a free Internet service providing you with access to the very best Web resources for education and research, evaluated and selected by a network of subject specialists.

www.intute.ac.uk

Expert advice

Intute services are developed in collaboration with staff from over seventy universities, colleges and research institutions across the UK – pooling expertise to share nationally.

Your guide for this booklet is:

intute : health & life sciences

– based at the University of Nottingham.

Intute is funded by the Joint Information Systems Committee (JISC) with support from the ESRC and the Arts and Humanities Research Council (AHRC).

Contact:

www.intute.ac.uk/feedback.html

Note: Intute was formerly known as the Resource Discovery Network (RDN).

Intute: Health & Life Sciences was formerly known as the BIOME Service

A PDF copy of this booklet can be downloaded from: www.intute.ac.uk/healthandlifesciences/support.html

Online learning and teaching materials

Here is a selection from the wide range of free learning and teaching resources in agriculture and related topics available on the Web.

SimForest

<http://ddc.hampshire.edu/simforest/>

Free downloadable software simulating tree planting and forest evolution. Choose from a list of tree species (US), set environmental conditions (e.g. rainfall, soil types) to grow a forest. Then watch it evolve over the years.

Library of Crop Technology Lesson Modules

<http://croptechnology.unl.edu/index.shtml>

A collection of animated online learning resources explaining the science behind crop technology. Structured lessons are arranged in broad topic areas: crop genetics, molecular genetic analysis and weed science.

Environmental Challenges in Farm Management (ECFIM)

<http://www.ecifm.rdg.ac.uk/>

A Web-based learning package from the University of Reading. Topics include environmental degradation, sustainability and land protection. Each module has a list of references with links to full-text where available.

Compendium of On-line Soil Survey Information

http://www.itc.nl/personal/rossiter/research/rsrch_ss.html

A portal to online resources on soil surveys. Material is organised by categories, including soil classification, applications and models, methods and techniques, land evaluation and survey interpretation, and computer programs for soil survey.

Forage Identification Slide Series

<http://www.caf.wvu.edu/~forage/Tutorial/sldpg1.htm>

A series of colour images designed to help identify forage grasses and legumes; includes text descriptions.

Food Law

<http://www.foodlaw.rdg.ac.uk/index.htm>

Information on UK and EU food law affecting the UK, designed for students on relevant courses at the University of Reading, but suitable for other interested parties.

WPS 595W: Wood Anatomy

<http://courses.ncsu.edu:8020/wps595w/common/index.html>

Lecture notes, slides, and quizzes for the wood anatomy course at North Carolina State University. The course covers tree growth and wood formation, softwood and hardwood anatomy and identification (mainly North American species). Many images of microscope slides are included.

Databases

Databases contain bibliographic, factual or statistical information, which is usually accessed by selecting from a browseable menu or searching for a specific term. Here is a selection:

ARS Pesticide Properties Database

<http://www.ars.usda.gov/Services/docs.htm?docid=6433>

A database from the US Department of Agriculture providing information on the chemical and physical properties of pesticides in ground and surface waters under a range of weather and soil conditions.

AGRICOLA

<http://agricola.nal.usda.gov/>

A free extensive bibliographic database on agriculture produced by the U.S. National Agricultural Library. Records can be searched by title, author, subject and keyword. Abstracts are available for many of the articles. Updated daily.

Database of UK Public Research on Non-Food Uses of Crops

<http://aims.defra.gov.uk/default.asp>

A DEFRA searchable database of government-funded research projects on non-food use of crops. Projects can be found by funding body, market sector, crop breeding system, crop species, commodity, and scientific discipline.

Dendrome: a Forest Tree Genome Database

<http://dendrome.ucdavis.edu/>

Dendrome is a collection of resources in forest genetics and biotechnology. Resources include information on genetic maps, PCR primers, DNA sequences, and software.

Inventory of Canadian Agri-Food Research (ICAR)

<http://www.icar-irac.ca/>

ICAR is a database of agriculture and food research in Canada, produced by the Canadian Agri-Food Research Council, describing over 2,400 research projects.

Soil Fertility and Plant Nutrition Portal

<http://www.fao.org/ag/agl/agll/prtplnu.stm>

Accesses the FAO fertiliser online database, information on current fertiliser trends, and documents on plant nutrition.

Weed Identification

<http://web.aces.uiuc.edu/weedid/>

A weed identification tool, enabling you to input information about an unidentified weed and compare it with photographs and descriptions of weeds that share similar characteristics. The database of 172 different types of weeds can be browsed by common or scientific name.



Electronic journals and other full-text material

Many journals, textbooks, reference works and full text documents are available on the Web. Some of these are available free while others require payment.

Here is a selection of some free publications:

AgBioForum

<http://www.agbioforum.org/>

A quarterly full-text online journal on the economics and management of agricultural biotechnology, with short, non-technical articles on current research in agriculture, agricultural economics, and biotechnology.

Journal of Food Science Education

<http://members.ift.org/IFT/Pubs/JFSE/>

A free full-text online journal from the Institute of Food Technologists, publishing articles on food science education, laboratory exercises, and classroom techniques.

Soil Science Society of America Journal

<http://soil.scijournals.org/>

Gives free access to all abstracts and tables of contents from 1998 onwards. Full-text articles can be viewed freely online 18 months after publication.

Shellfish News

<http://www.cefas.co.uk/Publications/shellfishnews/default.htm>

Is produced and edited by The Centre for Environment, Fisheries and Aquaculture Science (CEFAS), "as a service to the British shellfish farming and harvesting industry".

Forest and Shade Tree Pathology

<http://www.forestpathology.org/index.html>

An online textbook for those studying forest and shade tree pathology, giving information on fungi, decay, root and foliage diseases, rusts, cankers, wilts, viral and bacterial diseases, parasitic plants, abiotic diseases, declines, hazard trees, and disease ecology and management.

Unasylva

<http://www.fao.org/forestry/foris/webview/forestry2/index.jsp?siteId=2342&siteTreeId=8571&langId=1&geoid=0>

An international journal of forestry produced by FAO. It covers forestry and forest industries, including policy and planning, conservation and management, forest flora and fauna, silviculture, agroforestry, and rural development issues.

Radcliffe's IPM World Textbook

<http://ipmworld.umn.edu/>

An interactive textbook on Integrated Pest Management (IPM) for students of entomology. A list of key pest species is featured, with links to details and illustrations of these species. There is also an extensive guide to related websites.

Farming Systems and Poverty: Improving Farmers' Livelihoods in a Changing World

http://www.fao.org/documents/show_cdr.asp?url_file=/DOCREP/003/Y1860E/y1860e00.htm

This full-text book from FAO examines the farming systems of the developing world by region, and presents case studies for improving farm livelihoods in order to eradicate poverty.



Discussion lists and newsgroups

News and discussion lists enable professionals, researchers and others to exchange information on issues of interest to them. Some examples include:

ecol-agric

<http://www.jiscmail.ac.uk/lists/ecol-agric.html>

A newslister for all those working in organic/biological agriculture, offering a discussion forum, research news, information on conferences and new publications.

Seafood HACCP Mailing List

<http://seafood.ucdavis.edu/listserv/listserv.htm>

A mailing list for the exchange of information on safety control in the seafood industry by Hazard Analysis and Critical Control Point (HACCP). Its members include researchers and others from the seafood industry, government and universities.

Forest List

<http://joyx.joensuu.fi/cgi-bin/wa?SUBED1=forest-listA=1>

An online discussion group aimed at forest researchers worldwide, and moderated from the University of Joensuu, Finland.

Food Safety Today

<http://www.foodsafetytoday.com/>

An alerting service from the UK Leatherhead Food Research Association, giving news and comment on safety issues for the food industry; includes factsheets and a list of food safety Web links. A paid subscription service is also available.

GIEWS Electronic Mailing Lists

<http://www.fao.org/WAICENT/faoinfo/economic/giews/english/listserv.htm>

FAO's Global Information and Early Warning System (GIEWS) provides special reports on countries facing food shortages with information on crop production, food supply situations and food aid requirements.

Resources for practical skills and knowledge

Many sites on the Web contain authoritative and practical information for the agriculturalist, forester and food scientist. Here are a few examples:

Forward Farming

<http://www.forwardfarming.org.uk/>

Uses demonstration farms to help farmers “recognise and adopt best practice”. The website includes monitor farms for dairy, livestock and arable production, demonstration of rural integration, and a ‘virtual’ pig farm.

Agriculture: Organic Farming

http://ec.europa.eu/agriculture/qual/organic/index_en.htm

The European Commission's organic farming website provides a range of information on the EU agricultural sector, including EU legislation and guidelines, and general information on the development of organic farming in the E U.

DEFRA: Introduction to Farming

<http://www.defra.gov.uk/farm/farmindx.htm>

This site gives information on farming policy, environmental issues, specialized information for farming sectors (e.g. arable crops, or milk production), and information on employment legislation, tenancies and beginning in the industry.

English Farming and Food Partnerships (EFFP)

<http://www.effp.com/>

Encourages co-operation between farmers, and also between farmers and the food supply chain. The website includes case studies exemplifying successful collaboration projects.

Shetland Aquaculture

<http://www.shetlandaquaculture.com/home>

A website giving information on the Shetland salmon farming industry, including environmental and quality control issues, and a downloadable code of best practice for the industry.

Home-Grown Cereals Authority

<http://www.hgca.com/content.template/0/0/Home/Home/Home.msp>

Aims to improve the production and marketing of cereals and oilseeds grown in the U.K. The site includes current research, a list of recommended crop varieties, and market information.



British Survey of Fertiliser Practice: Fertiliser Use on Farm Crops.

<http://www.defra.gov.uk/enviro/pollute/bsfp/>

This annual survey from DEFRA discusses issues in fertiliser use; gives the latest survey of fertiliser use in all crops and grasses, and changes in recent practice and longer term trends. Annual reports from 2000 are available here.

British Farm Standard

http://www.redtractor.org.uk/site/rt_home.php

The website provides information on the “little red tractor”, farm standard and details how the scheme works in livestock, poultry, dairy, vegetables, cereals and oilseeds production.

British Beekeepers Association

<http://www.bbka.org.uk/>

This site answers questions about bee biology and behaviour, honey and other products. There is a series of articles and guidelines on beekeeping for practitioners and newcomers.

Long Term Research on Agricultural Systems (LTRAS)

<http://ltras.ucdavis.edu/>

The LTRAS website describes experiments examining long term (up to 100 years) changes in soil fertility. Experiments aim to predict sustainability of agricultural land, related to climate changes, varying inputs and tillage practices.

Soil Association

<http://www.soilassociation.org/web/sa/saweb.nsf?Open>

The Soil Association is the UK's leading certification body and campaigner for organic food and farming. There is information here on organic farming, organic food, antibiotics in farming, genetic engineering, biodiversity and forestry.

EU-AgriNet

http://www.europa.eu.int/comm/research/agriculture/index_en.html

This website provides an overview of European Union funded agricultural research activities and their influence on policy makers, consumers, industry and farmers.

Health and Safety in the Agriculture Industry

<http://www.hse.gov.uk/agriculture/index.htm>

This Health and Safety Executive website gives information on health and safety issues in the agricultural industry, including fact sheets, fatal injury and pesticide incident reports. A free downloadable interactive software program helps farmers carry out health and safety assessments.

Progress Through Knowledge

<http://www.ppi-ppic.org/>

A range of resources on the use of fertilizers is available here, including multimedia presentations and training materials. Also has a database of publications on phosphate use worldwide.

PlantStress

<http://www.plantstress.com/>

This website discusses the main plant stresses of drought, salinity, heat, cold, soil mineral deficiency, oxidative stress, water-logging and soil mineral toxicity, and how these may be mitigated.

Development Gateway

<http://home.developmentgateway.org/>

A World Bank initiative features information for developing countries on social, economic, technical and scientific development. Coverage of agricultural topics is extensive.

Organisations

A wide range of national and international bodies have a presence on the Web. Their sites often contain useful information and downloadable documents, guidelines and statistical data. Here are some examples:

GOVERNMENT ORGANISATIONS

Department for Environment, Food and Rural Affairs: DEFRA

<http://www.defra.gov.uk/>

DEFRA's remit includes animal health and welfare, economics, environmental protection, exports, farming, fisheries, food and drink, horticulture, plants and seeds, rural development, sustainable development, water, and wildlife and countryside. Each topic has its own searchable section of the website.

Forestry Commission

<http://www.forestry.gov.uk/>

The website provides information and publications on British forests; sustainable forestry, including the indicators of sustainable forestry; timber production and use; planting and managing woodlands. There is also a schools learning materials section, and access to images.

Food Standards Agency (FSA)

<http://www.food.gov.uk/>

The FSA was established to protect the public's health and consumer interests in relation to food. The website gives information on consumer protection, the food industry, food labelling, food safety and healthy eating.

European Commission: Agriculture Website

http://europa.eu.int/comm/agriculture/index_en.htm

There is a wealth of information here on European agriculture, agricultural markets, rural development, environment, forestry, state aid, and research. Online documentation includes press releases, consolidated agricultural legislation, and statistics.

PROFESSIONAL ASSOCIATIONS AND BODIES

Institution of Agricultural Engineers

<http://www.iagre.org/>

The IAgRE represents engineers, scientists, technologists and managers in agricultural and other land-based industries, food technology, renewable energy, horticulture and environment. The site has publications and information on agricultural engineering courses, and sponsorship opportunities.

Royal Forestry Society (RFS)

<http://www.rfs.org.uk/>

The website gives information on careers in forestry, RFS arboriculture qualifications and access to the Society's Quarterly Journal of Forestry. There is much information on trees, including tree species identification, tree biology, the law, pests, diseases, the future of forests, woodland wildlife, forest management, sustainability, and wood products.

International Association of Agricultural Information Specialists (IAALD)

<http://www.iaald.org/>

This website contains news of interest to agricultural information professionals, and details on the world directory of agricultural information resource centres.

OTHER ORGANISATIONS

CAB International

<http://www.cabi.org/>

CABI is an international organisation working in the fields of sustainable agriculture and food security, and a major producer of scientific information on veterinary health and agricultural research.

National Farmer's Union (NFU)

<http://www.nfu.org.uk/>

The NFU promotes the interests of UK farming. There is a range of information about agriculture in the UK, "facts on farming", and resources aimed at teachers.

International Agriculture Technology Centre (IATC)

<http://www.theiatc.org/>

IATC is a government supported organisation providing advice to agricultural technology companies in the UK on new export markets. The website has overviews of UK agriculture by sector, company case studies, and a quarterly newsletter.

National Beef Association (NBA)

<http://www.nationalbeefassociation.co.uk/>

The National Beef Association is an independent body representing the interests of UK beef farmers. The website provides information on cattle rearing, diseases, breeding warranties for use when privately trading pedigree cattle, links to breed societies and other useful contacts.

International Tropical Timber Organization (ITTO)

<http://www.itto.or.jp/>

The website has information about the world tropical timber markets, sustainable forest management, and ITTO projects. ITTO technical reports and its newsletter “Tropical Forest Update” are available here.



Discover the best of the Web using Intute

The Internet can be a powerful tool for learning, teaching and research, offering a huge range of information and services. However, finding relevant resources online can be a daunting task, and issues of trust, quality and poor search skills are very real and significant concerns – particularly in education and research contexts.

Intute exists to help students, teachers, researchers and librarians make sense of the Web by providing access to the very best Internet resources for education and research, selected and evaluated by a network of subject specialists.

intute : health and life sciences

- The **Internet catalogue** provides access to thousands of high-quality Internet resources, selected and described by subject specialists, and covers all key areas of health and life sciences.
- The **Virtual Training Suite** offers free Internet training with a set of “teach-yourself” online tutorials, designed to help students develop their Internet research skills.
- Free **support materials** for universities and colleges, such as flyers, posters, leaflets and presentations as well as a range of “best of the Web” subject booklets.
- **Recommended subject services** - such as **Hot Topics** are useful for those seeking inspiration for project work, possible ideas for essay themes or simply as a quick route into subjects of choice. Subject experts within the *Intute: Health & Life Sciences* team choose an area of interest or a current topic and provide links to key sites in our database for that theme.



Getting involved with Intute

- Sign up for a personal **MyIntute** account, which provides weekly email updates of recently reviewed websites and allows you to save resources of interest.
- **Working with Intute.** Join our community of users of online resources by suggesting sites for the database or embedding *Intute* services in your own websites and Virtual Learning Environments using our sophisticated **MyIntute Include** services.



The University of
Nottingham

JISC