



Annual Report 2006



CALU Annual Report – 2006

DIRECTOR'S FOREWORD

The second year of CALU's existence has seen a substantial increase in both the quantity and quality of output. It is very pleasing to see such a long and diverse array of technical notes being produced by the CALU team, and even more pleasing to know that these technical outputs are being accompanied by an increasing number of requests from farmers and growers for technical advice.

Further evidence of the maturing of CALU comes from the way partners have worked together to produce the report to Welsh Assembly Government on 'Inward Investment Opportunities in the Welsh Horticultural Processing Sector'. This partnership approach is also helping guide the team working on the new Horticulture Network Wales Interreg project to achieve real outputs for the horticultural industry.

Work on farm woodlands has progressed well, and farmers continue to show a real and growing interest in woodland management for landscape, timber and game. I am particularly pleased that we are able to integrate game management into our activities and hope we can build on this in the future.

I also hope that we can work with organisations across Wales, and beyond, to develop solutions to generating renewable energy from the land based sector. While much work remains to be done on some of the technical aspects of energy generation I am confident that this area offers significant opportunity for Welsh land owners.

Finally I would like to thank the staff at CALU for their hard work over the last year, and also to the CALU partners for their continued hard work and good humour.

Gareth Edwards-Jones
Professor of Agriculture and Land Use
Director of CALU

December 2006.



The Centre for Alternative Land Use (CALU), run by Bangor University, is managed by the Welsh Assembly Government as part of Farming Connect



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INTRODUCTION

CALU, the Centre for Alternative Land Use, is a partnership between Bangor University; the Welsh College of Horticulture (WCoH); ADAS Wales Ltd; Coed Cymru; and Coleg Llysfasi.

CALU was established in November 2004 and officially launched in July 2005 by Carwyn Jones, Assembly Minister for Environment, Planning and Countryside.

CALU exists to transfer knowledge and technology in the areas of:

- horticulture
- biomass
- farm woodlands
- alternative livestock
- alternative crops

SUMMARY OF ACTIVITIES 2006

CALU has maintained a high profile during its second year of existence and substantially increased its output.

43 technical advice days delivered to farmers and growers across Wales. The main areas of interest were horticulture and livestock (mainly pigs and poultry). Towards the end of 2006 requests for advice on biomass production started to be received.

42 technical leaflets were produced on subjects ranging from Cider Production to Worm Farming.

19 open days and **demonstration events** have been held across the length and breadth of Wales.

7 demonstration sites were established across Wales to raise awareness of the variety of crops suitable for cultivation. These included alternative oilseeds, energy grasses, field vegetables and less common cereals.

7 knowledge transfer projects were carried out.



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7 producer discussion groups were supported covering: general horticulture; small fruit production; goat meat production; dairy goat production; and alternative crops.

5 major agricultural shows were attended.

5 crop information sheets were produced with basic agronomic information on: -

- dual purpose hemp
- lupins
- Sárpo potatoes
- sunflowers
- sweetcorn

1 energy crop website was developed and launched.

In addition, CALU acts as a point of contact for general enquiries. Several hundred enquiries have been responded to by CALU staff.

CALU KNOWLEDGE TRANSFER PROJECTS 2006

CALU's knowledge transfer projects are an important way of disseminating information to Welsh farmers and growers. Most of the projects host open days and produce literature for attendees to take away. The projects operational during 2006 were:

➤ **Blight Resistant Potatoes and bio-fumigants**

Potato production is seen as an activity with considerable potential for expansion in Wales. Late Blight (*Phytophthora infestans*) is a major challenge to potato producers, with conventionally grown crops receiving as many as 14 prophylactic spray treatments during a single growing season. CALU's demonstration project uses potato varieties which have a natural genetic resistance to Late Blight, making them particularly suitable for low input and organic farming systems.

A new feature of the project in 2006 was a demonstration and evaluation of the effectiveness of Caliente mustard as a bio-fumigant to control soil pests and disease in potatoes (particularly wire worm)

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➤ **Alternative Tree and Shrub Species in Shelterbelts**

Shelterbelts are a traditional feature of many Welsh farms. However, inappropriately designed or poorly managed shelterbelts will provide little benefit. This project promotes best practice in shelterbelt design and management whilst also introducing new species of trees and shrubs into the planting mix. By varying the species used, shelterbelts can offer multi-function benefits on-farm: they can provide a wildlife habitat rich in food; they can be designed to benefit game birds; they can be designed to provide early season shelter making them particularly valuable for outdoor lambing; and timber and/or fruiting species can be incorporated to provide the opportunity to produce a cash income. The project also highlights the benefits shelterbelts can have in reducing pollution in run-off.

➤ **Energy Crops for Wales: A Guide for Industry and Agriculture**

With ever increasing levels of interest in non-fossil fuel energy, this was a timely project resulting in the production of an interactive website – www.energycropwales.co.uk. The website's aim is to provide easily accessible information on energy crop production specific to the Welsh context. The site includes agronomic guidance, economic calculators and advice on markets and contracts.

➤ **Energy Grass Demonstration Plots Open Days**

Open days were held at the two CALU energy grass demonstration plots to provide an opportunity for potential growers to see the crops growing and obtain expert advice on their agronomy and potential markets.

➤ **Organic Herb Production**

This project is investigating the viability of growing organic herbs in 8cm pots for sale through retail outlets and for the catering industry. In the future, the project is to expand to include medicinal herbs and field scale herb production systems.

A specific area of protected cropping has been established to produce fresh organic herbs on site at the Welsh College of Horticulture. The resource established will allow the production of natural seasonal herbs aimed at the retail market. Protocols for production will be developed as part of the project and will be adopted and reviewed to ensure the quality of the end product. Opportunities to evaluate alternative markets for the product will be investigated and field plots established to evaluate the market potential for cut fresh herbs for the catering industry.

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➤ **Farm Woodland Training Days**

Farm woodlands are often an under utilised resource. CALU's training days aim to provide farmers with the information they need to optimise the utility of their woodlands. The training days in 2006 included: managing farm woodlands for game; timber products from farm woodlands for use on the farm; farm woodland timber – products, processes and markets; and woodland establishment.

➤ **Demonstration Plots for Novel Crops**

The project demonstrated how to grow and manage a variety of alternative crops at four sites across Wales. The crops demonstrated included: sweetcorn; lupins; French dwarf beans; naked oats; hemp; blight resistant Sárpo potatoes; parsnips and carrots. A series of open days were held at the sites to demonstrate agronomic principles market opportunities.

ANCILLARY CALU PROJECTS 2006

In addition to the projects run by CALU through the Farming Connect programme, we have been successful in securing funding for three other projects.

➤ **Investment Opportunities in the Welsh Horticultural Processing Sector.**

This project, commissioned by the WDA, and delivered by ADAS, WCoH, Bangor University and CALU, provided an overview of the horticultural industry in Wales and considered the options for inward investment.

➤ **Horticulture Network Wales.**

This project is funded through Interreg IIIA and is led by the Irish Exporters Association, with WCoH leading activities in Wales. CALU is represented on the Steering Group for the project. The project's objective is to develop a programme for the horticulture industries in Wales and Eastern Ireland in order to develop capabilities and expand employment opportunities.

➤ **Scoping the Environmental and Social Footprint of Horticultural Production in Wales.**

A project funded by the Welsh Assembly, being led by Bangor University in collaboration with CALU, WCoH and ADAS Wales.



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CALU TRAINING DAYS AND DEMONSTRATION EVENTS

Training days and demonstration events are a key methodology used by CALU to increase awareness of diversification opportunities. Events held during 2006 included: -

2 February	Woodchip Open Day, Coleg-Meirion Dwyfor, Nr Caernarfon
9 February	Woodchip Open Day, IGER, Aberystwyth
23 February	Woodchip Open Day, ADAS Pwllpeirian, Aberystwyth
5 July	CALU pot herb project & WCoH organics open day, Northop
5 July	Novel crops demonstration plots open day, Milford Haven
12 July	Novel crops demonstration plots open day, Gwynedd
14 July	Novel crops demonstration, Monmouthshire
17 July	Novel crops demonstration plots open day, Northop
19 July	Blight resistant potato and Caliente mustard demonstration plots open day, Llanrhystud
25 August	Novel crops demonstration open day, Gwynedd
31 August	Novel crops demonstration open day, Milford Haven
5 September	Novel crops and herb production open day, Northop
8 September	Game Management Training Day, Llanfair Caereinion area
20 September	Blight resistant potato and Caliente mustard demonstration plots open day, Llanrhystud
10 October	Training day : Farm Timber – Products, Processes and Markets
11 October	Biomass Open Day, Nr Camarthen
18 October	Biomass Open Day, Gwynedd
26 October	Farm woodlands and timber – training day, Powys
28 November	CALU Heather Trust Moorland Management open day, Corwen

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CALU TECHNICAL LEAFLETS

CALU produces a range of technical leaflets to provide readily accessible advice and guidance to industry and the public. All of the leaflets are available to download freely from the CALU website (www.calu.bangor.ac.uk). Leaflets produced, or in production, during 2006 include:

Biomass

- 010102 Economics of Miscanthus and SRC Production
- 010302 Biomass as a fuel
- 010401 Anaerobic Digestion
- 010501 Liquid Biofuels

Horticulture

- 020102 Asparagus Production
- 020103 Small Scale Lettuce Production
- 020104 Production of Exotic Salad Leaves
- 020202 Field Strawberry Production
- 020301 Cane Fruit Production – Raspberries
- 020401 Top Fruit Production in Wales
- 020402 Cider Production
- 020403 Production of Stone Fruits
- 020501 Pot Herb Production
- 020502 Field Herb Production
- 020601 Alpine Plant Production
- 020701 Sustainable Urban Drainage Systems
- 020702 Green Roofs
- 020801 Production of Shrubs from Liners
- 020901 *Phytophthora infestans* – late blight
- 021001 Green Manures
- 021002 Compost Use and Legislation
- 021003 Growing Media
- 021101 Field Flower Production
- 021201 Tunnel Vegetable Production
- 021202 Protected Strawberry Production

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Novel crops

- 030101 Triticale and Naked Oats
- 030102 Alternative Cereals for Wales
- 030301 Crop Protection in Novel Crops

Livestock

- 040103 Fibre Production from Goats – an introduction
- 040104 Internal Parasites in Goats
- 040302 Deer Health and Welfare
- 040401 Beekeeping - an introduction
- 040501 Worm Farming
- 040601 Dairy Sheep
- 040701 Alpacas

Woodlands

- 050201 Growing Trees from Seed
- 050202 Basic Tree Planting
- 050203 Pigs in Woodland Management
- 050301 Woodlands and the SPS
- 050401 Producing Sweet Chestnut
- 050402 Hazelnuts and Walnuts

CALU DISCUSSION GROUPS

CALU supports a number of discussion groups across Wales. The purpose of these groups is to provide a forum so that those interested in CALU's areas of work can meet and exchange information, advice and experiences. The groups hold meetings throughout the year, often with a visiting expert talking on a topic of particular interest to the group. The discussion groups currently receiving support from CALU are:

Dairy Goat Producers
Meat Goat Producers
Pembrokeshire Alternative Crops
Gwynedd Blueberries
Carmarthenshire Growers Association (www.carmarthenshiregrowers.co.uk)
Pembrokeshire Growers Association
Conwy Beekeepers



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