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# WOODCHIP

## for Livestock Bedding Project

### Alun Edwards

Cae Coch, Rhydymain  
Dolgellau

**The Woodchip for Livestock Bedding Project was initiated to investigate the potential of using woodchip as an alternative to straw as indoor bedding for sheep and cattle. From January to March 2006 cattle and sheep were housed on woodchip at three development sites, ADAS Pwllpeiran, IGER Aberystwyth and Glynllifon College. During this housing period similar groups were also housed on straw and comparisons were made of their feed intakes, growth rates, cleanliness and health. Assessments were also made of the time and labour requirements for using woodchip in comparison to straw.**

An additional part to the project is to determine how best to utilise the woodchip after animals have been bedded on it. Composting studies are being carried out by Bangor University to investigate how the woodchip breaks down and the nutrient value of the end product. The project will also investigate the potential to reuse the woodchip as bedding after it has been composted. Glynllifon College will demonstrate this in February 2007.

Eleven demonstration farms have been set up across Wales to allow farmers to view the project on a local basis. Either cattle or sheep

### Farm Facts

- 735 acres mainly hill land rising to almost 3000ft
- 36 acres of land rented in Ruthin for away-wintering 130 ewe lambs and summer grazing for store cattle and ewes with twins
- 520 breeding ewes -Meirioneth Welsh Mountain
- 16 Welsh Black cows
- In Tir Gofal agri-environment scheme

will be housed on these farms for an 8-10 week period on both woodchip and straw. Assessments will be made of the health, welfare, growth and cleanliness of the animals as well as the labour required for the two systems. Full costings will be given, as the economies of using woodchip will be an important consideration for farmers. Alun Edwards is part of this demonstration farm network and below is a description of his farm enterprises and how woodchip fits into this.

### Cattle

There are 16 Welsh Black cows at Cae Coch, plus their calves and a Welsh Black bull that were all housed in early November. They are fed on round-bale silage produced from a single cut taken in late July from 34 acres of flat fields in the valley bottom. Contractors make the silage, as the policy is not to have expensive and unnecessary machinery on the farm.

The cows calve in April and May and the calves are sold as stores from October to December. There is a closed herd and as herd health is a priority John's testing is being undertaken through the John's testing scheme, supported by HCC. The herd has now had three consecutive clear tests for John's disease.

The cattle are gradually being graded up to becoming pedigree and the herd is in its second year of membership of the Welsh Black Cattle Society. The cattle are an important management tool on the farm and are well suited to this upland environment. There is also a premium paid by the Tir Gofal Scheme for grazing traditional breeds.

### Sheep

Cae Coch has 520 breeding ewes and 130 ewe lambs which lamb from late March onwards. The ewe lambs and ewes bearing twins are lambed indoors and the rest of the ewes are lambed outdoors. Everything is mated to a Welsh Mountain ram as both the ewes and lambs perform well in this farming system. Replacements are homebred and the rest of the lambs are either sold finished off grass or sold as stores. The aim is to sell all the lambs



before the end of December to avoid the need to feed them through the winter.

### Woodchip

With the increasing cost of using straw as bedding, Alun is keen to investigate alternative materials. Woodchip is attractive because of the potential to either source it from the farm, or in this case from another local farmer.

Since preparing a woodland management plan as part of the Tir Gofal agreement, it is recognised that there is potential to produce a small quantity of woodchip bedding each year from thinning woodland on the farm. Consideration will be given into whether this is economically viable, as a chipper would have to be hired. It would also depend on the farm producing enough wood to chip.

### Future projects

The muck storage area on the farmyard has been identified as having the potential to cause problems with run-off. Following discussions with the Environment Agency, Alun is currently looking into covering this area to protect it from rainwater. If this yard was covered it would create the ideal place to compost woodchip bedding. There are potential cost benefits from woodchip as it can be re-used the following winter after it has been composted and this possibility will be investigated at Cae Coch.



TACHWEDD 2006



# Prosiect NADDION PREN

## ar gyfer Gwasarn Da Byw

### Alun Edwards

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**Cychwynwyd y Prosiect Naddion Pren ar gyfer Gwasarn Da Byw er mwyn ymchwilio i botensial defnyddio naddion pren yn lle gwellt yn wasarn dan do i ddefaid a gwartheg. O fis Ionawr tan fis Mawrth 2006 cadwyd gwartheg a defaid dan do ar naddion pren mewn tri safle datblygu, sef ADAS Pwllpeiran, IGER Aberystwyth a Choleg Glynllifon. Yn ystod y cyfnod hwn cadwyd grwpiau cyffelyb dan do hefyd ar wellt a gwnaed cymariaethau â'u cymeriant bwyd, cyfraddau twf, glendid ac iechyd. Yn ogystal, aseswyd y gofynion amser a llafur wrth ddefnyddio naddion pren mewn cymhariaeth â gwellt.**

Rhan arall o'r prosiect yw penderfynu sut orau i ddefnyddio'r naddion pren ar ôl eu defnyddio'n wasarn. Mae astudiaethau gwrteithio'n cael eu cynnal gan Brifysgol Bangor er mwyn darganfod sut mae naddion pren yn dadelfennu a darganfod gwerth maethol y cynnyrch terfynol. Bydd y prosiect hefyd yn ymchwilio i'r potensial o aildefnyddio'r naddion pren yn wasarn ar ôl iddyn nhw gael eu gwrteithio. Bydd Coleg Glynllifon yn arddangos hyn ym mis Chwefror 2007.

Mae un ar ddeg o ffermydd arddangos wedi cael eu sefydlu ledled Cymru fel bod gan ffermwyr gyfle i weld y prosiect yn lleol. Bydd

#### FFEITHIAU AM Y FFERM

- 735 erw o dir mynydd yn bennaf sy'n codi hyd at ymron i 3000 troedfedd
- 36 erw o dir yn cael ei rentu yn Rhuthun er mwyn gaeafu 130 o ŵyn benyw ac fel tir pori haf i wartheg stôr a mamogiaid ag efeilliaid
- 520 o famogiaid bridio - defaid Mynydd Cymreig Meirionnydd
- 16 o fuchod Duon Cymreig
- Yn perthyn i gynllun amaeth-amgylcheddol Tir Gofal

naill ai gwartheg neu ddefaid yn cael eu cadw dan do ar y ffermydd hyn am gyfnod o rhwng wyth a deng wythnos ar naddion pren ac ar wellt. Asesir iechyd, lles, twf a glendid yr anifeiliaid yn ogystal â'r gwaith sydd ynghlwm â'r naill system a'r llall. Darperir y costau llawn, oherwydd bydd y gost o ddefnyddio naddion pren yn ystyriaeth bwysig i ffermwyr. Mae Alun Edwards yn rhan o'r rhwydwaith o ffermydd arddangos ac isod gwelir disgrifiad o'r mentrau fferm a sut mae naddion pren yn rhan o hyn.

### Gwartheg

Mae yna 16 o fuchod Duon Cymreig yng Nghae Coch, ynghyd â'u lloai a tharw Du Cymreig, a chafodd y rhain i gyd eu rhoi dan do ddechrau Tachwedd. Cânt eu bwydo ar silwair byrnau-crwn sy'n cael ei gynhyrchu o doriad sengl ddiwedd Gorffennaf o 34 erw o gaeau gwastad ar waelod y dyffryn. Contractwyr fydd yn gwneud y silwair, oherwydd y polisi yw peidio â chael peiriannau drud a diangen ar y fferm.

Mae'r buchod yn lloia yn Ebrill a Mai a chaiff y lloai eu gwerthu'n stôr o fis Hydref tan fis Rhagfyr. Mae yna fuches gaeedig ac am fod iechyd y fuches yn flaenoriaeth, mae profion clefyd Johnne's yn cael eu cynnal trwy gyfrwng cynllun profion Johnne's, â chefnogaeth Hybu Cig Cymru. Erbyn hyn mae'r fuches wedi cael tair cyfres dilynol o brofion clir.

Mae'r gwartheg yn cael eu graddio i fyny'n raddol er mwyn dod yn bedigri, ac mae Alun yn ei ail flwyddyn yn aelod o Gymdeithas Gwartheg Duon Cymru. Mae'r gwartheg yn bwysig o ran rheolaeth y fferm oherwydd maent yn addas iawn ar gyfer y tir uchel. Hefyd, mae Cynllun Tir Gofal yn talu premiwm am ddefnyddio bridiau brodorol i bori.

### Defaid

Mae Cae Coch yn cynnal 520 o famogiaid bridio a 130 o ŵyn benyw sy'n wyne o ddiwedd Mawrth ymlaen. Mae'r ŵyn benyw a'r mamogiaid sy'n cario gefeilliaid yn wyne dan do ac mae gweddill y mamogiaid yn wyne yn yr awyr agored. Bydd yr holl ddefaid yn cael hwrdd Mynydd Cymreig am fod y mamogiaid a'r ŵyn yn perfformio'n dda yn y system ffermio hon. Mae'r anifeiliaid cyfnewid yn cael



eu magu ar y fferm a chaiff gweddill yr ŵyn eu gwerthu naill ai ar ôl pesgi ar borfa neu fel ŵyn stôr. Y nod yw gwerthu'r holl ŵyn cyn diwedd Rhagfyr er mwyn osgoi'r angen i'w bwydo drwy'r gaeaf.

### Naddion Pren

Gyda'r gost gynyddol o ddefnyddio gwellt yn wasarn, mae Alun yn awyddus i ystyried defnyddiau eraill. Mae naddion pren yn atyniadol oherwydd fe ellid defnyddio coed o'r fferm neu fferm gyfagos.

Ers paratoi cynllun rheoli coetir fel rhan o'r cytundeb Tir Gofal, daeth yn hysbys y gellid cynhyrchu ychydig bach o wasarn naddion pren bob blwyddyn trwy deneuo'r coetir ar y fferm. Bydd rhaid darganfod a fydd hyn yn werth yr arian oherwydd byddai'n rhaid hurio peiriant naddu. Byddai hefyd yn dibynnu a allai'r fferm gynhyrchu digon o bren i'w naddu.

### Prosiectau'r dyfodol

Darganfuwyd y gallai'r iard lle mae'r tail yn cael ei storio achosi problemau oherwydd elifiant. Yn dilyn trafodaethau ag Asiantaeth yr Amgylchedd, mae Alun erbyn hyn yn bwriadu codi to dros y tail i'w ddiogelu rhag dŵr glaw. Pe bai'r iard hon yn cael ei rhoi dan do, fe fyddai'n lle delfrydol i wrteithio gwasarn naddion pren. Gallai naddion pren arbed costau oherwydd mae modd defnyddio'r gwrtaith y gaeaf wedyn, a bydd hyn yn cael ei ystyried yng Nghae Coch.

