

# CEFN Conwy Project

‘Improving **C**atchment **E**nvironmental Quality through better Soil and **N**utrient Management in the Livestock **F**arming Landscape.’

19.15 – 20.15 Speakers: **Siaradwyr:**

Jo Hughes & Dr Julie Williamson (Project Officers **Swyddogion Project**);

Dr Paula Roberts (Lecturer, **Darlithwyr, Prifysgol Bangor University**);

Geraint Jones (Coed Cymru).

20.15 – 20.30 Beneficiary forms to be completed; **Llenwi ffurflenni buddiolwyr;**

20.30 – 21.00 Buffet. **Swper bwffe.**



This project is part funded through the Rural Development Plan which is part financed by the European Union and the Welsh Assembly Government. **Cyllidir y project hwn yn rhannol trwy'r Cynllun Datblygu Gwledig a gyllidir yn rhannol gan yr Undeb Ewropeaidd a Llywodraeth Cynulliad Cymru.**

# What CEFN Conwy can do for local farmers.

## Beth all CEFN Conwy ei wneud i ffermwyr lleol.

Expertise available to you within the project team:

Arbenigedd ar gael i chi yn nhîm y project:

Soil science (quality, fertility, health, structure)	Gwyddor pridd (ansawdd, ffrwythlondeb, iechyd, adeiledd)		
Local knowledge	Gwybodaeth leol	Organic wastes	Gwastraff organig
Plant nutrition	Maethiad planhigion	Water quality	Ansawdd dŵr
Silviculture	Coedwriaeth	Biodiversity	Bioamrywiaeth
Farm economics	Economeg fferm	Digitised mapping	Mapio wedi'i ddigideiddio
Animal nutrition	Maethiad anifeiliaid	Faecal pathogens	Pathogenau ysgarthol
Research	Ymchwil	Field-based trials	Profion yn y maes
Local agronomist	Agronomegydd lleo	Farm research manager	Rheolwr ymchwil fferm

# Training Provision

## Darpariaeth Hyfforddiant

- Water Framework Directive; Cyfarwyddeb Fframwaith Dŵr;
- Glastir;
- Best Practice guides e.g.  
Canllawiau Ymarfer Gorau e.e. *“Think Soils”*;
- Tools for manure planning e.g.  
Offer ar gyfer cynllunio teilo e.e. *“Manner”*;
- Tools for whole-farm nutrient budgeting e.g.  
Offer cyllidebu ar gyfer maetholion i fferm gyfan e.e. *“Tried & Tested”*;
- Other topics, on request. Pynciau eraill ar gael os gofynnir amdanynt.

# For Participating Farms

## Ar gyfer Ffermydd sy'n Cymryd Rhan

Examples of what we can offer for free:  
Enghreifftiau o'r hyn y gallwn ei gynnig am ddim:

- Soil sampling, analysis and unbiased interpretation;
- Samplu a dadansoddi pridd a'i ddehongli'n ddiudedd;
- Manure/slurry/dirty water analysis;
- Dadansoddi tail/ slyri/ dŵr budr;
- Soil compaction testing;
- Profi cywasgiad pridd;
- Vegetation analysis;
- Dadansoddi llystyfiant;
- Advice, support, design, monitoring and reporting of on-farm trials.
- Cyngor, cefnogaeth, cynllunio, monitro a rhoi adroddiadau ar brofion ar ffermydd.

## Main Issues for Consideration

- nitrate pollution
- eutrophication
- pesticide pollution
- faecal pathogens
- riparian damage
- surface water flooding (overland flow)
- soil erosion => increased sediment load in rivers
- soil compaction
- soil and water acidification

## Prif Faterion i'w Hystyried

- llygredd nitrad
- ewtroffigedd
- llygredd pla-leiddiaid
- pathogenau ysgarthol
- difrod torlannol
- dŵr yn gorlifo ar yr wyneb
- erydiad pridd => mwy o waddodion mewn afonydd
- cywasgiad pridd
- asideiddio pridd a dŵr

Overland flow Gorlifo dros y tir



Soil capping Capio pridd



Soil compaction Cywasgiad pridd



Well-structured soil Pridd o wneuthuriad da



**Following slides:**  
**Sleidiau canlynol:**

Examples of available on-farm solutions to some of these issues.

Enghreifftiau o atebion ar y fferm sydd ar gael ar gyfer rhai o'r materion hyn.

# Reducing overland flow with contour tree planting

## Lleihau gorlifo dros y tir drwy blannu coed cyfuchlinol





# Riparian damage **Difrod torlannol**



**Riparian management**

**Rheoli torlannau**



Riparian management (2): Livestock restricted access to water  
Rheoli torlannau (2): Cyfyngu mynediad anifeiliaid at ddŵr



# Making the Most of Slurry    Gwneud y Gorau o Slyri

**Timing:** Nitrification Inhibitors allow slurry to be spread in winter without nitrate leaching or  $N_2O$  emissions = greater yields. (Hot topic!)

**Amseru:** Gydag Atalyddion Nitreiddiad gellir chwalu slyri yn y gaeaf heb i nitrad ollwng nac allyriadau  $N_2O$  = mwy o gynnyrch. (Pwnc llosg!)

**Method:** surface injection or trailing shoe means more N gets to the roots = 40% saving in fertiliser costs.

**Dull:** mae chwistrellu ar yr wyneb yn golygu bod mwy o N yn mynd i'r gwreiddiau = arbed 40% o gostau gwrteithiau.



# Testing New Products / Products New to Local Farms

## Profi Nwyddau Newydd / Nwyddau sy'n Newydd i Ffermydd Lleol

- High efficiency fertilisers;

Gwrteithiau sy'n effeithiol iawn;

- Mycorrhizal inoculated seed dressings (Biofertilisers);

Dresinau had wedi cael brechlynnau mycorrhizal  
(Biowrteithiau);

- Biochar;

- Others, on request.

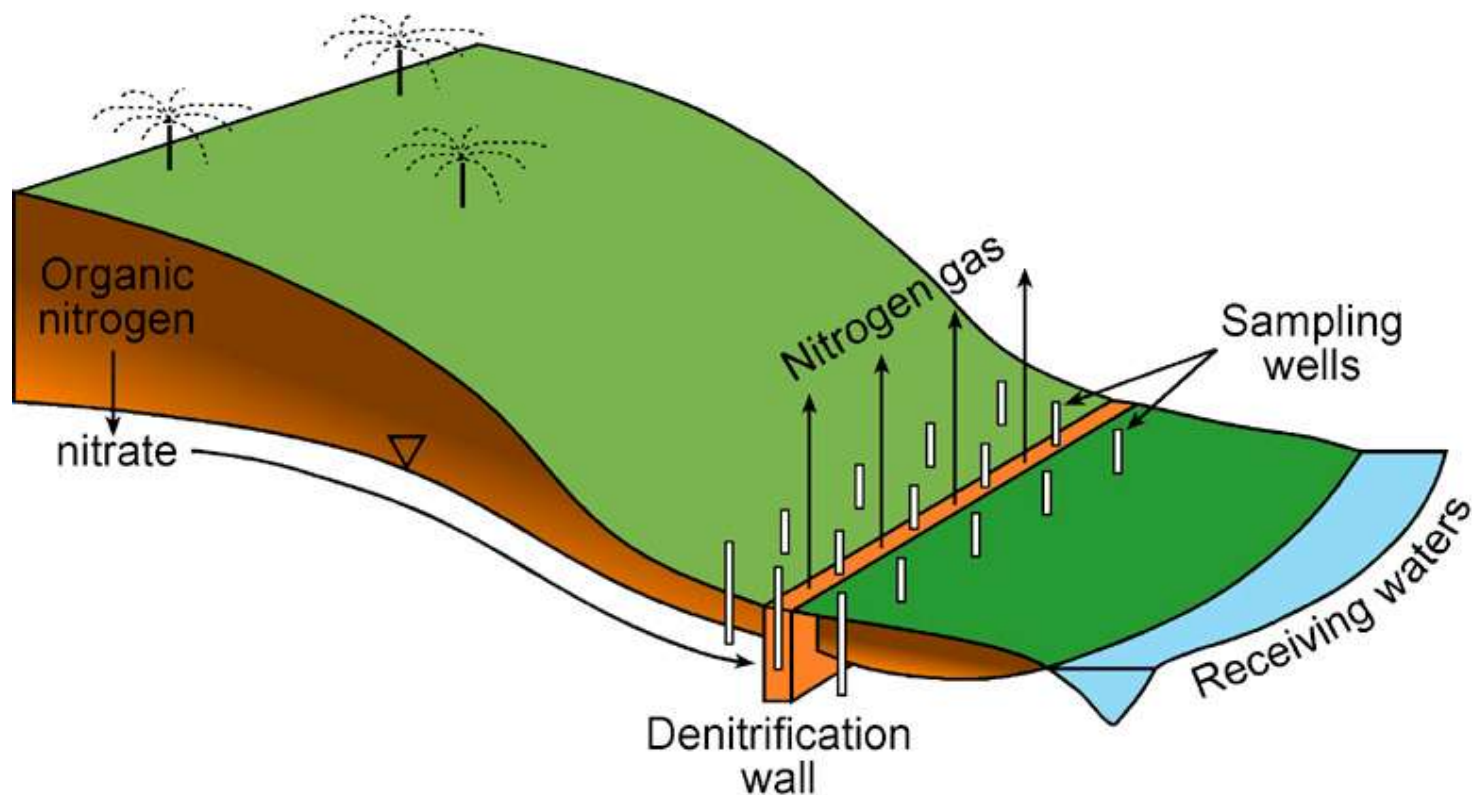
Eraill, os gofynnir amdanynt.

# Dirty Water Treatment: Constructed Wetlands at ADAS Pwllpeiran.

Trin Dŵr Budr: Gwlyptiroedd wedi'u llunio yn  
ADAS Pwllpeiran.



# Treating Point Source Pollution with Trin Ffynonellau Llygredd gyda Permeable Reactive Barriers



Source / Ffynhonnell: Schipper, L.; Landcare Research New Zealand (pers comm.)

# Composting Organic Wastes

## Compostio Gwastraff Organig

### Why?

- reduces volume and odour;
- reduces weed seed and pathogens;
- stabilises nutrients into slower-release organic forms.

sefydlogi maetholion yn ffurfiau organig sy'n cael eu rhyddhau'n arafach.

### Pam?

- lleihau swm ac aroglau;
- lleihau had chwyn a pathogenau;



# Composting Organic Wastes

## Compostio Gwastraff Organig

### What?

- Manure;
- Used animal bedding (straw, woodchip, paper crumble);  
Gwelyau anifeiliaid wedi'i ddefnyddio (gwellt, sglodion coed, papur wedi'i falu);
- Green wastes (hedge prunings, bracken, woodchip);  
Gwastraff gwyrdd (toriadau gwrych, rhedyn, sglodion coed)
- Vermicompost.  
Fermigompost.

### Beth?

- Tail;

# CEFN Conwy Project

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