

# AGROFORESTRY AROUND THE WORLD

**JO SMITH**

**ORGANIC RESEARCH CENTRE**

**[jo.s@organicresearchcentre.com](mailto:jo.s@organicresearchcentre.com)**





What is agroforestry?



## AGROFORESTRY

“Land-use systems in which woody perennials (trees, shrubs etc.) are grown in association with herbaceous plants (crops, pastures) or livestock; there are usually both **ecological** and **economic** interactions between the trees and the other components of the system” **Lundgren, 1982**

### Silvopastoral



### Silvoarable





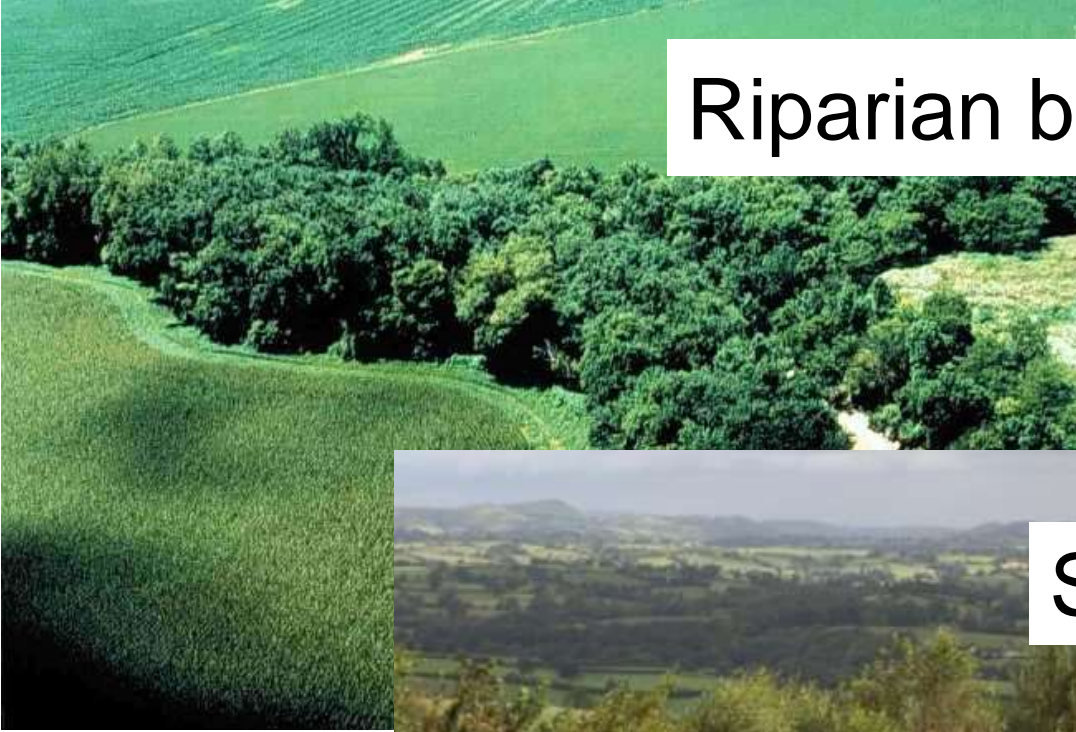








Riparian buffers



Shelter belts



Contour planting







**Montado, Portugal**



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**Oak pruning in the dehesa, Spain**



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**Iberian pigs browsing Holm oak (*Quercus rotundifolia*) acorns, a highly valued nutrition element for producing quality meat**



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**Olive groves with sheep grazing, Italy**



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**Lavender and oaks, France**



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**Maize and walnuts, Grenoble, France**



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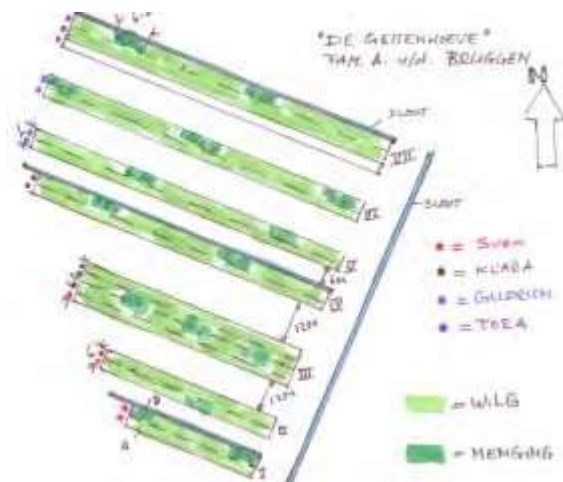
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**Alley Cropping in Forst, Northeastern Germany - former mining sites**



# NETHERLANDS







Short Rotation  
Coppice

DENMARK





# Broilers and apple sawfly, Denmark

Lindhard Pedersen et al 2004





Hedgerows



Grazed orchards



UK: traditional agroforestry



Pannage/grazed woodlands



# Forest gardens







UK Silvoarable Agroforestry



# Wakelyns Agroforestry, Suffolk

Established from 1994 – 22.5ha

Willow  
coppice

Hazel  
coppice

Mixed  
hardwood and  
fruit trees

















# Whitehall Farm

- 4500 apple trees planted Oct 2009 on 125 acres of newly converted organic farm on Cambridgeshire fens (Stephen Briggs)
- Trees planted in rows 27m apart to allow for combinable crops on organic rotation
- Tree rows undersown with nectar-rich wildflower mixtures to provide habitat for wildlife.









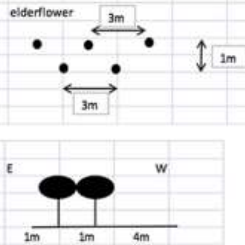


**David Rose, Screveton, Notts**



## Elderflower

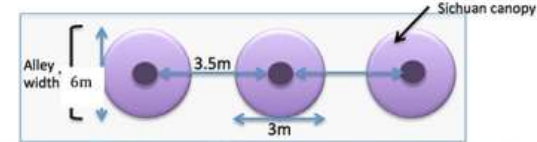
- Total length of elder tree alley is 2705m.
- 16m alleys between rows
- 6 m row width with 1m eas side of trees, 1m between trees, 4m west side of trees (tractor access).
- planting 3m between each tree with a 1m gap between tree rows in same row
- Total 1800 trees



## Dartington agroforestry field

Agroforestry (Open Air)

## Sichuan pepper



- Total length of Sichuan pepper alley is 680m (or 965m).
- Tree alley width of 4m.
- Tree spacing 3.5m in row.
- Total 190 trees if just two rows (or max 275 trees if use three rows).

Straightened edge of field boundary

25m squirrel buffer around edge of field and tree island

## Apple

- Total length of apple tree alley is 1440m above track (=410 trees), 690m below track (=195 trees).
- Tree alley width of 4m.
- Tree spacing 3.5m in row.
- Total 605 trees.



# Dartington

<https://www.dartington.org/will-our-unique-new-approach-bear-fruit/>





## UK Silvopastoral agroforestry













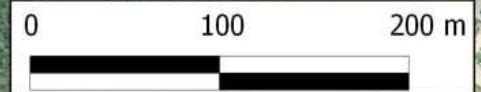
Elm Farm, Berkshire

 Farm Boundary

Woodfuel from  
Hedges

New tree planting

Silvopastoral  
SRC

















# Sheepdrove Organic Farm

An innovative agroforestry system that recreates a woodland environment within the context of a commercial organic mixed farming system.

## Multiple objectives:

- To provide living conditions that allow chickens to express their basic behaviour
- To supply food sources for nutritional and health benefits for the chickens from a variety of sources, trees, shrubs, herbs as well as grass/clover leys
- To provide an enriched landscape for the farm to encourage an increase in biodiversity
- To provide a community asset in terms of landscape and the opportunities to gather hedgerow fruits.





FAI





# Knepp Estate





# Pigs and forestry at Esgair



Photo: David Pilbeam





**Forest grazing, Fife**



# Shropshire silvopasture

[www.silvaspin.org.uk](http://www.silvaspin.org.uk)

- 20 acres
- 20m wide alleys
- Trees at 5m spacing
- N/S orientation
- Electric fencing
- Trees for browsing – ash, elm, honey locust, black locust, plus nut trees – walnut, hickory, sweet chestnut, almond, hazel







**Tim Downes, Shropshire**











# Pont Bren: landscape scale agroforestry

- Farmer-led initiative to achieving more sustainable upland land management
- Increased 'canopy cover' from 1.5% to 5%

**Water infiltration in shelter belts was 60 times that of neighbouring grassland**

**Peak stream flows reduced by 40%**

Also.....

- Increase in farm net income
- Improved efficiency of livestock enterprises
- Future proofing
- Reducing the risk of water pollution and biosecurity



# Trees and vegetables.....



.....silvohorticultural systems?



# Shillingford Organics, Devon







Duchy Home  
Farm,  
Gloucestershire





# Organic p CLC





# Information



[www.agroforward.eu](http://www.agroforward.eu)



[www.agrofe.eu/](http://www.agrofe.eu/)



[www.agroforestry.co.uk/](http://www.agroforestry.co.uk/)



[www.agroforestry.ac.uk/](http://www.agroforestry.ac.uk/)



[www.agroforestry.eu](http://www.agroforestry.eu)





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# Agroforestry training resources

**EDUCATIONAL RESOURCES OF THE EUROPEAN PROJECT AGFORWARD**



AGFORWARD has received funding from the European Union's Seventh Framework Programme for research, technological development and demonstration under grant agreement no 613520

## Training resources for farmers, technicians and students.

The aim of the “Agroforestry Training Resources” section of the AGFORWARD website is to provide a central location for agroforestry education and training resources appropriate for farmers, technicians and students.

The content of the site will be developed during 2016 and 2017.

You are encouraged to use material from the “train.agforward.eu” domain for non-commercial activities provided the source of the material is clearly acknowledged.