



Developing an Agro-Forestry System for a Commercial Organic Chicken Flock: Focus on Profits on a 'Triple Bottom Line'



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What is Agro-Forestry?

'...a system of land use in which a range of different approaches to integrating trees, crops and animals are used for the mutual benefit of all components.'

(www.answers.com/agroforestry, accessed 20/02/06)

Why Agro-Forestry For Poultry?

- Knowledge of the ancestral history of the chicken, domesticated from Red Jungle Fowl (*Gallus gallus*).



Red Jungle fowl (*Gallus gallus*)

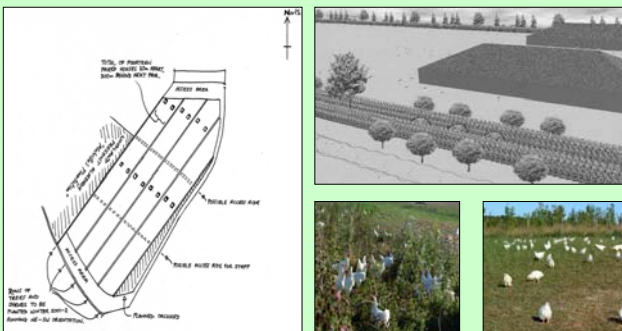
- Research observations: '*...in commercial free-range broiler systems, many birds never leave the houses... a wide open field is not a ... preferred habitat... tree cover is something that should be provided to encourage ranging*' (Dawkins *et al.*, 2003)

Benefits Include:

- Allowing chickens to express innate behaviours.
- Encouraged ranging through provision of cover and shelter which can.
- Nutritional and medicinal benefits by providing appropriate foraging opportunities
- Enriching the landscape and increasing biodiversity.

Case Study For the Development Of A Commercial Organic Agro-Forestry System: Sheepdrove Organic Farm, Berkshire, UK

This development was undertaken to provide agro-forestry benefits whilst being economically viable.



Changes to the system:

- 5 parallel avenues of highly diverse trees
- Coppiced hedge with shrubs
- Permanent 3m wide herbal strip
- Grass/clover ley

An on-going monitoring programme was put in place to evaluate the development of the system. This is used to develop a picture of the different profits it provides.

Acknowledgements

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References

Anon, www.answers.com/agroforestry&r=67, accessed 20/02/06
Dawkins *et al* (2003), *Animal Behaviour* 66: 151-160.

What is 'Profit'?

Conventionally profits tend to be viewed purely in terms of economic gain. Organic farming places value on intrinsic and sustainable qualities of its systems and adopts a holistic approach to profit, viewing it in terms of a *triple bottom line*:

Environmental profit

An advantageous gain or benefit to physical surroundings.

Environmental profits of Sheepdrove Agro-forestry

Improved landscape; aesthetically pleasing	Improved soil nutrient & respiration status	Increased biodiversity
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Social profit

An advantageous gain or benefit to a community.

Social profits of Sheepdrove Agro-forestry

Human	Social conscience	Improved landscape	Developing knowledge through consumer interaction	
	Poultry: Improved behaviour & welfare	Encourage natural behaviours	Good leg health	Low levels of injurious & antagonistic behaviours

Economic profit

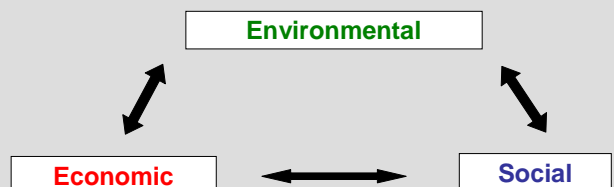
An advantageous gain or benefit for money laid out.

Economic profits of Sheepdrove Agro-forestry

Increased economic opportunities through optimum use of space:	Integrating poultry & crops (fruits & woodland produce)	Poultry in rotation with arable cropping to capitalise on nutrient rich ground	Inter species grazing (sheep & cattle)	Silage cuts
	Niche market:	Organic achieves a financial premium	Must account for increased production costs	

Conclusions

Due to the nature of organic farming systems there is an intrinsic link between the three different types of profit.



The organic agro-forestry system developed at Sheepdrove Organic Farm has been shown to have the potential to deliver not just economic profit but profits on a multi-faceted triple bottom line: environmental, social AND economic.