

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)

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*.

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.

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

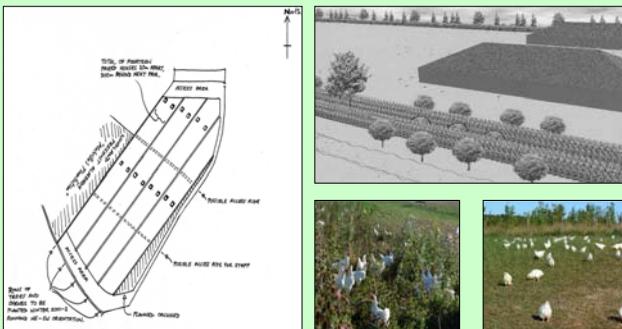
Social profit

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	Self medication

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.

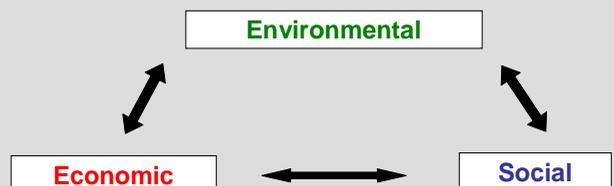
Economic profit

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.

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.