Care farming – A sustainable approach to multifunctionality in agriculture

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Abstract

This paper outlines the case for viewing agriculture as offering a multifunctional range of outputs including crop and animal production, environmental and recreational benefits and health services. Nature and a rural environment have been found to contribute to a wide range of positive health benefits. Care farming, which utilises the therapeutic aspects of agriculture has been steadily developing in the United Kingdom following its success in several European countries. It is supported by the National Care Farming Initiative (NCFI). A case study of Magdalen, a care farm situated on the Dorset and Somerset borders, illustrates the multifunctional nature of farming by demonstrating its contribution to a broad range of services, including health and well-being.

Keywords

Multifunctionality, care farming, health, well-being, agriculture

Introduction

Until recently land use has been viewed in a single function context whether it be biodiversity, farming or history and heritage (Hine et al., 2007). Land was seen as providing either for food production or biodiversity or heritage for instance. Yet recently it has been recognised that any area of land can provide many different environmental, recreational and health services at the same time and hence be considered to be multifunctional (Hine et al., 2008). This concept of multifunctionality fits in well with the concept of sustainable development especially the acknowledgement that the natural environment is essential to a healthy society. Natural England, for example, aims to provide an integrated approach to sustainable land management and conserving the natural environment. This has led it to focus on activities such as the conservation of biodiversity and the health benefits of nature (Natural England, 2006).

Concurrently, care farming, which fully embraces these principles, has been developing steadily in the United Kingdom with the number increasing from 40 in 2005 to 170 in May 2011. A further 180 prospective care farms are being considered according to unpublished Care Farming UK data. Care Farming UK, formerly the National Care Farming Initiative (NCFI), was established in 2005 at Harper Adams University College in association with four external partners to represent care farming in the UK. Care farming utilises the restorative benefits of nature which have been investigated extensively (for example Pretty et al., 2005; Korpela and Hartig, 1996; Herzog et al, 2002; Maller et al, 2005; Regan and Horn, 2005) and which formed the rationale for the development of the service. The Magdalen Project (soon

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to be known as Magdalen Environmental Trust), situated near Chard, Somerset is used as a case study to illustrate the linkage between care farming and multifunctionality. Since 2000, Magdalen has become known for pioneering environmental and sustainability-based education and training opportunities for a wide range of user groups.

**Multifunctional Agriculture**

Multifunctionality is becoming a key concept in current analyses of agricultural and rural change (Knickel and Renting, 2000). Writers such as Wilson (2007) have analysed the recent transition from agriculture as a producer of food and fibre to that of what has been termed multifunctional products and spaces. Agriculture is seen to have moved from a productivist to a post-productivist era which is characterised by a number of factors including the reduction in the intensity of farming through extensification, diversification and dispersion of agricultural production, ‘consumption’ of the countryside in contrast to agricultural production and greater emphasis on environmental protection.

The concept of multifunctionality as applied to agriculture has been developed as part of the negotiation principles of several international agencies such as UNCED (1992), FAO (1996) and World Trade Organisation (1998). The Organisation for Economic Co-operation and Development states that multifunctionality is associated with the existence of multiple commodity and non-commodity outputs that are jointly produced by agriculture and that some of the non-commodity outputs may exhibit the characteristics of externalities or public goods, such that markets for these goods function poorly or are non-existent. The nature of multifunctionality in agriculture embraces agricultural landscape and cultural heritage values, environmental outputs, rural viability and the contribution of agricultural employment, food security and animal welfare. The links between multifunctionality and sustainability are also delineated as follows:

“**Sustainability refers to the use of resources, human, natural and man-made, in ways that allow current generations to meet their needs without jeopardising the capacity of future generations to meet theirs.**” (OECD, 2001)

“**Multifunctionality refers to the fact that an economic activity may have multiple outputs and, by virtue of this, may contribute to several societal objectives at once**” (OECD, 2001).

The European Commission has likewise indicated the importance of multifunctional agriculture for European agricultural policy (European Union, 2005). Differences in approach with the USA and the Cairns group for instance are promulgated in the Commission’s Agenda 2000 document which emphasises the role agriculture plays in the economy, the environment, society and in the conservation of the countryside and hence provides the rationale for maintaining agriculture all over Europe and protecting farmers’ income (European Commission, 1997). This implies a change from a pure productive agricultural model to a more balanced rural development model with more emphasis on the production of public goods. Thus multifunctionality not only means a change in the support system for farmers, but also, for example, change in farming practices, contractual relations between farmers and other stakeholders, and mechanisms to enable the remuneration of contributions to public goods (Durand and van Huylenbroeck, 2003). The authors also cite the importance of rural entrepreneurship and institutional innovation for multifunctional agriculture. New ventures or farm diversification requires farmers with real entrepreneurial
skills and thus income diversification based on multifunctionality is not an easy solution for marginalized farmers but an opportunity for those farmers with an accurate perception of consumer concerns and societal expectations and who have the skills to explore the possibilities offered (Durand and van Huysteenbroeck, 2003).

Milone (2009) states that multifunctional farming only works when it fulfils new social needs and produces positive externalities which pay sufficiently well to enable a living to be made. This involves the translation of new social needs and expectations into new farm products (and services). Utilising case studies of farmers in central and southern Italy and the Frisian area of the Netherlands Milone shows that new products and markets were created through the rediscovery of local resources, the diversification of activities and the reorganisation of farms.

Benefits of Natural and Rural Environment

Research has shown that people place a great deal of value on many of the attributes of the countryside particularly tranquillity and peacefulness (English Nature, 2003). Pretty (2004) has demonstrated that the restorative process can be assisted by natural settings. Indeed, some would argue that benefits to health, well-being and improved recovery times can be achieved through active engagement in social and therapeutic agriculture and horticulture (Sempik et al., 2004). Concurrently, modern health care provision has come to emphasise delivery of value for patients as consumers, often placing them at the centre of stakeholder networks. These phenomena have been utilised in the development of a novel service, Care Farming UK (previously NCFI) which provides a network of rural community based care facilities. The service is based on collaboration between rural micro-businesses and Harper Adams University College reflecting a national government agenda of linking business with higher education. The development of care farms has, as a consequence, entailed a linking of social provision with rural entrepreneurial activity (Custance et al., 2011; Hine et al., 2008; Glasby, 2004)

Nature and the natural environment have been linked to good physical and mental health by Pretty (2004). In the UK a diverse range organisations in receipt of government funding, non-governmental agencies and charitable and educational bodies have produced reports and made recommendations to this effect (see, for example, English Nature, 2003; The Countryside Agency, 2005; Bird, 2007 (RSPB); Mind, 2007). The restorative process has been shown to benefit from the use of natural settings (Pretty et al., 2005; Korpela and Hartig, 1996; Herzog et al., 2002; Maller et al., 2005; Regan and Horn, 2005). Access to the natural environment can counteract or provide respite care from the negative consequences of urban living for example, concerning stress and anxiety as well as a higher prevalence of neurotic disorders and negative personal and social consequences (English Nature, 2003; Bird, 2007). The use of agriculture as a form of therapy has been recognised in the “biophilia hypothesis” (Kellert and Wilson, 1993), which determines that closeness to nature and incorporation of physical activities in the natural environment increases well-being and that the link is deep rooted in mankind’s genetic inheritance.
Contact with nature has a positive benefit to improved mental health as part of stress recovery (Herzog et al., 2003). This has been developed into the “Attention Restoration Theory” by Kaplan (1995) which acknowledges the associated “restorative” and “immunising” effects (Pretty et al., 2005) as well as the longer term psychological benefits of the natural environment. This has been empirically tested by Hartig et al., (2003) who compared stress levels and recovery in urban and natural settings, citing greater benefits (in terms of emotional well being, attention restoration and stress recovery) in the rural rather than the urban setting.

Work in Holland by de Vries et al., (2003) showed the positive benefits of living in a green environment. Kaplan (1995) reported that the presence of “nearby nature” enabled participants to think and to forget their worries, regain sanity and serenity and to enjoy solitude. Research evidence from a number of sources including the UK Department for Environment Food and Rural Affairs (DEFRA, 2001), and others (The Countryside Agency, 2005, Stratford and Christie, 2000 and Walley et al., 2000) show that people want attributes such as tranquillity and peacefulness from the countryside. Exposure to restorative environments has been shown by Berto (2005) to have facilitated recovery from mental fatigue.

Many of these projects have measurable outputs on individuals and communities that Bird (2007) sees as essential to quantifying health value. The author believes that this can be recorded and used in beginning to tackle problems as wide ranging as obesity, stress and antisocial behaviour, which “governments are struggling to solve”. A “natural health service” can add value and reduce the cost burden to the public purse of conventional treatment for problems such as mental health (Bird 2007). This view is echoed by Mind (2007) which has called for a “new green agenda” for mental health in the UK. This has been called “ecotherapy”. Mind believes the approach (based on green space exercise) can tackle the UK Government’s own agenda concerning exercise, mental health and obesity and offers benefits for physical and mental health and wellbeing. The Mind report uses empirical evidence to demonstrate the effectiveness of their approach and the associated positive spin offs compared with the negative side-effects of prescription drugs.

Pretty et al., (2005) undertook a systematic review of the evidence linking recreation in greenspace and the countryside to health and wellbeing. The authors also cite the beneficial effects of farming and nature on handicapped and sick people. This is demonstrated by the increasing number of therapeutic “green care” farms, especially in the Netherlands (WB, 2005) but also in other European countries such as the UK, Norway, Switzerland and Slovenia (Hassink and van Dijk, 2006). In Norway, a range of welfare services are provided on farms as part of a general trend where farmers have been developing new business alternatives and where there is an increasing market for private welfare services (Meistad and Fjeldavli, 2004).

Diverse agencies in the UK have produced reports and made recommendations linking nature and the natural environment to positive health attributes in terms of both good physical and mental health for individuals and their communities (English Nature, 2003; The Countryside Agency, 2005; Bird, 2007 (RSPB); Mind, 2007). Such organisations seek to respond to, influence or engage with EU or UK government policy, often citing how action could relieve or complement health service provision. Given the current trend for a reappraisal of the methods and role of farming subsidies and for ongoing reform of the
Common Agricultural Policy (CAP) these are interesting developments. Payments are now not linked to food production, but to support for environment and social outcomes. It is not a great leap to see that further changes in policy at EU and national level could support more widespread 'therapeutic' farms. There are thus many kinds of positive externalities produced by farmers and others who care for the countryside. The Sustainable Development Commission (2007) states that: “The natural environment, everything from parks and open countryside to gardens and other green spaces, can play an important part in promoting and maintaining good health and well-being.” The natural environment should be made a prominent feature of the community and be easily accessible to all. This can then help to relieve the UK National Health Service and the wider economy of the financial burden of ill-health.

Multifunctionality and Care Farming

In assessing the multifunctional value of land eight key services produced by the land have been identified by Hine et al., (2007) together with associated practical issues. They comprise farming services; biodiversity; historic and heritage; water services; climate change mitigation; landscape character; leisure and recreation services; health services. Issues identified with health services include the mental and physical health benefits to individuals arising from exposure to green places as well as engaging in physical activity. The pressures on farmers of developing a social role can be substantial. The intrusion of urban influences can negatively affect local social structures and put local culture under pressure as demonstrated by di Iacovo (2003) in Tuscany, Italy.

According to Hassink et al., (2007) care farming is the fastest growing sector of multifunctional agriculture in the Netherlands. The main client groups identified were mentally challenged clients, psychiatric clients, autistic persons, elderly people and youths. An increasing number of Dutch farmers were seen as attempting to fulfil the changing needs of society and to build new links between urban and rural areas. In the more urbanised areas particularly, the demand for new services like nature and landscape for recreation, education and care is increasing. But the authors acknowledge that while the need to combine agriculture with new services is recognised, in the Netherlands there is still much scepticism about their economic significance. Nevertheless, care farms can assist with the integration of clients into society, provide meaningful work leading to greater independence and social status. The emphasis is placed on the potential of clients rather than their limitations.

In the UK, care farms generally cater for more than one client group but, according to a survey by Hine et al., (2008) they most commonly work with people with learning difficulties (83% of care farms), disaffected young people (51%) and people with mental health needs (49%). Together, care farms cater for nearly 20 different client groups. The number of clients using a care farm varied from about 20 per week to as many as 200. Farm size varied from one acre to several hundred and the whole or part of the farm may be utilised. All care farms had some degree of farming (crops, livestock, woodland etc) combined with such ‘care’ services as health care, social rehabilitation or education or training (Hine et al 2008). Care Farming UK states that “care farming is the therapeutic use of farming practices”. Consequently they provide a supervised, structured programme of farming-related activities including animal husbandry, crop and vegetable production and woodland management. Often clients attend a care farm as part of a structured care, rehabilitation,
therapeutic or educational programme. The services are commissioned by agencies such as social services, health care trusts, community mental health teams, education authorities and probation services. Clients can also be self-referred as part of the direct payments scheme or be referred by family members (NCFI, 2010).

**Method**

Westgren and Zering (1989) suggest that case study research is well suited to the study of “…changing market structures and organisational forms in the agri-food sector”. According to Yin (2009, p18), “…a case study is an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-life context”. This study is “inductive” in nature as the case study methodology employed undertakes “exploratory” research into the phenomenon of the role of care farming within multifunctional agriculture. While there is no consensus regarding the procedure for conducting case study research it can be based on one case (Easton, 2010) provided a rigorous and systematic approach is adopted for conducting good research and generating sound theory (Westgren and Zering, 1998).

The case study was developed utilising several approaches. Data was collected by completion of two questionnaires. The first collected details about the farm and its enterprises coupled with information on when the care farming service commenced and the types of services offered. The main groups of people visiting the farm to use its facilities were investigated and basic details about the staffing of the service were collected. Evaluation methods, benefits to users and challenges and problems of offering care services were also investigated. The questionnaire concluded by asking the managers what their biggest successes were on the care farm and what makes care farming special for them. The second questionnaire looked at the marketing of the care farming services, activities available to users, funding and fees and future developments. A visit to the farm was made coupled with discussions with the managers and a content analysis of the web site.

**The Magdalen Project – A Case Study**

The Magdalen Project is an educational charity which provides a centre of learning for children and adults of all ages, abilities and backgrounds to explore sustainability, organic food production and ecological land management. Situated on the Somerset/Dorset border the residential centre can accommodate up to 36 people and is based round a 132 acre organic farm run by an environmental charity, ‘The Wessex Foundation’ and its Board of Trustees. Facilities include seminar and teaching rooms, a dining room, a roundhouse meeting facility built from straw bales and two tipis for school use, social events and parties. A Magdalen Project brochure states that “care farming combines care of people with care of the land, and seeks to develop people’s abilities and potential rather than focus on their limitations”. Client groups include school children, special needs (autistic and disabled children), people suffering with mental health problems (mainly adults and including older people with dementia), people suffering from depression, disaffected young people (including the homeless and unemployed) and individuals with a wide range of special needs. Day visits or residential courses of up to one week are offered from Key Stage 1 to ‘A’ level and including initial teacher training and ongoing CPD for Somerset and Devon LEAs. Holiday and leisure services include holiday clubs such as ‘survival in the wild’, ‘farmers in training’ and ‘muck and magic wildlife’ alongside birthday parties and practical
skills day courses. The conference facilities can be used for management training days, team building exercises, leadership coaching and for civil weddings.

The Magdalen Project seeks to inspire people to look at sustainability, organic food production and ecological land management. Triticale and oats are grown on the farm for animal feed. Beef cattle, pigs, sheep, a horse, goats and chickens demonstrate livestock farming. It aims to ‘walk the talk’, taking a holistic approach by integrating ideas about education and sustainability while supporting environmental best practice at all times. A biomass boiler provides hot water and heating and was installed with a grant from e-on UK. Voltaic cells generate 5KW of electricity (funded by DTi and SWEB Greenfund) and the organisation invests in green energy by buying power from Ecotricity. Other sustainable facilities include composting toilets, a reed bed sewage treatment system and in the future solar powered showers. The Magdalen Project provides a venue for therapeutic work and where outside activities such as fruit and vegetable growing, working with livestock and tree felling can be undertaken. Nature and wildlife courses are offered to a wide range of clients. The web site is seen as essential to effective marketing of the services offered. Little money is spent on marketing although a brochure for care farming has been produced and some cold calling of potential clients has taken place. Word of mouth has proven to be very effective in attracting new clients. Services are provided all year round although January and February are quiet.

The majority of the care farming activities are conducted outside. The covered areas including a barn are used for cooking and an egg room. There are poly tunnels for horticultural activities and an outdoor classroom. They have just purchased a 16 seater minibus with a full hydraulic tail-lift and have works commencing on a fully furnishes changing room, enabling doubly incontinent visitors and others comfortable and dignified toileting. Further capital works are planned to provide better paths, more covered areas, purpose built facilities for disabled clients, a demonstration kitchen and converting the farm house into a residential centre. Currently several bedrooms provide for clients with a range of disabilities. Respite holidays are offered to young carers. Eco learning sessions are offered to individual children with emotional and behavioural problems and hands-on activities for children excluded from school.

The care farming services provided improve physical health, social skills development, improved confidence and social integration. Specific mental health benefits for clients include increased self-esteem, improved mood, increased awareness and increased well-being.

Success is measured from the responses to feedback forms. A rigorous evaluation process is deemed essential in order to continue to provide a professional service. The number of return bookings is closely monitored coupled with periodic internal reviews and external debriefing with clients such as Mencap. The Magdalen Project tends to operate on a full cost recovery basis although there is an element of subsidy for certain services. Charges vary and are applied by the session or the day for individuals or groups of up to 30. The economic downturn has affected school groups and has slowed down the expansion of care farming services. Social services budgets and local authority money for child carers have been subject to cut backs. The farm is somewhat isolated which can limit the uptake of its services, although a minibus has just been purchased. While facilities need improving for those more profoundly in need the care farming service is seen to be beneficial for the
clients and rewarding for the providers. The providers are comfortable with providing ‘therapeutic’ services and getting an effective costings system in place and taking a professional attitude to care farming and other services has helped ensure the continuation of the project.

A variety of organisational and legal routes have been adopted by farmers when starting a care farm. Care farming is generally entrepreneur led, often by a member of the farming family. In the UK, until very recently, the health system has not encouraged private businesses to provide care through contracts with social services and as a consequence many UK care farmers have used social enterprise or charitable organisation models. The Magdalen Project is a charity and company limited by guarantee.

Discussion

Case study research is qualitative in nature. It tends not to produce findings that are definitive but rather it provides insight into complex subjects and direction for further research. By considering The Magdalen Project case study and comparing and contrasting it with the literature reviewed it is possible to deduce a number of insightful lessons regarding links between care farming and multifunctional agriculture. The eight key services identified by Hine et al., (2007) can be used to give an indication of the multifunctional nature of The Magdalen Project.

1. Farming services

The Magdalen Project consists of an organic farm and a range of buildings which serve a wide range of services including a care farm. Food, fibre and other primary products are produced from the farm operation and other land management (forestry). The care farming enterprise is an important part of the business which contributes to the financial sustainability of the organization but should not detract from the consideration of the broader provision.

2. Biodiversity

The organic farming system ensures the preservation of wildlife in the fields and in non-farmed habitats and care of the overall ecosystem of the farm.

3. Historic and heritage

While no scheduled monuments are present, the original farmhouse and buildings have either been or are in the process of being sympathetically converted.

4. Water services

Ponds, streams and a river flowing on the boundary of the farm are carefully managed to minimize the risk of pollution. Natural springs are also used on the farm.

5. Climate change mitigation

The use of a biomass boiler and voltaic cells are positive contributors to the issue of climate change. As a consequence carbon is saved by biomass-based renewable energy production.

6. Landscape character
The natural landscape of the farm has been preserved and enhanced with woodland, hedges, ponds and traditional farm buildings.

7 Leisure and recreation services

The farm has been developed to facilitate activities such as walking and playing in the rural landscape. A horse drawn chariot is being purchased to enable people with ambulatory disorders and the able bodied to travel around the entire farm.

8 Health services

This aspect concerns the mental and physical benefits to individuals arising from exposure to green places and engaging in physical activity. The perceived benefits of care farms have been split into three categories by Hine et al., (2008): those affecting physical health or physical attributes; mental health benefits; and social benefits.

The Magdalen Project provides an example of a farm which is extremely ‘care’ and ‘carer’ orientated with the farming element primarily developed to produce benefits for a range of clients rather than emphasising agricultural production and commercialisation. Physical benefits to clients include physical health improvement and the generation of farming skills. Improved self-esteem, well-being, and improved mood coupled with increased self confidence, calmness and trust in other people comprise the mental health benefits. Social benefits identified by Hine et al., (2008) and demonstrated by The Magdalen Project’s clients include greater independence, the development of social skills and personal responsibility and formation of the work habit.

Conclusion

The care farming activities link in well to the provision of multifunctional agriculture with the associated emphasis on environmental conservation, leisure and educational activities (Hassink and van Dyke, 2006). The farm is notable in its emphasis on the health and social values of activities associated with nature (Natural England, 2006). The provision of a care farm service within an overarching sustainable farming system provides for the enhancement of the multifunctionality of agriculture. The range of environmental and social goods and services is evident and links the clients with their many different needs with the land and its produce.

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