

COMBINING AGRICULTURAL PRODUCTION AND CARE FOR PERSONS WITH DISABILITIES: A NEW ROLE OF AGRICULTURE AND FARM ANIMALS

J. HASSINK

Wageningen University and Research Centrum – PRI, P.O. Box 16, 6700 AA Wageningen, The Netherlands, e-mail: j.hassink@plant.wag-ur.nl

Abstract

An increasing number of farmers in the Netherlands is combining commercial agricultural production with other functions such as landscape and nature conservation, and recreation. New and promising is the combination of agricultural production and providing care, occupational therapy and/or the development of occupational skills for persons with different kinds of disabilities. The number of farmers opting for this combination is increasing rapidly. Such sheltered agricultural workplaces, so-called sheltered farms, are good examples of the desired renewal of health care and agriculture. In a first -explorative study, farmers were interviewed to monitor the diversity of sheltered farms as these are developing. Farm animals were identified as one of the health-promoting factors on the farm. An interdisciplinary and interactive study was started to explore the possible contributions of farm animals to the quality of life of persons with disabilities. Although numerous studies have shown that animal contact can enhance the quality of life of persons with disabilities, the therapeutic potential of working with farm animals on the farm and the bottle-necks have generally been overlooked. The results of semi-structured interviews, field observations and independent discussion groups of farmers are presented and discussed, supplemented with data from the literature. The paper focuses on the diversity of farms combining agricultural production and social care, general characteristics of farm animals that are important for clients, differences in therapeutic qualities between different farm animals and activities, risks to animal welfare, and of zoonoses and accidents, consequences of the social care function for animal husbandry, the context of the farm and the role of the farmer and bottle-necks and potential to fully develop this new combination of functions.

Keywords: Social care farms - Therapeutic quality animals - Economics

Introduction

The further intensification and industrialisation of arable farming and livestock farming is under discussion in western Europe. Society demands farming systems which respect animal welfare and which are ecologically, economically and socially sustainable (Wijffels, 2001). An increasing number of farmers sees no future in further intensification and opt for new activities such as landscape and nature conservation, energy production, and recreation. They try to fulfil the changing needs of society and consumers and to restore and build new links between rural and urban areas. The combination of agricultural production and social care is a new and -promising combination of functions. These sheltered farms provide concrete examples of the desired renewal of the health care and rehabilitation sector such as integration of clients into society, providing meaningful work leading to greater independence and social status, taking the potentials of clients as starting point instead of their limitations. The combination of agriculture and social care contributes to the diversification of agricultural production, provides new sources of income and employment for farmers and the rural area,

reintegrates agriculture into society and has a positive impact on the image of agriculture (Driest, 1997; Omslag, 1997; Hassink, 2001).

The number of farms in the Netherlands where commercial agricultural production is combined with care, occupational therapy and/or development of occupational skills has increased rapidly from 50 in 1998 to almost 300 in 2001 (Landelijk Steunpunt, 2001). Among the sheltered farms are arable farms, horticultural holdings, livestock farms (cattle, pigs and sheep) and mixed farms. They vary in size and activities. Some of the farms have a shop where their products are sold, or a campsite. The percentage of farms with mixed and ecological farming is relatively high. A few years ago, most sheltered farms were part of a health institution. In recent years the number of independent sheltered farms with an agricultural background have grown so fast that they are outnumbering the institutional farms (Landelijk Steunpunt, 2001). Sheltered farms are used by different groups such as adults with mental, psychiatric/psychosocial and physical disabilities, children and young people with significant emotional, behavioural, and academic difficulties, young people with a drug history or long unemployment. General experience is that the natural rhythm of farm life, physical work, being part of a small society, and the contacts with plants, animals and basic life processes have a healing effect

Numerous recent studies have shown that animal contact can enhance physical and mental health of persons with different kinds of disabilities. Almost all studies concerned contacts with pets in institutional or non-institutional programmes, service animals (dogs) for people in a home setting and horseback riding-(equine) programmes (Delta Society, 1999; Beck, 2000). The therapeutic implications of working with farm animals and the environment of the farm have, generally, been overlooked.

The conclusion of the few explorative studies that documented the experiences of residential treatment centres that utilise farm animals (Ross, 1992; Mallon, 1994) was that, given the positive outcomes, the utilisation of farm animals as co-therapists deserves a closer look by professionals.

This paper explores the characteristics and diversity of sheltered farms in the Netherlands and the impact of farm animals on the quality of life of clients.

Methodology to collect data

A project to characterise the diversity and economic potentials of sheltered farms was started in 1999. Fifteen farmers running different types of sheltered farms were interviewed. The interviewees differed in number of clients, target group, agricultural activity, and the extent to which the farm has been adapted to the clients. Information on farm characteristics, numbers and characteristics of the clients, activities performed, the way in which agriculture and care are combined, and farm economic data were collected.

A project was started in early 2001 to explore the so called social care function of farm animals for persons with disabilities. Farmers' unions, the Dutch animal welfare association, health institutions, and researchers collaborated intensively to combine and reach interaction between experiences and views of very different stakeholders. The first goal of the project was to collect experiences and views of farmers and farm employees working with clients and farm animals and professionals linked with these farms (e.g. psychiatrists). We conducted 20 semi structured interviews of approximately two hours. We focussed on farms with long-term experience with the interaction between farm animals and clients. We confined ourselves to the following target groups: adults with mental or psychiatric/psychosocial disabilities and children with mental, emotional, behavioural and academic difficulties. The interviews focussed on:

- general characteristics of farm animals that are important for clients,

- differences in characteristics and therapeutic qualities between different farm animals and activities related to farm animals,
- consequences of the social care activities for animal welfare and risks of zoonoses
- bottle-necks that prevent professionalisation and expansion of farms and farm animals as therapeutic instruments.

Field observations supplemented the interviews. The findings were discussed by independent groups of farmers experienced in interactions between clients and farm animals/farm life.

Results of the studies

1. Ratio between agriculture and care

Sheltered farms vary in the way agriculture and care are combined. There is a continuum with farms focussing on efficient agricultural production and a relatively low number of clients and income from the social care task (Table 1; agriculture-oriented farms). On such farms one to three clients, who can work relatively independently, assist the farmer with minor activities, or clients with more severe disabilities participate in new (non-commercial) activities that are started especially for them. At the other side of the spectrum are farms where efficient agricultural production is of minor importance while focussing on providing care (care-oriented farms). On these farms, the number of clients is generally high (more than ten) and they often need more support and guidance; farms have been adapted in such a way that clients are able to perform a great variety of activities. Examples of adaptations are: widening stable corridors, hardening paths outdoors (for clients with wheelchairs), building of a small greenhouse to diversify the activities in wintertime or under bad weather conditions, extending the type of animals, the building of a canteen and sanitary facilities. External experts are employed to assist the farmer (and his/her partner) in guiding the clients.

On other farms social care and efficient agricultural production are of more or less equal importance (intermediate farms). Some farmers opt to integrate commercial agricultural production and social care only to a limited extent; in these cases the farmer is usually responsible for the commercial agricultural activities while the farmer's wife (with a background in social care) guides the clients. The activities of the clients are not really part of the commercial agricultural enterprise. Clients can take care of small animals (chickens, rabbits, ponies) that are kept in a non-commercial way. The number of clients is usually not more than six. Other farmers take up the challenge to really integrate social care and agricultural production in such a way that clients can participate in the production part of the farm, without frustrating the efficiency of agricultural production. This requires a lot of courage and adaptations of the production system. Some farmers change from cows to goats because they are easier to handle for the clients, or they change the stables in such a way that clients can feed the cows, pigs or chickens. This is only possible for farms that are not highly mechanised. The number of clients generally ranges from seven to fifteen.

Almost all sheltered farms are non-residential and clients visit the farms only during the day. The goals of the clients can be very different, and range from the fulfilment of a pleasant day activity, to therapy, to acquiring skills to reintegrate into the labour market.

2. Farm economics

Investments and costs: The investments required to set up social care activities on a farm varies considerably between different farm types. It ranges from 5.000 Euro on agriculture-oriented farms to 60.000 Euro on care-oriented farms (Table 1). The largest costs involve building a canteen, sanitary facilities, adaptations of the farm and starting up new activities. The amount of time the farmer's family spends to guide the clients and for administration and consultations with the health institution and representatives of the clients ranges from

approximately 17 hours per week on the agriculture-oriented farms to 56 hours per week on care-oriented farms. This corresponds with 10.000 and 40.000 Euro annually, based on 45 weeks per year and assuming a compensation of 14 Euro per hour. On agriculture-oriented farms, the additional costs are relatively low. When more than about six clients are present on the farm, external experts are employed to guide the clients. Employment of external experts is the largest source of costs. On care-oriented farms with 15 clients, the costs of two external experts are approximately 64.000 Euro per year.

Income: The income of the social care activities consists of a compensation for the time spent by the farmer and for the facilities. In most cases, the health institution that places a client on the farm compensates for the time and facilities. Based on the interviews, such compensations ranges from 23 Euro per day on agriculture-oriented farms, 32 Euro per day on intermediate farms and 36 Euro per day on care-oriented farms. There is, however, a large diversity between individual farms. There is no clear relation between the intensity of guidance and compensation paid; in most cases it is the result of negotiations between farmer and health institution. The interest of the institution to co-operate with a farmer determines the level of compensation. The potential income generated ranges from 15.000 Euro per year on agriculture-oriented farms to 120.000 Euro per year on care-oriented farms. The contribution of the clients to the production on the farm is relatively low.

Farm care income especially depends on the compensation paid by health institutions; this income of the social care activities can form a substantial part of the family income. On the care-oriented farms, the income originates entirely from the social care activities.

Table 1. Characteristics of agriculture-oriented, intermediate and care-oriented farms.

	Agriculture-oriented	Intermediate		Care-oriented
		----- Not integrated	Integrated	
<u>General characteristics</u>				
Number of clients	3	6	15	15
<u>Financial aspects (in 1000 Euro)</u>				
Investments	5	34	60	60
<i>Annual Costs (Euro/year)</i>				
Labour by farmer	10	26	40	40
External experts	0	0	64	64
Other costs	3	11	30	33
Total costs	13	37	134	137
<i>Annual Income</i>				
Potential compensation received by farmer	15	43	107	120
Production by clients	3	4	20	7
Total income	18	47	127	127
Balance	+ 5	+10	-7	-10

3. Possible contribution of farm animals to the quality of life of persons with disabilities

All farmers mention that the effective aspect of the use of farm animals should be sought first. Their experience is that the farm and its animals are only effective when a bond is formed between client and animal. They observe that clients do not only form a bond with dogs or cats, but also with horses, cows, pigs, sheep, goats or chickens. The farmer creates the conditions under which the bond is formed. Each person needs safety and challenge. Many clients have lost their trust in other human beings. This may result in aggressive, passive or distrustful behaviour. Experience is that farm animals have no hidden agenda, are honest, take you as you are, welcome you and need care. This offers a safe environment that can cause a breakthrough in behaviour. Other clients need challenges to tempt them out of their withdrawn attitude. The value of the farm environment and farm animals is that they offer a great variety in characteristics of animals and in activities and that clients experience basic elements of life.

The context of the farm

Working with animals on a farm is completely different from working with animals in a hospital or institution. Clients experience the rhythm, the seasons, the bond between the farmer and his farm, animals, land and stables. Many farmers recognise the importance of not being part of the rules, atmosphere and authority structure of the health institution. This permits clients to see the farm as a part of normal life. The farmer is seen as an expert in animal husbandry and has a different role than a therapist. The result is that in many cases clients do not show their typical “institution behaviour”. The farmer is seen as a figure-head by many clients; he is the person that can manage all animals. The enthusiasm and knowledge of the farmer are his instruments to interest clients and are a condition to create a bond between client and animal. The farm is also a place full of life, activity and vitality; this is attractive to people.

The interviewed farmers stress that there is a difference between a production farm and a farm where animals are kept as a hobby. On a hobby farm, work has less obligations. On a production farm, clients are more expected to take their responsibility; the work has to be done. Clients experience the need for a good quantitative and qualitative production of milk, cheese or eggs. They feel that animals must be treated properly to meet production goals.

Specific qualities of working with (farm) animals

The interviewed farmers indicated a large number of specific qualities of animals. They can be divided into three groups.

Aspects related to safety and appeal to caring

- animals address one’s feelings; they behave like human beings
- animals can offer comfort, safety and warmth
- it is safe to talk to animals as they have no hidden agenda, they do not gossip
- animals appeal to one’s sense of responsibility; when an animal is hungry it will let you know
- animals invite you to take care of them; the result is that clients are less focussed on their own problems and are stimulated to take care of themselves
- activities with farm animals give a solid structure to the day

Aspects related to offering challenges

- animals can address one’s courage; it takes courage to work with a cow or a horse
- most activities on a farm simply have to be done, this can be a good motivator to become active

- animals can do unexpected things; clients have to deal with this and they must react

Aspects related to basis elements of life

- animals make life processes visible; sexuality, birth and death, order in the group, etc
- animals are part of every-day life; they offer relaxation and starting point for conversation
- animals stimulate all the senses; they make noise, have a special smell, they move and each animal feels differently

Differences between animals and the associated activities

The farmers indicated how clients experience the different animal species and which activities the clients can perform. The most striking characteristics of the animals and the activities performed are the following:

Cow

Characteristics: large animal, warm, kind-hearted, dreamy atmosphere; a cow makes you calm and brings you in contact with your emotional life

Activities: milking, feeding and brushing, cleaning the cowshed, producing butter, yoghurt, cheese; the activities are diverse: from intimate brushing to physically heavy work of cleaning the cowshed and conscientious work of cheese making

Horse

Characteristics: large versatile animal, can form a close bond with a client

Activities: brushing, cleaning the stable, riding, driving; the experience to ride or drive this large animal can be impressive and give feelings of pride and freedom

Pig

Characteristics: cheerful, roguish animal, focussed on food

Activities: many structured activities such as feeding, cleaning the feeding corridor, moving the pigs from one sty to another

Goat

Characteristics: curious animal, focussed on clients, strokeable, but also wilful, jumpy and unpredictable

Activities: feeding, milking, cleaning the stable, making cheese, butter etc

Sheep

Characteristics: vulnerable, not very caressable, lambs in spring are attractive

Activities: in spring: constructing maternity pens, feeding and taking care of the sheep in separate pens; during the rest of the year: not many activities; in autumn sheep shearing

Chicken

Characteristics: give a cosy farm atmosphere, nice to watch, part of a group, keeps distance to the clients

Activities: feeding, collecting and cleaning the eggs; in general the activities are subtle, they stimulate the power of observation

Examples of goals of clients and matching activities with farm animals

Farmers find that it is in most cases not possible to say in advance which animal and activity is most attractive to a client; they were able, however, to indicate a huge diversity of potential effects of different activities with animals. Some examples of goals (in bold) and corresponding activities are:

Developing confidence, overcoming fear, experiencing a bond and intimacy

Caressing, hugging and taking care of small animals (calf, lam) and pony or horse for clients with more courage

Providing rest

Brushing cows

Diminishing overactivity

Brushing cows, or activities that demand a lot of physical efforts such as stable cleaning, repairing the fence or riding a lazy horse

Increasing firmness, learning to steer your life

Riding a wheelbarrow, leading cows, sheep or goats to another field, moving pigs, riding or driving a horse; activities where you take the steer in your hands and/or raise your voice to make the animals listen

Broadening contacts

Becoming member of a pony or horse riding club, a breeding club, showing guests around and explaining activities, selling of products

Consequences of the social care task for animal husbandry

Social care activities have consequences for the way animals are handled and housed. In order to ensure safety for the clients, the animals must be reliable and manageable. The experience of the farmers is that considerable time should be invested to accustom young animals to contact with human beings. Calves and foals that are insufficiently handled when they are young, are often too wild for clients when they are grown up. This is in correspondence with experimental data (Krohn et al., 2001).

There is little knowledge among farmers which breeds are to be preferred for the social care function. Some farmers mentioned that Lakenvelders cows have a calm character and are relatively easy to manage for clients. It has been observed that Jerseys and Ayrshires have a nervous and reactive nature (Briggs and Briggs, 1980). Jerseys, on the other hand, are small and therefore easier to handle than Friesian Holstein cows.

To realise sufficient and safe contact between animal and client, the accommodation has to meet certain standards. Important aspects are wide and hardened corridors (especially for clients with wheelchairs), stables where cows and horses can be fastened and clients can brush them and have one-to-one contact without the risk of accidents.

Animal welfare

The strong focus on efficient production in intensive animal husbandry has resulted in production methods in which animal wellbeing has been neglected (De Jonge and Goewie, 2000). Sheltered farms form a good starting point for a structural improvement of animal welfare; these farmers choose not to further intensify their farm, but to start new activities. There is less focus on reaching a high production level, and the animals are kept in a

relatively extensive way on most sheltered farms. In addition, there generally is more interest in social behaviour of the animal and the group on sheltered farms than on conventional farms as the interactions are used to educate clients.

The attitude on sheltered farms is that attention and optimum welfare for clients can only exist when the wellbeing of farm animals is also guaranteed.

Adding another function to farm animals also has a risk, however. There is a risk that optimising the wellbeing of clients may negatively affect the wellbeing of farm animals. More intensive contacts with human beings may have negative consequences for animal welfare, especially when animals are not used to this. Moreover, aggressive clients may harm the animals. Experience learns that clients who are aggressive towards human beings, are rarely aggressive towards animals. The farmers mention, however, that they are very reserved to let a client alone with an animal. Negative behaviour of a client towards an animal is always corrected. The farmers mentioned that it is important that animals already become accustomed to intensive contact with humans when they are growing up. They recognise that attitude, personality and temperament of the farmer are crucial for the well-being of the animals. The experience of the farmers is that animals can also benefit from more intensive contacts with human beings. In their view, farm animals can enjoy the bond with clients and farmer. This corresponds with data from the literature where it was shown that a positive attitude of the farmer leads to fewer negative interactions between animals and results in higher production (Hemsworth et. al., 1993).

Some farmers mentioned conflicts between the wish to intensify contacts between clients and animals and the wish to provide animals with more space. To realise one-to-one contact, animals should be fastened parts of the day. Farmers are searching for housing systems allowing optimum animal welfare and sufficient animal-client contact.

Farmers welcome more knowledge about the specific needs and specific behaviour of different kinds of farm animals and differences in behaviour between different breeds and the effects of socialisation on behaviour.

Risks of zoonoses

More intensive contacts between farm animals and human beings are expected to increase the risks of zoonoses. The interviews, however, showed that zoonoses is not a problem on sheltered farms. Farmers stress the importance of hygiene, veterinary control and the prevention of parasites and worms. Ring scabies of cows is the most commonly registered disease to watch. Farmers make sure that clients do not get into contact with animals with ring scabies.

Bottlenecks in the professionalisation of sheltered farms and the use of farm animals in therapy

The farmers mentioned many bottlenecks that hinder professionalisation. The most important ones are presented below.

- ✓ There are no data to underpin the value of sheltered farms and the use of farm animals in health care. There is no educational programme where workers from the agricultural and health care sector are taught how to make efficient use of farms and farm animals to meet the demands of clients, while respecting the specific needs of different farm animals to guarantee optimal animal welfare.
- ✓ On most farms, only the farmer has sufficient knowledge of animal husbandry. This is a vulnerable situation, especially on farms with a larger number of clients. The farmer has to divide his attention between animals and clients. This is often too much for one person and it may affect the quality of animal husbandry and care.

- ✓ Most health institutions have no clear picture of the possibilities and potential advantages of a farm for their clients. In situations in which the farm is part of a health institution, other workers have no clear picture of what is taking place on the farm and they have no knowledge of the potential impact of the farm on the clients. The farm is not part of the treatment plans of the clients and the farm is not considered as part of a therapeutic process.
- ✓ There is hardly any exchange of knowledge, experience and views between different farms that combine agricultural production and care. There is no contact at all between the care-oriented farms (that are often part of a health institution) and agriculture-oriented farms.

The lack of knowledge, education possibilities and exchange obstructs the professionalisation of the combination of agriculture and care and rehabilitation. Increased knowledge, education and exchange is essential to gain an accepted position in the health care system and allocate sufficient financial support.

4. Necessary action

The different stakeholders in the field of agriculture and care are convinced that further stimulation of this promising development is crucial. Stimulation could take place along the following lines:

- Combined promotion of the interests of farmers who run sheltered farms. This line has been taken up. A national society of farmers who run sheltered farms has been formed, and the ministries of agriculture and welfare are financing a National Support Committee for Agriculture and Care.
- Promoting the exchange between farmers who run sheltered farms and between the sectors agriculture and care. This is one of the missions of the National Support Committee for Agriculture and Care.
- Generating data and knowledge to underpin and prove the value of sheltered farms and identify healing factors for different groups of clients. Researchers have initiated some explorative projects as described in this paper. A co-ordinated interdisciplinary and interactive research effort is needed.
- Education to train farmers, health care workers and students from the agricultural and health care sector. Interdisciplinary education with attention for agriculture (horticulture, animal husbandry, animal welfare etc), health care, reintegration, combining agriculture and care, economics etc is required. Introductory courses for farmers have started. However, until now, the curricula of the health care sector contain no attention for sheltered farms or the use of animals in therapy.
- Support from policy makers. Farmers who run sheltered farms face many practical problems like difficulties to get funding and obstructing legislation (e.g. legislation to prevent diseases, tax legislation). This can only be solved at national level. At the regional level, funds are generated to support sheltered farms and to promote the interaction between the agricultural and the health care sector.

References

- BECK AM. 2000. The use of animals to benefit humans: Animal-assisted therapy. In: A. Fine (Ed.) *Handbook on animal assisted therapy; theoretical foundations and guidelines for practice*. Academic Press. San Francisco, pp. 21-40.
- BRIGGS HM, BRIGGS DM. 1980. *Modern breeds of livestock*. Fourth edition. Collier-Macmillan Publishers, London.

- DE JONGE FH, GOEWIE EA. 2000. *In the interest of the animal. About animal welfare in animal husbandry*. Van Gorcum, Rathenau Instituut. Den Haag. (in Dutch)
- DELTA SOCIETY. 1999. *Health benefits of animals*. Delta Society, Renton WA.
- DRIEST P. 1997. *Sheltered farms, an introduction*. NIZW. Utrecht. (in Dutch)
- HASSINK J. 2001. Creation of social policy with sheltered farms. *Zorg en Welzijn* januari 2001. P. 21. (in Dutch).
- HEMSWORTH PH, BARNETT JL, COLEMAN GJ. 1993. The human-animal relationship in agriculture and its consequences for the animal. *Animal Welfare* 2, 33-51.
- KROHN CC, JAGO JG, BOIVIN X. 2001. The effect of early handling on the socialisation of young calves to humans. *Applied Animal Behaviour Science* 74: 121-133.
- LANDELIJK STEUNPUNT. 2001. *Inventory of sheltered farms*. Landelijk Steunpunt, De Glindt (www.landbouw-zorg.nl) (in Dutch).
- MALLON GP. 1994. Cow as co-therapist: Utilization of farm animals as therapeutic aides with children in residential treatment. *Child and Adolescent Social Work Journal* 11(8): 455-474.
- OMSLAG. 1997. *The meeting of agriculture and care*. Omslag, Zutphen. (in Dutch).
- ROSS SB. 1992. The residential farm school approach. In B.T. Engel (Ed.), *Therapeutic riding programs: Instruction and rehabilitation*. Durango, CO: Barbara Engel Therapy Services p. 517-519.
- WIJFFELS HHF. 2001. *Future of animal husbandry, agenda for reshaping the sector*. Commission Wijffels, Ministry of Agriculture, Nature Management and Fisheries. Den Haag. (in Dutch).