Current status and potential of care farms in the Netherlands

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Abstract

Surveys among care farmers and data from the National Agricultural Census were analysed to describe the care-farming sector in the Netherlands. The number of care farms increased from 75 in 1998 to 591 in 2005. Care farming is the fastest growing sector of multifunctional agriculture. In 2005, nearly 10,000 clients made use of care farms, of which 8000 used non-institutional care farms. The main client groups were mentally challenged clients, psychiatric clients, autistic persons, elderly people and youths. The average annual revenue of care activities on a non-institutional care farm was about € 73,000, which amounts to annual revenues of € 37.1 million for the total Dutch non-institutional care-farming sector. The annual revenue for care activities was considerably higher than for other extended activities. Care farming resulted in 473 additional jobs in 2005. The prospects of care farming are positive and the growth in number of care farms is expected to continue.

Additional keywords: client groups, labour, multifunctional agriculture, revenues, social services

Introduction

Multifunctional agriculture

Since the 1960s there is a growing awareness of conventional farming ignoring or neglecting basic functions of the rural area. Although the primary role of agriculture is to produce food and fibre, many other functions are important as well (Vereijken, 2002; Boody *et al.*, 2005).

An increasing number of farmers try to fulfil the changing needs of society and to build new links between rural and urban areas. Especially in the more urbanized regions of the Netherlands the demand for new services like nature and landscape for recreation, education and care is increasing. Although the need to combine agriculture

with new services is recognized, in the Netherlands there still is a lot of scepticism about the economic significance of these new activities. According to a recent study the annual revenue of all extended activities was only € 119–154 million, less than 1% of the production value of primary agriculture and horticulture (Berkhout & Van Bruchem, 2004; Voskuilen *et al.*, 2006).

Care farming

The utilization of agricultural farms as a basis for promoting human mental and physical health and social well-being is an interesting example of multifunctional farming. There are different terminologies for the combination of agricultural production and care, such as green care, care farms, social farming and farming for health (Hassink & Van Dijk, 2006). In this paper we shall use the term *care farm*. Care farms are used by different groups of clients, such as people with mental challenges, psychiatric patients, people with learning disabilities, people with a drug history, problem youths, people with burn-out, elderly people, and social service clients (Hassink, 2003; Elings & Hassink, 2006; Hassink & Van Dijk, 2006). Care 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 clients' potentials as a starting point rather than their limitations (Driest, 1997). Between 1998 and 2005 the number of care farms in the Netherlands increased from 75 to 591 (Elings & Hassink, 2006; Table 1).

One of the main problems care farmers are facing is finding adequate financing for the care services they provide (Ketelaars *et al.*, 2002). Many care farmers are not recognized as official care institutions and depend for the payment of care services on the willingness and collaboration of care institutions. A positive development was the introduction of the personal budgets of clients (PGB). The PGB was introduced to diversify the supply of care and to shorten waiting lists. With this PGB the client or the client's representatives can contract a care farm directly without interference from a care institution. This budget has become popular in recent years. In addition, it has become easier for care farms to receive an AWBZ (Exceptional Medical Expenses Act) accreditation. AWBZ is the general insurance for special medical costs, and care farms with an AWBZ accreditation have the formal status of a care institution.

Recently, the European Community of Practice 'Farming for Health' was initiated. Its aim is to exchange experience, scientific results and views related to care farming. One of the conclusions of its first workshop in Wageningen in 2005 was that the number of multifunctional farms offering care services is increasing rapidly in many European countries (Hassink & Van Dijk, 2006). The positive experiences seem to be similar in different countries: working on the farm contributes to self-esteem, social skills, rehabilitation, inclusion, responsibility, physical health and sense of purpose (Lenhard *et al.*, 1997; Ketelaars *et al.*, 2002; Hassink & Ketelaars, 2003; Hassink, 2006; Hassink & Van Dijk, 2006).

Important qualities of care farms are space, quietness, useful work, diverse activities, caring activities, working with plants and animals, and the protective and caring environment of the farmer's family and the social community. It is argued that

Table 1. Numbers and percentages (in brackets) of types of care farms according to their relation with care institutions, in the period 1998–2005[1]. <http://www.landbouwzorg.nl>

Type of care farm	1998	2000	2001	2003	2004	2005
Care farm is part of a care institution or day activity centre	24 (32)	64 (30)	77 (24)	82 (22)	86 (20)	78 (13)
Care farm with AWBZ[2] accreditation	12 (16)	15 (7)	16 (5)	18 (5)	21 (5)	39 (7)
Care farm in co-operation with a care institution	14 (19)	72 (34)	145 (45)	145 (39)	145 (34)	192 (32)
Independent care farm with compensation through PGB[3]	12 (16)	48 (22)	45 (14)	67 (18)	103 (24)	217 (37)
Care farms that receive no compensation	n.a.[4]	n.a.	26 (8)	30 (8)	24 (6)	26 (4)
Other types of care farm	n.a.	n.a.	14 (4)	31 (8)	15 (3)	15 (3)
Unknown	13 (17)	15 (7)	0	0	38 (9)	24 (4)
Total number of care farms	75	214	323	372	432	591

1 No surveys were done in 1999 and 2002.

2 AWBZ = acronym for Dutch national insurance against risks not covered by personal health insurance.

3 PGB = acronym for individually assigned budget enabling person to 'buy' care, help and supervision.

4 n.a. = not available.

the combination of agriculture and 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; Van Schaik, 1997; Hassink, 2001; Hassink & Van Dijk, 2006).

At the same time there are large differences among care farms: differences in activities and goals, financing structures, balance between care and agricultural production, and in target groups (Ketelaars *et al.*, 2002; Hassink & Van Dijk, 2006).

This paper aims to describe the care-farming sector in the Netherlands, and its prospects.

Methodology

Data from the following sources were used to obtain a good picture of the development and present status of care farms in the Netherlands: (1) the National Support Centre for Agriculture and Care, and (2) the National Agricultural Census (Anon., 2003).

National Support Centre for Agriculture and Care

In 1998 and 2000, the National Support Centre for Agriculture and Care carried out a survey among all care farms. Since then all care farms are contacted annually to update

the information. From each farm the following data are being collected:
• Activities offered;
• Production method (conventional, organic);
• Target groups that are welcome;
• Connections with health institutions and financing structures.
In 2005, the National Support Centre carried out a more detailed survey amongst all care farmers of which the Support Centre had an e-mail address. The survey included 407 out of the 591 care farms existing in 2005. The following data were collected:
• Functions offered to clients;
• Number of clients from different target groups present;
• Number of days per week that care is provided;
• Number of hours spent on agricultural and care activities by farmer or co-workers;
• Proportion of family income related to agriculture and care activities;
• Financing structure and income per client per day per financing structure.
Of the 407 questionnaires that were distributed, 176 were returned, a response of 43.2%. It was assumed that the results of the survey are representative of all Dutch care farms. This is supported by unpublished results of the National Support Centre, showing that the average number of clients per care farm in 2004 was 18.0, which is more or less similar to the number of 16.8 in the 2005 survey (Table 6). The total number of clients present on care farms in the Netherlands was calculated by multiplying the average number of clients per farm for the 176 farms surveyed by 591, i.e., by the total number of care farms that existed in 2005.

The payment generated by the care activities was calculated by multiplying the number of days that care is provided by the payment per client per day. The average of the payment per financing structure was used. Of the 176 care farms, 14 were classified as institutional care farms. In these cases the respondent was employed by a care institution, and the care farm had an AWBZ accreditation. The numbers of clients on institutional and non-institutional care farms were calculated assuming that (1) the 14 classified institutional care farms were representative of all institutional care farms, and (2) 4% of the total number of care farms are institutional care farms according to the data of the National Support Centre for Agriculture and Care (Table 1).

National Agricultural Census

In the National Agricultural Census of 2003 (Anon., 2003) farmers were asked whether they performed extended activities like care. The 363 care farms with a production size larger than 3 DSU (Dutch Size Unit) were compared with conventional farms larger than 3 DSU but without extended activities. The DSU is a unit for economic size based on standard gross margin. The value of one DSU is defined as a fixed number of euros, which at present is € 1400. Care farms and farms without extended activities were compared in terms of the following aspects:
• Farm area (in hectares) and economic size (in DSU);
• Production method (conventional or organic);
• Number of employees;
• Age of youngest farm holder and percentage of farm holders with a successor.

Statistical analysis

Differences between care farms and farms without extended activities were analysed separately for each type of holding, using the Mann-Whitney U test. In view of the very skew distributions of farm area and economic size, these data are presented as medians. For number of employees and age of youngest farmer, the averages are used.

Results

Number and diversity of care farms

Between 1998 and 2005 the number of care farms in the Netherlands increased from 75 to 591 (Table 1)

According to the National Agricultural Census of 2003, 363 farmers had a care farm, which is about 0.4% of all farms. This number is almost similar to the number of care farms in the survey of 2003 of the National Support Centre Agriculture and Care. Most care farms were dairy farms or other types of grassland-based farms. Care farming was most common among goat and sheep farms and least common amongst arable farms (Table 2).

Almost 70% of the care farms in 2003 had types of extended activities other than care (Table 3). Recreation, processing and selling products were most popular. These additional activities were most popular among the other grassland-based farms and horticultural farms, and least popular amongst intensive livestock farms. About 30% of the care farms had more than one additional activity.

Table 2. Care farms by main type of holding. Source: National Agricultural Census (Anon., 2003).

Type of holding	Care farms[I]	
	Number	Percentage
Arable farms	25	0.2
Horticultural farms	67	0.4
Dairy farms	109	0.5
Goat or sheep farms	13	1.9
Other grassland-based farms	96	0.5
Intensive livestock farms	30	0.4
Mixed farms	23	0.6
Total	363	0.4

[I] Farms larger than 3 DSU (Dutch Size Unit). For explanation see text.

Table 3. Percentages of care farms with extended activities. Source: National Agricultural Census (Anon., 2003).

Type of holding	Extended activities					
	Several	Recreation	Processing or selling products	Nature conservation	Caravan storage	Contracting
	(%)					
Arable farms	60	28	32	12	20	12
Horticultural farms	72	25	55	6	6	4
Dairy farms	68	28	18	35	6	8
Goat or sheep farms	62	31	46	15	15	0
Other grassland-based farms	79	39	29	39	36	7
Intensive livestock farms	37	20	10	7	7	3
Mixed farms	65	30	52	13	9	4
Overall	68	30	31	25	16	7

Organization and financing

Care farms operated in different constructions. The National Support Centre Agriculture and Care distinguishes six types of care farms: (1) care farms that are part of a care institution, (2) independent care farms with an AWBZ accreditation, (3) independent care farms that co-operate with a care institution, (4) independent care farms that make primarily use of personal budgets of clients (PGB), (5) care farms that receive no compensation for their services, and (6) different types of care farms, e.g. farms that make use of reintegration budgets of municipalities (Table 1). A relatively small number of care farms are part of a care institution; the percentage of this type of care farm is decreasing (Table 1). About one third is classified as care farm with a formal co-operation with a care institution. The care institution pays the farmer for the care activities and the farmer in turn has to negotiate financing with the care institution. Another one third of the farms receives mainly clients with a personal budget. A growing number of independent care farms have an AWBZ accreditation. The percentage of care farms receiving no compensation is decreasing.

The results from the 2005 survey show that most care farms used several sources of funding for their care activities. More than 60% of the care farms had a contract with a care institution; almost 60% had one or more clients with a personal budget; 20% had clients paid by the AWBZ, and more than 20% had one or more clients that were not financed (Table 4).

The average number of clients paid by the AWBZ was generally higher than the number paid by other financing structures. The average payment per client per day was higher for PGB (€ 77) than for AWBZ or for contracts with care institutions (about € 50), but the differences were not statistically significant ($P < 0.05$).

Table 4. Percentages of care farms with revenues from different financing sources, average number of clients making use of a farm financed by the different financing sources, and average daily revenues from the different financing sources. Reference year 2005.

Source of income	Care farms using this source (%)	Average number of clients [1] paid by this source	Average daily revenue per client (€)
AWBZ[2]	20.8	16.7	55 (15)[3]
PGB[2]	59.5	5.3	77 (67)
Contract with institution per client	45.8	5.9	47 (57)
Fixed contract with institution	16.7	8.6	50 (1)
Reintegration budget	6.5	4.0	57 (5)
Budget client	7.1	9.5	56 (8)
Other form of financing	14.3	5.6	80 (8)
No financial support	23.2	4.4	0 (40)

[1] Average per care farm.

[2] For explanation see footnote Table 1.

[3] Numbers in brackets: number of responses.

Number of clients

The 2005 survey provided data on the number of clients from different target groups that made use of a care farm. The total number of clients that made use of the 169 responding farms at the time of the survey was 2834. This corresponds to nearly 10,000 clients making use of the 591 Dutch care farms (Table 5). Care farms received a great diversity of target groups of which mentally challenged people and people with psychiatric problems were the main ones.

The total number of clients that made use of non-institutional care farms (86% of the total number of care farms) was about 8000 (Table 5). Institutional care farms were generally more care-oriented than non-institutional ones. The number of clients and the number of days care was provided per week was higher on institutional care farms (Table 6). Most care farms combined different target groups. The percentage of care farms combining different target groups was lower on institutional than on non-institutional care farms.

The percentage of income derived from agriculture was considerably lower on institutional than on non-institutional care farms. Unfortunately, not all respondents reported complete and consistent data on the average income per client per day. The annual revenues of the care activities could be calculated for 57 care farms, which were all non-institutional care farms. Annual revenues ranged from € 0 to € 435,000 with

Table 5. Number of clients per target group that make use of a care farm. Reference year 2005.

Target group	Clients		No of care farms	No of clients on non-institutional care farms
	Number	% of total		
Mentally challenged	3700	37	452	2953
Physically challenged	398	3	138	321
On psychiatric demand	1322	13	221	1029
(Ex) addicts	262	3	80	220
Autistic persons	898	9	217	760
Children	388	4	43	364
Youths	587	6	87	370
Elderly	654	7	64	587
Elderly with dementia	220	2	50	106
Long-term unemployed	230	2	50	128
Persons with burn-out	109	1	39	95
Persons with brain injury	102	1	53	79
People with learning difficulties requiring special education	493	5	157	393
(Ex) prisoners	73	1	11	7
Others	472	5	64	442
Total	9908	100		7954

Table 6. Some characteristics of care farms, and non-institutional compared with institutional care farms. Reference year 2005.

Characteristic	All care farms	Non-institutional care farms	Instititutional care farms
Average number of clients per week	16.8	15.6	29.1
% care farms with one client group	28	27	36
Number of days care provided per week[1]	26.9	24.0	77.9
% care farms where revenues from agriculture < 20%	26	20	76
Average annual revenue per care farm[2] (× € 1000)		73.0	221.3

[1] Number of clients receiving care per week × number of days per week each client is present on the farm. For example: a farm with 3 clients who receive care for 2 days per week each, corresponds with 6 days care per week.

[2] From care activities.

an average of € 73,028 (Table 6). This amounted to € 37.1 million annual revenue for all non-institutional care farms, € 32 million of which was attributed to the supply of daytime occupation and work training and € 5.1 million to offering 24-hour services.

Assuming that the 83 institutional care farms provided on average 77.9 days of care per week (Table 6) and received € 55 revenue per day (Table 4; care institutions have an AWBZ accreditation), all institutional care farms received € 17.4 million revenue per year (€ 221,300 per care farm; Table 6) for day time occupation. Actual total revenues of the institutional care farms will be higher, as some of them also provide 24-hour care services.

Differences between care farms and conventional farms

The data presented were derived from the National Agricultural Census of 2003 (Anon., 2003).

Size

Generally, care farms were of the same acreage and economic size as conventional farms (Table 7). There were, however, statistically significant differences for some types of holdings. Other grassland-based care farms were significantly ($P < 0.05$) larger than conventional farms, in terms of both acreage and economic size. Goat and sheep care farms were larger only in terms of economic size, and arable, dairy and intensive livestock care farms in terms of acreage. For horticultural holdings the situation was different: as to economic size the care farms were smaller than the conventional farms. This did not hold for acreage (Table 7).

Table 7. Care farms and conventional farms of the same type of holding compared for median economic size and median acreage. Source: National Agricultural Census (Anon., 2003).

Type of holding	Economic size		Acreage	
	Care farm	Conventional farm	Care farm	Conventional farm
	(DSU)[1]		(ha)	
Arable farms	42	32	36*[2]	25
Horticultural farms	43	89*	3	3
Dairy farms	88	90	40*	35
Goat or sheep farms	40*	17	6	6
Other grassland-based farms	26*	11	13*	7
Intensive livestock farms	53	68	11*	5
Mixed farms	25	25	17	16
Total	52	54	17	13

[1] DSU = Dutch Size Unit. The value of 1 DSU is defined as a fixed number of euros, which at present is € 1400.

[2] * = significantly higher ($P < 0.05$) than the corresponding median in the same row.

Table 8. Total number of regular workers on 363 care farms and average numbers of regular workers on care farms and conventional farms. Source: National Agricultural Census (Anon., 2003).

Type of holding	Total number of workers	Average number of workers	
		Care farms (n = 363)	Conventional farms (n = ca. 80,000)
Arable farms	44	1.8* [1]	1.3
Horticultural farms	319	4.8	3.9
Dairy farms	254	2.3	1.9
Goat and sheep farms	46	3.5*	1.3
Other grassland-based farms	235	2.4*	0.9
Intensive livestock farms	65	2.2	1.9
Mixed farms	56	2.4*	1.4
Total	1019	2.8	2.0

[1] * = statistically different ($P < 0.05$) from comparable average in the same row.

Table 9. Average age of youngest farm holder and percentage of holdings with youngest farm holder over 50 years of age plus a successor present. Comparisons between care farms and conventional farms. Source: National Agricultural Census (Anon., 2003).

Type of holding	Care farms		Conventional farms	
	Age youngest holder (years)	> 50 years + successor (%)	Age youngest holder (years)	> 50 years + successor (%)
Arable farms	47	80	50	49
Horticultural farms	46	69	45	69
Dairy farms	43	90	44	78
Goat and sheep farms	45	85	47	61
Other grassland-based farms	47* [1]	69	57	30
Intensive livestock farms	45	83	44	75
Mixed farms	45*	83	51	49
Total	45	79	48	60

[1] * = statistically different ($P < 0.05$) from comparable average in the same row.

Labour

The total number of regular workers (> 20 hours per week; including farmer and family members) was higher on care farms than on conventional farms. Differences were statistically significant ($P < 0.05$) for arable, goat and sheep farms, other grassland-based farms and mixed farms (Table 8).

The additional activities on care farms compared with conventional farms resulted in an increase in regular jobs from 298 in 2003 to 473 in 2005, assuming that the average number of regular workers of 2.8 on care farms and 2.0 on conventional farms (Table 8) still held for 2005.

Age and succession of farm holder

The youngest farm holder was generally younger on care farms than on conventional farms (Table 9), but differences were statistically significant only for other grassland-based farms and mixed farms. For these types of conventional farming systems, the average age of the youngest farm holder was over 50. Moreover, the percentage of farm holders indicating that a successor was available was considerably higher for care farms than for conventional farms (Table 9). Differences were largest for arable, other grassland-based and mixed farms. For horticultural and intensive livestock farms there were no differences in age of farm holder and succession between care farms and conventional farms.

Discussion

In this chapter we shall focus on three topics: (1) the development of care farming in the Netherlands, (2) its significance, and (3) the prospects of this new sector.

Development of care farming

The combination of agricultural work and care is not new. For a long time it was common that individuals who were 'different' and could not fully participate in society, worked on a farm. Also in health care, many institutes had a farm or a garden where patients were working (Ketelaars *et al.*, 2001). However, modernization and industrialization caused these people with special needs to leave agriculture, as happened to many other workers (Van Schaik, 1997). Many care institutions closed their farms and creative therapies became popular (Van Weeghel & Zeelen, 1990). Despite these changes, care farms have never disappeared and in many countries there are examples of care farms that started many decades ago (Van Schaik, 1997; Sacristán, 2003). The driving forces in all these examples were idealism and the positive results (Van Schaik, 1997). Since the end of the 1990s, care farms are being stimulated. They are considered examples of innovation in the rural area and contributors to the desired integration of care in society (Ketelaars *et al.*, 2001).

Since the Ministry of Agriculture, Nature and Food Quality and the Ministry of Health, Welfare and Sports stimulate the development and professionalization of care farming, the number of care farms has grown spectacularly: from 75 in 1998 to

591 in 2005. In the 1990s, the main target groups were mentally challenged people and people with psychiatric problems. Over the last few years the number of target groups has been increasing and now also include elderly, people with an addiction background, people with burn-out, long-term unemployed, and children (Elings & Hassink, 2006). As a result the average number of clients per non-institutional care farm now is 15.6, which is much higher than the average of 6 as estimated before by Ketelaars *et al.* (2002) and Berkhout & Van Bruchem (2004). In total almost 10,000 clients make use of care farms.

Finding adequate financing for care services has always been a main challenge for the idealistic care farmers (Van Schaik, 1997). Financial problems and the dependence on the willingness of care institutions to co-operate with an independent care farm seem to be decreasing. The introduction of personal budgets (PGB) for clients has been stimulating for care farms. About 60% of the care farms receive income through the PGB and 35% considered the PGB as their main source of income in 2005, compared with 16% in 1998. The average payments per client per day increased from € 23–36 per day in 1999 (Hassink, 2003) to € 47–80 per day in 2005, indicating the improved financial rewards for care activities. The 2005 survey showed that most care farmers were satisfied with the level of financing of their care activities (Zwartbol, 2005).

Significance of care farming

To explore the importance of care farming for the agricultural sector and for society as a whole and its potential for farmers, it is important to distinguish between private farms, family-based care farms and care farms started by a care institution. The number of private care farms was found to be growing faster than the number of institutional care farms. The percentage of institutional care farms decreased from 32 in 1998 to 14 in 2005. Private, more production-oriented care farms were found to be more successful in meeting the goals of mentally challenged clients than institutional

Table 10. Some characteristics of conventional farms with extended activities. Data based on Voskuilen *et al.* (2006). Reference year 2005.

Extended activity	No of farms		Average additional annual revenue per farm	Annual revenue total sector (percentage of total in brackets)
	2005	change in number since 2003 (%)	($\times 10^3$ €)	($\times 10^6$ €)
Nature conservation	9311	−3	5.2	49 (32)
Recreation	2857	+16	12.4	33 (22)
Storage of caravans	2933	−24	3.2	11 (70)
Energy	464	−4	48.6	23 (15)
Care[1]	488	+73	73.0	37 (24)

[1] Data for non-institutional care farms based on this paper.

farms (Elings, 2004). The presence of a real farmer who is dedicated to farming, with authority and entrepreneurship appears to be crucial. Only these non-institutional, family-based care farms can be compared properly with other types of production-oriented farms.

The care component amounts to (average) additional annual revenues of more than € 70,000 per farm. In a previous study, different types of care farms were distinguished (Hassink, 2003). On agriculture-oriented and intermediate care farms, net farm income increased considerably due to the care activities (Hassink, 2003).

Care farming is by far the fastest growing multifunctional agricultural sector (Table 10). Although the number of farms with care activities is still relatively low compared with the number of farms with nature conservation, recreation or storage of caravans, the contribution of care activities to the annual revenue of farms with extended agriculture is considerable. This is due to the high additional revenue per farm for care, which is much higher than for other additional activities (Table 10). Unlike nature conservation, care is a private extended activity that generates additional revenues for farmers that are not coming from subsidies from the Ministry of Agriculture, Nature and Food Quality.

Care farming also contributes to employment in agriculture. We found that the number of paid workers is higher on care farms than on farms without extended activities. The additional activities on care farms resulted in 473 regular jobs in 2005.

Prospects of care farming

The prospects of care farming are positive. The number of care farms shows a steady increase and the number of clients making use of a care farm has grown to approximately 10,000 per week. Although the number of other client groups is growing, the main target group still consists of mentally challenged persons. According to Kramer & Claessens (2002), 900 mentally challenged clients, 200 clients with psychiatric demands, and 50 elderly clients went to care farms for day activities in 2001. In 2005 these numbers were 3700, 1321 and 872, respectively.

Care institutions estimated the potential demand for care farms at 6.5% for mentally challenged clients, 7% for clients with psychiatric problems, and 5.5% for elderly in care institutions (Kramer & Claessens, 2002). The potential demand was restricted to subgroups of these target groups, e.g. for elderly only the persons in day care and on the waiting list, and for psychiatric clients the ones making use of day activity centres. In 2005 the number of psychiatric clients that made use of care farms was twice the potential number given by Kramer & Claessens in 2002. The percentage of youth with a disability related to autism that made use of a care farm in 2005 was more than 8% (Table 11). This indicates that the potential is higher than estimated in 2002. As a rough estimate, we assume that the potential number of clients interested in making use of a care farm is on average 5% for each target group. For the main target groups that make use of a care farm the total potential number of clients is more than 25,000. For elderly, psychiatric clients and mentally challenged clients, there still are considerable waiting lists (Zwartbol, 2005). Care farms can contribute to shorten these waiting lists. They will also attract other client groups like long-term unemployed and people with learning disabilities.

Table 11. Total population of different target groups in the Netherlands and number and percentage of them making use of a care farm in 2005, and potential number of clients for care farms of each group based on total population

Target group	Total population[1]	Clients making use of a care farm		Potential client population[2]
		No	%	
Mentally challenged persons	100,000	3700	3.7	5000
Persons with chronic psychiatric problems	100,000	1321	1.3	5000
Elderly persons in nursing homes	150,000[3]	872	0.6	1250
Persons registered in ambulatory care and treatment drug addicts	61,000	262	0.4	3050
Youth help and care	105,000	587	0.6	5250
Youth with autism[4]	11,000	898	8.2	550

[1] Estimates based on different sources and different years.

[2] Estimated at 5% of total population.

[3] Data after Schols (2004).

[4] Data after Fombonne (2003).

Using the care farm preventively rather than curatively is a new phenomenon. Several care farmers offer inspiration courses for managers (Elings & Hassink, 2006).

The number of care farms has increased rapidly. The future of care farming will depend on client satisfaction, adequate proof of its values and effects, sufficient funds for care services, enough farmers willing to start a care farm, and professionalization of this new sector (Ketelaars *et al.*, 2002).

Generally, experiences of clients on care farms are very positive (Ketelaars *et al.*, 2001; Van Erp, 2004; Elings *et al.*, 2005). But systematic reviews of client satisfaction and effectiveness of programmes offered by care farms are still missing. Other aspects of the professionalization should be education of care farmers, development of regional support centres for care farming, and descriptions of the various services that are provided for different client groups.

One of the questions is whether enough farmers are interested in the combination of agriculture and care to enable further growth of the sector. It is promising to see that the age of the youngest farm holder is lower for care farms than for conventional farms and that a higher percentage of care farmers has a successor. Especially for mixed farms and other grassland-based farms, care farming contributes to the rejuvenation of these types of holding.

De Lauwere (2005) distinguishes five types of farmers. One of the types is the social farmer. The personal characteristics of social farmers and their farming system

seem to fit in best with care activities. More than 18% of the farmers are classified as social farmers, indicating that there still are many farmers that may be interested to start care activities. According to economic theories these social farmers also seem to meet the demands of real entrepreneurship better than most other farmers because they can be called movers of the market, innovators or discoverers of profit opportunities (De Lauwere, 2005).

Crucial for the further development of care farming are policy and legislation developments as regards health care. The current general trend is decentralization, reduction of collective costs, and an increase of market mechanisms and personal responsibility in health care (Schols, 2004). The Social Support Act (WMO) is a clear example of decentralization that will have consequences for care farmers. Under the WMO, municipalities will become responsible for most of the services provided by care farms. Care farms can conclude contracts with a municipality without interference from care institutions. This will make care farms less dependent on care institutions. Care farms should develop good relationships with municipalities and describe their additional value for client groups under the responsibility of the municipality.

Finally, we conclude that care farming is a relevant sector and that its prospects are positive.

References

Anonymous, 2003. Agricultural Statistics 2003. Agricultural Economics Research Institute (LEI) & Statistics Netherlands (CBS), The Hague, 272 pp. (in Dutch)

Berkhout, P. & C. Van Bruchem, 2004. Rural area. Chapter 5; Agricultural Economic Report 2004. Agricultural Economics Research Institute (LEI), The Hague, pp. 75–93. (in Dutch)

Boody, G., B. Vondracek, D.A. Andow, M. Krinke, J. Westra, J. Zimmerman & P. Welle, 2005. Multifunctional agriculture in the United States. *Bioscience* 55: 27–38.

De Lauwere, C.C., 2005. The role of agricultural entrepreneurship in Dutch agriculture today. *Agricultural Economics* 33: 229–238.

Driest, P.F., 1997. Care Farms: an Introduction. Nederlands Instituut voor Zorg en Welzijn, Utrecht, 30 pp. (in Dutch)

Elings, M., 2004. Farmer has to stay a Farmer. Research on the Specific Values of a Commercial Care Farm. Report No 194B. Wetenschapswinkel, Wageningen University and Research Centre, Wageningen, 52 pp. (in Dutch)

Elings, M. & J. Hassink, 2006. Farming for health in the Netherlands. In: J. Hassink & M. Van Dijk (Eds), Farming for Health. Green-care Farming across Europe and the United States of America. Springer, Dordrecht, pp. 163–179.

Elings, M., N. Van Erp & F. Van Hoof, 2005. The value of care farms for clients with a psychiatric or addiction background. Report No 97. Plant Research International, Wageningen University and Research Centre, Wageningen, 21 pp. (in Dutch)

Fombonne, E., 2003. Epidemiological surveys of autism and other pervasive developmental disorders: an update. *Journal of Autism and Development Disorders* 33: 365–382.

Hassink, J., 2001. Improving social policies with social farms. *Zorg + Welzijn* 1: 21. (in Dutch)

Hassink, J., 2003. Combining agricultural production and care for persons with disabilities: a new role of agriculture and farm animals. In: A.Cirstovao & L.O. Zorini (Eds), Farming and Rural

Systems Research and Extension. Local Identities and Globalisation. Fifth IFSA European Symposium, 8–11 April 2002, Florence. Agenzia Regionale per lo Sviluppo e l'Innovazione nel Settore Agro-forestale della Regione Toscane (ARSIA) Florence, pp. 332–341.

Hassink, J., 2006. Healthy People by Agriculture and Nature. Van Gorcum, Assen, 228 pp. (in Dutch)

Hassink J. & D. Ketelaars, 2003. The foundation under the care farm: towards an explanation of the health improving qualities of a care farm. In: Handboek Dagbesteding. A3116, pp. 1–25.

Hassink, J. & M. Van Dijk, 2006. Farming for Health: Green-care Farming across Europe and the United States of America. Proceedings of the Frontis Workshop on Farming for Health, 16–19 March 2005, Wageningen. Springer, Dordrecht, 357 pp.

Ketelaars, D., E. Baars & H. Kroon, 2001. Healing through working. Research on the therapeutic working communities for people with psychiatric problems. Trimbos Instituut, Utrecht & Louis Bolk Instituut, Driebergen, 188 pp. (in Dutch)

Ketelaars, D., N. Van Erp & J. Hassink, 2002. Agriculture and care in the picture. Looking at the present and the future. Report No 50. Plant Research International, Wageningen University and Research Centre, Wageningen, 32 pp. (in Dutch)

Kramer, B. & M. Claessens, 2002. Growing Opportunities for Care Farms. A Research on the Demand of Day Care on Care Farms. Reinoud Adviesgroep, Arnhem, 53 pp. (in Dutch)

Lenhard, L., R. Mövius & S. Dabbert, 1997. Struktur und Organisationsformen von Therapie- und Betreuungseinrichtungen in der Landwirtschaft: eine explorative Studie. *Berichte über Landwirtschaft* 75: 459–485.

Sacristán, M.C., 2003. Reformando la asistencia psiquiátrica en Mexico. La Granja de San Pedro del Monte: los Primeros Años de una Institución Modelo, 1945–1948. *Salud Mental* 26(3): 57–65.

Schols, J.M.G.A., 2004. The Future of Chronic Care, a Care for us? Of old Structures, the Things that Pass. Dutch University Press, Amsterdam, 82 pp. (in Dutch)

Van Erp, N., 2004. Instrument for Measuring Satisfaction among Clients on Care Farms. Trimbos Instituut, Utrecht, 45 pp. (in Dutch)

Van Schaik, J., 1997. Where Agriculture and Care Meet. Stock taking of Practical Experiences on Care Farms. Stichting Omslag, Vorden, 168 pp. (in Dutch)

Van Weeghel, J. & J. Zeelen, 1990. Working Rehabilitation in a Renewed Mental Health Care. Lemna, Utrecht, 180 pp. (in Dutch)

Vereijken, P.H., 2002. Transition to multifunctional land use and agriculture. *NJAS–Wageningen Journal of Life Sciences* 50: 171–179.

Voskuilen, M., P. Berkhout, T. De Koeijer, T. Kuhlman, J. Luijt & E. Spruit, 2006. Rural area 2006. In: P. Berkhout & C. Van Bruchem (Eds), Landbouw-economisch Bericht, Agricultural Economics Research Institute (LEI), The Hague, pp. 64–82. (in Dutch)

Zwartbol, Ch., 2005. Care Farmer, what do you think of it? Survey among Care Farmers in the Netherlands in 2005. Landelijk Steunpunt Landbouw en Zorg, Barneveld. 50 pp. (in Dutch)