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Success of a participatory research and extension programme in the Dutch organic dairy goat sector

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Abstract

In 2004, most organic dairy goat farms had financial problems due to a gap between the milk price paid and the cost price on farm. In 2005, a research project "BIOGEIT" was started. In 2007, the research project was combined with an extension programme. A framework was set up with 3 shells. The first shell consisted of two farmer research groups in which goat keepers worked in close cooperation with researchers on a specific theme. One research group has worked constantly on cost price optimisation and milk price. One of the activities in the farmers research group on cost price was monitoring the cost price and milk price over the years. Its objective was threefold: determining priorities for cost price optimisation, using the cost price for milk price negotiations and monitoring the project results. The cost price inclusive labour costs evolved from 58.92 euro/100 l in 2004 to 65.24 /100 l in 2009. The milk price (7% fat and protein; exclusive tax) evolved from 51 euro/100 l in 2004 to approximately 70 euro/100 l in 2012. From the year 2009 onwards, the cost price is covered by the milk price.

Key words: dairy goats, organic farming, participatory research, extension, cost price milk, economics

Introduction

In the Netherlands, 74 out of the 566 dairy goat farms are organically working (SKAL, 2011). In 2004, most organic dairy goat farms had financial problems due to a gap between the milk price paid and the cost price of the milk produced on farm. In 2005, a research project "BIOGEIT" was funded by the Dutch Ministry of Agriculture. The long term objective of the project was to strengthen the sector as a whole with a special focus on cost of production, nutrition, animal health, animal welfare and product quality. Each year the organic dairy goat keepers and a working group appointed by the Ministry, identified and prioritized research themes. In 2007, the research project was combined with an extension programme. A framework was set up with 3 shells (Figure 1). The first shell consisted of two farmer research groups in which goat keepers worked in close cooperation with researchers on a specific theme. These themes could change over the years, but one research group has worked constantly on cost price optimisation and milk price. In the second shell, goat keepers of three regional farmer study groups discussed and exchanged information with advisors regarding themes directly related to their daily management. In the third shell, organic and conventional goat keepers, advisors, veterinarians, feed companies cooperated closely in thematic meetings and different media (newsletters, reports etc.).

One of the activities in the farmer research group on cost price was monitoring the cost price and milk price over the years. Its objective was threefold: determining priorities for on farm cost price optimisation, using the cost price for milk price negotiations and monitoring the project results (Govaerts & van Eekeren, 2010). Results of the cost price development in this research group are discussed in this paper.

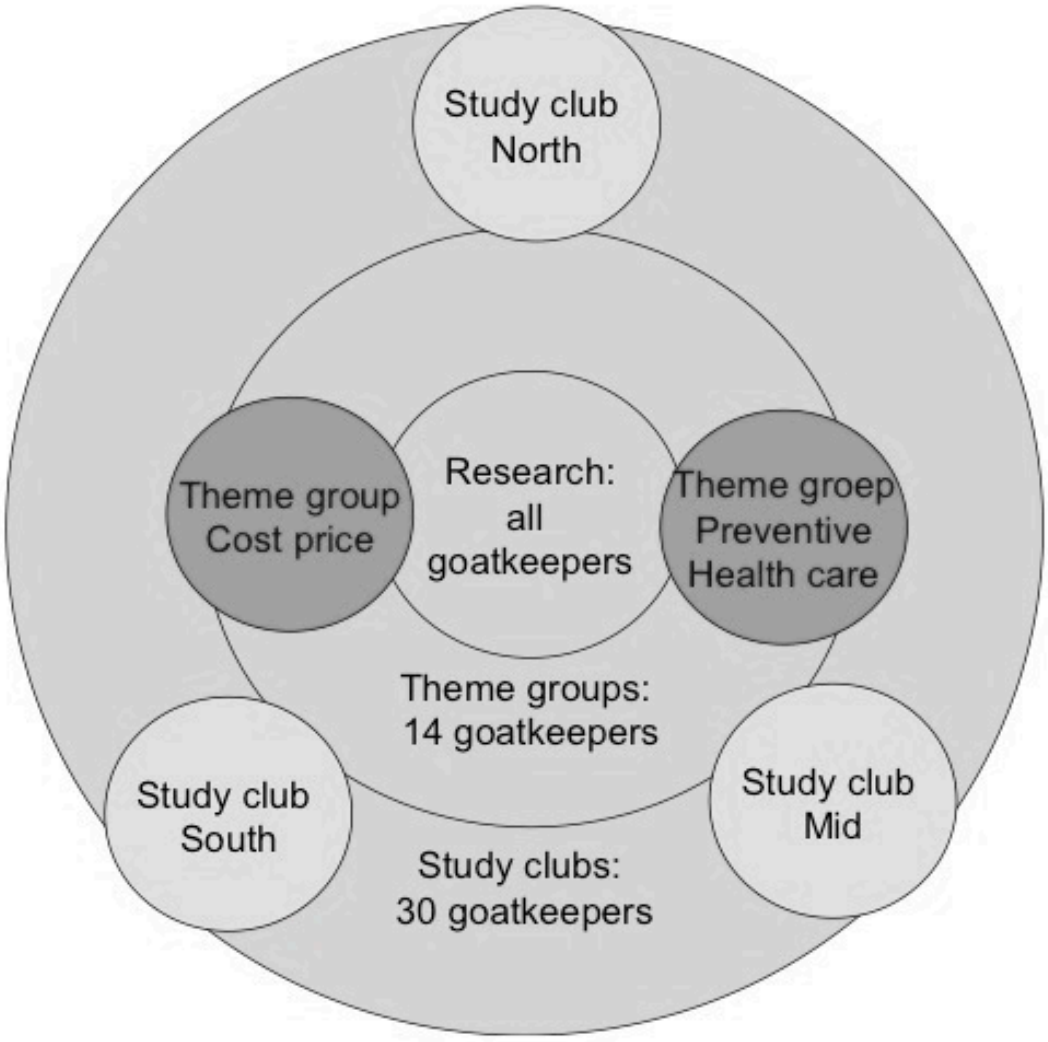

Figure 1. Combination of research with extension, whereby the extension approach distinguished 3 shells

Material and methodology

For the cost price calculation a sample of 10% of the total organic dairy goat farms was taken. Out of the 74 organic dairy goat farms in the Netherlands, 8 goat farms were selected for cost price calculation over the years 2004-2009. Selection criteria for the farms selected were the availability of accurate figures on milk production, separated financial administration of milk production, cheese production and arable production, a farm size of 400-1200 goats, an equal distribution of farms over the soil types and regions of the Netherlands. Figures were collected over the years 2004, 2007, 2008 and 2009 on basis of the yearly financial statements of the farms. Interest costs were accounted at an interest rate of 4%, regardless of whether this was external or own capital. The costs for land were calculated on basis of the actual rent paid or on basis of an interest rate of 3% on the current value of the land. Labour costs were calculated with an entrepreneurial wage of € 46800 for the farmer and € 23240 for the other workers, per person per year. External labour was brought in against the actual costs. The costs were adjusted for non-milk yields as premiums received, sale of

breeding material or growth in animals on holdings etc. The final cost price per 100 litres of milk was corrected for 7% fat and protein.

Results and discussion

In table 1 the development of the farm size is shown. The number of full time persons working on these farms remains relatively stable over the years. The number of productive goats increased by 12% from 2004 to 2009. The average milk production has increased substantially with 17%: from 727 litres per goat in 2004 to 852 litres in 2009. This was mainly the result of technical improvements on farm and better health of the animals. In addition to milk production the protein content of the milk has increased from 3.35 to 3.45% by matching the energy and protein requirements. The fat content was rising again in 2009 after an initial dip due to the requirement of 100% organic ingredients in the ration. In their demand for good quality roughage, many farms established a partnership with organic arable farms for grass clover production. The production per hectare own fodder crops increased significantly over the years to 24.946 litres per hectare in 2009. If the ha fodder crops on partner (arable) farms are included, the milk production per hectare fodder crops was 13.346 litres hectares per hectare in 2009.

Table 1. Average size of farms over the years 2004, 2007, 2008 and 2009

	2004	2007	2008	2009	2009 rel. to 04
Number of full time employers (fte)	1,53	1,50	1,54	1,54	101%
Number of goats	575	546	607	641	112%
Delivered milk (litres)	416.375	437.514	475.717	556.967	134%
Fat (%)	3,82	3,71	3,69	3,73	98%
Protein (%)	3,35	3,37	3,43	3,45	103%
Milk per goat (litres)	727	786	772	852	117%
Milk per fte (litres)	271.022	283.804	299.363	352.778	130%
Number of goats per fte	376	360	388	416	111%
Number of goats / ha own fodder crops	22	21	26	29	132%
Number of goats / ha incl. fodder crops on partnership arable farms				15	

The costs were calculated per hundred litres of milk delivered to the factory corrected for 7% fat and protein (see table 2). The general costs stabilised in 2009 after a sharp increase in 2008. The costs for buildings decreased after an initial rise in costs in 2007. With approximately 60% of the costs, the feedings costs are the highest.

Table 2. Cost overview per 100 litres of milk over the years, adjusted for 7% fat and protein (euros, excl. VAT)

	2004	2007	2008	2009
General fixed costs	4.18	4.05	5.48	5.43
Costs buildings and non-feed mechanisation	8.4	9.97	9.09	8.84
Roughage costs	13.69	17.10	17.63	15.94
Concentrate costs	16.87	24.97	32.16	22.12
Other variable costs	5.95	8.53	7.44	6.26
Correction for non milk returns	-3.34	-7.23	-8.38	-5.95
Cost price excluding labour costs	45.78	55.39	63.42	52.64
Labour costs	13.15	15.74	14.75	12.61
Cost price including labour	58.92	71.13	78.17	65.24
Milk price	51.00	55.60	70.79	67.00

After a strong increase in 2007 and 2008, due to the requirement of 100% organic ingredients in the ration and a rise in commodity prices, this dropped sharply in 2009. This was the result of a focus of most farms on high quality roughage in the ration combined with a higher productivity of the ani-

mals due to improvements in feeding and animal health. The cost price was adjusted for non-milk yields, such as sales of animals and premiums. To have enough farm income goat farmers were looking in previous years for non-milk yields return. Since the cost price became under control, the need for non-milk yield returns became less important and the focus was more on the milk revenues of the goats. The gap between milk price and cost price was already substantial in 2004. In 2007 the gap between milk price and cost price took the full margin of labour. In 2008 a moderate margin could be realized. In 2009, despite a drop in milk price, the gap was covered due to a reduction of costs price.

Suggestions to tackle the future challenges of organic animal husbandry

For a sustainable development of organic goat husbandry, a balance between cost price and milk price is necessary. This requires efforts on milk price realization and cost price optimization. Balancing milk supply and demand through deliverance cooperatives of farmers is an important tool in stabilizing the milk price. Cost prive optimization through healthy goats, good roughage quality, balanced nutrition, craftsmanship and dedication of the farmer and his wife have proven to be the keys to success for cost price optimization.

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