

# **Public Perceptions of Dairy Sector in Northern Greece**



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#### Introduction

Dairy cattle farming in Greece is one of the most important sectors in farm animal breeding. Apart from its vital contribution to incomes and employment in rural areas, dairy farming is a multifunctional activity, as it sustains rural landscapes and poses threats on environmental quality, especially in protected areas. Water quality, pressure on water reserves, due to heavy irrigation, and pollution of the atmosphere are only a few examples of its negative environmental externalities. In addition to its complex interactions with the environment, dairy farming in Greece is a traditional economic activity, whose role in safeguarding cultural features and preventing depopulation in rural regions is incontestable.

Public awareness in the country has been raising during the past few years, along with concerns about farm animal welfare and food security. These features illustrate an important shift in the role of dairy cattle farming in Greece. As a consequence, farms, as well as milk industries, are currently obliged to adapt to this new economic and social environment. The E.U farm policy in force incorporates some of the aforementioned non-economic characteristics; price policy as well as structural and environmental policy measures have been introduced as an answer to consumer's demands. Indeed, if the sector is endowed with functions other than producing marketed goods, farm policy measures are necessary in order to maintain the goods and services. Therefore, the newly emerging circumstances provide additional arguments in favor of retaining protectionism in the Greek dairy cattle sector.

Within this context, the purpose of this study is to examine the attitudes of the public in northern Greece towards the dairy cattle sector. This approach is necessary in order to define appropriate policy measures and also to improve market conditions in the country. Central to this investigation is the recognition of the main stakeholders, which are the groups that are directly or indirectly affected by the sector.

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#### Materials and Methods

Stakeholders' attitudes are examined by means of a questionnaire-based survey. The questionnaire includes questions regarding the economic, environmental and social functions of dairy cattle farming in Greece as well as the respondents' social and economic characteristics. Eight additional questions were also presented, regarding policy and market adjustments necessary to improve the sector's performance, in order to achieve specific policy objectives that are of particular importance to the public. Furthermore, interviewes were categorized according to their participation into official or unofficial groups with particular stakes in dairy cattle farming. The survey was conducted with in-person interviews in February 2009 on a sample of 317 persons in northern Greece.

## Results

Table 1. Respondents' attitudes towards the main functions of the Greek cattle dairy sector. The results reveal a considerably high degree of recognition concerning acceptable incomes and the sector's vital role in safeguarding rural economy, as well as significant correlations with respondents' education  $(\chi^2=60.82 \ and 77.82\ for df=45\ and 60\ respectively)$  and stakeholder group participation  $(\chi^2=27.51\ and\ 45.54\ for\ df=18\ and\ 24\ respectively).$  Negative environmental externalities are also highlighted, however food safety and animal welfare issues are reported as the central issues linked to the sector's performance. The contribution of dairy cattle farming to the formulation of rural landscapes is only acknowledged by 35,0% of respondents.

	Responses (%)							
	Negative environmental externalities	Profitability	Employment – Rural economy	Food safety – Animal welfare	Tradition	Landscape		
Strongly disagree	26,8	-	0,3	-	1,6	17,4		
Disagree	36,9	2,8	1,3	0,3	4,1	20,2		
Neither agree nor disagree	18,0	12,9	4,4	2,8	10,1	27,4		
Agree	14,8	33,4	36,3	24,3	39,1	25,2		
Strongly agree	3,5	50,8	57,7	72,6	45,1	9,8		

Table 2. Respondents' attitudes towards some of the negative environmental externalities of dairy cattle farming. The main problems on which respondents focus are in relation to water use, namely irrigation (which is correlated with stakeholder groups;  $(\chi^2=38,51,\ d=24)$  and use of noxious agrochemicals for feed crops. Responses about non-point sources of pollution are correlated with age  $(\chi^2=90.30,\ d=24)$ . Concerns are revealed about soil resource degradation and herd diseases; the latter are directly linked to the use of antibiotics (mastitis). Atmosphere pollution, albeit often in debate, is not reported as a severe problem

	Responses (%)						
	Pollution of water resources	Soil degredation	Non-point sources of pollution	Atmosphere pollution	Pressure on water resources	Frequent animal diseases	
Strongly disagree	7,6	5,0	1,6	24,6	9,8	4,7	
Disagree	11,7	14,5	3,8	27,1	12,0	11,0	
Neither agree nor disagree	21,8	16,1	7,9	24,9	19,6	30,0	
Agree	34,1	36,3	24,9	17,7	34,1	41,0	
Strongly agree	24,9	28,1	61,8	5,7	24,6	13,2	

Table 3. Respondents' attitudes towards animal welfare and health issues. The results highlight animal welfare as a central factor, given that the vast majority of stakeholders endorse legislation introducing such measures. Moreover, quality and health issues are of importance, including crop production for feed. Correlations are found between the latter and respondents' gender (x²=11,26, df=3). These findings confirm public support to policy measures enforced by the CAP reform in 2003. Furthermore, they point to shift to quality production, which is often highlighted as a necessary condition for enhancing the sector's performance.

		Re	sponses (%)		
	Legislation on animal welfare	Interest in animal welfare	Healthy products	Quality of animal feed	Landscape quality
Strongly disagree	0,3	0,3	-	-	2,2
Disagree	0,9	0,3	-	0,3	6,0
Neither agree nor disagree	3,8	5,4	2,8	2,2	28,1
Agree	22,1	24,9	13,9	18,9	26,8
Strongly agree	72,9	69,1	83,3	78,5	36,9

Table 4. Respondents' preferences towards measures for the enhancement of the sector's performance. Measures affecting prices are acceptable, especially those which would benefit producers. Indeed, the perspective of cutting on retail prices is only accepted by 24,6% of respondents; at cacepted only if it should affect milk industry profits. The reinforcement of control structures in order to safeguard the production of healthy dairy products and animal welfare is supported by 88,3% of respondents; a chi-square test reveals significant correlation with age ( $\chi^2$ =45,52, df=24). Environmental benefits from the introduction of new sewage disposal and water management systems are also broadly supported. Organic dairy cattle single is envisaged as a positive perspective for Greece, while the answers to this question are correlated with stakeholder group membership ( $\chi^2$ =37,57, df=24). The issue of milk quality is highly important for 95,0% of respondents, while 88,0% are in favor of raising milk quotas on national level, as Greek milk is generally considered of higher quality by consumers. Hence, a new system of quality control in effect farms, that would lead to the production of quality dairy products, combined with raised productivity, would contribute to the enhancement of the Greek dairy market.

	Responses (%)							
	Raise in producer price	Reduce market prices by reducing producer price	Reduce market prices by reducing industry profits	Health and animal welfare control	Sewage disposal and water management	More organic dairy cattle farms	Quality control in milk industries	Raise milk quota on country level
Strongly disagree	3,5	45,7	12,0	0,9	3,2	6,9	0,3	1,3
Disagree	3,5	13,2	6,9	3,8	4,7	5,0	0,6	1,3
Neither agree nor disagree	9,8	16,4	14,8	6,9	11,7	19,6	4,1	9,5
Agree	19,2	10,1	22,1	23,3	24,6	27,8	23,7	18,9
Strongly agree	64,0	14,5	44,2	65,0	55,8	40,7	71,3	69,1

Table 5. Stakeholders. Respondents are categorized into six groups, according to their involvement in the dairy cattle sector. Milk producers are dairy cattle farmers, while other farmers and animal breeders are also stakeholders, as they produce animal feed or their products compete with dairy products in the market. Farm input retailers are responsible for the quality of inputs that dairy farmers use. On the other hand, dairy producers, ranging from small family businesses to large-scale milk industries, are those who buy the products of dairy farmers. Farm scientists are in charge of milk quality and disease controls, but also of the implementation of the quota regime and other CAP measures.

Stakeholders	Frequency
Milk producer	84
Farmers/Animal breeders	130
Farm input retailers	24
Dairy producers	11
Consumers	29
Farm scientists	39

## Conclusions

This study examines the Greek public's attitudes towards the dairy cattle sector. The questionnaire survey reveals a high degree of awareness in relation to the sector's numerous functions, which provide serious arguments in favor of retaining the sector, by taking advantage of policy measures in force. One of the main findings is the recognition of the sector's social and economic role in rural areas, where it provides acceptable incomes and employment to farm families. Furthermore, a high degree of environmental consciousness is found, which, however, is not directly linked to dairy farms' negative externalities. Nevertheless, respondents reported significant importance of emerging issues, such as food security and farm animal welfare. It can be readily concluded that the public in Northern Greece endorses CAP measures concerning environmental and health aspects. On the other hand, the milk quota regime is not accepted by the majority, as respondents declare their preference to Greek milk products. Organic dairy farming appears as an appealing perspective; nevertheless, market performance can be considerably enhanced by ameliorating the quality of milk and dairy products.



