

**DAIRY FARMERS ATTITUDE AND PREFERENCES TOWARDS CONTRACT
DAIRY FARMING SYSTEM**

D. V. Kolekar, H. R. Meena And Y. C. Bangar

Division of Veterinary Extension Education

Indian Veterinary Research Institute, Izatnagar-243122 Bareilly-U.P.

Corresponding author Email: drdnyanesh45@gmail.com

Received 14-12-2012 Accepted 25-2-2013

ABSTRACT

The present study was conducted purposively in Satara district of Maharashtra to ascertain attitude and preferences towards contract dairy farming by using instrument consisting of 7 point Likert scale. The study reveals that majority of dairy farmers prefers contracts with no restrictions regarding volume control and shows the willingness for arrangements with a long duration. Also dairy farmers are rather averse to risk-taking and believe that close contractual relationships could also be beneficial for them. While dairy farmers have positive preferences towards the contract attributes pricing, volume regulation, duration and intensity of the settlement.

KEY WORDS: Contract farming, Attitude, Preferences.

INTRODUCTION:

In dairy, the contract offers the guarantee of supply of intermediate inputs, livestock services and market outlet for the smallholder producers, in exchange for the guarantee of supply of milk to the processor, through its intermediary (Birthal et al., 2006). Important behavioral factors for choosing a certain form of coordination are trust (Batt 2003), attitudes towards contracting (Guo et al. 2005) or contract attributes (Furesi et al. 2006) as well as farmers contract motivations (Davis and Gillespie 2007) and their preferences for entrepreneurial freedom (Key and MacDonald, 2006). Roe et al. (2004) states that U.S. farmers have a preference for short-term contracts with minimum delivery requirements. There is another important factor influencing the contracting decision of farmers is trust. It is considered as the main force regarding the establishment of contractual as well as non-contractual cooperation in the relationship management literature (Morgan and Hunt 1994). Thus keeping above scenario in mind the present study was undertaken to ascertain dairy farmers attitude and preferences towards contract dairy farming in Satara District, Maharashtra.

MATERIALS AND METHODS:

The present study was conducted purposively in Satara district of Maharashtra during 2010-11. The district has the highest number of contract dairy farmers engaged with integrating firm Govind Dudh Phaltan. Based on the findings of pilot survey the two blocks were selected purposively from district and from each block, 6 villages and from each village, 10 farmers were selected randomly, thus making total a sample of 120 respondents for the study. The interview schedule was prepared in the form of instrument consisting of 7 point Likert scale on attitude and preferences toward contract dairy farming with the help of study conducted by Schlecht and Spiller (2009). The scale ranges from "strongly disagree" (scale = -3) to "strongly agree" (scale = +3). The data gathered were analysed by using appropriate statistical techniques such as frequency, percentage, mean, standard deviation with the help of SPSS statistical software.

RESULTS AND DISCUSSION:

Attitudes towards contracting in the dairy:

The dairy farmers evaluation of contractual relationships is not entirely positive, table 1 illustrates their opinions on long-term agreements in the dairy industry. There is no clear tendency if long-term contracts between farmers and their processors are better: 43 per cent of respondents agree to the statement, 29 per cent are not sure and 32 per cent reject it. Contracts with no restrictions regarding volume control increase the willingness for arrangements with a long duration. The possibility of free production volumes is an incentive for nearly half of all respondents. Furthermore, dairy farmers are rather averse to risk-taking, 72 per cent of the interviewees agree with the statement. Even without contracts, dairy farmers are loyal, only 29 per cent of the respondents would switch their milk buyer more frequently if they had no long-term agreement. There is a differing of opinion on the question of whether only processors benefit from contractual arrangements, the 47 per cent of all respondents have a neutral position. 41 per cent of the dairy farmers believe that close contractual relationships could also be beneficial for them. A further 31 per cent is, however, convinced that they receive no benefits from higher coordination intensity between producer and processor.

Table 1: Attitudes towards contracting in the dairy

Sr. No.	Statement	M	SD
1	In my opinion it would be better if farmers engaged in long-term contracts with their dairy processors.	0.16	1.328
2	I am willing to close long-term contracts if I can deliver milk without volume restrictions	0.38	1.210
3	I avoid taking risks in milk production	1.07	1.228
4	Without the (long-term) contract I would switch my dairy more often.	-0.49	1.138
5	Contractual arrangements favor the dairy processors; farmers do not benefit from them at all.	-0.79	1.619

M= mean (Scale ranging from "-3 = strongly disagree" to "+3 = strongly agree"); SD = standard deviation

Dairy farmer's preferences for contract attributes:

Preferences concerning the different pricing systems:

The respondents evaluated three different pricing systems: the classical cooperative price setting, price negotiations between processors and producer groups and milk pricing via reference prices. They object to the classical pricing mechanism of cooperatives ($M=-0.98$; $SD=.0.917$). Price negotiations between the market partners obtain the highest acceptance among farmers ($M=1.29$; $SD=1.350$). Farmers judge the third pricing mechanism rather positively ($M=0.61$; $SD=1.368$).

Preferences concerning volume regulation:

The volume regulation is a very important feature of future milk marketing contracts. For farmers, volume regulations are associated with planning reliability and the opportunity of growth. Hence,

milk producers would prefer arrangements that guarantee unlimited delivery quantities, 63 per cent of all respondents agree to the statement. The farmers are prepared to forecast their production for the following year bindingly in return for free deliveries. Nevertheless, they are not prepared to accept fines if they do not supply the volumes contracted beforehand. More than two thirds (69 per cent) of the respondents would forecast their quantities supplied, but only little more than one third (31 per cent) of the producers accepts fines for excess or accordingly under deliveries. 64 per cent of the dairy farmers vote for the persistence of their selling obligations. In return, 73.5 per cent of all participants demand that milk processors retain their intake obligations in the future. The result is little surprising, because existing buying and selling obligations guarantee planning security for producers in particular. Nevertheless, especially farmers' selling obligations are also favorable for processors, as they provide them with planning reliability and contribute to securing the raw milk supply.

Preferences concerning contract duration:

Table 2 depicts an overview of preferences with regard to contract duration. 73 per cent of the respondents agree to the statement "The period of cancelation should be as short as possible". Furthermore, 53 per cent want to be able to switch dairies quickly. The clear consent to short periods of cancellation as well as to switch quickly reflects farmers wish for flexibility. 82 per cent of the respondents demand the maintenance of extraordinary cancelation clauses. Producers perceive that this stipulation is their only means to exert pressure on their processor. Due to the high perceived dependence, more than half of the dairy farmers (55 per cent) see it as a last resort to defend oneself in case they have problems with their dairies.

Preferences concerning the intensity of the settlement:

From the table 2 the statement "In the dairy industry, it is sufficient to close simple marketing contracts governing quantities and prices" revealed that the preference for simple marketing contracts 47 percent, nearly equals the demand for more complex production contracts 44 per cent. It was parameterized with the exemplary statement "In order to improve the logistics of my dairy I would invest in further storage capacities." 47 per cent of all respondents are not willing to invest in storage capacities. Yet, in order to optimize the milk hauling process 43 per cent of the farmers are ready to invest. Otherwise, the importance of quality standards is beyond doubt, 97 per cent of all interviewees agree that contracts between farmers and milk processors should include arrangements concerning quality.

Although dairy farmers general attitudes towards contracting are rather critical, their attitudes towards contracting in the dairy sector help to explain why long-term arrangements prevail in the industry. Schulze et al. (2007) showed that risk aversion is an important driver to close contracts. Due to the collapsing prices, farmer's willingness to cooperate might be even higher when prices were exceptionally high. The dropping milk prices raised farmer's awareness of price risks. Thus, risk reduction might be a significant contracting motivation for milk producers. The means and high standard deviations of the other items show that there is no clear tendency among dairy farmers. On the one hand, producers support long-term relationships and intense contractual relations. On the other hand, a somewhat smaller proportion favors short-term arrangements and less contractual obligations. The important contract attributes includes volume regulation, pricing, duration, and intensity of the settlement. The paramount importance of prices is not surprising, because the milk price determines the lion's share of revenues on specialized dairy farms. (Wocken and Spiller 2009).

CONCLUSIONS:

Analysis of the attitudes of dairy farmers towards contracting in dairy farming shows their preference for entrepreneurial freedom and independence. Due to the prevailing attitude among dairy producers, we may conclude that the establishment of stronger vertically coordinated arrangements

Table 2: Dairy farmer's preferences concerning contract attributes

Sr. No.	Statement	M	SD
Preferences concerning the different pricing systems			
1	The classical cooperative price setting	-0.98	0.917
2	Price negotiations between processors and producer groups	1.29	1.350
3	Milk pricing via reference prices.	0.61	1.368
Preferences concerning volume regulation			
1	My future contract should not limit delivery quantities	1.04	1.286
2	In order to guarantee planning reliability for my dairy, I would forecast my production volumes bindingly for the next year.	1.29	1.343
3	I accept milk price reductions if I cannot supply the contract Volumes.	-0.42	1.017
4	Dairy farmers' selling obligation should persist.	0.88	1.391
5	Milk processors should retain the intake obligation in the future.	1.58	1.142
Preferences concerning contract duration			
1	The period of cancelation should be as short as possible.	1.21	1.256
2	I want to be able to switch dairies quickly	0.58	1.127
3	Extraordinary cancelation clauses for farmers should be maintained.	1.41	1.363
4	Only with the extraordinary notice of cancelation I can exert pressure on my dairy.	0.31	1.114
Preferences concerning the intensity of the settlement			
1	In the dairy industry, it is sufficient to close simple marketing contracts governing quantities and prices	-0.08	1.238
2	In order to improve the logistics of my dairy I would invest in further storage capacities.	-0.69	1.002
3	Contracts between farmers and milk processors should include arrangements concerning quality	1.97	0.859

M= mean (Scale ranging from "-3 = strongly disagree" to "+3 = strongly agree"); SD = standard deviation

in the dairy industry is not very likely. Another factor arguing against stronger vertical coordination is the high specific knowledge of dairy farmers. Next, we addressed the question of dairy farmers preferences towards the contract attributes pricing (mechanism), volume regulation, duration and intensity of the settlement. In general, dairy farmers prefer contracts without controls, i.e. flexibility

concerning production volumes. Hence, current durations can be maintained in future contracts. Farmers strongly reject the classical cooperative price setting due to a perceived lack of control. They favor (frequent) price negotiations or the application of a reference price, thus particularly cooperatives have to reconsider their pricing mechanism. Nevertheless, tendencies among farmers are not always clear. High standard deviations indicate that preferences for contract attributes diverge in many cases.

REFERENCES:

Birthal, P.S., Jha, A.K., Tiongco, M., Delgado C., Narrod, C. and Joshi, P.K. (2006). Equitable intensification of smallholder market-oriented dairy production in India through contract farming, Annex I of the IFPRI-FAO Final Report Contract farming of milk and poultry in India: Partnerships to promote the environmentally friendly and equitable intensification of smallholder livestock production. International food Policy Research Institute, Washington DC.

Batt, P. J.(2003). Building trust between growers and market agents. *Supply Chain Management: An International Journal*. 8 (1):65-78.

Davis, C. G. and Gillespie, J. M. (2007). Factors Affecting the Selection of Business Arrangements by U.S. Hog Farmers. *Review of Agricultural Economics*. 29 (2):331-348.

Furesi, R., Gaetano, M. and Pietro, P. (2006). Contractual choice and food safety strategy : some empirical findings in Italian poultry sector. In *Trust and risk in business networks*, edited by M. Fritz, G. Schiefer and U. Rickert: ILB Press.

Guo, H., Jolly, R. W. and Zhu, J. (2005). Contract Farming in China: Supply Chain or Ball and Chain? Paper read at 15th Annual World Food and Agribusiness Congress "Re-Inventing the Food Chain: New Products, Consumers and Markets", IAMA, at Chicago, USA.

Key, N. and MacDonald, J. (2006). Agricultural Contracting: Trading Autonomy for Risk Reduction. In *Amber Waves*.

Morgan, R. M. and Hunt, S. D. 1994. The Commitment-Trust Theory of Relationship Marketing. *Journal of Marketing*. 58 (3):20-38.

Roe, B., Sporleder, T. L. and Belleville, B. (2004). Hog Producer Preferences for Marketing Contract Attributes. *American Journal of Agricultural Economics*. 86 (1):115-123.

Schulze, B., Spiller, A. and Theuvsen, L.(2007). A broader view on vertical coordination: lessons from German pork production. *Journal on Chain and Network Science*. 7 (1):35-53.

Schlecht, S. and Spiller, A. (2009). Procurement strategies of the German dairy sector: Empirical evidence on contract design between dairies and their agricultural suppliers; Paper presented at the 19th Annual World Forum and Symposium "Global Challenges, Local Solutions", IAMA Conference, June 20 - 23, 2009 in Budapest, Hungary.

Wocken, C. and Spiller, A.(2009). Der Einfluss des Preises auf die Stabilität von Geschäftsbeziehungen in der Agrar- und Ernährungswirtschaft. *Zeitschrift für betriebswirtschaftliche Forschung (zbf)* (in review, previously unreleased).

□