DAIRY FARMER CLIENTS' PERCEPTIONS OF THE TEAGASC ADVISORY SERVICE

Tom O'Dwyer
Teagasc, Kildalton, Piltown, Co. Kilkenny, Ireland.
Email: tom.odwyer@teagasc.ie

Kevin Reidy
Waterford Institute of Technology, Cork Road, Waterford, Ireland.

Abstract

The Teagasc advisory service plays a crucial role as change agent at farm level. One of the challenges facing the organisation is to define how it will best help commercial dairy farmers in the future. Reform of the milk quota system plus trade liberalisation is likely to result in fewer dairy farmers in the future; those that do remain will, on average, be farming on a larger scale. A telephone survey was conducted of a representative sample of Teagasc dairy farmer clients in the summer of 2006. The purpose of the survey was to investigate the perceptions regarding the Teagasc advisory service amongst its dairy farmer clients and to determine the nature of the relationship, if any, between the measured perceptions and the clients overall satisfaction rating for the advisory service. 52 per cent of respondents could be described as 'positive' or 'very positive' towards the advisory service based on a composite index formed from the responses to the perceptions statements used. 72 per cent of respondents indicated that they were either 'satisfied' or 'very satisfied' with the Teagasc advisory service. The results indicate a high level of satisfaction with the current advisory service amongst dairy farmers in general; but a lower level of satisfaction amongst larger dairy farmers and those in counties Kerry, Limerick, Cork and Tipperary (the key dairying areas in the Republic of Ireland).

Key Words: *Teagasc, perceptions, satisfaction*

Introduction

Teagasc is the state-sponsored body that provides integrated research, advisory and training services for the agriculture and food industry in Ireland. Its mission is to provide an independent knowledge base, technology transfer and training service for the sustainable development of the agriculture and food industry (Carey, 2004). This mission is crucial in assisting the industry to respond profitably to consumer and market demands, regulatory requirements, and contribute to a vibrant rural economy and society. Teagasc advisors play a significant role in providing Irish dairy farmers with professional farm production advice but they do not play as important a role in providing them with professional farm financial advice (Byrne *et al.*, 2003).

According to MacConnell (2005), if Irish agriculture is to survive and prosper, Teagasc has to be at the cutting edge of innovation and technology. The same author states that 'Teagasc sees much fewer but more commercial farmers requiring quite specialist advice - the general advisor of the past not being relevant to this core of commercial farmers'. Agriculture is changing and becoming more commercialized, thereby changing the quantity and nature of farmer information needs (Alex *et al.*, 2002).

Dairy farmers are operating in a changing environment. The Single Farm Payment became effective in Ireland from January 1, 2005. Because it is decoupled and not linked to production, it is intended to reorient EU farmers towards market-based decision-making. This direct-payment type of farm income

support can be expected to have very significant effects for Irish agriculture, and possibly for the rest of the Irish economy, given its very high reliance on EU subsidisation (Dixon and Matthews, 2006).

There were 1.101 million dairy cows in Ireland in December 2005 and they produced 4.92 billion litres of milk in 2005; approximately 10 per cent was consumed locally as liquid milk; the remaining 90 per cent was processed into mainly cheese and butter (CSO, 2007). As of April 1st 2005, there were 22,379 active dairy farmers in Ireland (DAF, 2006); this number has fallen by an average of almost 5 per cent per year since 2000. The average herd size is 50 cows and average milk quota size is 227,500 litres per dairy farm. Trade liberalisation could result in dairy farm numbers falling to less than 10,000 in 2015 compared to about 15,000 if export subsidies and import tariffs were retained (Hennessy, 2006). Given the fixed national milk quota, as dairy farm numbers fall, the average milk quota size will increase. Recently a new, market-led approach has replaced the previous administered system of milk quota transfer ('Milk Quota Exchange'); it is too early to judge the impact of this on the transfer of milk quota. Current CAP arrangements allow for milk quotas to remain in place until 2015. A 'Health Check' of CAP will take place in 2008; one of the objectives will be to design a policy that will provide dairy farmers with a 'soft landing' (Rasmussen, 2006).

The Teagasc advisory service plays a crucial role as a change agent at farm level. A challenge facing the organisation is to define how it will best assist its commercial dairy farmer clients in the future. A study of clients' needs and their perceptions of the current service was recently completed (O'Dwyer, 2006).

Rogers (2003) identified a number of factors in change agent success, leading to the adoption of innovations. Four of these factors are:

1. The amount of effort spent in communication activities with clients;
2. A client orientation by the service provider;
3. Awareness of and empathy with clients' needs; and
4. Credibility of the change agent in the clients' eyes.

The FAO (2004) identified ten factors as critical to the success of a modern extension service. These included: regular contact between the adviser and farmer; advice given on demand; general advisers supported by subject matter specialists; a common vision and professional pride shared by all advisers; strong links to agricultural research; independent advisory service; and an advisory service seen as a reliable and trusted partner.

Research Objectives and Methodology

The objectives of the present research were as follows:

1. To investigate the perceptions regarding the Teagasc advisory service amongst its dairy farmer clients;
2. To establish the nature of the relationship, if any, between these perceptions and the overall satisfaction rating with the advisory service; and
3. To investigate whether clients' perceptions and satisfaction rating for the service is related to a range of independent variables.

The population was the 10,524 dairy farmers on the Teagasc' client database as at June 2006. The database comprises contact details, quota size and dairy livestock units (LU's) for each farm.

The population was divided into twelve different strata derived from three region and four milk quota size groups which are of relevance in an Irish context. The regions were: (1) Kerry, Limerick, Cork and

Tipperary; (2) Waterford and the counties of Leinster excluding Longford and (3) Clare, Longford and the counties of Connaught and Ulster. The milk quota size groups were: (1) less than 150,000 litres; (2) 150 - 250,000 litres; (3) 250 – 350,000 litres; and (4) greater than 350,000 litres.

A stratified sampling procedure, as described by Snedecor and Cochran (1967), was used to determine the appropriate sample size for each stratum given an overall intended sample of 1,000 farms for survey. This procedure is based on the standard deviation of the variable of interest, in this case milk quota, within each stratum and ensures a higher sampling fraction in the larger quota size groups. To further ensure adequate representivity, it was decided to set the minimum stratum sample size at 30 giving a target sample of 1,027 farms. The survey was conducted by telephone in late June and early July 2006. Owing to time and cost constraints, it was not possible to secure a useable sample beyond 530 farms. Given the nature of telephone surveys, a response rate of 52 per cent from the original sample selection and an overall sampling fraction of 5 per cent were acceptable.

Survey results were analysed by reference to region, quota size, age, incidence of off-farm income, discussion group membership, participation in the Rural Environment Protection Scheme (REPS) and future intentions regarding dairy farming.

Farmers' perceptions of their advisory service were ascertained by reference to the level of stated agreement with eight statements regarding their recent experiences with the service. A standard Likert scale for each response was used whereby 1 = 'disagree strongly' through 5 = 'agree strongly'. The statements about the service were:

1. Helpful with problems on the farm;
2. Value for money;
3. In touch with farmers needs;
4. Up to speed with latest research;
5. Easy to contact;
6. Helps to improve income;
7. Staff work in a professional manner; and
8. Timely information is given about available services.

Farmers were also asked to indicate their level of satisfaction with the current advisory service they were receiving, according to a standard Likert scale whereby 1 = 'not at all satisfied' through 5 = 'very satisfied'.

Results

Profile of Respondents

Table 1 shows the distribution of respondents broken down by region and actual quota size. The respondents were weighted in favour of the larger farms and the two regions where they are mainly located.

Table 1: Distribution of Respondents (n = 530)

Region	Actual Quota Size, ,000 litres				All
	< 150	150 - 250	250 - 350	> 350	
1	28	73	29	138	268
2	2	11	26	134	173
3	15	10	15	49	89
All	45	94	70	321	530

Based on stated responses, respondents had the following profile:

- 32 per cent in the modal age group, 36 to 45 years;
- 12 per cent with an off-farm job;
- 35 per cent in a Teagasc discussion group;
- 26 per cent were REPS participants;
- 65 per cent with intentions for themselves or a family member to be in milk production in five years time.

Perceptions of the Advisory Service

Respondents' perceptions of the advisory service received by them were positive. Table 2 shows that the modal response to each of the eight statements was either rank four or five. The difference in responses to each statement between regions and size groups were statistically significant in nearly all cases. A general pattern emerged whereby: (1) Farmers in the largest size group were less positive than others; and (2) Farmers in region 1 were less positive and farmers in region 2 were more positive than expected on a statistical basis.

Table 2: Modal Response and % Respondents 'Agreeing' or 'Agreeing Strongly' to the Eight Statements Listed (n=530)

		% Respondents	
Statement	**Modal Response**	**'Agree'**	**'Agree Strongly'**
1. 'Helpful'	4	44	39
2. 'Value for Money'	4	36	29
3. 'In touch'	4	38	30
4. 'Up to Speed'	4	42	37
5. 'Easy to Contact'	5	26	58
6. 'Helps to Improve my Income'	4	35	22
7. 'Professional'	5	34	57
8. 'Timely Information'	5	34	48

The level of overall agreement ranged from 57 per cent (statement 6) to 91 per cent (statement 7) while the level of strong agreement range from 22 per cent (statement 6) to 58 per cent (statement 5).

Specifically, the statistical differences (at the 5% or lower level), as described above in relation to region, applied to all statements. As regards quota size, no statistical differences (at the 5% level) were found between respondents in respect of statements three and four.

Satisfaction Rating for the Advisory Service

72 per cent of respondents indicated that they were either 'satisfied' or 'very satisfied' with the advisory service. Difference in response between regions and size groups were statistically significant at the five per cent or lower level. Specifically, fewer respondents than statistically expected in both region 1 and the largest size group were 'very satisfied' with the service.

Table 3 lists the Spearman rank correlations between each of the eight perception statements and overall satisfaction rating with the advisory service. All correlations were positive and statistically significant but relatively weak – ranging from 0.243 (statement 7) to 0.483 (statement 2).

Table 3: Spearman rank Correlations between the Eight Statements Listed and Overall Satisfaction Rating for the Advisory Service (n=525).

Statement	Correlation
1. 'Helpful'	0.452
2. 'Value for Money'	0.483
3. 'In touch'	0.474
4. 'Up to Speed'	0.444
5. 'Easy to Contact'	0.354
6. 'Helps to Improve my Income'	0.332
7. 'Professional'	0.243
8. 'Timely Information'	0.287

Composite Index of Perceptions

A composite measure of individual farmer's perceptions of the advisory service was created by adding together response scores for each of the eight statements. 525 farmers replied to all the statements and the resultant composite perceptions scores (CPS) ranged from 11 to 40.

Table 4: Distribution of respondents by CPS (n = 525)

CPS range	Indicative perceptions of the advisory service	Respondents (%)
≤ 23	"negative"	31 (6%)
24 – 32	"neutral"	221 (42%)
33 – 36	"positive"	156 (30%)
37 – 40	"very positive "	117 (22%)
Total	-	**525 (100)**

Table 4 shows the distribution of respondents by CPS and associated, arbitrarily chosen, indicative perceptions. The majority of respondents could be classified as 'positive' towards the advisory service – 30 per cent of respondents had a CPS of 33 – 36; a further 22 per cent of respondents had a CPS of greater than 37. A small number of respondents (31 or 6 per cent) would be described as negative towards the advisory service.

The overall perception of respondents was favourable towards the advisory service: the modal CPS was 32 (52 respondents, 10 per cent). Despite the high overall level of approval, differences in CPS between regions and size groups were statistically significant at the five per cent level. On the basis of statistical expectation, fewer respondents from both region 1 and the largest size group were found in the highest CPS range.

The positive Spearman rank correlation ($r = 0.538$) between CPS and overall satisfaction rating for the advisory service was statistically significant ($p<0.01$). This correlation was strongest in region three ($r = 0.68$, $p<0.01$) and in the smallest size group ($r = 0.66$, $p<0.01$).

When satisfaction rating and CPS were analysed by the classification variables, apart from location and size, mentioned above, no statistical difference between the relevant groups for each variable were found with the exception of REPS participation. Specifically, dairy farms in REPS registered a higher level of satisfaction with the advisory service than non-REPS farms ($p<0.01$).

Discussion

In a study commissioned by Teagasc, Healy and Associates (1991) found that 63 percent of dairy farmer respondents rated the advice received from Teagasc as either 'helpful' (score 7 or 8 on 10 point scale) or 'very helpful' (score 9 or 10 on 10 point scale). In a later survey, Healy and Associates (1997), found that 82 per cent of dairy farmer respondents rated Teagasc dairy advisers at 7 or over on a 10 point scale. Those with larger herd sizes rated the Teagasc adviser lower than those with smaller herd sizes. The findings from the present research are broadly in line with these earlier results.

The present findings reveal a tendency for fewer farmers in the largest size group to be in strong agreement with the objective statements concerning their recent experience of the advisory service. There is widespread acceptance that while the overall number of dairy farms will decline, the number of dairy farmers in the largest size group (greater than 350,000 litres) will increase substantially (Hennessy, 2006). The research findings suggests the hypothesis that in the absence of appropriate interventions, an increasing proportion of the critical cohort of market-oriented dairy farmers may be less positively disposed towards the service heretofore and may decide to go elsewhere for service.

This raises some fundamental questions for the Teagasc advisory service, namely:
1. Does it want to offer a comprehensive and appropriate advisory service to commercial dairy farmers in the future? and, if so
2. How can it best reposition itself to ensure that it offers the required advice to a smaller number of more commercially focussed dairy farmers?

While Teagasc is a state-sponsored body, it is nonetheless required to collect a proportion of its annual budget from advisory contract fees (based on a scale of charges applied to clients depending on herd size and level of advice sought). Any such service offered to commercial dairy farmers in the future will have to be offered on a full cost-recovery basis i.e. it will not be subsidised by Government. The organisation will have to decide if there is a commercial opportunity for it in offering advice to these farmers and whether it can operate an advisory service in a more commercial environment. Advisory organisations in other countries have successfully made the transition from public funding to own-resources e.g. DLV Advies Groep (the Netherlands), ADAS (England and Wales) and Dexcel (New Zealand). Yet Garforth *et al.* (2002) state that governments' need to provide advice and information to farmers has increased rather than diminished. The same author expressed the need for a re-think of the ways in which advice and information is made available to farmers.

Teagasc has recognised the changes occurring in the external environment and the likely impacts on demand for advice. It is currently in the process of re-organising its advisory service to meet these changed needs (Teagasc, 2006). The new advisory service will attempt to change the exiting balance between the service needs and development needs of clients. The advisory service will deliver advice under four broad programme areas:

1. Business & Technology - to provide cutting edge technology to more intensive and commercial farmer clients;
2. Rural Development and Good Farming Practice – to provide REPS planning, environment and rural development services;
3. Options for Farm Families - to provide advice and support to farm families who wish to attain a viable family income and a better quality of life; and
4. Training – to be continued as a key aspect of the restructured advisory service.

It is the Business and Technology (B&T) service which will be expected to meet the technological and financial management demands of commercial dairy farmers of the future. If this new service is to be successful, advisers will need to be (1) more visible; (2) more consistent; and (3) able to tailor their advice to individual farmer's needs. As dairy farmers who want increased advisory contact will be expected to pay higher fees, the service offered must be of the highest quality. Dairy farmers have expressed the opinion that 'professional charges demand professional service' (O'Dwyer, 2006).

Heskett *et al.* (1997) suggest that there is an exponential type relationship between customer satisfaction and loyalty or retention. For example, if the customer is 'satisfied', his loyalty is approximately 30 per cent; if however he is 'very satisfied' his loyalty almost trebles to 85 per cent. Given that the modal satisfaction rating in this research was 4 (45 per cent of respondents were 'satisfied'), Teagasc needs to be concerned about the loyalty of these farmers to the advisory service. At present, the Teagasc advisory service is the only organisation offering technical and financial advice to dairy farmers; no other organisation offers a combination of technical and financial advice on a national basis.

Previous research with focus groups (O'Dwyer, 2006) suggests that dairy farmers in the future will judge the success of the advisory service by reference to its ability to 'put money in our pockets'. Therefore it is somewhat worrying that the correlation between satisfaction with the service and 'helps to improve my income' was the weakest observed. The survey was conducted at a time when dairy farmers' income was under particular pressure – CAP reform was resulting in lower milk prices and costs were continuing to rise. It is possible that the timing of the survey could have influenced dairy farmers' perceptions regarding the advisory service and income improvement.

It has also been suggested that the effectiveness of training is largely determined by the learning styles of the participants relevant to the trainer (McLeod, 2006). The same author found that New Zealand dairy farmers can be segmented on the basis of their different learning style preferences and gender and/ or position in the industry. And that anecdotal evidence suggests that the current mode of delivery of training packages in the agricultural sector is falling short of participants' learning experiences. So perhaps the effectiveness of the current advisory/ training methods used by Teagasc is less to these larger dairy farmer clients than it is to other dairy farmer clients due to different learning styles.

Nonetheless, the fact remains, that there will be less dairy farmers in the future; and those that do remain will be farming on a larger scale. Therefore there is an onus on the Teagasc advisory service to re-organise itself to ensure that it can provide an advisory package of relevance to the commercial dairy farmers of the future. New advisory methods need to be examined e.g. extension circles as employed in Baden-Wurttemberg, Germany (Hoffman *et al.*, 2000) or a key adviser strategy as employed in Denmark (Rasmussen, 2003). Increased farmer participation must also be encouraged (Massey, 2000) e.g. discussion groups. Finally, there is a need for the extension service to be less prescriptive and to focus

more on client's needs. Wielinga (2000) contends that the time when scientists could tell them what is true, and churches or politicians could tell them what to value is past.

Conclusion

These results indicate a high level of satisfaction with the advisory service amongst dairy farmers in general. However a lower level of satisfaction exists amongst (1) larger dairy farmers and (2) those dairy farmers in the key dairying area that is region 1. Worryingly, over 40 per cent of dairy farmers felt that the service was not helping to improve their income and this feeling was pronounced amongst the same categories of dairy farmer clients. Given that previous research has indicated that there will be less dairy farmers in the future but that those who remain will be larger in size, these findings pose a particular challenge for the Teagasc advisory service. This challenge involves the design and delivery of an appropriate advisory package to those farmers whose future will depend more on market developments and less on EU subsidisation.

As dairy markets continue to become more globalised and driven by market prerogatives, technological knowledge becomes an even more important factor in development at the farm level (Alex et al., 2002). Given the key role of knowledge and the fact that the larger dairy farmers and those farmers in region 1 are likely to be the driving force behind a successful Irish dairy industry in the future, it is essential that the Teagasc advisory service addresses the challenge of effective technological transfer to this cohort of dairy farmers immediately.

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