



Impact of Participation in Teagasc Dairy Discussion Groups

Evaluation Report

January 2013

Front Pic: The Cloughduv dairy discussion group with Teagasc advisors Liz Duffy and Seamus Lordan



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January 2013

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ACKNOWLEDGEMENTS

The contribution of the following to the evaluation is acknowledged with gratitude:

- Teagasc Project Team, Steering Group, Specialists and Advisors;
- Dr Thia Hennessy, Teagasc Research Officer;
- Mr Enda Duffy, Teagasc Walsh Fellow;
- Farmers who participated in the research survey and the focus group meetings; and
- The survey interview team.

EXECUTIVE SUMMARY

Discussion groups are a key methodology used by Teagasc to transfer knowledge to dairy farmers. Due to the importance of discussion groups and the increased farmer involvement as a result of the Dairy Efficiency Programme (DEP), funded by the Department of Agriculture, Food and the Marine, Teagasc commissioned this independent evaluation to determine the effectiveness of dairy discussion groups and to identify ways in which these groups could be developed and improved. This evaluation is not an evaluation of the DEP, but it provides useful analysis and feedback on the DEP.

The specific objectives of this evaluation are:

1. To evaluate the impact of Teagasc dairy discussion groups on the knowledge, attitudes and behaviours of group members;
2. To determine the impact of the DEP on the knowledge, attitudes and behaviours of 'new' group members;
3. To evaluate the impact of Teagasc dairy discussion groups on the performance (both physical and financial) of group members and to compare it with the performance of non-group members;
4. To establish the perceptions of group members of the benefits of group membership, including the impact of discussion group membership on the advisor client relationship; and
5. To identify opportunities to improve the efficiency and effectiveness of discussion group delivery.

Evaluation Methodology

The evaluation is based on data collected utilising both internal (Teagasc) and external expertise. Internal sources include firstly, an internationally peer-reviewed analysis of Teagasc National Farm Survey data by Dr Thia Hennessy of the Teagasc Rural Economy Development Programme, to ascertain the economic returns to discussion group membership. This analysis was conducted on data from 2008 to assess the returns to group membership for long-term established group members and data from 2011 was used to assess the impact for more recent members. Secondly, an M.Sc. project was conducted by Mr Enda Duffy (Teagasc Walsh Fellow) examining the performance of dairy discussion groups in East Cork from 2010-2011. External sources include a research survey of 405 dairy discussion group participants and nine focus groups designed and administered by Dr. Pat Bogue, Broadmore Research. The overall evaluation report was compiled by Dr Bogue.

Evaluation Findings and Conclusions

A selection of evaluation findings and conclusions is summarised under relevant headings.

Physical Performance/Practice Adoption

An analysis of 2008 Teagasc National Farm Survey data showed that established (pre-DEP) discussion group members have higher levels of practice adoption than non-members. For example, in 2008, 39% of discussion group members used artificial insemination with

genomic bulls compared to 14% of non-members. On examination of the data, it was revealed that discussion group members tended to farm larger, more intensive holdings in more advantaged regions than non-members. However, even when these physical advantages were controlled for, discussion group members were still more likely to adopt technology. Regression analysis showed that even when the initial differences in terms of age, size and location and so forth were controlled for, the effect of membership on the probability of adoption is still positive and significant at 0.21. In other words, taking two farmers with the same characteristics, the discussion group member has 0.21 higher probability of using genomic bull insemination than the non-member.

The effect of group membership on physical performance, with respect to the achievement of Teagasc roadmap targets for yield, quality and feed usage was also evident (Table 1). Teagasc National Farm Survey data from 2011 showed higher levels of performance for both established (pre-DEP) and new discussion group members in comparison to non-members.

Table 1 Percentage Achieving Teagasc Roadmap Targets

Technical Performance Indicator	Established Members	New (DEP) Members	Non-Members
Milk yield per cow: $\geq 5,200$ litres	56	54	42
Milk solids per cow: ≥ 378 kg	53	49	37
Protein Content: $\geq 3.4\%$	54	37	35
Fat Content: $\geq 3.95\%$	36	33	27
Somatic Cell Count: $\leq 200,000$ cells/ml	52	55	23
Concentrate feed per cow: ≤ 750 kg per cow	57	41	39

Participation in discussion groups through the DEP (in East Cork) had a positive impact on technology adoption in the areas of grassland management and financial management (Duffy):

- Grassland Management: in 2011, 43% of new group members measured grass on a weekly basis compared to 31% for the same group in 2010. In 2012, discussion group members turned out cows to grass 11 days earlier than non-members;
- Financial management: in 2011, 51% of group members completed a profit monitor compared to 29% in 2010.

Farmers perceived that they gained considerable knowledge and benefits from discussion group involvement in the immediate years after joining. However, the ongoing benefits may not be as obvious and readily achievable and it is important that farmers stay involved in discussion groups for the longer term and continue to work within the group.

Financial Performance

An analysis of 2008 Teagasc National Farm Survey data revealed that established (pre-DEP) group members perform better financially than non-group members. A regression analysis was conducted to control for farm characteristics, such as soil type, location, farm size farmer's age and to test for potential selection bias, i.e. that there may be some unobservable factor associated with the enhanced performance of group members such as higher levels of motivation etc. The results of this analysis confirmed that even when

observable and unobservable characteristics are controlled for, the average established (pre-DEP) group member benefited in the order €247 per hectare in gross margin terms in 2008.

Using 2011 Teagasc National Farm Survey data, the performance of established (pre-DEP) group members, new (DEP) members and non-members was examined. The results showed that established members performed better financially than DEP groups and non-group members on a net margin per litre (2 to 3 cent per litre) and per hectare basis. DEP group members performed better than non-members per litre, and even more so, per hectare, in nominal terms (Table 2).

Table 2 Economic Performance: Established, New and Non-Members

Economic Indicator	Established Members	New (DEP) Members	Non-Members
Net Margin (cent per litre)	14.5	12.1	11.6
Costs per hectare (€)	2,260	2,327	2,150
Net Margin per hectare (€)	1,516	1,234	1,050

A regression analysis, which controlled for farm and farmer characteristics, revealed that economic returns to membership were present. Established group members earned statistically significantly higher gross margins per hectare than non-members, in the order of €240 in 2011 (equivalent to approximately 2 cent per litre). While gross margins on new member farms were higher, by €44, the difference was not statistically significant.

In general, the analysis revealed that new members were not yet reaching the same level of performance as established members. This suggests that the relatively short duration of their membership (1 to 2 years) was not yet sufficient to allow them to reap the full economic benefit from participation.

Survey and Focus Group Findings

Broadmore Research surveyed 405 dairy discussion group members in Summer 2012. There was an even split between established members (48%) and new DEP members (52%). This was followed by nine focus groups (five DEP groups, two established groups, non-discussion group members and advisors). The survey results show that the DEP has been successful in attracting more farmers from disadvantaged areas with smaller herds and those less dependent on dairying.

Motivation for Joining Discussion Groups and Perceived Benefits

The motivation for joining discussion groups was primarily for the purposes of learning and gaining information. All respondents were asked to give reasons why they joined their discussion group. Reasons most frequently listed included: to learn (29%); gain information (23%); and DEP payment (21%).

The DEP payment was an important motivation (38% listed this as a reason for joining) for the most recent members, and as a result they had a lower rating on wanting to learn (26% versus 33%) and information (18% versus 27%) than established group members.

The most frequently listed benefits of discussion group membership included learning, access to up-to-date information, source of ideas, problem solving and a social outlet. Group membership enabled members to harness the knowledge of a number of other farmers and the advisor for application on their own farms.

The most obvious benefit was in the area of grassland management, with 70% of survey respondents having made improvements in this area in the last three years. This reflects the importance of grassland efficiency in dairy farming and the focus on this aspect within the discussion groups. Breeding, fertility and financial management benefits were perceived as being slower to achieve and were more likely to be identified by long-serving members.

When asked about continuation in discussion groups post DEP, 81% of all applicants stated their intention to continue, with 12% being uncertain. For DEP members, 71% intended to continue and 18% were uncertain. Reasons for uncertainty included the lack of financial incentive, the time involved and the Teagasc fees.

Satisfaction with Discussion Groups and the Advisor - Client Relationship

The discussion group method has altered the delivery of advice from the traditional advisor provision role to a shared approach between farmers and the advisor. The hosting of a discussion group meeting provides an important opportunity for the advisor to undertake a farm visit which allows for discussion of issues on a one-to-one basis.

Overall satisfaction levels with discussion groups were high. However, some farmers were intent on leaving the discussion groups after the DEP ends, which indicates that they were not sufficiently convinced about the benefits to warrant ongoing involvement/membership; the financial payment was maintaining their involvement currently. The impact of a fall-out of members, particularly those who joined since the DEP, needs to be considered.

Overall, the discussion group members were satisfied that their advisor '*knew and understood their farm and family situation*' and was able to provide advice tailored to their needs; when surveyed, 64% of members stated that they deal with the Teagasc Advisory Service equally through both one-to-one contact and groups. The provision of a one-to-one service by Teagasc remained important to farmers. The increased number of discussion groups was perceived by some farmers as contributing to the decline in the number of one-to-one farm visits, as the demands on advisors increased.

Those farmers who have not fully bought into the discussion group concept or recognised the benefits of the group approach, may simply be looking for direction, guidance and information from their advisor that could be provided through a less structured group approach.

A small number of focus group participants considered it important that technologies and information be pitched to groups at a level appropriate to the group.

Opportunities to Improve the Efficiency and Effectiveness of Discussion Group Delivery

There is currently a high dependence on the advisor for the effective operation of groups. Survey results indicated that 79% of groups had an active chairperson, 75% had an annual plan, 63% used monthly worksheets, with 53% having all three. However it was evident from the focus groups that in some groups where a chairperson existed, he did not play a proactive role. Even in the established groups, the role of chairperson was not developed or maximised.

There was scope for considerable improvement in the areas of: utilising worksheets; developing annual plans; having a set meeting date each month; the involvement of farmers in setting the agenda for meetings; and provision of recommendations for the host farmer and other members.

Farmers were very satisfied with the service provided by advisors in facilitating discussion groups. There appeared to be adequate opportunities for farmers to contribute. The biggest challenge was to get farmers to take over more of the discussion and reduce the dependence on the advisor.

General Conclusions on the Discussion Groups

Dairy discussion groups are an effective mechanism in the delivery of advice; are impacting on management and efficiency; and are generally delivering to the expectations of farmers. While discussion groups were perceived as being beneficial to all scales and types of dairy farmers, those who most recently joined groups were: milking the smaller herds; less dependent on dairying in their overall enterprise mix; and more likely to have been single. The DEP was successful in attracting different types of farmers to join discussion groups. However, the smaller farmers were more likely to consider leaving the groups once the DEP ended.

Discussion group members generally appeared to have a short-term focus and had not considered the long-term development or functioning of the group, or how they could improve the effectiveness and efficiency of discussion groups. The groups had limited interaction with other groups, proving to an extent that farmers viewed groups more as a mechanism for the delivery of advice than as an entity in their own right. There was limited understanding of the need to build the group dynamic.

There was a high dependence on the advisor to lead and guide in both the short-term (each meeting) and the long term (overall direction of the group). The evidence from the groups presented was that the advisor was critical to success.

An important message from the DEP was that it was challenging to integrate new members in existing groups. This took time and effort on behalf of the individual, the group and the advisor. There were advantages to both establishing a totally new group and expanding an

existing group. However, it may be inherently difficult for new members to integrate into an established one. In addition, existing members may not be tolerant of having to wait for new members to '*come up- to- speed*'. This was an issue which was starting to emerge with the integration of new DEP members into existing groups, where the newer members had not demonstrated a commitment to the group process. It may also be necessary to consider the streaming of discussion groups based on appropriate criteria.

Conclusions on the Dairy Efficiency Programme

On balance the DEP has succeeded in widening the membership of discussion groups and making dairy technology available to a greater number of farmers. However, the cessation of the DEP payment could lead to instability within discussion groups as some members leave and others reduce their commitment/involvement.

The DEP programme structure was beneficial to new groups in that it provided them with a focus and structure for their participation, but it may have somewhat hampered the more established and well functioning groups in so far as their autonomy was restricted. The absence of the DEP payment could provide the opportunity to refocus the content and structure to the specific requirements of the members.

Evaluation Recommendations

A brief summary of the recommendations for Teagasc is outlined under a number of key areas.

Strategy for Development of Discussion Groups

- Develop a long-term vision for discussion groups
- Provide specific resources for a farmer recruitment campaign
- Develop a post- DEP programme for the ongoing development of discussion groups
- Aim to increase the numbers in discussion groups by way of promotion of benefits in terms of practices, management, problem solving and financial performance.

New Member Integration

- Develop a new member integration policy and member replacement strategy
- Provide an opportunity for potential members to sample a discussion group.

Group Streaming: Advisory Groups and Discussion Groups

- Consider streaming groups into intensive, high commitment and involvement, developmental (management, skills, efficiency) discussion groups and low commitment advisory/information groups
- Undertake an objective assessment of the extent to which farmers intend to engage with discussion groups or advisory groups

Improved Group Functioning

- Encourage established discussion groups to engage in an annual '*group functioning and operation*' review sessions
- Consider providing advisors with specific training on group dynamics and effective review sessions
- Encourage interaction between discussion groups
- Develop an online database of discussion group performance on key measures.

Operation of Discussion Groups

- Review and update Teagasc '*Best Practice Protocol for Operating Discussion Groups*'
- Focus on maximising the contribution of farmers within groups
- Maintain the focus on learning within each group activity
- Consider group initiatives (projects) which build trust and encourage interaction
- Maintain an ongoing focus on financial performance
- Agree on a system for each group for the submission of regular information in advance of meetings for circulation and sharing
- Seek to ensure that there is more variation in meeting topics (wider than grassland).

Meeting Outcomes

- Maximise the usage of regular monthly worksheets
- Develop a renewed focus to ensure that there are specific and implementable outcomes/recommendations from every discussion group meeting

Farmer Involvement/Ownership

- Ensure that as a discussion group develops there is greater farmer involvement in the routine organisation of group activities.

Group Annual Plans

- Prepare and circulate clear annual group plan
- Facilitate planning sessions so that practical and realistic programmes are developed
- Consider providing advisors with specific training in the skills of facilitating effective group planning sessions.

Chairperson

- Encourage the development of an active chairperson's role and the delegation of responsibilities to the chairperson
- Develop and deliver a training programme for chairpersons.

Set Meeting Dates

- Set an agreed meeting day for each month (with agreed reminder procedure).

Use of Appropriately Tailored Messages

- Ensure that the messages (especially regarding technology) that are pitched to discussion groups are appropriate to the requirements and the abilities of farmers
- Streamline the use of tools such as farm planners/profit monitors within groups.

Research Inputs

- Consider the views of discussion group members on Teagasc research outcomes and possible future research projects
- Ensure greater clarity in the communication of research findings to ensure greater understanding and application at farm level.

Specialist Input

- Ensure regular involvement of specialists (internal and external) in group meetings.

Service Delivery

- Put in place formal review mechanisms whereby discussion group members have the opportunity to discuss difficulties relating to the service delivered
- Undertake an assessment of the work load of advisors to determine the optimal number of discussion group and non-discussion group clients that can be served
- Ensure that an adequate one-to-one advisory service is provided to those clients who are not involved in discussion groups and do not intend to join
- Consider occasional rotation of advisors/facilitators between discussion groups
- Provide advisors with the opportunity to develop specific delivery/advice plans in place for each individual discussion group tailored to their needs.

Dairy Efficiency Programme

- It is recommended that sufficient farmer participation in discussion groups be continued.
- Devote consideration to the impacts of new members on existing groups.

1. INTRODUCTION TO TEAGASC AND EVALUATION OF DAIRY DISCUSSION GROUPS

Discussion groups have been used throughout the world, in all agricultural sectors, as a way to transfer knowledge. They provide a forum for sharing ideas, a place for farmers to openly discuss farming issues and an opportunity to keep up-to-date with new technology. Groups also offer support to farmers through the provision of a social network. The primary purpose of a discussion group is to provide a forum suitable for learning to take place (DPI, 2012)¹. A Teagasc *'Best Practice Protocol'* serves as a guide to ensure that each discussion group operates effectively for the benefit of its members. The three attributes of a successful discussion group are deemed to be: regular meetings; a committed advisor/facilitator; and an identified group chairman and secretary.

The importance of discussion groups as a vehicle for knowledge transfer, technology adoption and change leading to increased milk production is recognised by the Food Harvest 2020 Report (DAFF, 2010)²:

'Teagasc should set a target of ensuring that 9,000 progressive milk suppliers are participating in vibrant discussion groups.'

The role of discussion groups is also highlighted in the Roadmap for Implementation of Food Harvest 2020 in the Dairy Sector (DAFF, 2010a)³:

'Discussion groups play a critical role in the achievement of improved technical and financial know-how by dairy farmers.'

Discussion groups are a key methodology used by Teagasc to transfer knowledge to dairy farmers. There were a total of 351 active dairy discussion groups, with 5,775 dairy farmer members in 2012. The number of Teagasc dairy discussion groups (approximately 100 new Teagasc groups), and participating dairy farmers, has benefitted from the introduction of the Department of Agriculture, Food and Marine funded Dairy Efficiency Programme (DEP) in 2010.

The main objective of the DEP is to encourage efficiency gains on dairy farms through an expansion in the level of participation in discussion groups. The aim of this initiative is to support the transfer to milk producers of technology and knowledge that will help them to adopt best practice in the running of their enterprises. All discussion groups whose members are in receipt of support under the DEP are required to focus on the adoption of best practice in three key areas, namely, grassland management, breeding and financial management. Discussion groups form a significant element of industry Joint Programmes between Teagasc and milk processors, including Dairygold, Glanbia and Kerry Agribusiness.

¹ Department of Primary Industries, 2012, 'Discussion Group Co-ordinators', AG0758, (<http://www.dpi.vic.gov.au/agriculture/dairy/people-and-networks/dairy-discussion-groups/dairy-discussion-group-coordinators>) (29th March 2012).

² Department of Agriculture, Fisheries and Food, 2010, Food Harvest 2020: A Vision for Irish Agri-Food and Fisheries.

³ Department of Agriculture, Fisheries and Food, 2010a, Roadmap for Implementation of Food Harvest 2020 in the Dairy Sector. (<http://www.agriculture.gov.ie/media/migration/farmingsectors/dairy/RoadmapRevised080211.pdf>) (27th September 2012).

Due to the importance of discussion groups and the increased farmer involvement as a result of the DEP, Teagasc commissioned this independent evaluation to determine the effectiveness of dairy discussion groups and to identify ways in which these groups could be developed and improved. This evaluation is not an evaluation of the DEP as such, but it provides useful analysis and feedback on the DEP.

1.1 Objectives of the Evaluation

The overall objectives are to:

- Examine the impact and/or effectiveness of Teagasc dairy discussion groups in terms of the knowledge, attitudes, behaviours and performance (both physical and financial) of group members; and
- Make recommendations which will enable Teagasc to continuously improve its delivery of dairy discussion groups.

The more specific objectives are:

1. To evaluate the impact of Teagasc dairy discussion groups on the knowledge, attitudes and behaviours of group members;
2. To determine the impact of the DEP on the knowledge, attitudes and behaviours of 'new' group members;
3. To evaluate the impact of Teagasc dairy discussion groups on the performance (both physical and financial) of group members and to compare it with the performance of non-group members;
4. To establish the perceptions of group members of the benefits of group membership, including the impact of discussion group membership on the advisor client relationship; and
5. To identify opportunities to improve the efficiency and effectiveness of discussion group delivery.

The evaluation is based on data collected utilising both internal and external expertise. Dr Thia Hennessy (Teagasc Rural Economy) undertook an evaluation using National Farm Survey Data (2008-2011) to quantify the economic return to dairy discussion group membership in the context of the DEP. Mr Enda Duffy (Teagasc Walsh Fellow) carried out research (as part of an M.Sc. project) with eight dairy discussion group members (108 farmers) and a sample of non- group members (24 farmers) in East Cork.

The external evaluation was undertaken by Dr Pat Bogue, Broadmore Research. This involved a research survey with a sample of discussion group participants across the country. The data collection was undertaken by way of a telephone survey (notified in advance by text message or letter). A total of 405 survey questionnaires were completed during June/July 2012. A series of nine focus group meetings was organised to complement the information collected from the research surveys and to gain a greater insight into the views/opinions of farmers and advisors on the evaluation objectives. The groups involved: farmer discussion groups (7) – a mix of new groups established as a result of the DEP and long established groups which were enlarged to include new members as part of the DEP; non-discussion group members; and dairy advisors (involved in the provision of advice and the facilitation of dairy discussion groups).

2. EVALUATION FINDINGS

The findings from the various elements of the research are presented under four main headings: physical performance and practice adoption; financial performance; perceptions/attitudes – survey findings; and perceptions/attitudes – focus group findings.

2.1 Physical Performance and Practice Adoption

The analysis is based on National Farm Survey⁴ data examining the returns to discussion group members (Dr Thia Hennessy) and research undertaken with dairy farmers in East Cork (Mr Enda Duffy).

Rates of technology adoption by farmers were examined using 2008 Teagasc National Farm Survey data, i.e. data from before the DEP was launched. The results showed that established (pre-DEP) discussion group members were more likely to adopt technologies. For example, 87% of discussion group members used artificial insemination compared to 67% of non-members, (Figure 1).

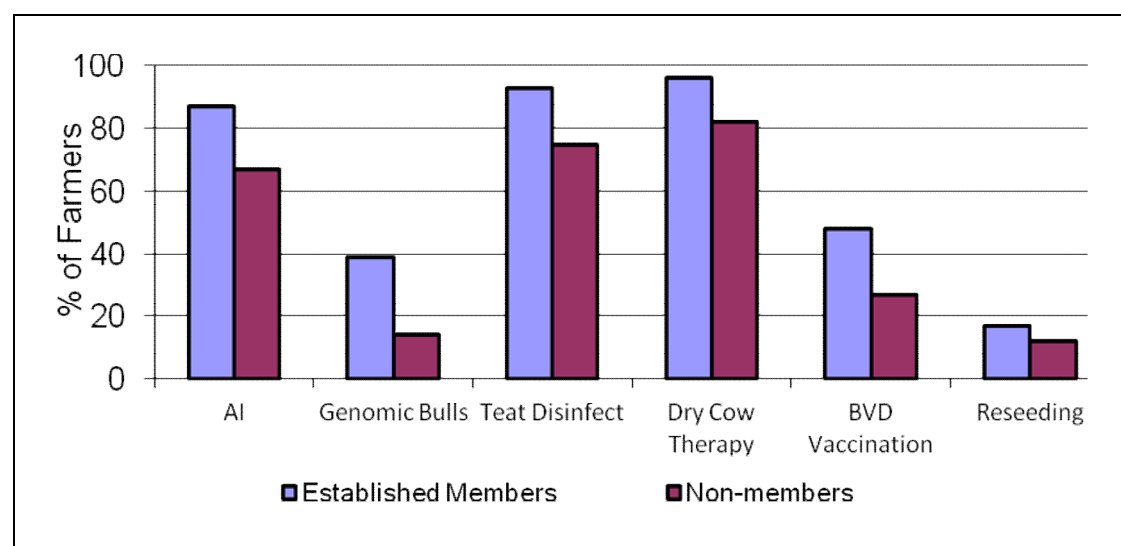


Figure 1 Rates of Technology Adoption by Discussion Group Members and Non-Members (2008)

However, further analysis of the data also showed that discussion group members tended to farm larger holdings in more advantaged regions than non-members. It is therefore possible that the higher rates of technology adoption may be due to the *types of farmers* participating in the groups rather than the actual knowledge gained through participation. Hence it is important to control for the initial differences between members and non-members. In relation to artificial insemination using genomic bulls, i.e. one of the newer technologies, the results show that even when the characteristics of discussion group members are controlled for, i.e. in terms of age, size and location, the effect of membership on the probability of adoption is still positive and significant at 0.21. In other words, taking two farmers of the same age, farming the same size holding in the same region, the

⁴ Hennessy, T., Kinsella, A., Moran, B. and Quinlan, G., 2012, National Farm Survey 2011. Teagasc.

discussion group member has 0.21 higher probability of using genomic bulls insemination than the non-member.

More recent Teagasc National Farm survey data (2011) is used to examine the physical performance of established, new and non-members. Along three output indicators (output per cow, per hectare and milk solids) new members fared better than non-members but poorer than established members (Table 3). The somatic cell count of new members was also lower, and while concentrate feed volumes per cow were slightly higher on new member farms, new members had more compact calving patterns and had a higher usage of artificial insemination.

Table 3 Technical Performance Indicators

	Established Members	New Members	Non-Members	All Farms
Production (litres per cow)	5,333	5,229	5,060	5,170
Milk sales (litres per hectare)	9,964	9,695	8,584	9,181
Milk solids (kgs per cow)	380	372	355	366
Somatic Cell Count ('ooo cells/ml)	217	204	297	252
Concentrate feed usage (kgs per cow)	773	941	913	875
Calving (% of calved from Jan to Mar)	69	67	60	64
Artificial Insemination (%using AI)	90	91	81	85

Established = joined before 2010; new = joined 2010/2011.

The Teagasc Road Map for Dairy Production (2011)⁵ has set performance indicators for farms for 2018. The percentage of farms that achieved a selection of these targets in 2011 is presented in Table 4.

Table 4 Percentage of Farms Achieving Teagasc Roadmap Targets (2011)

	Established Members	New Members	Non-Members	All Farms
	%			
Milk yield per cow: ≥ 5,200 litres	56	54	42	48
Milk solids per cow: ≥ 378kg	53	49	37	44
Protein Content: ≥3.4%	54	37	35	41
Fat Content: ≥ 3.95%	36	33	27	31
Somatic Cell Count: ≤ 200,000 cells/ml	52	55	23	37
Concentrate per cow: ≤750kg per cow	57	41	39	45

Established = joined before 2010; new = joined 2010/2011.

Again, the performance by both established and new members was substantially better than non-members along all measures. These results suggest that the dissemination through discussion groups was effective and was delivering real quantifiable results.

⁵ Teagasc, 2011, Sectoral Road Map for Dairy Production (http://www.teagasc.ie/publications/2011/761/Roadmap_Dairy.pdf) (27th September 2012).

Duffy found that the use of the spring time rotational planner for grassland management had significant effects on cow turnout dates. When compared to non-discussion group members, cow turnout dates for those in discussion groups were 11 days earlier in 2012. The greatest advances in cow turnout dates were for the newer discussion group members, indicating significant changes upon joining the group, whereas the ongoing changes for long- established group members were more modest.

Over one quarter (27%) of discussion group farmers rarely or never measured grass during the summer in 2010, compared to 11% of the farmers in 2011. Similarly, in 2010 some 55% of farmers measured grass on either a fortnightly or weekly basis, while this increased to 71% in 2011. Only 2% of discussion group members never measured grass growth compared to 33% of non-group members.

As a result of the DEP, a greater proportion of farmers were registering calves online (42% in 2010 compared to 59% in 2011). The greatest change was for new members. The proportion of farmers using profit monitors to analyse their dairy farm business increased from 29% of the group members in 2010 to 51% in 2011. Only 13% of non-discussion group members used a profit monitor in 2011. The longer established members and the larger herd size farmers (more than 65 cows) were more likely to undertake a greater level of financial analysis.

Duffy assessed the level of knowledge among farmers in 2011 and 2012 of key practices relating to grassland, breeding and financial management. The results show that farmer knowledge increased as a result of discussion group participation: a 6% increase in grassland knowledge (72% vs. 78%); 10% increase in breeding knowledge (68% vs. 78%); and 7% increase in finance knowledge (64% vs. 71%) However, the only statistically significant change was in breeding knowledge. The knowledge of the group members was significantly greater, compared to that of the non-group members with regard to grassland knowledge (78% vs. 38%), breeding knowledge (78% vs. 29%) and financial knowledge (71% vs. 42%). The new members experienced greater knowledge change. Farmers had learned the most in the area of grassland management, with 89% stating that they had learned '*a good amount*' or '*a lot of knowledge*' as a result of discussion group membership.

2.2 Financial Performance

Financial performance analysis is based on National Farm Survey data examining the returns to discussion group members (Dr Thia Hennessy). Two analyses were conducted. First, Teagasc NFS data from 2008 was used to assess what economic returns to discussion group membership, if any, existed prior to the introduction of the DEP. Second, data from 2011 was used to ascertain whether new group members, i.e. those joining through the DEP, are deriving economic benefits from participation.

A regression analysis was conducted to examine the impact of membership on farm profit while controlling for the various relevant farm characteristics. In terms of profit, the results of the analysis showed that when all measurable characteristics of the farm are controlled for, i.e. the farm size, soil type, location, intensity of production and so forth, that discussion group members typically earned a €247 premium per hectare in gross margin terms (Table 5).

Table 5 Multiple Regression Analysis of Gross Margin per Hectare (2008)

Dependent Variable (n=335)	Gross Margin Per Hectare €	
	Co-eff	t-Stat
Independent Variables		
Constant	765.28	
BMW	-164.83**	-2.30
East	122.35	1.79
South West	-110.15	-1.44
Herd Size	4.40*	5.69
Farmer's Age	-0.6421	-0.26
Member of a Discussion Group	247.45*	4.08
F-Statistic	18.66*	

* significant at the 99% confidence level & ** significant at the 95% confidence level

Further economic modelling techniques that account for the complex issue of selection bias were also conducted. Selection bias occurs if certain *types* of individuals opt into a programme, i.e. better farmers may be more likely to join discussion groups. It is important to account for these initial differences in participants and non-participants, which are often unobservable, when conducting programme evaluation. The results of this economic modelling confirmed that even when self-selection bias was identified and controlled for, the economic returns to discussion group membership were still present, (Laepple et al., 2013).⁶

Teagasc NFS data from 2011 was used to examine the relative performance of new discussion group members, i.e. those joining under the DEP. For a number of reasons it was expected that the return to membership would not be as significant for newer members. First, newer members had only been participating in discussion groups for a maximum of three years and data was only available for the first two of these three years. It was possible that it may have been too soon to observe any return to membership. Second, established members of discussion groups joined without a financial incentive and therefore could be viewed as more motivated farmers than those that only joined after the financial incentive was introduced. Hence, the prior expectation is that the analysis will not reveal as significant benefits to membership for newer members relative to established members.

On a per litre basis, there was very little difference between the performance of new members versus non-members, whereas established members were performing considerably better, with a net margin of 14.5 cent per litre compared to the average of 12.5, see NFS data for 2011 in Table 6.

⁶ Lapple, D., Hennessy, T. and Newman, C. (2013). Quantifying the Economic Return to Participatory Extension Programmes in Ireland: An Endogenous Switching Regression Analysis. *Journal of Agricultural Economics*. Forthcoming 2013. Volume 64. Issue 1

Table 6 Average Gross and Net Margin Cent / Litre: Established, New and Non-Members

	Established Members	New Members	Non-Members	All Farms
	Cent per Litre			
Milk Price	35.8	34.9	34.9	35.2
Total Gross Output	36.0	35.1	35.2	35.4
Concentrate Costs	3.7	4.7	4.8	4.5
Pasture and Forage Costs	4.0	3.9	4.4	4.2
Other Direct Costs	3.8	4.1	3.6	3.7
Total Direct Costs	11.5	12.8	12.8	12.4
Gross Margin	24.5	22.2	22.4	23.0
Energy and Fuel	2.1	2.1	2.7	2.4
Hired Labour	0.8	0.6	0.3	0.5
Other Fixed Costs	7.2	7.4	7.9	7.6
Total Fixed Costs	10.1	10.1	10.8	10.5
Net Margin	14.5	12.1	11.6	12.5

Established = joined before 2010; new = joined 2010/2011.

On a per hectare basis, however, the enhanced performance of new members was more apparent (Table 7). Net margin per hectare was 18% higher on new member farms than on non-member farms.

Table 7 Economic Performance: Established, New and Non-Members

	Established Members	New Members	Non-Members	All Farms
Production (litres per hectare)	10,484	10,161	9,092	9,687
Costs per Hectare (€)	2,260	2,327	2,150	2,218
Net Margin per Hectare(€)	1,516	1,234	1,050	1,214

Established = joined before 2010; new = joined 2010/2011.

Data in Table 8 describes the statistical significance of some of the differences reported in the previous tables. Along all three measures the differences between established members and non-members were positive and statistically significant at the 99% confidence level. However, the differences between new members and non-members were positive but not statistically significant. This result is further supported by a multiple regression analysis.

Table 8 Difference in Means and Statistical Significance between the Members and Non-Members

	Established Members versus non-members	New Members versus non-members
Gross Output per hectare (€)	563*	359
Gross Margin per hectare (€)	502*	180
Gross Margin per litre (€)	0.018*	0.005

*significant at the 99% confidence level

Established = joined before 2010; new = joined 2010/2011.

The results of a regression analysis that examines the impact of discussion group membership on farm profit (controlling for regional location of the farm, herd size, soil type and farmer's age) show that the effect of being a new member of a discussion group, relative to being a non-member, was positive at 44.13 but not significant, i.e. the t-statistic is 0.33 (Table 9).

Table 9 Multiple Regression Analysis of Gross Margin per Hectare (2011)

Dependent Variable (n=295)	Gross Margin Per Hectare €	
Independent Variables	Co-eff	t-Stat
Constant	1720.2	
Border Midland Rest region	-128.17	-1.22
East region	123.75	0.505
South West region	15.211	0.931
Herd Size	6.604*	4.84
Soil Type	362.62*	3.86
Farmer's Age	-2.837	-0.66
New Member of a discussion group	44.13	0.33
Established Member of a discussion group	241.11**	2.17
F-Statistic	9.42*	

* Significant at the 99% confidence level & ** significant at the 95% confidence level

The effect of established group membership on gross margin per hectare was significant and positive. Other things being equal, established membership was associated with a €241 gross margin per hectare premium relative to non-membership.

A multiple regression analysis examining gross margin on a cent per litre basis, using the same model structure as the gross margin per hectare model, also confirms the positive returns to membership for established members. Other factors being equal, being an established member is associated with a 1.96 cent per litre premium on a gross margin basis, this is the equivalent to an 8.5% profit premium (Table 10).

Table 10 Multiple Regression Analysis of Gross Margin Cent per Litre (2011)

Dependent Variable (<i>n</i>=295)	Gross Margin Cent Per Litre	
Independent Variables	<i>Co-eff</i>	<i>t-Stat</i>
Constant	21.48	
Border Midland Rest region	-0.734	-1.33
East region	-0.179	-0.18
South West region	0.981	1.07
Herd Size	-0.0039	-0.55***
Soil Type	0.816	1.65
Farmer's Age	0.020	0.89
New Member of a discussion group	-0.268	-0.37
Established Member of a discussion group	1.968	3.37*
F-Statistic	3.05*	

* Significant at the 99% confidence level, ** significant at the 95% confidence level, *** significant at the 90% confidence level

2.3 Perceptions/Attitudes – Survey Findings

The survey was conducted with a total of 405 farmers participating in 251 discussion groups in 23 counties.

2.3.1 Personal and Farm Characteristics

One in 20 farmers (5%) surveyed were aged in their 20's and the most common age group of participants was 40's (35%) (Figure 2). Three quarters (74%) of the respondents were married.

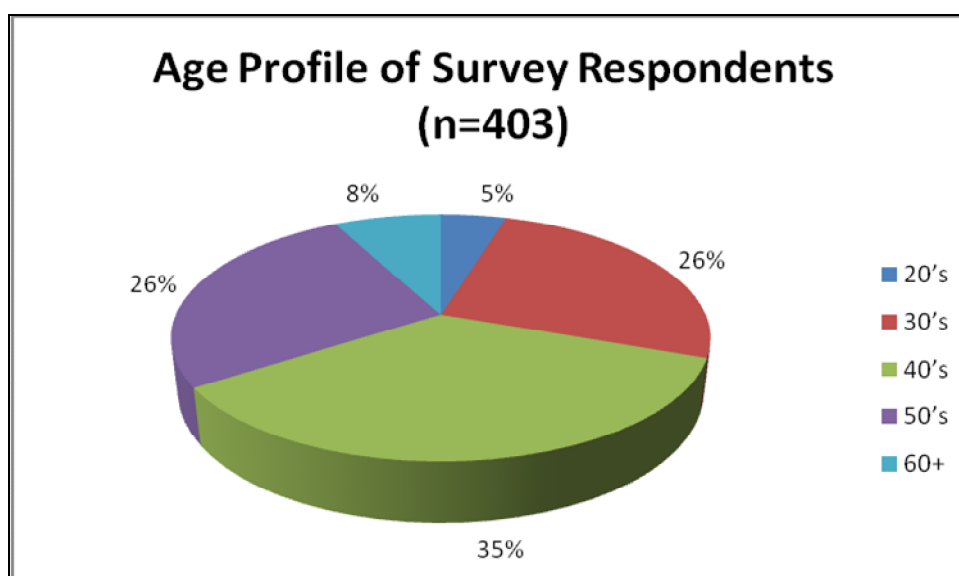


Figure 2 Age Profile of Teagasc Discussion Group Evaluation Survey Respondents (n=403)

Seven out of ten (71%) discussion group participants had completed an agricultural college course/green certificate, 17% had completed short courses, 9% had a degree/diploma and 9% had no formal agricultural training.

One tenth (11%) of farmers had an off-farm job or were running another business, while 39% had a spouse/partner with a non-farm source of income (Table 11). Overall, 46% of households had another source of income (job/other business) from either the operator and/or spouse/partner.

Table 11 Presence of an Off-Farm Source of Income (job/other business) for Teagasc Discussion Group Evaluation Survey Respondents (n=405)

Off-Farm Income	%
Respondent Only	6.9
Spouse/Partner Only	35.1
Both	4.2
None	53.8

Some 57% of farmers earned at least 75% of their income from dairying, while only 5% earned less than 50% of income from dairying. The average number of cows being milked at the time of the survey was 80 (ranging from 0 -280). One in ten farmers was milking less than 40 cows and 20% were milking more than 100 cows.

2.3.2 Discussion Group Membership

There was almost an even split between those who joined discussion groups since the introduction of the DEP (52%) and those who were members prior to 2010 (48%). New members⁷ were most likely to be milking less than 70 cows and established members were more likely to be most dependent on dairying (> 75% of income).

The main reasons cited for originally joining a discussion group included: to learn (29%); gain information (23%); and for the DEP payment (21%). Other important reasons cited included: meeting other farmers (14%); advisor asked them (9%); and to improve skills (8%).

Some 38% of those who joined since 2010 cited the DEP payment as the reason for joining. In contrast those who joined prior to 2010 were more likely to identify learning (33%) (compared to 26% of those who joined since DEP) and information (27%) (compared to 18% of those who joined since DEP).

Based on the average rating by farmers, '*wanted to learn/access to information/advice*' and '*meet other people*' were the most important factors in deciding to join a discussion group (4.7 and 4.38 ratings respectively) (Table 12).

Table 12 Views of Teagasc Discussion Group Evaluation Survey Respondents on the Importance of Key Factors in Their Decision to Join a Discussion Group (n=404)

Factor	Average Rating on scale of 1-5 1=not important to 5 = very important
Wanted to learn/access information/advice	4.7
Meet other people	4.38
The DEP financial payment	2.72
Friends/other farmers asked me	2.71
Advisor asked me	2.54

Those with less than 70 cows were significantly more likely to rate the '*DEP financial payment*' on being more important in their decision to join a discussion group than those with more than 70 cows (40% compared to 30%) (farmers with less than 70 cows were more likely to have joined the groups since 2010).

2.3.3 Discussion Group Characteristics

Four out of every five (79%) discussion groups had a chairperson and 76% had an annual plan, while 45% used monthly worksheets and a further 18% used them sometimes (Table

⁷ In this analysis, new members refers to those who joined discussion groups post 2010 and established members are those who joined prior to 2010.

13)⁸. Some 53% of discussion groups had a chairperson, an annual plan and used monthly worksheets (including those who sometimes used worksheets), while 10% had none of these three characteristics and 16% had only one.

Table 13 Characteristics of their Group for Teagasc Discussion Group Evaluation Survey Respondents (n=404)

Characteristics	Presence	
	%	
Chairperson	78.7	
Annual Plan	75.5	
Use Monthly Worksheets	45	17.8 (sometimes)

Established members were more likely to be involved in groups with all three characteristics (58% of established members compared to 43% of new members).

Some 64% of discussion groups meet on a specific day every month, a further 18% meet mostly monthly while the same proportion (18%) had no set date for meeting. Those discussion groups which had a chairperson, annual plan and used monthly worksheets were also more likely to meet on a specific day each month.

Some 73% of farmers stated that the talking at discussion group meetings was equally shared by the advisor/facilitator and farmers, while 16% stated that it was mainly the advisor/facilitator.

The agenda for discussion group meetings was generally set by the advisor/facilitator for 44.2% and by a combination of advisor/facilitators and farmers for 49.1% (Table 14). Some 99% of farmers stated that they had an opportunity to speak when they had something to say at group meetings. The advisor/facilitator was less likely to set the agenda for the longer established groups and groups which had a chairperson, annual plan and used monthly worksheets

Table 14 Teagasc Discussion Group Evaluation Survey Respondents Views on Who Generally Sets the Agenda for Meetings (n=405)

Generally Sets Agenda for Meetings	%
Combination of farmers/advisors	49.1
Advisor/facilitator	44.2
Group	4.4
Host farmer	1.5

While 42% of respondents stated that there were no weaknesses associated with their discussion group, one in ten (11%) believed that the discussion group meetings were repetitive (stale) and a further 10% said that the members were too quiet.

⁸ Evidence from the focus groups indicates that the extent of groups which were identified as having a chairperson was actually much lower (some 13 farmers in the main survey sample involved in the focus groups. Some 6 out of 13 (46%) stated in their survey response that there was a group chairperson, when there actually was not).

2.3.4 Benefits of Discussion Group Membership

Some 44% of farmers identified learning as a benefit of group membership, with in the region of one third identifying up-to-date information (34%) and ideas (32%). Problem solving (28%), meeting farmers (26%), seeing other farms (19%) and grassland management (12%) were also identified as important benefits.

Farmers were further asked to rank a number of benefits on a scale of 1 to 5: learning from others received the highest average rating (4.23); with social outlet (3.96); and problem solving (3.94) also highly rated (Table 15). Better work/life balance received the lowest average rating (2.62). Established members were more likely to rate '*financial management/cost control*' as a benefit than new members (46% compared to 33%).

Table 15 Views of Teagasc Discussion Group Evaluation Survey Respondents on the Benefits of Being a Member of a Discussion Group (n=404)

Benefit	Average Rating on scale of 1-5 1=no benefit to 5 = significant benefit
Learning from others	4.23
Social outlet (contact with other farmers)	3.96
Problem solving	3.94
Daily/weekly farm decisions	3.46
Long term planning	3.2
Financial management/cost control	3.06
Better work/life balance	2.62

The main change respondents felt they had made (in the past three years) as a result of being a group member was in the area of grassland management (70%). Other changes were in the areas of breeding/fertility (13%) and reduced costs (11%).

2.3.5 Hosting of Group Meetings

One in ten farmers had never hosted a discussion group meeting, 37% had hosted one meeting, while 32% had hosted three or more meetings. As could be expected, established members (96%) were more likely to have hosted a group meeting than new members (85%).

Three - quarters of discussion group farmers had a detailed planning visit from their advisor/facilitator prior to hosting the meeting, 12% had received a short visit, while 8% had had no visit.

Some 70% of farmers stated that recommendations/suggestions were made to the host farmer on the day of the discussion group meeting, while a further 19% stated that recommendations were made sometimes. Four out-of-five (81%) of respondents stated that the recommendations/suggestions were provided by a combination of advisor/facilitator and farmers, while 17% stated that they were made by the farmers only. One in five (22%) farmers believed that the recommendations were always implemented, while 73% stated that they were sometimes implemented. The hosting of a discussion group meeting was considered to be very beneficial/beneficial by 87% of respondents.

2.3.6 Assessment of Discussion Groups

Overall, there was a high level of satisfaction with the running of the groups, outcome of meetings and member participation (Table 16).

Table 16 Views of Teagasc Discussion Group Evaluation Survey Respondents on the Extent of Satisfaction with Aspects of Their Discussion Group (n=404)

Aspect of Discussion Group	Average Rating on scale of 1-5 1=very satisfied to 5 = very dissatisfied
Running of Group	1.8
Member Participation	1.98
Outcome of Meetings	1.92

Some 81% of farmers surveyed intended to continue their membership after the DEP ends and a further 12% were uncertain. Some 73% of new members intended to stay in the discussion groups while 18% were uncertain. Those with more than 70 cows were more likely (87%) to intend to continue than those with less than 70 cows (77%) ; (farmers with less than 70 cows more likely to have joined a group since 2010).

The main reason cited for uncertainty (of the above 18%) over continuing in groups after the DEP payment ends was the lack of the financial incentive (29%). Other important reasons included the time involved (26%), not worthwhile (24%) and the Teagasc fees (20%).

Of those farmers who stated that they were not intending to remain in discussion groups or were uncertain about remaining after the DEP ends:

- Those aged under 40 years were three times more likely to cite lack of time than discussion group fees than those aged over 40 years. In contrast, the lack of the DEP payment was more likely to be an issue for those aged over 40 years.
- Those with an off-farm source of income were less likely to cite time as a reason for not continuing in the discussion group than those totally dependent on the farm income. The lack of DEP payment was also more of an issue for those totally dependent on the farm income than those with an off-farm income.

For those who stated that improvements were required to their discussion group, the main suggestions listed included: more focus on Profit Monitors (10%); better involvement from members (9%); more practical advice from Teagasc (8%); visit farms outside the group (8%); and more honesty from farmers (8%). Three out of ten farmers stated that there were no improvements needed to their discussion group.

2.3.7 Advisor/Farmer Interaction

Almost two-thirds (64%) of farmers engaged with the advisory service equally through one-to-one and discussion groups (indicating that despite the active engagement in discussion groups, one-to-one service was important). One-in-ten stated that their engagement was mainly one-to-one and 26% mainly through their discussion group.

The views of farmers on a series of statements relating to their advisor/facilitator are presented in Table 17. The main strength of the advisor/facilitator was the ability to tailor

advice to their needs. Overall it is evident that farmers believe that the advisor/discussion group facilitator has a good knowledge and understanding of their needs and requirements.

Table 17 Views of Teagasc Discussion Group Evaluation Survey Respondents on Their Engagement With Their Advisor/Discussion Group Facilitator (n=404)

Views on Advisor/Facilitator	Average Rating on scale 1-5 1=total disagreement to 5 = total agreement
Advisor can tailor advice to my needs	4.25
Advisor knows my farm and technical requirements	4.06
Discussion groups make better use of advisors time	3.96
Advisor understands my plans & ambitions	3.84
Advisor understands me & my family/household situation	3.65

Established members were more likely to agree with the statements '*advisor knows my farm and technical requirements*' and '*advisor understands me and my family/household situation*' than new members.

The views of farmers on a series of statements relating to the operation of their discussion group are presented in Table 18. Overall, farmers were very satisfied with the operation of their group.

Table 18 Views of Teagasc Discussion Group Evaluation Survey Respondents on the Operation of Their Discussion Group (n=404)

Views on Operation of Discussion Group	Average Rating on scale 1-5 1=total disagreement to 5 = total agreement
Facilitator is well prepared for group meetings	4.75
Facilitator encourages the sharing of ideas/information	4.61
Facilitator ensures discussion/farmer participation	4.6
There are always outcomes/actions from meetings	3.87

2.4 Perceptions/Attitudes Focus Groups

The findings from nine focus group meetings are presented around a number of key areas⁹.

2.4.1 Perceptions of the Benefits of Discussion Group Membership

Farmers involved in discussion groups identified a range of benefits to their participation in the groups including: financial management/cost control; grass measurement/budgeting; and breeding. The extent of benefits identified was influenced by the length of time the group was in operation; newer established groups were more reticent in identifying the benefits.

The power of collective thinking and the harnessing of the members to solve problems was a strength of groups, particularly useful during the difficult summer of 2012. Even more basic than solving problems was the ability to share problems, experiences and solutions. On-farm meetings provided an ideal environment for devising practical solutions. The shared experiences and knowledge of the farmers was complemented by the expert input of the facilitator. The facilitator was also perceived as bringing information and experiences from other discussions groups/a much wider circle of farmers. The advantage of learning from the mistakes of others was also highlighted. The group approach was perceived as having the benefit of deciphering complex advisory messages and clarifying the most important elements for farmers.

Membership of a discussion group was considered as providing a target for farmers to strive to achieve: to reach above the average in the group; or to match the better farmers in the group. Therefore, even passively, groups encourage enhanced performance. There was a view that generally the mood and attitude of farmers were more positive following group meetings as they provided them with a positive attitude and drive to improve.

2.4.2 Perceptions on the Dairy Efficiency Programme

There was a belief that the DEP had a significant impact on discussion groups, particularly relating to the more structured programme of activities and the increased membership. The DEP brought people into discussion groups who had the opportunity to benefit from increased advisory contact and the shared wisdom of the other farmers. Regular contact with an advisor, which many did not have previously, provided an opportunity to discuss issues on a one-to-one basis with the advisor (before/after the group meeting). The advisors' perspective on the DEP was broadly similar to that of the farmers. They believed it was a worthwhile programme which brought new farmers into groups.

A criticism of the DEP was that it was too structured (restrictive in terms of the agenda for meetings) in that it did not provide enough opportunity to tailor the delivery of the programme to the specific needs of farmers. A further criticism was that some new

⁹ The opinions presented in this section are those of the focus group participants. The author's opinion is only expressed in the conclusions section.

members had unsettled some of the existing members because it was considered that the former were only interested in receiving the DEP payment (contributing little to the group). The advisors found that it was challenging to get farmers to complete the DEP '*paperwork*' and as a result it increased the demands on their time. This limited the time available to prepare in advance for each individual group, resulting in generic rather than specific preparations. There was concern that some of the DEP technology was too '*advanced*' for many new members. Therefore, the emphasis should be on promoting new technology and explaining the technology but not forcing application.

2.4.3 Views on Future DEP

Some farmers believed that the benefits of DEP participation should be evident to all. Others felt that it would take more than three years for new members to get the most from groups. There was concern about a fall off in participation once the DEP payment ceases. It was suggested that a future DEP should be promoted more to farmers to ensure greater awareness and greater engagement.

Farmers considered that the programme for a future DEP should be: similar in structure and format to the current programme; delivered through a discussion group format; with less emphasis on paperwork; and more opportunities to visit external farms. An element of one-to-one advisory visits was suggested as a worthwhile addition to the programme. Non-participants believed that the DEP could support the provision of one-to-one advisory visits to dairy farmers who were willing to sign up to the programme.

The advisors believed that a future DEP should be focused on the discussion group approach with more flexibility in the content and scheduling of meetings. Greater opportunities to amalgamate groups for specific meetings and encourage interaction between them should be allowed. They also believed that the momentum developed as a result of the DEP could be lost if the funding was removed. In addition, it could have an impact on the morale of those involved in the groups.

2.4.4 Absence of the DEP

A proportion of farmers indicated that they would definitely leave the discussion groups in the absence of a DEP-type payment. A proportion would remain as part of a group, but would not be as regular a participant (less committed and attend fewer meetings). Approximately half of the farmers indicated that they would probably stay actively involved and committed to the discussion group programme.

While many farmers saw the decline in numbers as a problem, some did not see this as a major problem, as those intending to leave were likely to be contributing least to the discussions. A decline in commitment may also cause long-term problems for groups, as it could erode the group over time. Both declining numbers and commitment could affect the morale of remaining members. Amalgamation of groups was also looked on with some concern with some anticipating difficulties in joining with another group, particularly if that group was perceived as being at a higher level of development.

2.4.5 Impact of Discussion Groups on the Advisor Client Relationship

Most farmers maintained contact with their advisor for form filling and other requirements but generally their advisory needs were serviced through the discussion group or at/around the time of the discussion group meetings. Ongoing contact is maintained through telephone and some office consultations. Farmers felt that for more personal and targeted advice on their own situation, one-to-one contact was important.

However, the advisors confirmed that the DEP had increased the demands for services. Farmers believed that the popularity of discussion groups as a mechanism for the delivery of advice has made it more difficult to access advisors on a one-to-one basis. Farmers not involved in groups also believed that the proliferation of discussion groups was having a negative impact on the time available to advisors to deliver a one-to-one service (on-farm, office and telephone). These farmers also believed that the discussion group approach had resulted in a focus on New Zealand technology which was not totally applicable to Ireland, and a belief that *'if you were not adopting this technology, then you were not adhering to best practice'*. The reduced focus on one-to-one advice had encouraged a small proportion of the more developed farmers to engage private consultants for specific advice.

2.4.6 Weaknesses/Challenges of Discussion Groups

The main challenge facing discussion groups was maintaining freshness and enthusiasm and not becoming stale/repetitive. Recruitment of new members was considered to be important in maintaining the vibrancy of groups, but it was challenging to attract new members and to integrate them in a way that could maximise their contribution and benefits.

It was difficult for advisors to continually source new information, particularly for the established groups and those with members who regularly attend Teagasc events. These farmers already have the core information/messages from research/best practice (open days; events; online; newspapers) but required more specific messages to be extracted. A challenge faced by the advisor/facilitator was to maintain the interest of group members when addressing ongoing aspects/topics, which needed to be covered annually due to the cyclical nature of farming. Farmers cited that they need to be challenged by the advisor. In doing so, it was necessary to get farmers to focus on their weaknesses or issues which need to be most addressed on their farms (individuals by their nature find it difficult to explore and address their weaknesses).

Financial management and cost control are critical elements of efficient milk production. However, there was a view that some discussion groups and farmers were not placing enough emphasis on financial management. The DEP was perceived as adding to the difficulty in this area by effectively setting the agenda for the year. As a result of rigid agendas, farmers had less time to introduce issues/topics of relevance or concern to them at particular times of the year.

Diversity of members (in terms of scale, importance of dairying, efficiency level, stage of development, attitude) was considered both a strength and a weakness of discussion

groups. It was seen as a strength in terms of the opportunity to gain an insight from a wide range of farmers, but as a weakness in terms of the relevance to everyone within the group. However, the consensus was that the attitude of farmers was the most important aspect.

Regular and committed attendance was enforced by the DEP, but remains an issue. The DEP, in particular, has caused frustration for a minority, but yet noticeable number of farmers where new members joined existing groups. Some new members contribute little to the groups and have limited interest in developing the group. As a result, there is frustration among some existing members that the overall group is being held back and stifled by the '*lowest common denominator*'. To date, this frustration is '*bubbling under the surface*', but may emerge as a more important issue in the future. Another challenge raised by advisors was the ongoing need to pursue farmers for routine information for the meetings and the completion of paperwork (Profit Monitors, grass planners etc.).

The advisor/facilitator was perceived as critical to the success of groups and concern was expressed that if a group had a weak or less competent facilitator, members did not have the ability to seek a change in advisor. There was also a weakness in that some advisors/facilitators took too much control of discussion groups and, in effect, set the group's agenda.

2.4.7 Preventing a Group from Getting Stale/Repetitive

One of the most important methods of ensuring that the discussion did not become stale/repetitive was to have a variation in every meeting. While the primary focus of groups may be on profitable grass-based milk production, elements could be added to the meetings to ensure that the discussion is not just about '*grass*'. It was felt that farmers would gain more from the group discussions if specialist issues (identified by members) were addressed on an occasional basis.

The efficiency of routine information collection and sharing in advance of the discussion group meetings could be improved (by e-mail, text, telephone call or access to co-op data). Meetings should focus on the average, the extremes and the host farm if desirable.

External specialists both within Teagasc and other organisations (e.g. breeding/AI, nutrition, co-ops), were perceived as worthwhile for: adding new information and experience to the group discussions; exposure to wider issues; and maintaining variety and interest. The involvement of the Co-op Milk Quality Advisors was suggested as a mechanism for a two-way flow of information between the farmers and the milk processors.

2.4.8 Suggested Improvements to Discussion Groups

Many of the suggestions for improvement relate to the characteristics identified for the ideal group. A range of specific aspects was discussed relating to improving the performance of groups: improved interaction and discussion; improved meeting outcomes; sharing of information; focusing on the bottom line; organisation and operation; appropriateness of the message/technology; and farmer ownership/involvement.

2.4.8.1 Improved Interaction and Discussion

The dairy advisors believed that an improved level of discussion among farmers was fundamental to improved efficiency (ease of running groups) and effectiveness (benefits and outcomes from meetings). In order to achieve this, advisors needed to step back somewhat from making inputs and let the discussion flow. This would build the level of discussion within the group and encourage farmers to contribute more. An advisor/facilitator with a good knowledge of each member and their situation had a greater opportunity to include them in the discussion. In addition, it was considered worthwhile to seek to let farmers set the agenda for discussion group meetings.

While a good facilitator is critically important for discussion groups, farmers can become too familiar with the same person. It was suggested that greater use could be made of external specialists for inputs on specific issues. Also, that consideration should be given to the rotation of advisors into different groups on an occasional basis (possibly once or twice per year on a relevant issue).

The ideal number of members was identified as being in the region of 15-20. The actual number was not as critical as the extent to which those involved were willing to actively engage in vigorous discussion and debate at the maximum number of meetings. Involving a variety of different farmers in terms of scale, system and stage of development was considered important. However, it was considered that the farmers needed to be somewhat similar in terms of their attitudes and goals.

Improved interaction between farmers was raised as an important aspect which could benefit the overall effectiveness of discussion groups. This encompassed both the level of discussion and debate at meetings, but also the interaction outside of the meetings. Farmers themselves (especially those in long-established groups) believed that the more ongoing interaction there was between them, the greater the trust and sharing and, ultimately, the more effective the discussion groups will be. Greater interaction could be promoted and encouraged at a business and social level. Greater interaction between discussion groups could be facilitated by external visits and also by visits to other groups.

Well-established groups viewed the role of the advisor as guiding the discussion, encouraging farmer contributions, clarifying the facts and providing key pieces of information. However, some of the newer members and groups believed that the advisor should provide more direct information, advice and guidance rather than coordinating the inputs of members.

In order to overcome the lack of commitment of some members, it was believed to be necessary to work to convince them of the potential benefits to be derived from active group participation and the value of taking time out of their farming operations to attend group meetings. This was particularly important for newer group members who may not yet be fully convinced about the merits of discussion groups and may be considering dropping out.

2.4.8.2 Improved Meeting Outcomes

A good facilitator was viewed as vitally important to a successful discussion group, to maintain momentum within the group and the flow of information into the group. They can also ensure that there is learning and relevant outcomes from every meeting. This could be enhanced by having a current and group specific topic discussed at every meeting. The advisor should summarise the discussion and draw out the relevant lessons for participants. Farmers by nature are slow to make changes, therefore the facilitator needs to review the implementation of recommendations at subsequent meetings to encourage ongoing learning and application. In some cases the implementation of a recommendation may take time or result in a small change; hence the importance of recording the recommendation and returning to it at a future meeting.

There was a view that greater outcomes could be achieved by the setting of group targets/goals. This was necessary to encourage farmers to challenge themselves. The advisor was perceived as being critical to the setting of targets and providing encouragement to achieve targets and reviewing ongoing progress. Members need to be open to new ideas, technology and practices and be willing to share their experiences of trying to achieve those targets.

2.4.8.3 Sharing of Information

Farmers need to continually build the trust (farm and personal/social levels) within their discussion group and achieve a stage where they are willing to share all information with each other. Introducing a social element was highlighted as allowing members to get to know each other outside the farm. The trust should extend to sharing their problems in confidence and receiving constructive recommendations. The sharing of information could be encouraged by the advisor, but it was ultimately the responsibility of farmers to achieve a level of trust and willingness to share for their own benefit and that of the group. A mechanism suggested for increasing the sharing of information was to identify a common project or target to address a specific issue relevant to the group.

2.4.8.4 Focus on the Bottom Line

The focus of farmers in groups was to improve management skills, profitability and efficiency. It was suggested that to improve the effectiveness of groups, there should be more focus placed on the *bottom line* – financial measures and profitability. This should involve the ongoing usage and referral to the Profit Monitor figures (or other measures) throughout the year.

2.4.8.5 Organisation and Operation

One of the challenges for advisors is the collation of *paperwork*. In order to improve the efficiency of discussion groups, farmers need to take on the responsibility of submitting information punctually. It was suggested that all information available should be presented in summary for each host farmer and an opportunity provided at each meeting to explore the key points and areas for improvement.

Greater structuring of meetings could allow more opportunity for new issues to be added to the agenda in addition to addressing the routine management issues.

The organisation of meetings/events could be enhanced by active voluntary input by farmers. Roles such as chairperson and secretary (and others) should be encouraged and supported. Once these roles become established within a group, this could reduce the burden on the advisor/facilitator and also make the group more independent and facilitate members to take more ownership and set the agenda. It was generally concluded that currently these roles were mostly inactive, or passive at the very most.

2.4.8.6 Appropriateness of the Message/Technology

Discussion groups focused on grass technology and accompanying planners. For some members, even following discussion, the technology was *'over their heads'*, and it is important to simplify the message as much as possible. In addition, it was considered worthwhile to recap on the technology and techniques occasionally to ensure that everyone was making the most from them and fully understood the technology and its application.

2.4.8.7 Farmer Ownership/Involvement

The level of ownership taken on by the groups seemed to be quite small and there was a high level of dependence on the advisor. Even among strong groups, there was an expectation that the advisor would organise and facilitate all meetings. When challenged on this, the response was that *'it is a Teagasc group, not a farmer group'*.

The development of some groups may be hindered by the commitment of the advisor doing too much for the group and not allowing members to take ownership. There is a difficult balance to be achieved, as advisors may feel that the response is not coming back from the farmers in the absence of their own initiative. As a result, the group and the agenda can become almost totally advisor led.

For the long-term success and development of groups, there needs to be a greater shift in ownership of the group activities from the advisor to the farmers. Farmers generally felt that they could get most of their issues discussed. However, it was best described in one of the groups as *'advisor directs on big issues and farmers have input on regular smaller issues'*.

None of the newly established groups (in the Focus Groups) appeared to have elected officers (e.g. Chairperson, Secretary). Where the officers were in place, they seemed to be little more than token positions. The strongest group with an active chairperson expressed the opinion that there were not clearly defined roles for officers and that there was more potential for farmers to take on greater responsibility (setting their own agenda for meetings and encouraging participation and engagement).

It was suggested that the group agendas should be determined by farmers in consultation with the advisor, particularly for established groups. An opportunity should be provided in each meeting to discuss issues of particular relevance to the host farmer, including the

opportunity to discuss long-term goals, plans, strategies or management issues. An annual review meeting was considered as suitable to discuss the broad issues that the group should pursue and also some of the more specific topics. However, the experience of advisors is that some of these meetings even though well intentioned, can develop into an unattainable wish-list of topics. In many groups, it can be difficult to get farmers to engage in planning/review meetings and therefore, difficult to identify in either broad or specific terms, what they want from their participation in the group.

2.4.8.8 Emphasis on Grassland Management

One of the questions raised by farmers was whether there was too much emphasis on grassland management in discussion groups. Some farmers thought that the group discussions became too repetitive because of the ongoing focus on grassland management (growth, measurement and budgeting). However, the majority felt that the emphasis was correct. There was a view that the discussions could be altered so that they did not become too mundane and repetitive and also that more effort could be made to alter the relevance of the message to different parts of the country. Some farmers believed that in order to maximise the learning from the discussion on grass, that there should be ongoing occasional recap on the basics of grass measuring and budgeting so that all farmers could keep their skills up-to-date and refreshed.

2.4.9 Teagasc Research Information

There was concern among some farmers about the validity of the research messages which were communicated to them from the Teagasc dairy research programme. This issue relates to the extent to which farmers perceived the research issues as relevant to them, the complexity of the information emerging and the difficulty of translating findings from research farm scenarios into real farm situations. There was a perception among some farmers that the focus of Teagasc research was on large scale operations (Greenfield farms, expansion, scale). This was considered as not being relevant to the majority of farmers who operated smaller scale operations with modest expansion potential.

2.4.10 Perspective of the Non-Discussion Group Participant

Pressure on advisors to deliver a one-to-one service was identified as an outcome of the increased participation in groups by non-discussion group farmers. This led to those who are not involved in groups becoming further distanced from the Advisory Service. The reasons for not participating in discussion groups were wide and varied, but included:

- Personal choice, not interested in the discussion group approach;
- Teagasc information, advice and research had moved to a step beyond the average farmer and therefore was not relevant to them;
- Too much focus on grass measurement and grass budgeting within discussion groups which did not interest or enthuse all farmers;
- Discussion groups were too diverse (in terms of the farmers involved) to provide worthwhile and focused information;
- Perception that discussion groups were too focused on a New Zealand system of farming which did not have enough to offer them;

- Groups provide generic advice whereas these farmers wanted specific advice;
- Farmers are at different stages of development and therefore the advice delivered in groups may not be suited to their needs;
- Difficult for younger farmers to actively participate in discussion groups if they are not in management control (unable to implement recommendations); and
- Some farmers did not want to host a discussion group meeting.

The requirements from the Advisory Service for farmers who were not involved in discussion groups could be summarised as follows:

- Two farm visits per year (visits should respond to an agreed agenda between farmer and advisor with subsequent follow-up after the meeting);
- Information available on Irish systems of production (not New Zealand);
- Advice tailored to the specific needs of the farmer (Advisory Service takes greater account of the farm and family situation – motivation, goals, aims, plans etc);
- Targeted research on practical issues;
- Presenting information on both sides of the argument, not just on the perceived best practice; and
- Access to an advisor for telephone consultations as required.

3. EVALUATION CONCLUSIONS

The statistical and economic analysis revealed that before the DEP was launched, discussion group members tended to be younger, formally trained in farming and operating larger holdings in more agriculturally advantaged regions of the country. The DEP has been successful in broadening the scope of discussion group membership by attracting farmers with smaller holdings, from less advantaged regions. An analysis of the physical performance of discussion group members showed that discussion group members are up to 20 percent more likely to adopt new technologies and best management practices. Furthermore, the analysis confirms that this enhanced physical performance also translates into profit. On average, farmers that have been members of a discussion group for a number of years generate higher gross margins, and even when the characteristics of the farmers in groups are controlled for, these economic returns to membership are still present. In other words, taking two identical farmers farming in the south west with a herd of 60 cows, on very good soils, aged 55, the results show that the farmer who is a member of a discussion group is likely to generate a gross margin per hectare of approximately €2,600 compared to €2,350 for the non-member: this represents an 11 percent profit premium due to membership.

Evaluation conclusions¹⁰ are drawn for each of the main sections in the report.

3.1 Physical Performance and Practice Adoption

Participation in discussion groups had a positive impact on grassland and financial management. The introduction of the DEP increased the membership of discussion groups and as a result more dairy farmers benefited from improved management practices. On grassland management, earlier turnout dates were achieved and grass was being measured on a more frequent basis. The discussion group members were also using more financial aids as a consequence of the DEP. As well as improving their farming practices over time, the group members had shown significantly better practice than the non - group members. However, some of the differences between members and non-members may reflect differences in attitude, motivation and stage of farm development.

Farmers who were members of long-established groups had higher levels of knowledge on grassland management compared to those of new group members in early 2011. By 2012, both new and established group members were displaying similar levels of knowledge on grassland management. The knowledge levels of grassland, breeding and finance of the DEP farmers were significantly higher than the non-discussion group members. Therefore, it can be concluded that the DEP had a positive influence on increasing farmer knowledge on grassland, breeding and finance.

It is evident that there are significant benefits to be had from discussion group involvement in the immediate years after joining - '*discussion group bounce*'. This results from farmers gaining knowledge, benefiting from the experience of other farmers and catching up on

¹⁰ Conclusions include those made by Mr Enda Duffy and Dr Thia Hennessy in their elements of the evaluation.

some of the more basic but fundamental management practices and efficiencies. However, the ongoing benefits may not be as obvious and readily achieved, and it is important that farmers stay involved in discussion groups for the longer term and continue to work within the group structure.

It is anticipated that the improvements in knowledge and practices will continue even for those farmers who do not continue to participate in discussion groups after the DEP payment ends. However, some farmers may let practices lapse without the support and encouragement provided by other discussion group members and their advisor. As a result, some of the gains made under the DEP may not be sustained.

Overall, farmers had benefited as a result of their discussion group membership. Farmers were adamant that discussion groups had greatly improved their farming practices and management.

3.2 Financial Performance

The analysis in the report showed that there were clearly quantifiable benefits to '*long-term*' discussion group membership. The results showed that those who had been members of groups for three years or more were more likely to adopt new technologies and best practice and were more likely to achieve higher profits. The results were less clear for new members, i.e. those who had joined groups since the DEP. While a simple comparison between new and non-members suggested that new members were performing better along a number of technical performance and output indicators, the statistical analysis did not support this finding. These findings suggest that while there was a real economic return to dairy discussion group membership, the return could not be realised immediately and could take a number of years of membership. The evidence presented in this element of the evaluation would not support the perceived - '*discussion group bounce*' (as discussed in the previous section) in terms of significant tangible financial benefits. However, it may be the case that farmers perceive themselves to be getting benefits from membership but that the outcomes in financial terms are slower to be realised.

There is also a possibility that the differences presented in terms of established, new and non-members may reflect the differences in attitude and motivation of the operators. While the research concluded that even allowing for self- selection, there were benefits to discussion group membership. It must also be concluded that some non-members are at a stage in their farming career where they may not want to make any further improvements in efficiency and are satisfied with their current levels of profitability. Therefore, the potential gains from discussion group membership will not be realised, as they are unlikely to join (and differences may be evident between this group and other farmers even if discussion groups were never in operation).

3.3 Benefits of Group Membership

The motivation for joining discussion groups was primarily focused around learning and gaining information – a hunger for knowledge. The DEP payment was an important motivation for the new members. Overall, there appeared to be a relatively high level of satisfaction with discussion groups with no major weaknesses identified, indicating that farmers were getting benefits from groups - learning, access to information, ideas and problem solving. These benefits were derived through meeting other farmers and seeing practices on other farms. Group membership was harnessing the benefit of the knowledge of a number of farmers (*'learning from others'*) and an advisor for application on their own farm. The social element of interacting and sharing with other farmers was also important. Social interaction can lead to improved confidence in applying learning and an overall more positive attitude. Grassland management benefited significantly from participation in groups', financial management benefits were perceived as being slower to achieve.

3.4 Impact of Discussion Group Membership on the Advisor Client Relationship

Discussion groups have altered the delivery of advice from the traditional advisor provision role to a shared approach between farmers and the advisor/facilitator. This was evident in the fact that farmers identified the discussion as mainly being shared between them and the advisor. However, it indicated further opportunities to encourage greater discussion. The hosting of a discussion group meeting provides an opportunity for the advisor to undertake a farm visit, allowing farmers to discuss issues on a one-to-one basis with their advisor. However, there were suggestions that the obligation to host a group meeting was a deterrent to some farmers from joining a discussion group.

The level of farmer satisfaction with discussion groups was evident in their intention to stay involved after the DEP ends. However, the impact of a fall-out of members, particularly those who joined since the DEP, needs to be considered at three levels: impact on the group dynamic and on other farmers; meeting their advisory needs in the absence of discussion group participation; and steps to be taken by advisors to adapt to reduced participation.

A number of the new DEP groups were at a good stage, which reflects the interaction of an interested group of farmers with a competent facilitator/advisor. These groups need to be challenged in order to develop further and survive (in the absence of the DEP payment). There was also an opportunity for longer established discussion groups to be pushed harder to take more responsibility for their own group and ownership over their own development.

The fact that a proportion of farmers was intent on leaving the discussion groups after the DEP ended or were uncertain about it indicates that they were not sufficiently convinced about the benefits of discussion groups to warrant continued involvement. The reasons for not continuing in their discussion group are varied, but the lack of payment, lack of time and benefit indicates that the financial payment is currently keeping some farmers involved.

Despite the active engagement in discussion groups, the provision of one-to-one advice was very important to farmers. However, the increased number of discussion groups was perceived as contributing to the decline in one-to-one farm visits. One of the realities of increased discussion group membership was an increase in the demand for advisory services – those involved in discussion groups were making more demand on the advisors' time,

often arising directly from a discussion group meeting. Therefore, those who are not involved in discussion groups and not demanding of services could be somewhat sidelined. It can be challenging for advisors to deliver an adequate one-to-one service while also servicing a number of groups. Supporting farmers in the completion of paperwork or computer work associated with the use of planners and monitors has also become a significant drain on advisors' time, both in terms of actually assisting in the completion and in pursuing farmers to submit their information.

Those farmers who have not fully bought into the discussion group concept or recognised the benefits of the group approach may only want to receive general advice and information. They may not be interested in developing the group mechanism or contributing greatly to the group process. These farmers are seeking direction, guidance and information from their advisor (provided through a group mechanism).

Overall, the discussion group members were satisfied that their advisor '*knew and understood their farm and family situation*' and were able to provide advice tailored to their needs.

3.5 Improving the Efficiency and Effectiveness of Discussion Group Delivery

It is evident from the focus groups that the extent of an '*active functioning chairperson*' is much lower than appears from the survey. There may be a chairperson in name but in practice the role of chairperson was not developed or maximised. One of the reasons cited for not having a chairperson in the newer DEP groups was the fear that putting in place rigid structures would put farmers off. The lack of an actual chairperson was a concern, but even more so, the fact that where there was a chair, the role was often not understood and not utilised effectively.

In addition to having a chairperson, there was scope for considerable improvement in the areas of: utilising worksheets; developing annual plans; and having a set meeting date each month. More focus was also required on ensuring that there were definite recommendations made at each group meeting. Greater efforts need to be made with all groups to bring them up to certain standards and ensure adherence to group best practices.

The setting of agendas reflects the level to which farmers have taken ownership of their own discussion group and were still significantly controlled by advisors. The fact that the extent to which the advisor sets the agenda declined with the length of time the group was in operation and also the extent to which there was a chairperson and annual plan indicates that where farmers take more ownership of their group, then they set the agenda more.

Evidence from the survey indicates that farmers were very satisfied with the service provided by advisors in facilitating discussion groups. There appeared to be adequate opportunities for farmers to contribute. The biggest challenge was probably to get farmers to take over more of the discussion and reduce the dependence on the advisor.

There appears to be scope to increase the level of up-to-date information provided about the host farm at each meeting. This depends on the willingness of the farmers to provide and share information with other farmers.

The Best Practice Protocol for Discussion Groups suggests that established groups should engage in specific projects. The evidence in the focus groups suggests that there was little engagement with projects. Advisors perceived that many farmers were not willing to engage in projects and therefore that projects had limited appeal.

3.6 General Conclusions on Discussion Groups

Overall, dairy discussion groups are an effective mechanism in the delivery of advice; are impacting on management and efficiency; and are generally delivering to the expectations of farmers. While discussion groups were perceived as being beneficial to all scales and types of dairy farmers, those who most recently joined groups were milking the smaller herds and were less dependent on dairying in their overall enterprise mix. The DEP was successful in attracting different types of farmers to join groups. However, the smaller farmers are more likely to consider leaving groups once the DEP ends. It is also evident that the discussion group approach does not appeal to all farmers.

The three attributes of a successful discussion group identified by Teagasc are: regular meetings; a committed advisor/facilitator; and an identified group chairman & secretary. It can be concluded that: there are committed advisors/facilitators; meetings are generally regular, but not all need be so; and while the survey evidence suggests that the majority of groups have a chairperson, the role was not very active in many cases.

It emerged that discussion group members appeared to have a short-term focus and had not considered the long-term development or functioning of the group. The focus group meeting for this evaluation appeared to be the first opportunity provided to group members to explore how they could improve the effectiveness and efficiency of their groups.

The discussion groups were insular in that they had limited interaction with other groups, proving to an extent that farmers viewed groups more as a mechanism for the delivery of advice than as an entity in their own right. The members felt they had little knowledge of how other groups operated or how their performance compared to that of other groups (little to benchmark themselves as a group against and limited in the goals they could set as a group). There was limited understanding of the need to build the group dynamic or develop the functioning of the group.

There was a high dependence on the advisor to lead both short-term (each meeting) and long - term (overall direction). In many cases, the advisor seems content with this role and may be more concerned about a role where the farmers would take full ownership of the group. In the event of this occurring, the advisor would have limited control over the direction of the group and be required to respond to the group demands. The evidence from the focus groups was that the advisor was critical to the success of the group, even with strong groups.

The learning from the DEP both for new groups and those that expanded to include new members, was that it was challenging to involve new members. This took time and effort on behalf of the individual, the group and the advisor. There were advantages to both establishing a totally new group and expanding an existing group. Establishing a new group

had the advantage that all members were starting at the one time and new people did not feel ill at ease in joining an established group. The obvious disadvantage was that everyone was starting new and more effort was needed. The advantage of expanding an existing group was that the core group was already in place and functioning. However, it may be difficult for new members to integrate. In addition, existing members may not be tolerant of having to wait for new members to '*come up to speed*'. This was an issue which was starting to emerge with the integration of new DEP members into existing groups, where the newer members had not demonstrated a commitment to the group process.

A policy for the integration of new members may be necessary. However, it may also be necessary to consider the streaming of discussion groups into two different levels. Advisors were concerned about the concept of group streaming, as they felt it could lead to a breakdown in the current group dynamic and the perception of elitism within groups. However, the biggest fear was that the original groups would collapse if the stronger farmers were to move out of them.

3.7 Conclusions on the Dairy Efficiency Programme

There was considerable variation within the DEP groups and the opinion of the author on these groups: one group was at a very early stage of development and would not survive in the absence of the DEP; two groups would suffer from a decline in members post DEP and would need nurturing to survive; two groups had developed significantly since their establishment and appeared to be in a position to sustain the loss of the DEP payment. One of the long-established groups had benefited significantly from the influx of new members as a result of the DEP, while the other had seen a benefit to the new members but also was experiencing a lack of real commitment from newer members to the development of the group (starting to cause a level of irritation among the established members). However, on balance, the DEP has succeeded in widening the membership of discussion groups and making dairy technology available to more farmers.

As suggested, weaker DEP groups are likely to struggle to survive as they were established solely for the purpose of qualifying for the DEP payment. As a result, a large proportion of the membership of these groups could potentially leave once the payment ends. Even those who are unlikely to leave commented that their level of participation would be reduced once the DEP payment ends and there was a no requirement on them to attend a minimum number of meetings. Members in these groups had not recognised the benefits of discussion group participation and had made limited changes in farm practice or management.

Despite the benefits of the DEP and the importance of focusing on the main areas of dairy farm management which were programme requirements, some felt that the DEP had restricted the autonomy of groups and limited the aspects which could be discussed. The rigid programme was beneficial to new groups to provide them with a focus and structure but perceived to somewhat hamper the more established and well - functioning groups. The absence of the DEP could provide the opportunity to refocus the content of the discussion group to the specific requirements of the members and deliver more to their needs.

4. EVALUATION RECOMMENDATIONS

Recommendations are presented for Teagasc following a review of the various elements of the evaluation and a consideration of the issues.

Action	Context/Detail
Strategic Development of Discussion Groups	
Develop a long term vision and targets for discussion groups and how they should be promoted and supported.	<ul style="list-style-type: none"> The practice and knowledge of the group members is significantly better than the non-group members.
Develop and implement a strategy to promote the benefits of discussion group membership and of adopting the new technologies and practices. This will require specific resources for a recruitment campaign.	<ul style="list-style-type: none"> Those easily convinced of the merits are already members. Encourage dairy farmers who are not yet members to consider joining groups. The benefits should be provided in terms of margin per litre or hectare or cow.
Promote the role of discussion groups in problem solving and addressing issues of concern.	<ul style="list-style-type: none"> Farmers may not be willing to admit to the personal, business and day-to-day stresses that they face, discussion groups have a very positive impact in this area.
Develop a post DEP programme which would address the impact of the DEP ending and the ongoing development of discussion groups.	<p>Some of the aspects which need to be considered include:</p> <ul style="list-style-type: none"> Broad template for the long established groups; Structured template to follow on for DEP groups which have become established; Agreement on the essential and optional tools/technology for groups; Programme of contact to encourage those who are considering leaving the discussion groups to continue and to encourage those who want to reduce their level of commitment/participation; and Flexibility for advisors in the operation of discussion groups to ensure that they can meet the needs of the members.
New Member Integration	
Develop a discussion group new member integration policy and a member replacement strategy (including the targeting of new entrants/successors).	<ul style="list-style-type: none"> Would benefit both existing and new members and improve the overall functioning of the discussion group.
Provide an opportunity for non-members to sample the discussion group programme for 3-6 months without the commitment of joining or providing full information/participation.	<ul style="list-style-type: none"> Would give farmers an opportunity to experience the group discussion method first hand and to determine if it was worthwhile for them to join.

Action	Context/Detail
Group Streaming: Advisory Groups and Discussion Groups	
<p>Consider streaming of discussion groups into developmental (management, skills, efficiency) groups and advisory/information groups.</p> <p>Undertake an objective assessment of the extent to which farmers want to engage with the discussion group and the advisor/facilitator.</p>	<ul style="list-style-type: none"> • Range from those who want a group as a way for advisors to deliver information and advice with minimal farmer contribution to where the group is a mechanism to facilitate the sharing of information and advice in a fully interactive manner. • Assessment could allow the development of different levels of service provision and respond to the needs of farmers. Lower level advisory groups may only require to meet 4 times/year whereas higher level discussion groups could meet at least monthly and address a more intensive programme. • The advisory group meetings could be held on the members' farms or on other appropriate locations (monitor farm, another non-member farm or office location). While desirable, members would not be obliged to host discussion group meetings or complete the planners/monitors which are an essential part of higher functioning discussion groups. Farmers could self select the type of group that they want to participate in. • Differentiation of groups would be difficult to initiate but it would provide the benefit of groups to more farmers and respond to the needs of farmers at different levels including those who: are not currently in groups due to the lack of interest in regular meetings; do not want to host a meeting; those who want advice and information from the advisor without their own input; are considering leaving their group once the DEP payment ends; are contemplating a reduced level of commitment once the DEP payment ends; are interesting in participating in a discussion group but do not want to complete the various planners/monitors; and those who want a highly interactive progressive discussion group.
Improved Group Functioning	
<p>Encourage established discussion groups to engage in annual '<i>group functioning and operation</i>' review session.</p> <p>Consider providing advisors with training on group dynamics and also on the effective facilitation of review sessions.</p>	<ul style="list-style-type: none"> • Members should be challenged to look at how their group is working and on areas for improvement. Ideally this should be facilitated by an external advisor (not the group facilitator). Arising from these sessions, all groups could establish (re-establish) ground rules and standards (e.g. minimum attendance, submission of information etc.).

Action	Context/Detail
Encourage interaction between discussion groups at county/regional management unit level and possibly wider. Develop an online database of discussion group performance on key indicators/measures.	<ul style="list-style-type: none"> • The interaction should focus on shared interests/common topics and group development (learning how other discussion groups operate and function). • This would also allow groups to benchmark their performance against other groups (encourage ongoing development rather than competition). • Online database dependent on the willingness of farmers to engage in the provision and updating of information.
Operation of Discussion Groups	
Review and update Teagasc ' <i>Best Practice Protocol for Operating Discussion Groups</i> ' following which seek the buy-in of advisors and farmers to achieve the agreed standards.	
Focus on maximising the contribution of farmers within groups.	<ul style="list-style-type: none"> • Farmers need to be continually supported and encouraged to engage in active discussion at meetings.
Maintain the focus on learning within each group activity.	<ul style="list-style-type: none"> • Meetings can become routine, therefore, it is important that there is a focus on learning in every meeting and a key message(s) arising from that meeting.
Consider group initiatives (projects) which build trust and encourage cooperation, interaction and sharing of information.	<ul style="list-style-type: none"> • Group projects may have a role to play in this area. • Social interaction and activities should be promoted and encouraged.
Maintain an ongoing focus on financial performance.	<ul style="list-style-type: none"> • All aspects of management and practices are focused on delivering improved financial performance, therefore this should be a constant aspect of all group activities.
Encourage advisors and discussion groups to agree a system for each group for the submission of regular information in advance of meetings for circulation and sharing (text, email, phone, post).	<ul style="list-style-type: none"> • Potential to improve efficiency of group operation and enhance information sharing.
Seek to ensure that there is more variation in meeting topics (wider than grassland management).	<ul style="list-style-type: none"> • This could be done at least at alternate meetings, or ensure that some other topic is considered for a section of each meeting.
Provide opportunity in each meeting for host farmer to explore issues of importance to their farm business.	<ul style="list-style-type: none"> • Increase the relevance and importance of hosting a discussion group meeting.

Action	Context/Detail
Meeting Outcomes	
Maximise the usage of regular monthly worksheets.	<ul style="list-style-type: none"> Worksheets can prompt advance thinking/preparation, collate information and stimulate discussion at meetings.
Focus on ensuring that there are specific implementable recommendations from every group meeting. Advisors need to ensure that there is a concise summary of take-home points from each meeting.	<ul style="list-style-type: none"> Subsequent meetings should review the extent to which the recommendations were implemented, the level of success, the challenges encountered or the reasons for not implementing the suggestions.
Farmer Involvement/Ownership	
Encourage groups members to seek more involvement in the routine organisation & running of group activities, researching and organising trips/external activities as the group develops.	<ul style="list-style-type: none"> This should encourage independence, reducing the dependence on the advisor particularly relating to routine activities.
Group Annual Plans	
<p>Encourage each group to prepare and circulate 'real' annual plans.</p> <p>Facilitate planning sessions so that practical and realistic programmes are developed - the responsibility of both the group members and the advisor.</p> <p>Consider providing specific training in the skills of facilitating effective group planning sessions.</p>	<ul style="list-style-type: none"> The achievement on targets should be reviewed at subsequent planning meetings.
Chairperson	
<p>Encourage the development of an active chairperson's role and to ensure that all groups elect a chairperson (and other officers as necessary). Advisors need to encourage the delegation of responsibilities to the chairperson.</p> <p>Develop and deliver a short training programme for chairpersons</p>	<ul style="list-style-type: none"> At a minimum, all groups after one year in operation should have a chairperson.

Action	Context/Detail
Set Meeting Dates	
Encourage groups to set an agreed meeting day for each month. Put in place a reminder system utilising an agreed procedure (e-mail, text or letter) and operated either by the advisor or the chairperson (or another group member).	<ul style="list-style-type: none"> This will ensure that all farmers are aware in advance of their annual meeting schedule.
Use of Appropriately Tailored Messages Technology	
Ensure that the messages (especially regarding technology) that are pitched to groups are appropriate to the requirements and the abilities of members.	<ul style="list-style-type: none"> Will require ongoing explanation and training. In the event of the establishment of different levels of groups, this could facilitate the pitching of different aspects of technology at the most appropriate level.
Streamline the use of tools such as farm planners/profit monitors within groups to determine the obligatory and optional aspects.	<ul style="list-style-type: none"> Necessary to reduce the advisory input to support the completion of planners and monitors. This may require: the provision of training on the use of planners/monitors; implementing strict codes for the completion and submission; and onus on the group to ensure adherence to the agreed codes.
Research Inputs	
Consider the views of discussion group members on Teagasc research outcomes and possible research projects on an occasional consultative basis. Ensure greater clarity in the communication of research findings for uptake and application at farm level.	<ul style="list-style-type: none"> This approach could provide insights into the practical issues that are considered worthy of research but could also address the apparent information and understanding gaps between research findings and application at farm level.
Specialist Input	
Ensure regular involvement of specialists (internal and external) in group meetings.	<ul style="list-style-type: none"> May place undeliverable demands on the Teagasc specialists. However, the annual discussion group programme could include at least one Teagasc specialist input and one other external input (on a planned basis or in response to a particular problem/issue). Ongoing involvement of the processor milk quality advisor is worthy of consideration but will depend on each processor.

Action	Context/Detail
Service Delivery	
Put formal review mechanisms in place whereby discussion group members have the opportunity to discuss difficulties relating to the service delivered by their advisor (if necessary).	<ul style="list-style-type: none"> Ensures that issues which arise are addressed appropriately and promptly.
Undertake assessment of the work load of advisors to determine the optimal number of discussion group and non-discussion group clients to be served.	
Ensure that an adequate one-to-one service is provided to clients who are not involved in discussion groups and do not intent to join.	
Consider rotating of advisors/facilitators between discussion groups (possibly twice per year).	<ul style="list-style-type: none"> This would have the benefit of sharing the expertise of advisors but also maintain the freshness within the group and possibly provide a regular external challenge to farmers and advisors.
Provide advisors with the opportunity to develop specific delivery/advice plans for each individual discussion group tailored to their needs rather than the delivery of a generic plan for a number of discussion groups.	
Dairy Efficiency Programme	
Continue DEP on from the current programme as a mechanism of further encouraging efficiency and uptake of new technology.	<ul style="list-style-type: none"> Programme could include practices in other key aspects of dairy farming such as labour/time management, nutrition and other complementary enterprises. Programme should encourage farmers who are not already in discussion groups to join, therefore enabling knowledge transfer to a greater number of farmers.
Consider the impact of new non committed members, on some established discussion group members.	<ul style="list-style-type: none"> Those farmers who are not yet willing to make a full and active contribution to the discussion group are a cause of frustration for the more committed members.

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