

## **How Agricultural Advisory Services Can Improve Engagement with Farm Women**

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**Abstract:** This paper examines the current level and nature of engagement of farm women in an Irish county with agricultural advisory services. It identifies their knowledge needs and ways to increase their engagement to support their role within family farms. While an estimated 74,000 women work on Irish farms (27% of the agricultural workforce), only 4,800 are registered clients with the public farm advisory service (Teagasc). The research was carried out with women working and/or living on farms in County Wexford and included a questionnaire survey of 233 farm women, focus group discussions with representatives of the survey respondents, and key informant interviews. A questionnaire survey was also conducted with farm advisers in the county to investigate the extent to which they currently engage with farm women and their attitudes towards the value of greater engagement. The main barriers to engagement with advisory services were identified as: the feeling that women would not be taken as seriously as male producers; that they are not welcome in many agricultural groups, a lack of self-confidence and a lack of knowledge.

**Key words:** Farm women, engagement, agricultural advisory service, AKIS

### **Introduction**

This paper profiles the roles played by women on farms in a typical Irish county and their levels of engagement with agricultural advisory services. It argues that the work done by women on farms continues to be largely invisible and unrecognised and that advisory services operate in a gender blind fashion, failing to address the barriers that exclude women.

The role of women in European farming has been considered in many studies (Gasson and Winter, 1992; O'Hara, 1998; Brandth, 1994; Haugen, 1998; Shortall, 1999). Brandth (2002) considers the dominant discourse of the patriarchal family farm where women typically marry into farming families and their energies are directed to supporting the farm and family. The masculinisation of farming has also been a subject of scholarship and how the spread of mechanisation and specialisation led to a minimisation of women's roles (De Rooij, 1994; Brandth, 2002) although this is also linked to women seeking to find their autonomy through off-farm employment and men being left to work farms by themselves. Saugers (2002) and Little (2015) highlight the power of socially accepted and embodied 'norms' of gendered behaviour associated with the performance of rural masculinity and femininity, and the argument that farm work reinforces traditional masculinity through its emphasis on bodily strength and tasks requiring physical prowess.

Brandth (2002) discusses a third discourse on diversity and de-traditionalisation where a plurality of roles is emerging that challenge traditional gender roles. In a more recent study in the US, Beach (2013) found this discourse of diversity to be gaining momentum and that while men were still the primary operators, women were depicted in diverse and important roles. For example, some women aid in decision making, some are in charge of financial aspects of the farm, and others often contribute substantially to the household by working off-farm.

The importance of women's off-farm work and income to the survival of low profit family farms has also been considered by Shortall (2002). Kelly and Shortall (2002) found that a primary motivation for women to find work off-farm is to enable the continuation of the family farm, however they find no evidence that farm women's increased resources contribute to significant renegotiation of domestic responsibilities and gender role expectations.

Bokemeier and Garkovich (1987) identified five basic role orientations, in which farm women operators are engaged in agricultural production. These include independent producers, i.e. women who manage the farm operation mostly by themselves; agriculture partners, i.e. women who share equal work, responsibilities, or decision-making on all aspects of the farm operation with another person, typically their husbands; business managers, i.e. women whose main responsibilities are bookkeeping, information gathering, and contribute to financial decision making but another person, typically their husbands, is the primary operator and decision-maker of the farm; agriculture helpers—women who participate in agricultural production as needed; and farm homemakers—women whose main farm activities involve “gofering” and operating the traditional farm household. Variations of these basic roles have been used by O'Hara (1998) and Mulhall and Bogue (2013) in analysing the roles played by women on Irish farms.

The invisibility of much of the work carried out by women on farms has been highlighted by various scholars (Garcia-Ramon *et al.*, 1993; O'Hara, 1998, Bock, 2004; Brandth and Haugen, 2007; Riley, 2009). There has also been a number of studies that have highlighted positive innovations that are linked to women's influence on farms (Gorman, 2006; Haugen and Vik, 2008; EU SCAR, 2012; Mulhall and Bogue, 2013). These studies have shown a link between women's active role on farms and recognising the potential for multi-functionality and alternative enterprises. Haugen and Vik (2008) found that women are more likely and more motivated to initiate and develop agri-tourism as an enterprise. The EU SCAR (2012) refers to women as “drivers of innovation” as they generate income through diverse ways to contribute to the farm income.

In Ireland in 2010, 74,092 women worked in agriculture, comprising 27% of the agricultural workforce. They are categorised as farm owners (23%), spouses of farm holders (50%), family workers (23%) and non-family workers (3%) (CSO, 2012). In 2014, 13% of women were sole farm owners, according to the DAFM (2015) with 43% of these over 65 years of age and 30% over 80. These figures reflect that the common entry route for women to farming is through marriage as only in exceptional circumstances do women acquire farms by gift, inheritance or otherwise (O'Hara, 1998; Shortall, 1999).

The level of engagement of farm women with agricultural advisory services is low in most countries. Trauger *et al.* (2008) posit that long held social constructions of farming women as ‘farmwives’ and in some cases ‘the bookkeepers’ rather than farmers or decision-makers, influence the direction of most extension programmes in the United States. Consequently, many women farmers generally view these spaces as hostile, rather than helpful environments. In Greece Charatsari *et al.* (2013) found that while women express a high willingness to participate in agricultural extension/education programmes, this willingness is not translated into participation mainly because of women's perception that agricultural extension/education constitutes a male dominated area. Ragasa (2014)

also makes the case for improving the gender responsiveness of agricultural extension systems through consideration of the gender of the extension worker; whether both men and women receive extension advice and how the extension service is delivered. Barbercheck *et al.* (2009) demonstrate that a comprehensive needs assessment that includes attention to the learning formats that women prefer must be a precursor to design of appropriate extension and education programmes for farm women.

In Ireland, Teagasc is the main provider of public agricultural advisory services and in 2017 it had 42,184 farmer clients, where only 3,560 are female; while a further 1,269 women are co-named with their spouse or partner on the advisory service contract (source Teagasc CIMS, 2017).

Johnson *et al.* (2016) examined how different institutions and development programmes take into account the different needs of women and men, classifying as *gender blind* efforts that 'typically do not acknowledge the role of gender in different social contexts and ignore the different ways that men and women engage with productive resources.' *Gender aware* refers to approaches that 'have an understanding of the different needs and interests of men and women'; while *gender transformative* refers to approaches that 'explicitly engage both women and men to examine, question, and change those institutions and norms that reinforce gender inequalities'. In Ireland it would appear that the advisory services are 'gender blind' and that the agricultural advisory and education needs of Irish farm women are largely unknown and therefore the best methods for providing knowledge services to them are also unknown.

Shortall (2015) examines efforts by the EU to gender mainstream the CAP and argues that at best, gender mainstreaming focuses on the symptoms of gender inequality in agriculture rather than the causes. The EU's priority for the CAP focuses on the mainstream business goal of a viable agricultural industry and does not pay any heed to gender inequalities in agriculture. Barriers to gender mainstreaming include male-biased organisations that do not recognise gender mainstreaming as a priority, treating gender equality as a separate process instead of integrating it into a project, cultural resistance, and a lack of staff understanding about basic concepts (Moser and Moser, 2005). Pollack and Hafner-Burton (2010) argue that organisational cultures and bureaucratic self-interest act as barriers to effective gender-mainstreaming within the European Union and that implementing organisations need to have hard incentives (carrots or sticks) as well as soft incentives. They argue that soft incentives are only effective insofar as the proffered policy frame resonates with officials existing world views.

Programmes in many different countries to support rural women's empowerment have focussed on knowledge-sharing among women and access to educational information (DAFWA, 2014). There are various arguments for and against farm women's groups. Harding (1992) in Shortall (1996) argues that women-only programmes and courses do not reflect the real world and may promote segregation and reinforce gender stereotypes. In contrast, McGivney (1993) argues that women themselves feel more comfortable and non-threatened in a female group while Shortall (1996) argues that women in female groups often have the safe space to question unequal social structures.

## Methodology

This research was carried out in Wexford, which is statistically a typical Irish county. Women represent 27% of the total agricultural workforce in Ireland and 29% in Wexford. Eleven per cent of advisory service clients nationally and in Wexford are female.

Open-ended key informant interviews and a focus group with existing farm women's groups were held as a prelude and to help formulate survey questions. A questionnaire was developed to examine the experience, attitudes and views of farm women. The survey was publicised to reach as many farm women as possible through a postcard campaign, radio interview, local press release and distributed through local agricultural organisations. The questionnaire was completed by 233 farm women out of the population of 2,679 farm women in Co. Wexford (CSO, 2012). An online questionnaire was developed for agricultural advisers in Co. Wexford and a focus group discussion was subsequently held with them.

### *Categorising 'Farm Women'*

One of the research challenges in scholarship of farm women is the heterogeneity of roles played by women on family farms and the invisibility of these roles (O'Hara, 1998). For this research, participation was invited from any woman living and/or working on a farm in County Wexford. Farm work was considered as the expending of effort towards the business of the farm including *inter alia* manual yard work, animal husbandry, crop husbandry, machinery work, record and book keeping, management, dealing with callers, purchasing inputs and services, sales of animals and produce, dealing with regulations and compliance, making decisions on the farm etc.

## Results

### *Profile of Survey Respondents*

The majority (73%) of survey respondents were older than 40 years of age with 21% older than 66. Marriage is still the most common entry route for women to farming with 43% indicating this was how they became involved, while 22% inherited it on a death, 15% were working on a family farm, 6% had purchased the farm and less than 1% were working on a non-family farm. Only 12.6% of respondents received their farms through a lifetime transfer, similar to Bogue's (2013) findings where successors are identified on farms, about 13% are female. Respondents aged under 40 years (n=54) were either working on a family farm (41%) or became involved through marriage (33%). Respondents between 41 and 65 years (n=113) mainly became involved through marriage (46%) or inherited it on a death (26%) while respondents aged 66 and older (n=45) became involved through marriage (44%) or inherited the farm on a death (38%).

Over half of the respondents were in an ownership role, either as a sole owner, joint owner or working in a partnership. A further 12.4% were primarily homemakers and 12.4% were working on a family or non-family farm, with 6% stating they had no involvement with the farm. Twenty five percent of sole owners were working off-farm (n=56). Bivariate analysis showed a significant influence of age on ownership. It showed that 39% of sole owners were 66 years or older, 52.5% were between 41 and 65 years, and 8.5% were under 40 years (n=59) ( $\chi^2=40.720$ ,  $df=16$ ,  $p=0.000$ ).

Seventy one percent (71%) classified themselves as working on the farm with 29% full

time and 42% part time. Sixteen percent said they were not currently working on the farm but had done so previously while 8.6% said they had never worked on the farm and 3.4% did not respond to this question. However almost two-thirds of the women who classified themselves as ‘not working on the farm’ were later found to be carrying out at least one task on the farm indicating that even farm women themselves don’t always recognise or place a value on their contribution to the farm. Forty three per cent of women had off-farm employment, and 87% of these women also classified themselves as working on the farm.

Thirty six percent of respondents’ primary farming enterprise was a beef enterprise, 21% was tillage, 19% was dairy, sheep accounted for 17% and alternative enterprises represented 7%.

A quarter of respondents had an agricultural qualification with 18% having a certificate or diploma, 5.6% having a degree and 1.3% having a post graduate agricultural qualification. Younger women were significantly more likely to have agricultural education but there was no significant correlation between ownership and agricultural education. Respondents who classified themselves as ‘working on a family or a non-family farm’ were most likely to have agricultural education (58%) compared with 15% of women who had married into the farm.

### ***Women’s work and contribution to farm tasks***

Respondents were asked to highlight individual tasks that they carried out on their farm. These were then categorised as farm business management or technical tasks as illustrated in Table 1. The average number of tasks carried out by each respondent was 5 and 84% of respondents carried out more than one task. Table 1 shows the role profile for all respondents and also compares the role profiles for different subsets (not mutually exclusive) of the respondents. The respondents who had an agricultural education had the highest levels of involvement in all the tasks listed while respondents who were owners or partners in the farm also had a significantly higher engagement in both business and technical tasks. Women who had married into the farm had high levels of engagement in the administration and business tasks but less so in the technical areas.

**Table 1: Farm task profile of different categories of respondent**

	<b>Percentage of all respondents n=233</b>	<b>Percentage of women who are owners/partners n=136</b>	<b>Percentage of women who married in n=92</b>	<b>Percentage of women with agricultural education n=58</b>
<b>Tasks carried out on farms</b>				
<b>Farm business management</b>				
Farm accounts and/or form filling	63%	73%	64%	79%
Making decisions	52%	62%	45%	71%
EU/ Government schemes	51%	63%	38%	71%
Dealing with callers	44%	56%	37%	59%
Highlighting health and safety	42%	54%	39%	53%
Dealing with / feeding farm	38%	41%	35%	55%



labour				
Ordering supplies	37%	47%	27%	57%
Farm business planning	35%	45%	28%	53%
Selling farm goods	18%	26%	4%	41%
Marketing farm produce	8%	11%	3%	12%
<b>Technical Tasks</b>				
General animal husbandry	48%	51%	40%	64%
Operating machinery	19%	22%	8%	43%
Technical skills	18%	22%	5%	36%

Looking across the role profiles for the different categories it is evident that farm women contribute significantly to the farm especially in the areas of farm accounts and administration but also significantly in animal husbandry and in farm health and safety.

***Knowledge levels and learning needs of farm women***

Respondents were asked to self-assess their knowledge of critical areas relating to farming. These areas included farm business management, technical management and other valuable skills and knowledge and asked to identify whether they had considerable, moderate or minimal knowledge of a topic or if it was non-applicable to them.

The topics under farm business management included; cash-flow planning, business planning, EU and Government schemes, farm health and safety, labour management, cost-benefit analysis and marketing. The topics under technical skills and knowledge included; breeding policies, animal nutrition, animal health, grassland management, soil fertility and applying fertiliser, controlling plant diseases and pests, maintaining environmental standards and basic farm machinery operation. The topics outlined under other valuable skills and knowledge included; personal development, computer skills, communications skills, social media, farm diversification, succession and inheritance and food processing.

Composite knowledge scores for the three areas were computed and respondents were considered to have very high knowledge levels if they had moderate or considerable knowledge in 5 or more of the topics in each area and very low if they indicated minimal or less knowledge in any area. Table 2 below shows the percentages of respondents in the different knowledge categories. Thirty six percent of respondents had high or very high levels of knowledge in farm business management, 35% had high or very high knowledge of technical management and 40% had high or very high levels of other valuable skills and knowledge. Averaging across all categories 49% of respondents had a high level of knowledge. Unsurprisingly those with agricultural education scored significantly higher in terms of their knowledge scores. Age was also significant with women over the age of 60 scoring significantly lower in terms of knowledge scores than the younger age cohorts.

**Table 2: Self-reported agricultural knowledge of respondents (n=233)**

Knowledge	Very low	Low	High	Very high	Total
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<b>Farm business management</b>	<b>32%</b>	<b>32%</b>	<b>28%</b>	<b>8%</b>	<b>100%</b>
<b>Technical agricultural knowledge</b>	<b>37%</b>	<b>29%</b>	<b>21%</b>	<b>14%</b>	<b>100%</b>
<b>Other valuable skills and knowledge</b>	<b>32%</b>	<b>27%</b>	<b>34%</b>	<b>6%</b>	<b>100%</b>
<b>All 3 areas combined</b>	<b>26%</b>	<b>25%</b>	<b>37%</b>	<b>12%</b>	<b>100%</b>

### *Farm business management*

Within the areas of farm business management, respondents felt that they were most knowledgeable about farm health and safety, followed by cash flow planning and business planning; then EU and Government schemes, labour management, cost-benefit analysis and finally by marketing.

Respondents were most interested in learning more about cash-flow planning (19%), business planning (19%), farm health and safety (15.5%), EU & Government schemes (15%) and cost-benefit analysis (15%). Of the women that wanted to learn more about cash-flow planning, business planning and farm health and safety more than two thirds were owners or partners and 40-45% classified themselves as having moderate or considerable knowledge in these areas but still wanted to learn more. Over half were working off-farm and over half were aged between 36 and 55 years.

### *Technical skills and knowledge*

Animal health was the topic on which respondents were most knowledgeable, followed by environmental standards, then animal nutrition, grassland management, breeding policies, soil fertility, controlling plant pests, and lastly machinery.

Respondents were most interested in learning more about soil fertility and applying fertiliser (17%), animal nutrition and animal health (15%), grassland management (12%), breeding policies (12%) and how to maintain environmental standards (12%). Similar to the results above, two thirds of those wanting to learn more were in ownership. Off-farm employment and age were also significant factors with the highest level of interest from women aged 36-55 who also work off the farm.

### *Other valuable skills and knowledge*

The respondents felt they were most knowledgeable on computer skills, personal development, communications skills, succession and inheritance, farm diversification and finally food processing.

The women were most interested in learning about updating their personal development (20%), developing their computer skills (20%), succession and inheritance (18%) and farm diversification (17.5%). Again approximately two thirds of those wanting to learn more being owners or partners and the strongest interest was among the 36-55 age cohort

and those working off-farm. On the topic of succession and inheritance, 70% of those interested to learn more were owners/partners.

Other topics of interest that respondents mentioned included tax advice, insurance, stress management and physical and mental health.

*How, where and when would respondents like to learn?*

The diversity of the farm women is reflected in the diversity of preferences for learning modes. Training courses (24%) and online courses (16%) were the most popular followed by seminars/workshops (14%), discussion groups (14%), on-farm demonstrations (12%), farm walks (9%) and open days (9%) respectively. Printed information (1.3%) was the least popular method.

Respondents were asked to identify what time(s) they would prefer to attend advisory events. Late evenings during the week were the most preferred time (22%) reflecting the high interest from women who have off-farm employment. Other popular times included weekday mornings (17%), weekend mornings (12%), and weekday afternoons (10%). Ten percent of respondents indicated that they had no preference to the timing of events. The least popular times were weekend evenings (6%), weekday evenings (6%), weekend afternoons (8%) and late evenings at the weekend (9%).

#### ***Awareness of and Engagement with Farm Advisory Services***

Respondents were asked if their farm business was a client of a farm advisory service and 79% were. Of the advisory service clients (n=182), 66% were clients of a public advisory service, 21% were clients of a private advisory service and 13% were clients of both a public and private advisory service.

Respondents were asked to identify the main person who engaged with advisory services and 38% identified themselves while 37% identified a male relative (mostly husbands but also fathers, sons, sons-in-law and brothers) and 18% said that they engaged with advisory services, along with another person. Of the 86 respondents who identified themselves as engaging either solely or with another person, 76% were either sole owners, joint owners or in a partnership and 46% of them had an agricultural education. Age did not make a significant difference.

Eighty one percent of respondents were satisfied with the service provided by their advisory service, whereas 5% were dissatisfied and 14% were unsure (n=179). Eleven respondents identified reasons why they were dissatisfied which included; the service being too expensive, not enough advice being provided, a lack of training provided for them, they never get a call from the adviser to check in, not having calls returned by the adviser and the service isn't open enough to women.

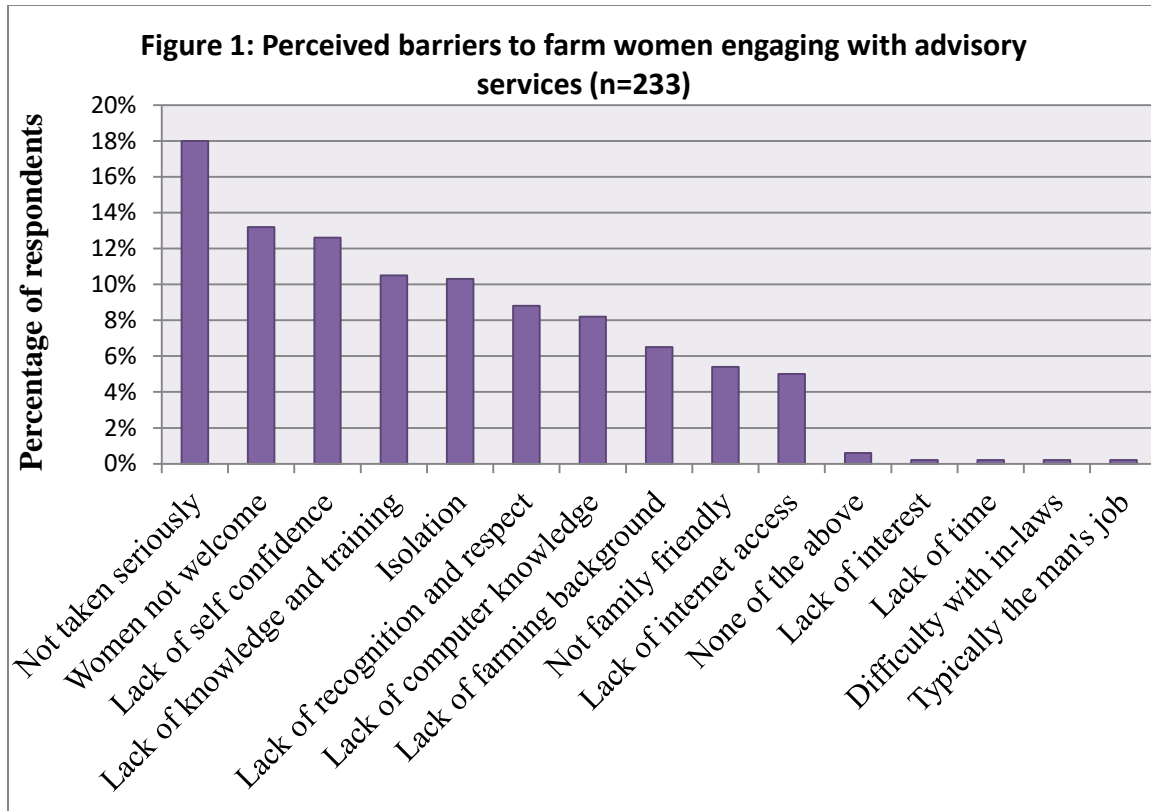
Twenty four percent of respondents said that they would like more engagement with advisory services, 43.6% of whom were working off-farm (n=55). Receiving more information, training for completing online forms, discussions on partnerships, more interaction from the adviser, topical courses, more events and courses for women were suggested as ways in which engagement could be improved. Over 70% of the women that want more engagement are sole owners, joint owners or in a partnership. However 26% of respondents that would like more engagement are homemakers, working on farms or have limited involvement with the farm. Age was not significant in wanting more



engagement. Thirty eight percent of those who wanted more engagement with advisory services had an agricultural qualification (n=57).

#### *Barriers to engagement with advisory services*

The respondents were asked what barriers they thought prevent farm women from engaging with advisory services and their responses are illustrated in Figure 1 below.

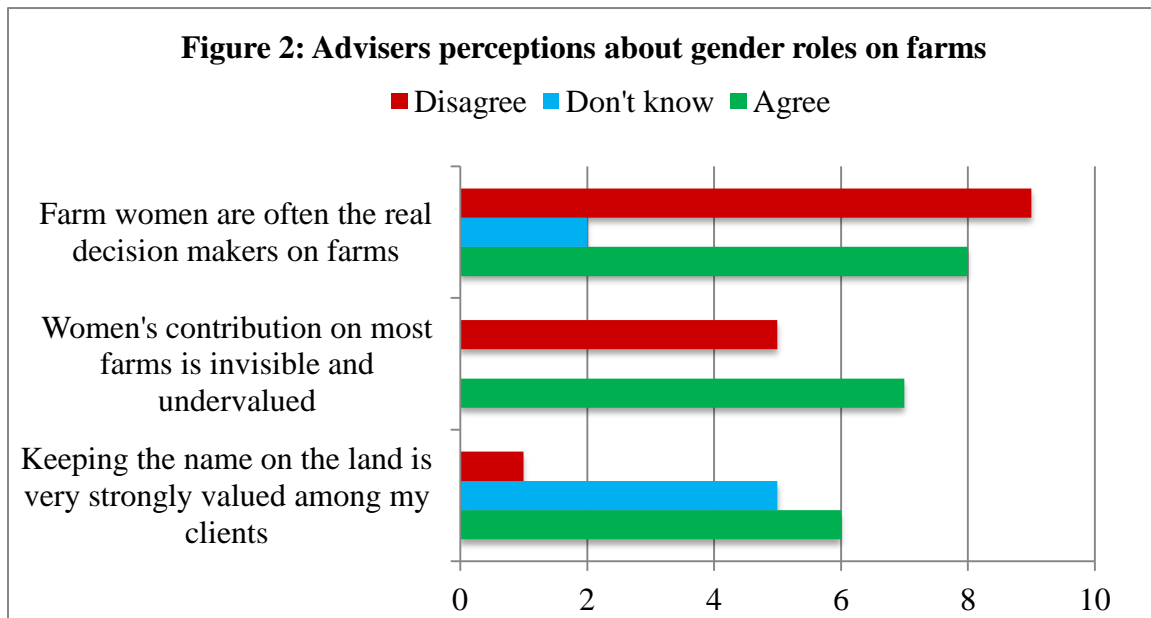


The feeling that women were not taken as seriously or were not as welcome as male producers was highlighted as the main barriers. Agricultural education was a significant factor in the perception of certain barriers with the respondents who had an agricultural education much more likely to perceive that women are not taken seriously (60% compared with 34%;  $\chi^2=12.836$ ,  $df=1$ ,  $p=0.000$ ); that women were not welcome (43% compared with 25%;  $\chi^2=6.742$ ,  $df=1$ ,  $p=0.009$ ); that there was a lack of recognition and respect for women (33% compared with 16%;  $\chi^2=8.135$ ,  $df=1$ ,  $p=0.004$ ) and that advisory services are not family friendly ( $\chi^2=6.742$ ,  $df=1$ ,  $p=0.009$ ). Age was significant in the perception of lack of recognition and respect with 45% of women under 40 years of age identifying this barrier compared with 21% of the 41-65 year olds and 4% of those over 66 ( $\chi^2=12.216$ ,  $df=2$ ,  $p=0.002$ ). Off farm employment was not significant in any of the barriers mentioned.

#### **How the Advisory Service view Engagement with Farm Women**

An online questionnaire was completed by 15 farm advisers in Co. Wexford; from different farm sectors and with a range of experience. Five respondents were female advisers and ten were male. Thirteen were public sector advisers and 2 were private consultants.

Advisers were asked if they agreed or disagreed with a number of statements in Figure 2. Eight out of 15 agreed that women are often the real decision makers on farms and 7 out of 15 agreed that women’s contribution on farms is often invisible.



Although the sample of advisers was small, it shows mixed views about the visibility and value of women’s contributions to farms, a perception that women do play a critical role in farm decision making and mixed views on the continued prevalence of the traditional patrilineal pattern of farm inheritance.

Every adviser agreed that it was important for farm women to engage with advisory services. When asked if they thought that there are any barriers that prevent farm women from engaging with advisory services, some of the issues mentioned included the traditional perception of the man who farms and the woman as a homemaker and “*fear of being seen as the woman wearing the pants by the men*”. A senior advisory service manager suggested that it may be difficult for a woman to join a male-dominated group on her own and that the marketing of advisory services does not explicitly encourage women to engage with them.

Nine of the advisers agreed with the statement ‘*Farm advisers should have a stronger family focus*’ and eight advisers agreed that there is potential for them personally to engage with more farm women. Some suggestions included including farm women’s names on contracts and on letters and invitations to events; having events and discussion groups that are specifically mixed or focused on women; and having an annual social briefing on general agricultural topics. However only 3 advisers had actually done something to reach more farm women e.g. included spouses/partners on discussion group invitations and included farm families in farm planning. Some of the comments from those who have not attempted anything included;

*“I have not consciously excluded farm women from events. The events we run are technical...they are not gender specific.”*

*“I do not see why I should take any different approach to one client over another based on their sex.”*

Only 5 advisers disagreed with the statement '*Gender analysis is not relevant to my work*'. Advisers were asked if female clients had different learning needs than male farmers and only two agreed that they had. Shortall (1996) highlights that although agricultural training does not 'consciously exclude women', it does not provide for the varied work that farm women carry out. It can be argued from the comment by one adviser who did not 'consciously exclude' women at events that they may be gender blind by failing to consider how different genders engage with resources and advisory services. During the focus group with the advisers, most of them were unaware of what farm women want from an advisory service and they stated this themselves. Therefore it is difficult for them to progress to being gender transformative in their roles and many advisers may not even be aware that they are gender biased.

## **Discussion**

The high response rate to the research questionnaire is indicative of the high level of involvement by women on farms. It also highlights the high numbers of women with agricultural education and those that are eager for more involvement with agricultural advisory services. Farm women contribute to a range of activities. They have a high level of involvement in farm administration and management, but also a high level of engagement in technical farm management, particularly with more involvement in animal husbandry.

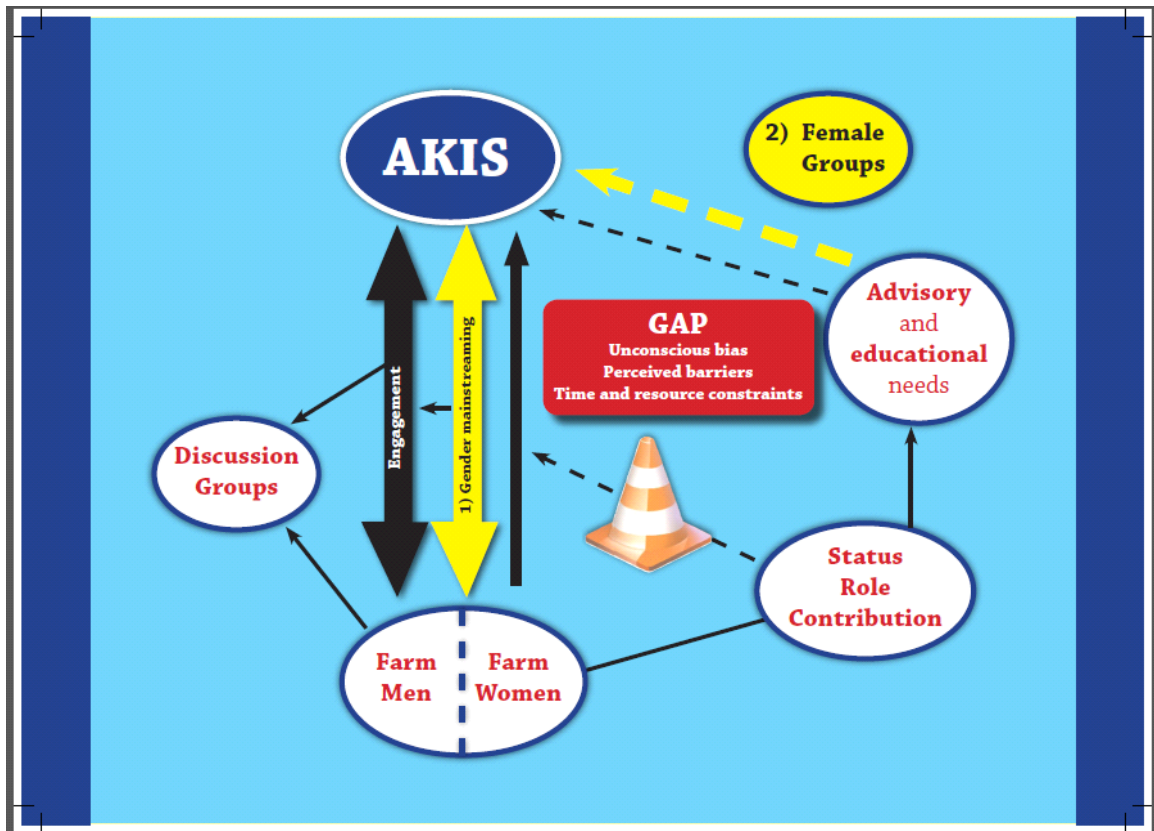
There is a clear elucidation of where women feel that they have knowledge and skills and where they wish to strengthen them; they have specific needs especially around the timing of events because of family care commitments and off farm work.

It is proposed that gender mainstreaming advisory services should help to engage more farm women with advisory services and thus the Agricultural Knowledge and Innovation System (AKIS); to encourage knowledge transfer and to aid decision making on farms. It is recommended that advisory services need to make a more conscious effort to include farm women. This could be done by naming family members in correspondence and publishing gender-balanced promotional material. Farm women's learning needs should be considered when designing advisory programmes. This study has identified topics such as cash-flow planning, soil fertility and personal development that women are interested in learning about. Training courses, online courses, seminars or workshops could be held on these at times that suit the women such as weekday mornings or after 6 p.m. on weekday evenings. The advisers suggested that if they were more aware of farm women's needs and perceived barriers, they may be more proactive in encouraging farm women to engage and there is scope to provide unconscious bias training for them.

Women in the study suggested female-only groups as a means of improving engagement but the literature debates that these may re-enforce gender stereotypes. Regional groups of farm women exist in Ireland, for example, Wexford Women Who Farm, South East Women in Farming and North West Women in Farming. These grass root groups already have a network in place and speakers are asked to attend their meetings. Collaborating with these groups would be an opportunity for Teagasc and other agricultural organisations to get their message across while providing information that farm women require. Female groups could help to provide a link between the advisory and educational needs of farm women and engaging them with the AKIS. Female discussion groups could be piloted by advisory services to evaluate whether or not they would be effective.

The literature on the engagement between farm women and agricultural advisory services, furthermore with the agricultural knowledge and innovation system (AKIS) can be summarised through Figure 3. Farm men have a stronger engagement with agricultural advisory services and thus the AKIS than farm women, as evident from Teagasc client numbers (CIMS, 2017) and represented by the thick line in Figure 3. They have access to many services and participate in discussion groups. However farm women do not have the same level of engagement. This is influenced by their status, role on farms and contribution to their farms. There is a ‘gender gap’ that prevents them from engaging which includes unconscious bias from the advisory services, perceived barriers and time and resource constraints. Their advisory and educational needs are largely unknown and this is acknowledged by the broken link that connects them to the AKIS.

In summary, this study would propose that a twin-track approach is required to improve engagement between advisory services and farm women; firstly by gender mainstreaming advisory programmes to have a gender inclusive delivery of services and to provide the opportunity to connect both men and women equally to the AKIS, and secondly to pilot female discussion groups that are targeted at farm women’s needs as a secondary means of connecting them to the AKIS.



**Figure 3:** Proposed model to improve engagement between farm women and agricultural advisory services

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