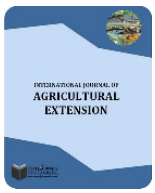

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ACKNOWLEDGING HARD TO REACH FARMERS: CASES FROM IRELAND

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A B S T R A C T

While acknowledging the positive role farm advisory services play in agricultural development, the reality is that many farm households are disconnected from these services thus failing to benefit from supports to farm-level decision-making. This article provides a better understanding of those farmers who either do not engage with the farm advisory services or else engage at a very low level. Failure to recognise the role and importance of these hard to reach farmers in Ireland provides an important backdrop to this issue where the national agricultural development strategy implies meeting targets through the more progressive and 'service-reached' farmers. The article draws on findings from four studies which identified and examined farmers who were 'hard to reach' by farm advisory services in Ireland. These studies collected data through farmer interviews and focus groups with farm advisors. They are augmented by the outputs of a workshop with farm advisors from a number of EU member states which focused on hard to reach farmers. 'Hard to reach farmers' are defined as those who either do not use the public or private advisory services or use a minimum level of the services accessible to them. The hard to reach farmers comprise just over half of all Irish farmers and fall into two distinct groups: those who are elderly, with no successor and no intention to develop their farms; and those who are relatively young and have off-farm work. The article suggests that advisory agencies can either establish or increase engagement with many of these farmers by reconfiguring how and when they deliver services. This new and increased engagement is regarded as important in achieving the broader goals of sustainable agricultural and rural development in Ireland and has relevance at the wider EU and global levels.

Keywords: Advisory engagement, hard to reach, small scale, agricultural development.

INTRODUCTION

In an assessment of how to transform and strengthen agricultural extension and advisory systems in moving toward the broader goals of increasing farm income and improving rural livelihoods, Swanson & Rahlati (2010, p.27) found it to be 'a complex process that must reflect each nation's primary agricultural development goals, as well as the primary clientele to be served and the available institutional infrastructure that can be transformed to provide the necessary agricultural extension and advisory services'. These services also play an important role in meeting the new challenges that agriculture is confronted with, including: changes in the global food and agricultural system; growth in non-farm rural employment and agribusiness; the deterioration of the natural resource base; and the emerging need to cope with climate change (Anderson, 2007). Reflecting on the global challenge, FAO (2015) stated that many small or medium-sized family farms could make a greater contribution to global food security and rural poverty alleviation depending on, among other things, their capacity to innovate and that 'through a supportive agricultural innovation system these farms could help transform world agriculture'.

Responding to the economic challenges facing Ireland in 2008/9, the Irish Government set out an ambitious vision for agricultural development over the period 2010-2020 to be achieved through higher productivity and higher value outputs. The strategy, known as Food Harvest 2020, set targets for sustainable growth that requires the mobilisation of Irish farmers to produce more output in a more efficient and environmentally-sound way. It also recognised the critical importance of building the skills and capabilities of Irish farmers to deliver these national targets (DAFM, 2010). By 2015 the

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vision was recalibrated in the national agri-food strategy entitled Food Wise 2025 which, at farmer level, strongly focused on the adoption of the latest production technologies and on improving the management capabilities of producers (DAFM, 2015). It set growth targets to increase the value of agri-food exports by 85% and increase the value of primary production by 65%. The Food Wise 2025 strategy recognises the importance of human capital development with particular emphasis on: maintaining an effective, independent, national agricultural advisory service providing a locally-based contact point for all farmers through farmer education, consultation and a wide range of communication and influencing activities, using appropriate mechanisms to optimize service delivery to farmers (DAFM, 2015). Of concern here is the failure to recognise the role and importance of small scale farmers in Ireland's strategy for agricultural development. The strategy implies meeting targets through the more progressive and 'service-reached' farmers.

Irish Farming: In 2013 there were 139,600 farm holdings in Ireland with average size of 32.5ha and almost all (99.6%) classified as family-owned farms (CSO, 2015). A substantial proportion (18%) of these farms were less than 10ha while 39% of all farms generated an estimated annual Standard Output of less than €8,000 (CSO, 2015). Ireland has a predominantly grassland-based system of farming with 90% of the country's 4.5mn ha of agricultural area in grassland and Ireland's agri-food strategy emphasising the importance of the country's 'natural advantage in sustainable grass-based production' (DAFM, 2015). Specialised cattle and sheep farming (drystock) is practiced on two thirds of farms, with 11% operating dairy systems and 4% specialising in arable crops (CSO, 2015). Some 88% of farm owners are men while women contribute 27% of labour on farms. The average age of farm owners in Ireland was 56 years with 29% of farmers over 65 years, just slightly below the EU average of 31%.

Theoretical Background: Across countries and policy domains the term 'hard to reach' is used to refer to those deemed not to be in optimal receipt of public sector services which are intended to increase some aspect of material, social or physical wellbeing (Mackenzie et al., 2012). Over 40 years ago, Kandel (1975) used the term 'hard to reach' in relation to drug addiction amongst adolescents and how public services might engage them. In general, the hard to reach have been defined as having characteristics associated with lower socio-economic status and for numerous reasons may be isolated from mainstream communication streams (Froonjian & Garnett 2013). The concept and term has been applied to farmers in assessing the relationship of certain farming sub-groups with existing advisory and information services (Somers, 1991; Kinsella, 1995; and Jansen et al., 2010).

In describing the use of the term HTR within the context of Australian local government planning, Brackertz (2007) found that policy documents utilise the term to indicate a homogeneous group of constituents. She argued that, to be useful, 'hard-to-reachness' should be more clearly categorised as demographic, cultural, behavioural and attitudinal or structural. Froonijan & Gareth (2013) suggested that the more effective strategies to reach the hard-to-reach groups in society involve: utilizing knowledge about target audiences; simplifying communications; and using feedback techniques. Nuanced definitions are largely absent from, or hidden in, the key health policy documents that aim to tackle the policy problem of hard-to-reachness (Brackertz, 2007). This may be partly due to the fact that it is an ill-defined and contested term (Mackenzie et al., 2012) and, that while much has been written about 'excluded' or HTR populations in relation to service use, there is less critical analysis of what the terminology means and how different interpretations may mediate different policy responses. Kovandzic et al. (2011) examined access to mental health care services for HTR groups and found both commonalities between experiences of people from different 'hard-to-reach groups' and considerable diversity within each group. They concluded that there is a need to provide a service that is pluralistic, adaptive, holistic, resonant and socially conscious to ensure equitable access to services.

Somers (1991) evaluated an extension project with small scale farmers in the Netherlands with a focus on those with little or no contact with extension services. She examined possibilities for extension services to reach these hard-to-reach farmers and found that it can be achieved through alleviating problems of communication, as well as a general reconsideration of the valuation of small farms. She suggests that the 'hard to reach' farmers were perceived as small part-time farmers, with a low level of education and saw themselves as inferior and consequently were slow to make decisions regarding their farm business. These

traits were seen as some of the reasons why HTR farmers do not consult their advisory services more regularly. Somers (1991) also found that the small and part-time farmers were not attractive to extension workers and there was a need for the extension personnel to take the initiative to provide support and assistance to this group of farmers. Consequently, she suggested that extension activities that engage these hard-to-reach farmers should be accompanied by strong policy instruments.

Kinsella (1995) identified the HTR category of farmers in his study of farm viability amongst Irish farm households. These farmers were mainly the small-medium scale drystock farmers of whom 41% did not use farm advisory services in the 1993-94 period and were characterised by being mostly either relatively old farmers or had off-farm work. These HTR farmers also had relatively negative attitudes to farm development with 71% having no plans to expand or develop their farm businesses in the following five years' period and were heavily reliant on family, friends and neighbours as sources of information for their farm-related decisions.

Applying the term 'hard-to-reach' to dairy farmers in the Netherlands with respect to their adoption of certain promoted mastitis control practices, Jansen et al. (2010) found that hard-to-reach farmers were not a homogeneous group and identified four categories based on their openness to and trust in external information sources. The results suggested that hard-to-reach farmers may not be as difficult to reach as is often assumed and that farmers were indeed accessing information from different sources. Seen from the perspective of the sender of the message, hard to reach could mean either that there was no contact with the farmer at all or that farmers did not apply the available information on improved farming practices, in this case mastitis prevention measures (Jansen et al., 2010).

Hard to reach Farmers in Ireland? For the purpose of this paper farmers who are labelled 'hard to reach' (HTR) by farm advisory services, are those who either do not use the public or private advisory services or use a minimum level of the services accessible to them. Many do not have formal contracts for services with the public or private farm advisory bodies in Ireland and therefore are identified through being absent from the lists of contracted clients. These are represented in Figure 1 by the 'not engaged' farmers and those on the outer periphery of the 'moderately engaged' farming population. Engagement is based on having a formal arrangement in which the farmer pays for advisory services which can range from the minimum service providing the farmer client an annual office consultation assisting with timely completion of their application to the CAP-funded Basic Payments Scheme to a high level of service including farm visits, discussion group membership and office consultations. As many as one in three Irish farmers do not contract farm advisory services from either the public or private sector (Kinsella, 2014). Evidence from a traditionally strong farming county in Ireland showed that 30% of farmers did not contract farm advisory services (Dunne, 2016).

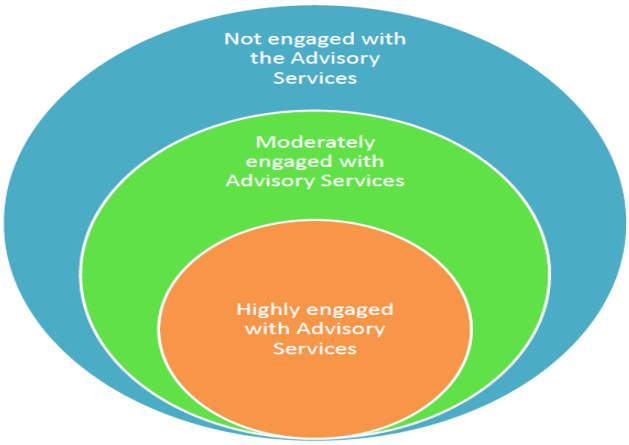

Figure 1. Categorisation of Farmers by their Engagement with Advisory Services.

Farm advisory services are available to all farmers in Ireland either through the state agency, Teagasc, or through the network of private consultants who are located throughout the country. Despite this network of services only two in every three farmers choose to formally engage, through contracts. In 2015 there were 43,500 farmer clients of Teagasc and a similar number of farmers who contracted the services of the private sector agricultural consultants. Of those farmers using contracted advisory services around one third availed of the lowest (minimum) level of service. In the case of Teagasc, this is the 'Club Support Package' which includes: limited phone contact, office assistance with annual BPS application, invitations to events, as well as newsletters and the organisation's bi-monthly farming magazine. Farm visits are not included in this package (Teagasc, 2016). If the same equivalence is applied to the private consultancy services in terms of those farmers who avail of minimum services, the HTR farmers in Ireland comprise 58% of all farmers i.e. those with no

engagement or else with lowest levels of engagement with services. This presents a challenge for meeting Ireland's stated targets for agricultural development in the 2010-25 era.

METHODOLOGY

This paper draws on the findings of three studies undertaken by students of the Masters in Agricultural Innovation Support (MAIS) Programme which has been delivered since 2010 through the collaboration of the School of Agriculture & Food Science, University College Dublin and Teagasc, the Irish state agency for the delivery of agricultural advisory, education and research services. The studies, based on topics originally proposed by Teagasc advisory staff, were undertaken between 2014 and 2016 at different locations throughout Ireland with a view to better understanding the farmers who either use very limited or no farm advisory services. These three studies are augmented by early findings of a PhD study on the role of advisory services in rural development in County Laois. It also draws on findings from the EUFRAS/IALB Conference Workshop on Hard-to-Reach Farmers which was held in Limerick in June 2016 with almost sixty farm advisors from a number of EU member states in attendance (facilitated by the author). The Workshop outputs help to relate the Irish studies' findings to the wider EU experience as shared by the participating advisors.

Low engagement HTR farmers: Two of the MAIS studies, namely Masterson (2016) and Deane (2016) focused on drystock farmers who had low levels of engagement with advisory services in Counties Roscommon and Longford. Masterson (2016) selected a random sample of 100 drystock farmers who were 'Teagasc Club clients' (the most basic advisory support package available) and collected data through self-administered questionnaires at advisory offices. Deane (2016) selected 30 HTR drystock farmers through consulting advisors and farmers themselves and applied the following criteria: had advisory contact but did not apply the information available; had no desire to seek out and utilise technical farming information; was mainly interested in using advisory services for agricultural schemes; was reluctant to change being 'entrenched in their own ways of doing things'. This study collected data from the farmers through on-farm semi-structured interviews.

No engagement HTR farmers: The two remaining studies used in this paper collected data on agricultural development from the wider population of farmers in specific geographic areas namely, East County Clare and County Laois (respectively Kelly, 2015 and Dunne, 2016). Both studies collected data through on-farm interviews with the farmers. The no-engagement farmers were identified through snowball sampling in East Clare (18 farmers interviewed) and through the selection of all farmers in the randomly selected sites in Laois (82 farmers interviewed).

Challenge: A common challenge experienced by the researchers in collecting data from the HTR farmers was their relative reluctance to meet with the researcher and reticence in providing information. In quite a few cases the contacted farmers did not want to be interviewed. For the low-engagement farmers it was relatively easy to identify them through their respective advisors. However, in the case of the no-engagement farmers this was much more difficult as they were unlisted by the advisory services and so had to be identified by other farmers in their communities.

RESULTS

Acknowledging the heterogeneity associated with hard-to-reach groups the studies undertaken with drystock HTR farmers in Ireland indicated some common characteristics that help better understand the 'typical profile' of these farmers.

The low-engagement drystock farmers examined by Masterson (2016) and Deane (2016) were found to be quite similar to the general population of drystock farmers in the studied area in terms of: scale of farming (size and stock number); and age (Table 1). However, they differed substantially in terms of agricultural education and their level of off-farm work with the low engagement farmers being more likely to have no formal agricultural education and to have off-farm work.

Two further studies (Kelly, 2015; Dunne, 2016) collected information on 'no engagement' farmers. In his examination of agricultural advisory services in East County Clare (west of Ireland), Kelly (2015) interviewed 18 farmers who had no formal contact with the advisory services. All were drystock farmers. On average these farmers were four years older than other farmers in the area and had a higher dependence on farming as their sole occupation. They owned farms which were 37% smaller than the average in the area at just 23ha. These no-engagement HTR farmers also had relatively low levels of formal education with 28% reporting completion of primary school education only. Somewhat

surprisingly, half of them had formal agricultural education. This can best be explained by the emergence of two distinct groups of HTR farmers, one comprising elderly farmers who were dependent on farming as their sole source of livelihood and the other comprised younger farmers who combined their farming with off-farm work. Many of these relatively younger farmers had completed some formal agricultural education while relatively few of the older farmers had. A stand out characteristic of the no-engagement HTR farmers in East Clare was the reported absence of a farm successor, with 83% of the farmers stating they had no identified successor in contrast to 54% for all farms surveyed in the area (n=240).

Table 1. Characteristics of studied low engagement HTR Drystock Farmers relative to area and national statistics.

Characteristic	National* (n=91,293)	Area (Ros. and L/ford) (n=7,062)	HTR Farmers (n=130)
Average age of farmer (yrs.)	56	56	55
Farm area (ha)	32.5	27.5	30
Agricultural education	54%**	50%	40%
Sole occupation farming	51%	50%	40.5%

Source: Masterson (2016) and Deane (2016)
*CSO, 2010 (Specialist Beef and Sheep Farms)
** Based on Heanue and O'Donoghue (2014), NFS data

Dunne (2016) collected data from 82 farmers in Co. Laois (midlands of Ireland) who reported no relationship with the farm advisory services. All but one of these farmers operated drystock enterprises and tended to be older (by 4 years) than the average for the area and had farms which were 28% smaller than the average for all farms involved in this study (n=270). Some 40% of these farmers reported their sole occupation as farming, indicating a high proportion involved in some level of off-farm work. The farmers had low levels of formal education with 39% having completed primary education only and 82% indicating no formal agricultural education. As in the case of East Clare it can be seen that two distinct groups of farmers have emerged in this category of no-engagement HTR farmers. One group being the older farmers who were dependent on farming as their sole occupation (average age of 65 years) while the other being the relatively younger farmers (average age of 55years) who combined small-scale drystock farming with off-farm work.

The findings from the afore mentioned studies mirror the reality across some EU states as indicated by the outputs of the EUFRAS/IALB Workshop in June 2016. The workshop posed a number of questions to the participating agricultural advisors – one of which was: What are the characteristics of HTR farmers? In response to this question the common characteristics identified through the workshop groups were: age (older farmers); education (low levels of formal education); and off-farm employment (high levels). In addition, they also identified social factors associated with the HTR farmers such as the conservative/ traditional nature of certain farmers which can be intergenerational.

Reflecting on the findings of the studies in Ireland and the EUFRAS/IALB workshop, two distinct groups of HTR farmers have emerged: the first being the older farmers who are farming low income small holdings on a full-time basis and have relatively low levels of education. The second group being the relatively younger farming cohort who combine small-scale drystock farming with off-farm work and who have higher levels of education, particularly agricultural education.

Reasons for low or no engagement with farm advisory services: In examining the reasons why low-engagement HTR drystock farmers did not engage with advisory services, Masterson (2016) undertook a focus group discussion with agricultural advisors who suggested the main reasons as: farmers only wanted their advisors to assist them in timely completion of applications for the EU Basic Payment Scheme; many had off-farm work and did not have any ambition to develop their farms, viewing themselves as 'extensive' farmers and regarded the advisory services as primarily promoting more intensive farming which did not suit them. When the farmers were asked to indicate reasons for their low engagement with advisory services they indicated that 'they had time constraints' which limited their involvement in activities such as discussion groups and farm walks – these constraints were mostly associated with those having off-farm work. Commenting on their lack of involvement in farmer discussion groups, which are widely used and promoted

by advisory services, some farmers reported that they 'knew very little about these discussion groups nor had they been invited by advisors to join them'.

Deane (2016) asked the drystock agricultural advisors why some farmers were hard to reach. In response they felt that: these farmers believed they had enough farming knowledge themselves and so did not need technical farming advice from the advisors. They also identified cases of farmers having low engagement with services because they were not themselves in control of their farms as ownership may still be with an elderly parent(s) and farm succession had not been addressed. Advisors also believed that some farmers were sceptical of the existing advisory services which were seen by farmers as biased in favour of supporting dairy farming and pushing intensive farming practices. Deane's study categorised the HTR farmers into a number of distinct sub-groups each offering different reasons why they had a low level of engagement with the advisory services. The older category of HTR farmers (average age of 64 years), known as Winding Down Retirers, had little motivation to develop and progress their farms and looked to steadily reduce their workload until they retire. Consequently, they saw little reason to engage with the advisory services. Another category of HTR farmers identified in Deane's study was the Future Positivers, who were relatively young (average age of 37 years) and the majority had off-farm work. While open to farm development many of these farmers felt the advisory services were for larger and more intensive full-time operators while they also felt they did not have the time to engage with the advisory services due to their off-farm working hours. The heterogeneity reflected in Deane's sub-categories is comparable to those identified by Jansen et al. (2010) who also recognised the existence of a cohort of HTR farmers who, while not highly engaged with advisory services, were nevertheless positive in their outlook on farm development – these were called 'Proactivists' and had relatively high trust in external sources of information.

Focusing on the sub-sample of no-engagement HTR farmers (all were drystock farms) in County Clare, Kelly (2015) found these farmers had the 'lowest levels of intent for farm business development' which included: land improvement or expansion, intensification of their farming system or purchasing farm machinery. These farmers comprised a mix of relatively older farmers with no identified successor and farming on small holdings and the relatively younger farmers operating small-medium scale farms while also having off-farm work and who associated use of advisory services with a type of farm development that 'was not for them'. Kelly (2015) also found that these no-engagement farmers used relatively few sources to inform their farm decision-making, with a higher dependence on oneself for information on farm planning and development, including financial planning. This same dependence by low and no engagement drystock farmers on their own tacit knowledge for farm development decisions was recognised by Kinsella (1995).

The EUFRAS/IALB Workshop asked the participating farm advisors: Why do some farmers not engage with advisory services? In response, they suggested a broad range of reasons encompassing: farmers' perceptions of the credibility and worth of the services; their own lack of intent to develop their farms due to absence of a successor; their own low self-esteem associated with standard of farming and consequently a fear of being exposed as a 'poor' farmer; time constraints due to off-farm work commitments; the relevance of the advice provided to small-scale farmers; and the 'language gap' which existed between advisors and farmers, with advisors using technical terms which farmers may not understand. Some of these reasons have been echoed by Sutherland *et al.* (2017) who found that 'small-scale farmers in Europe's peripheries utilise formal advisory services primarily for accessing subsidies (e.g. completing application forms), rather than acquiring production knowledge'.

DISCUSSION

From the studies drawn on in this paper it is estimated that over half (58%) of Irish farmers can be categorised as 'hard-to-reach' on the basis of either zero or low level (minimal) contact with the farm advisory services. While many of these farmers are small in scale and generate low returns from their farms this is cause for concern as they represent a substantial proportion of the business of farming in Ireland and are direct contributors to meeting the national goals of agricultural development. They also represent a very important sub-population in rural areas who are critical to achieving sustainable development. While HTR farmers have themselves either consciously chosen not to engage with the farm advisory services or simply continued a tradition of no or low contact, there is a sub-group of these farmers who are interested and willing to increase their use of

the services. Deane (2016) identified the Future Positivers who were willing to engage more with advisory services and who had relatively productive farms, off-farm work and a positive attitude towards farming. These farmers were keen on making a profit from farming and saw the benefit of investing in their farms. As in the case of Jansen *et al*. (2010) 'Proactivist' farmers, these farmers tended to use multiple information sources such as agri-company reps, farming press and other farmers, in contrast to the other categories of HTR farmers who used relatively few sources of information. Core reasons put forward by farmers for no or low engagement in advisory services ranged from: their lack of any intent to undertake farm development, thus the view that technical farming advice was unnecessary; to their low self-confidence which constrained their engagement in activities such as farmer discussion groups with a fear of being exposed as 'poor' farmers, a point supported by Labarthe & Laurent (2013). They also identified the timing of service delivery which did not suit many farmers who combined farming with off-farm work. In addition, advisors identified the highly sensitive issue of farm ownership and succession which, when unresolved, created an obstacle for young farmers to fully engage with services.

The results from the studies and workshop used to inform this paper provide some insights into this poorly understood yet very significant cohort of farmers in Ireland. It is not surprising that the majority of the HTR farmers in Ireland are in drystock farming with relatively few in dairying. This is to be expected as the more labour-intensive nature of dairy farming does not suit farmers who have off-farm work while older farmers who were once in dairying have largely exited the sector which had encouraged them to expand and intensify in the post milk quota era. Two distinctly different groups who comprise the majority of HTR farmers are identified as: elderly farmers with no farm development intentions and consequently no need for farm advisory services, except to assist them in the paperwork associated with scheme applications and in particular to access on an annual basis their CAP-related Basic Payment Scheme entitlements. And the other significant group of HTR farmers as the relatively younger farmers who have off-farm work and who view the advisory services as being for the full-time farmers and generally not accessible due to their off-farm working hours relative to the advisory services working hours. It has also recognised that not all HTR farmers are unwilling or disinterested in a greater engagement with the services available with some farmers indicating a willingness to engage more and see benefits of using services to inform their farming decisions.

CONCLUSION

While recognising the diversity associated with farming across the EU and the heterogeneity associated with the HTR farmers there are many similarities between the Irish story and that of HTR farmers across the EU in those regions where farm advisory services are accessible. Similarly, there is a common rationale for being concerned about these farmers across the EU, a point acknowledged by the European Parliament's resolution (2014) that 'small farms play an important role in the European country-side, providing employment, maintaining landscapes and nature, and preserving both traditions and traditional products'.

Appreciating the reasons why farmers choose either no or low levels of engagement with advisory services can help to customise services to reach a greater proportion of these farmers in the future, particularly those who see benefits of engaging with the advisory services. At the same time the reluctance of many elderly small-scale farmers to engage services for farm development is understandable and needs to be respected, especially in those cases where a farm successor is not identified. This being said, there remains a distinct need to support these farmers in gaining access to services and schemes that they are entitled to as they form a substantial part of their household income. This in turn supports their important roles in land management that ultimately contributes to the national green image agenda and to the rural economy. A point argued by Sutherland *et al*. (2017) at a wider EU level.

Labarthe & Laurent (2013) recognised that the organisation of advisory services in the EU tend to be detrimental to the interests of small scale farmers. For advisory services to deepen their engagement with HTR farmers, many of whom are small scale, they would need both a reconfiguration of services and an increase in the capacity of advisors. Somers (1991) suggested that advisors would require certain attributes in order to engage with this category of farmers, such as approaching farmers without prejudice and be willing to spend time with them to gain their confidence. This is particularly the case for many of the no-engagement farmers who have little confidence in how the services

can benefit them. Helping to move the low-engagement farmers to higher levels of engagement may require adjustments to the suite of advisory methods used so that the nature of the engagement changes with a reduced reliance on farm walks and discussion groups and concurrently an increase in the use of farm visits allowing one-to-one engagements. It would also need adjustments to the timing of service delivery to enable those with off-farm jobs to use services at times compatible with their 'farming' time. Such changes present a challenge to advisory services as they would require increased work time per advisor and/or more advisors if greater emphasis is placed on farm visits and/or extending farm advisors working hours to enable more evening and weekend work. Increasing farm advisory services engagement with more of these HTR farmers is possible but would require changes by advisory bodies and ultimately public policy measures which recognise and target these farmers with new and expanded services towards meeting an agenda of sustainable agricultural and rural development.

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REFERENCES

Anderson, J., (2007), Agricultural Advisory Services: A Background Paper to the World Development Report 2008. Agriculture and Rural Development Department, World Bank.

Brackertz, Nicola. (2007). Who is hard to reach and why? Institute of Social Research Working Paper, Swinburne University of Technology Institute of Social Research, Victoria.

Central Statistics Office (2012). Census of Agriculture, 2010. Government of Ireland Stationary Office, Dublin, Ireland.

Central Statistics Office (2015). Farm Structures Survey 2013. Government of Ireland Stationary Office, Dublin, Ireland.

Deane, T. (2016). Categorisation of hard to reach drystock farmers according to their aspirations, intentions and motivations. MAgrSc Thesis, Unpublished. School of Agriculture and Food Science, University College Dublin, Ireland.

Department of Agriculture, Food and the Marine. (2010). The Food Harvest 2020: A vision for Irish agrifood and fisheries. Dublin: Department of Agriculture Fisheries and Food.

Department of Agriculture, Food & the Marine. (2015). Local roots global reach. Food Wise 2025. A 10-year vision for Irish agri-food industry. Dublin: Department of Agriculture Fisheries and Food.

Department of Agriculture, Food and the Marine, (2016). Annual Review and Outlook 2015-16. Dublin: Department of Agriculture Fisheries and Food.

Dunne, A. (2016). An Examination of the Impact of Agricultural Extension Services on Rural Development - Case Study of County Laois. UCD PhD Programme (2013-2018) in Progress. School of Agriculture and Food Science, University College Dublin, Dublin, Ireland.

European Parliament (2014). European Parliament resolution of 4 February 2014 on the future of small agricultural holdings (2013/2096(INI)).

Food and Agriculture Organization of the United Nations (2014). The State of Food and Agriculture: Innovation in Family Farming. FAO of the United Nations, Rome 2014.

Froonjian, J. & J. L. Garnett (2013). "Reaching the Hard to Reach: Drawing Lessons from Research and Practice." International Journal of Public Administration, 36 (12) (2013), 831-839.

Heanue, K. & C. O'Donoghue (2014). The Economic Returns to Formal Agricultural Education. Teagasc, Agriculture & Food Development Authority.

Jansen, J., C. D. M. Steuten, R. J. Renes, N. Aarts, &T. J. G. M. Lam. (2010). 'Debunking the myth of the hard-to-reach farmer: Effective communication on udder health'. Journal of Dairy Science, 93, (3) 1296-1306.

Kandel, D. (1975). Reaching the hard-to-reach: illicit drug use among high school absentees. Journal of Addictive Diseases, 1975, 1 (4), 465-480.

Kelly, M. (2015). An Examination of Agricultural Advisory Services in East Clare. Masters in Agri. Sci. Thesis, Unpublished. School of Agriculture and Food Science, University College Dublin, Ireland.

Kinsella, J. (1995). A Study of Development Information Needs of Viable and Potentially Viable Farm

Households in Ireland in the Context of a Changing Policy Environment. Unpublished PhD, National University of Ireland.

Kinsella, J. (2014). Advisory Services at a Crossroads. Presentation to the Agricultural Science Association Annual Conference 2014: Keeping pace with global food trends, Naas, Co. Kildare, Ireland. Sept. 12th 2014.

Kovandzic, M., C. Chew-Graham, J. Reeve, S. Edwards, S. Peters, D. Edge, S. Aseem, L. Gask, C. Dowrick, (2011). Access to primary mental health care for hard-to-reach groups: From 'silent suffering' to 'making it work'. Social Sciences and Medicine 72 (2011) 763-772

Labarthe, P., Laurent, C., (2013). Privatization of agricultural extension services in the EU: Towards a lack of adequate knowledge for small-scale farms? Food Policy 38, 240–252.

Mackenzie, M., M. Reid, F. Turner, Y. Wang, J. Clarke, S. Sridharan, S. Platt and C. O'Donnell (2012). Reaching the Hard-to-Reach: Conceptual Puzzles and Challenges for Policy and Practice. Journal of Social Policy, 41, 511-532

Masterson, J. (2016). Review of Advisory tools and methodologies to engage with 'hard to reach' drystock farmers. M.Agr.Sc Thesis, Unpublished. School of Agriculture and Food Science, University College Dublin, Dublin, Ireland.

Somers, B. M. (1991). "Small farmers and agricultural extension." Surviving on a small farm in the Netherlands and possibilities for agricultural extension to reach a hard-to-reach category. Wageningen, Landbouwuniversiteit Wageningen, Netherlands

Sutherland,,L.A., L. Madureirab, V. Dirimanovac, M. Boguszd, J. Kaniad, K. Vinohradnikg, R. Creaneya, D. Ducketta, T. Koehnenb and A. Knierim (2017). New knowledge networks of small-scale farmers in Europe's periphery. Land in Use Policy, 63, 428-439.

Swanson B. & R. Rajalahti (2010), Strengthening Agricultural Advisory and Extension Systems: Procedures for Assessing, Transforming and Evaluating Extension Systems. World Bank Agriculture and Rural Development Discussion Paper No. 45. The World Bank

Teagasc, (2016). Annual Report 2015 and Financial Statements. Teagasc Agriculture and Food Development Authority. Ireland.