

1 **The role and contribution of women in UK farm businesses**

2 **Zoë Kempster, Aberystwyth University**

3 Aberystwyth Business School, Penglais Campus, Aberystwyth, SY23 3DY
4 zoek2000@hotmail.co.uk

6 **Wyn Morris, Aberystwyth University**

7 Aberystwyth Business School, Penglais Campus, Aberystwyth, SY23 3DY
8 dmm@aber.ac.uk; ORCID iD: 0000-0003-4355-2211

10 **Louise Manning, University of Lincoln**

11 Lincoln Institute for Agri-Food Technology, Riseholme Park, Lincoln LN2 2LG
12 LManning@lincoln.ac.uk; ORCID iD: 0000-0002-9900-7303

14 **Robert Bowen, Cardiff University**

15 Cardiff Business School, Aberconway Building, Colum Drive, Cardiff, CF10 3EU, UK.
16 BowenR16@cardiff.ac.uk; ORCID iD: 0000-0002-8492-2701

18 **Abstract**

19 The global empowerment of women has been, and remains to be, a continuing issue, especially
20 within the workplace. The agribusiness industry is no exception, where continuation of gender
21 bias and stereotypes positions women as under-represented. Whilst the significance of women
22 in farm businesses is evidenced, their relative invisibility in policy discourse is clear, despite
23 the number of women developing careers in the industry increasing. This qualitative study
24 examines the self-identified roles of women in United Kingdom (UK) farm businesses through
25 interviewing individual participants in the sector (n=8). The literature highlights four roles: the
26 farmer, farm manager, off-farm income careerist and entrepreneur with an on-farm diversified
27 business which forms a theoretical framework to structure the interviews. Findings show five
28 emergent self-identification of role characterisations as being the mother, a decision-maker, a
29 supporter, a labourer and an entrepreneur within a personal role profile. Thus, while externally
30 identified roles consider women's status and contribution in a siloed job role structure, the
31 multiplicity of roles that women undertake are much more nuanced and contiguous. The
32 research contribution is an understanding of the variance and multiplicity of tasks undertaken
33 which indicate the extensive work and contributory efforts that women instinctively provide to

34 the farming business and the farm household structure. Findings contribute by establishing a
35 new conceptualisation of the contributions of women to farm businesses informing rural
36 policymakers, to consider the roles of women at farm household level rather than simply
37 focussing on the gender characteristics of the principal farmer.

38

39 **1. Introduction**

40 Globally the empowerment of women continues to be an issue, especially within the
41 workplace. The agribusiness industry is no exception with women being underrepresented, due
42 in part to the continuation of gender bias and stereotypes (Ball, 2020; Glazebrook et al., 2020).
43 The farming environment is heavily gendered in favour of males, where it is more likely that
44 farmers and farm employees are male (Smith et al., 2020). Despite this, the number of women
45 entering careers in the industry are increasing, even given the stereotypical transition via
46 succession between males. 28.5% of employees in UK elementary agricultural operations are
47 female, with the total number increasing by 40% since 2004 (Nomis, 2020). In addition, the
48 number of female students studying in UK higher education in agriculture, food and related
49 study programmes during the 2019/20 academic year is almost double that of males (HESA,
50 2020). Whilst the numbers of women in agriculture are increasing, only 22.4% of managers
51 or proprietors in UK agriculture and horticulture are female (Nomis, 2020), raising questions
52 about the status of women within the industry, their roles and their overall contribution to
53 corporate and family businesses. Whilst studies have examined the role of women in farm
54 businesses, previous research has suggested there are still many gaps in the literature (Dunne
55 et al., 2021; Smith et al., 2021). With the exception of literature reviews (Ball, 2020; Dunne et
56 al., 2021; Smith et al., 2021) and book chapters by Shortfall et al. (2017; 2019; 2020), recent
57 literature on developed nations such as Ireland and the UK are limited to, for example, Cush et
58 al. (2018). Generally, research on the role of British women in the farming/agri-business

59 industry is aged, such as work by Gasson (1980; 1992) or Shortall and Kelly (2002). Research
60 on the role of women within agriculture and agribusiness in the global North includes the
61 United States (Carruth and Logan, 2002; Trauger, 2004; Keller, 2014), France (Saugeres,
62 2002), Sweden (Pettersson and Cassel, 2014) and Germany (Lehberger and Hirschauer, 2015).
63 Although this research has been conducted in countries with similar farm business typology to
64 the UK, cultural differences may still exist in terms of national policies and the perspectives of
65 women in the industry. The lack of contemporary empirical research reflecting UK women's
66 contribution to the overall resilience of the farming business including their financial
67 contribution towards household income, their roles and role characteristics makes this a topic
68 of interest, and as such, the primary data gathered during this study is both timely and
69 necessary.

70 This qualitative study examines the self-identified roles of women in UK farm
71 businesses through interviewing individual participants in the sector (n=8). Their contribution
72 is assessed in terms of their level of responsibility, the time they allocate to the business and
73 the particular tasks they undertake. This research also explores the self-reported challenges and
74 barriers experienced by women involved in agriculture. The structured literature review that
75 informs this paper led to the conceptualisation of four job roles: the farmer, farm manager, off-
76 farm income careerist, and entrepreneur of an on-farm diversified business. The data is
77 analysed using thematic analysis (Braun and Clarke, 2006). This study is situated in the
78 experiences of those interviewed and it is those experiences that drive the empirical research.
79 The work informs both industry and policy of the multifaceted contribution of women on
80 farms, notably in the context of the UK, and further contributes by establishing a new
81 conceptualisation of the contributions of women to farm businesses as an entrepreneur,
82 decision-maker, supporter, mother, and labourer. Based on the findings of this research, we
83 argue that the role of women in agriculture has evolved to one which is of multi-skilled/multi-

84 characterisation. Indeed, the study finds that the ways in which women performs these role
85 characterisations varies between farm businesses and also for the individual lived experiences
86 of the women interviewed. For each women role characteristics can change over a woman's
87 working and personal life, especially the role of mother, support and carer.

88

89 **2. Theoretical Framing**

90 Historically, the role of women in a farm business is a 'house-wife' or an 'assistant farmer'
91 (Gasson, 1980) where very few women work the land as a full-time role. Wisser (1975; cited
92 by Tanner, 1999) states that "women make a more important contribution to agriculture than
93 they do to any other single industry", but whilst women are said to have a significant role (Tara-
94 Satyavathi et al., 2010), their contribution is unrecognised and their work invisible with males
95 being dominant (Brandth, 2002; Damisa and Yohanna, 2007; Nain and Kumar, 2010; Annes
96 et al., 2021). However, much of this research took place in the global South including Nigeria
97 (Damisa and Yohanna, 2007), and India (Nain and Kumar, 2010), where the farming and
98 family context is different from that of the developed North. Indeed, women's contribution is
99 positioned as low value compared to men's (Alston, 1990; Lewis, 1998). Dunne et al. (2021)
100 reviewed 184 studies published between 1970 and 2020 that considered women's roles in
101 agriculture with the most recent being focused on developed nations, such as Ireland and the
102 UK (for example, Cush et al., 2018; Shortall et al., 2017, 2019, 2020; Ball, 2020). Job roles
103 cited across these studies include: the traditional farm housewife, working farm member (farm
104 assistant, subordinate manager), woman farmer (traditional women farmer, professional
105 woman farmer); and off-farm occupation (dual or off-farm occupation with limited
106 engagement with the farm), where women have limited access to land, education and
107 organisations. Gasson (1980) bases her evaluation of women's contribution to farm and rural
108 life using three identified role types: farm housewife, working farmwife and woman farmer.

109 Brasier et al. (2014) uses work from Burton and Wilson (2006) and McGuire (2010) to develop
110 a theoretical model for role identities of farming women highlighting: *primary operator, farm*
111 *wife-helper and off-farm income careerist*. Combining these sources with the work of Brandth
112 (2002) and Barlett (1993), four roles are positioned in this research: a farmer, a farm manager,
113 an off-farm income careerist and an entrepreneur of a diversified business. Some terms have
114 been positioned specifically in this paper and are now described for clarity, contribution and to
115 explore each role.

116 The term contribution can be defined as “the action of contributing or giving as one’s
117 part to a common fund or stock... to bring about a result” (Oxford English Dictionary, 2021).
118 It is the input and involvement that a person provides for a given role, and the impact that they
119 have on their surrounding environment. In relation to a woman’s contribution to a farm
120 business, it could involve her physical work and skillset, the influence she has on decision-
121 making or even the emotional support she offers. Contribution can also be considered through
122 financial aspects, i.e., the monetary value provided to farm household income, whether that
123 income is generated within or outside of the farming business. Generating income through off-
124 farm activity is a recognised resilience strategy for farm-based households (Gasson, 1988;
125 Shucksmith et al., 1989; Morris et al., 2017). However empirical evidence of female
126 contribution is scant in related studies.

127 Definitions of role are multiple, addressing the commitment of an individual to a
128 specified job with the responsibility to carry it out with the highest degree of one’s ability; the
129 “functional niche assigned to each member of a group, carrying the expectations of peers
130 regarding individual contributions to that group” (Kurian, 2013, p. 263); “a socially expected
131 behaviour pattern usually determined by an individual’s status in a particular society,” a
132 given duty, or “a function or part performed especially in a particular operation or process”
133 (Merriam-Webster, nd). This suggests that a role could be defined as a job description or as

134 a group of functions or tasks that create a self-identified role. Farming is not just an
135 occupation for many farmers and farm workers, it is often positioned as a vocation, a way of
136 life that extends beyond employment to provide personal meaning (Groth and Curtis, 2017).

137 **2.1 Farmer**

138 One role of women within the farming/agribusiness industry is as the farmer. Smith et
139 al. (2020) define a farmer as operating a farm or cultivating land, i.e., the physical work within
140 the farm environment where mechanisation has made tasks physically easier than centuries ago
141 (Smith et al., 2020). In her study forty years ago on farm women role types, Gasson (1980, p.
142 171) identifies the woman farmer to be “farm centred... regarding farming as their most time
143 consuming, most important and most enjoyable activity”. They are not the assistant to another
144 farmer and participate in tasks that were perceived at the time to be masculine, they value their
145 work, and gain satisfaction from the independence and pride that farming sustains (Gasson,
146 1980). Other sources suggest difficulties for the female farmer including self-identity
147 especially in communities “where masculinity and femininity have been shaped over time by
148 the gendered symbolic categories of farmer and farmwife” (Keller, 2014, p. 2). This was often
149 reinforced where physical strength requirements forced farming women into the house
150 (Trauger, 2004), and where women traditionally had a role in feeding large numbers of manual
151 farm workers. As mechanisation increased, this role of feeding workers on the farm reduced,
152 in line with a reducing work force. Female work was perceived as lesser, secondary, and
153 complementary to physical work (Saugeres, 2002), and where women undertook work on farm
154 it was work such as handling and caring for small livestock that were kept indoors. This
155 stereotyping is interpreted by Pini (2005) who suggests that women cross the traditional gender
156 division of labour if they partake in physical on-farm tasks, deemed to be men’s work,
157 especially if this includes the use of large farming machinery. This notion of the farmer in a

158 male sphere in the global North is considered by Smith et al. (2020) and Glazebrook et al.
159 (2020) when considering farm productivity, but not by Dunne et al. (2021).

160 **2.2 Farm Manager**

161 The farm manager is the individual who ‘manages’ the day-to-day operations of the
162 farm, i.e., their role in combining [available] resources appropriately (Nuthall, 2010), the land,
163 the labour and the capital (Dexter and Barber, 1960), focusing on business aspects rather than
164 land custodianship. An analysis of the role of farm manager recognises that management is
165 complex, requiring sufficient knowledge of the external industry environment as well involving
166 factors such as the market, economics, decision making and implementing strategies based on
167 dynamic changes that occur (Malcolm, 2004). He stated, “the outstanding characteristic of the
168 most successful [farm] managers... is their mastery of information” (Malcolm, 2004, p. 53).

169 Societal presumption, that women are the principal family caregivers, will position that
170 this caregiving role interferes with their role as a farm manager (Lehberger and Hirschauer,
171 2015; Dunne et al., 2021). A lack of rural childcare is also a challenge for farm managers, both
172 male and female, so the physical nature of being a mother can be a career barrier. Having to
173 take time away from a farm managerial career during maternity periods can lead to career
174 downgrading creating social pressure or financial risks (Lehberger and Hirschauer, 2015), as
175 with a female’s career in many other sectors.

176 **2.3 Off-farm Income Careerist**

177 Off-farm income can be considered as dual occupation, i.e., either working both on the
178 farm and off the farm or solely in an off-farm occupation (Dunne et al., 2021). Thus, a woman
179 can be an off-farm careerist where their primary role is in employment off-farm, and also work
180 on the farm, i.e., the woman’s role involves pluriactivity (Brandth, 2002; Dunne et al., 2021).
181 According to Gasson (1992), the greatest number of women in the farm labour force are
182 married to farmers and assist their families in roles, differentiating from women farming

183 independently, as farm managers or farm workers, or from female farm workers. Off-farm
184 income generated by women often supports farm survival, aiding the male farmer through
185 supplementing the household income (Carruth and Logan, 2002; Price, 2010), and providing
186 additional economic security. Therefore, the role of a woman as an off-farm income careerist
187 is an important contribution to overall business performance and earning their own money
188 encourages women to have self-assurance, visibility and autonomy (Brandth, 2002). Although
189 they provide additional income off-farm, many women are also actively involved in the farm
190 business.

191 **2.4 Entrepreneur involved with an On-Farm Diversified Business**

192 The female family member generally instigates and manages entrepreneurial (non-core)
193 farm diversified activities (McElwee, 2006), as they generally have had greater transferable
194 skills, are not tied to the day-to-day activities giving them more time and energy for a new
195 business and are more innovative, recognising the potential for business opportunities
196 (Bosworth and Wilson-Youlden, 2019; Smith et al., 2020), compared to their male
197 counterparts. Diversification can be driven by combined and interconnected economic, social,
198 and personal motives, but primarily the driver is as an alternative economic strategy to support
199 and enable the farm business' survival and socially and personally, is a preferred option as
200 women can be independent and work from home, important for those with children and limited
201 rural childcare (Pettersson and Caseel, 2014). An example of this is seen through the female
202 managing the agritourism activities of the family business as a means of supplementing farm
203 income (Stirzaker et al., 2022).

204 **2.5 Summary**

205 The literature suggests that one role is not mutually exclusive of the others over the course of
206 a women's life as the role of farming woman may change in line with the business and family
207 demands and their position in the family, indeed they may have multiple roles simultaneously.

208 This notion of multifunctionality is found in the current literature (Brandth, 2002; McElwee,
 209 2003; Pettersson and Cassel, 2014), but there is also an aspect of fluidity and circularity as the
 210 women substitute one role for another, or in a family business may take one role as farmer's
 211 daughter, but over time could become farmer, farm manager or farmer's wife, then in time
 212 farmer's mother (Smith et al., 2021). The methodology is now defined.

213 3. Methodology

214 The research exercise now presented is predominantly a descriptive one with the objective of
 215 providing a new conceptualisation of women farmer' types that can inform future empirical
 216 work. Based on the research aim, a qualitative methodology is adopted involving semi-
 217 structured interviews with representatives of the four roles positioned in this research and
 218 informed by the structured review of literature namely a farmer, farm/office manager, off-farm
 219 income careerist, and enterprise entrepreneur. A purposive sampling method is used, to identify
 220 for the interviews, women that associate themselves with the aforementioned four roles, i.e.
 221 they represented cases of the roles (Yin, 1989). The interview guide is designed to gather data
 222 focussing on the primary role, self-reported contribution and experiences of the eight female
 223 participants in their farming businesses (Table 1) distinguishing participants by allocated job
 224 role, age and farm business type.

225

226 **Table 1: Profile of interview participants**

Participant	Self-identified role	Age	Farm business type
P1	Farmer	20	Dairy
P2	Farmer	24	Dairy and beef
P3	Farm manager	52	Cereals and poultry
P4	Farm manager	51	Potatoes, carrots, cereals and maize
P5	Off-farm careerist	56	Chicken, beef and sheep
P6	Off-farm careerist	54	Cereals and maize
P7	Entrepreneur of a diversified business	51	Beef and pigs Diversified business: farm shop

P8	Entrepreneur of a diversified business	28	Beef and sheep Diversified business: vineyard
----	--	----	--

227

228 The UK is chosen as the setting for this research due to its multifunctional and non-
 229 homogenous farm business structure. The use of semi-structured interviews is a method that is
 230 consistent with related research on the role of women in agriculture (Keller, 2014; Petterson
 231 and Cassel, 2014). The interviews (n = 8) provide rich data and this research is similar in sample
 232 size to previous studies in the subject area (for example, see Morris et al., 2017; Joosse and
 233 Grubbström, 2017). Maximum variation sampling is used for participants to be purposively
 234 selected to ensure that each of the four roles identified in the theoretical framework are
 235 represented with interviews being conducted at the end of 2020 and the beginning of 2021.
 236 Due to the Covid-19 regulations, which restricted travel and contact with individuals,
 237 interviews were conducted virtually using video technology. Interviews were recorded, and
 238 transcribed verbatim, with consent of the participant, to ensure that data obtained was a true
 239 representation of the interviews. Rigour was sought at all times through the research process,
 240 from the formulation of the interview guide based on the literature review, to the sampling
 241 method, and use of a structured analysis process. Interview data is analysed through the six-
 242 step Braun and Clarke (2006) process of thematic analysis. Firstly, on a case-by-case basis
 243 comparing the similarities and differences of the interviewees' roles, contributions,
 244 experiences and perceptions, this comparison involved a number of factors such as role type
 245 and age. The thematic analysis process includes first and second cycle coding (Miles et al.,
 246 2014) of the interview transcripts, establishing initial codes, evaluating the codes and
 247 facilitating the formulation of themes. NVivo 12 is used to ensure that data analysis is
 248 conducted in a structured and rigorous manner. Initially, 98 unique codes were outlined from
 249 the interview data, which related to 10 themes, as shown in Table 2.

250 **Table 2: Thematic Analysis Findings**

251

Motherhood	Decision-making	Capability	Experience	Entrepreneurial	Community	Driving Force	Physicality	Stereotypes	Change
Children	Discussions	Prove	Education	Entrepreneurial	Community	Driving force	Physicality	Stereotypes	Change
Family	Contribution	Hard work	Awareness	Creative	Social media	Inspiring	Labour	Perception	Positivity
Mother vs. career	Input	Determination	Development	Confidence	Networks	Encouraging	Arable vs. livestock	Hesitation	Mechanisation
Support	Involvement	Capability	Skills	Determination	Interaction	Supportive	Husbandry skills/motherly	Masculine	Respect
Responsibility	Ideas	Break barriers	Experience	Hard work	Influences	Teamwork	Caring	Inequality	Generation differences
Work from home	Inclusion	Passion	Opportunities	Skills	Role models	Positive	Gentle	Sexism	Valued
Paperwork	Family business	Presence	Encouragement	Initiative	Inspiration	Looking ahead	Mechanisation	Judgemental	Equality
	Equality	Resilience	Equal	Opportunities	Connections	Initiative	Masculine culture	Derogatory	Easier than ever before
	Decision-making	Extra effort	Upbringing	Endless possibilities	Confidence	Calming	Help	Arable vs. livestock	Self-infliction
		Attitude			Reality	Valuable		Shock/surprise	Social media
		Perseverance			Awareness				Education
		Control			Respect				

252

253

254

255

256

257

258

259

The 10 themes from the data analysis process include motherhood, decision-making, capability, experience, entrepreneurial, community, driving force, physicality, stereotypes, and change. Further evaluation of these themes, and a consideration of the 4 main roles of women in agriculture emergent from the literature review, led to the identification of 5 key contributions of women in agribusiness, based on dominant role characteristics which emerged from the data. These are contributions as an entrepreneur, decision-maker, supporter, labourer and mother, which are discussed in the following section.

260

4. Findings and Discussion

261

4.1 Entrepreneur

262

263

264

265

266

267

268

269

270

One of the job roles that arose from the literature was on-farm diversification entrepreneur. The respondents asserted that if women are creative, determined, hard-working, resilient, forward-thinking and have a positive attitude, they can prove themselves in the industry and be successful, i.e., that the traits of entrepreneurship extended beyond a diversified enterprise into the agricultural enterprises too. It was more common for off-farm careerists and diversified entrepreneur participants to comment on this theme outside of farming activities.

“Women have the entrepreneurial and creative skills to work close with the market.” (P5)

“Women have definitely proved themselves as being equal in farming. Anything is possible,

which I think is wonderful.” (P7)

295 On the other hand, it is identifiable that farm managers and diversified entrepreneur
296 participants, whose roles consist of having more control in the business, discuss their thoughts
297 with their male family members, but then proceed to make the final decision themselves.

298 *“Decisions are all with me in the business. We will chat over machinery purchases and then*
299 *discuss and decide from there, but everything else is with me.” (P3)*

300 *“I have full control on decision-making... but I always run all decisions through my dad and*
301 *brother, so we work together to figure out a solution for any problems.” (P8)*

302 These findings agree with Bokemeier and Garkovich (1987), who determined that a woman’s
303 role in decision-making varies depending on their defined roles in the farm business. The
304 participants in this study actively involved in the day-to-day farm operations demonstrate more
305 control in decision-making, compared to those who are not.

306 **4.3 Supporter**

307 The role of women as drivers and supporters of the farm business emerged from the
308 interviews. Participants used vocabulary such as inspiring, encouraging, teamwork, positive,
309 initiative and valuable to describe a woman’s role in a supportive manner to her family and
310 colleagues. Off-farm careerist and diversified entrepreneur participants are much more likely
311 to articulate a sense of support to the family business as they are not immediately involved in
312 the day-to-day operations of the farm itself as much as farmer and farm manager participants.
313 Supporting could be achieved through off-farm work, bookkeeping, or alternatively being a
314 driving force by supporting and encouraging other family members to succeed by having a
315 positive attitude. Findings suggest that the supporter role means the woman brings new and
316 innovative ideas to the farm business.

317 *“I do a lot of the accountancy paperwork, [and] so my husband and I discuss the finances*
318 *together and see if affordability would cause an issue when coming to a final decision.” (P6)*

319 *“All of the [local] farms that are moving [forward] are the ones that have got strong women*
320 *who are interested in the farm and continually driving from behind. I think that’s where the*
321 *woman makes it a team.” (P7)*

322 Comparing with Gasson’s (1980) three role types, supporting farm accounting and paperwork
323 historically was seen as a role of a ‘farmer’s wife,’ but four decades later, Smith et al. (2020,
324 p. 9) suggests the supportive nature of being a ‘farmer’s wife’ allows the husband to undertake
325 farm work, through the woman “doing necessary logistical, organisational and office work”.
326 The respondents articulated notions of the farmer and wife as a team (Gasson, 1980); and
327 providing mutual emotional support (Pini, 2005). Similarly, the extended family surrounding
328 females in the farm business plays an important role in developing women in the industry.
329 Respondents highlight the importance of inclusive, encouraging and supporting females in a
330 community and/or family environment as being crucial to personal and business success.

331 *“In rural communities, there is still a ‘village’ feeling and there is a lot of support across*
332 *generations, even if there is not necessarily any relation between the women.” (P5)*

333 *“In a family business with women, there is a real social fabric of networks supporting each*
334 *other and it’s really important.” (P6)*

335 The local agriculture and rural community can also impact a woman’s experience, which in
336 turn will affect her level of presence in the industry.

337 *“I’ve only ever really had positive comments from people when I’ve said I work in*
338 *agriculture.” (P8)*

339 Gasson (1980, p. 166) recognised the contribution that women make through the provision of
340 support “to maintain the stability and enhance the quality of life” of other men and women’s
341 lives within their local rural community. The literature highlights that in some remote UK
342 locations, a lack of support can cause deterioration in the quality of life. Women are more likely
343 to contribute their attention to the community due to a perceived natural instinct to nurture

344 (Morris and Evans, 2001). Trauger (2004, p.301) found that many US female farmers believed
345 they would not be able to farm without community support so “public spaces of recognition
346 and support are crucial not only for women to maintain their identities as farmers, but also for
347 legitimating and valuing the work of women farmers and providing a space of public
348 representation and resistance to traditional constructions of farm women femininity.”

349 Therefore, the role of a woman as a supporter is vital for other females. Recent
350 developments in social media have also helped to support women in the wider UK farm
351 business community and further increase the concept of women supporting each other on a
352 national level.

353 *“The support online nowadays is incredible and for women to have that network and be able
354 to interact with people of similar backgrounds to them really encourages them to continue
355 their work in the industry.” (P6)*

356 *“There are so many female role models to follow on social media who are showing
357 everything good about British agriculture. It’s so positive and the best way of linking
358 everyone together; it’s just amazing.” (P7)*

359 There is little investigation into the impacts of social media on UK female farmers, however,
360 Daigle and Heiss (2021) found in the US that the power of social media improves information
361 accessibility, improves problem solving on farm and the development of effective marketing
362 strategies. Social gratification was created through social media platforms via “exchange of
363 emotional support among farmers... [by] sharing celebration, sharing struggles or sharing the
364 commonality of being a woman farmer” (Daigle and Heiss, 2021, p. 15). This network of
365 people connecting provides a sense of motivation for individual women farmers, and a
366 woman’s involvement in supporting other women on social media is important for the national
367 agriculture community, promoting positivity throughout the industry, which in turn is reflected
368 into individual farm businesses.

369 4.4 The Mother

370 One female family farming role characteristic in particular emerges from the literature
371 and the interviews, that of the mother. The role of the farmer's mother exerts influence on other
372 family members, including as a mentor and advisor, especially to the other women in her
373 extended family (Smith et al., 2020). A common issue highlighted by many interviewees was
374 their role within the family as a mother, birthing and caring for children. The older participants
375 (P3, P4, P5, P6, and P7) have experienced being the main caregiving parent in the family whilst
376 the husband continues to work on the farm.

377 *"I made the difficult decision to stop working off-farm to look after the children and lose the*
378 *additional household income. This [childcare] became my main responsibility."* (P6)

379 Being female means becoming pregnant if the couple wish to have a family, so the woman has
380 no choice but to take a break from her career progression to support the maternity, birthing and
381 initial childcare processes. Gasson (1980, p. 166) states that the "role of [women] in producing
382 and rearing successors, and in socialising them to accept that role, is crucial to the survival of
383 most family farming businesses". Two decades ago, Morris and Evans (2001) highlighted the
384 lack of recognition and celebration of women as the mother whilst still continuing to carry out
385 duties. However, it is difficult for a woman to fully undertake the prime caregiver role whilst
386 fulfilling other role characteristics identified in this study, for example an entrepreneur, off-
387 farm careerist or labourer.

388 *"Women are expected to take a break from their careers to have children, and because of*
389 *this, I believe women are overlooked in the industry."* (P1)

390 *"Farming is not part-time in any shape or form and it's very difficult to maintain a high*
391 *business level when you're female and trying to bring up a family because it's not easy."* (P4)

392

393 All these factors highlight the issue with being a woman in a hardworking and
394 physically demanding 24/7 working environment. It makes women dependent on others during
395 motherhood, for either the support with childcare, in the workplace, or both. The interviews
396 highlight a woman's reluctance to ask for assistance on the working farm, but due to the
397 demands of the work and the demands of being a mother not corresponding, they often had no
398 choice. The size of the family and the stage of the family lifecycle will both influence the extent
399 of a woman's role as a mother (Gasson, 1980), so a woman with more children and of a younger
400 age will have a more saturated motherly role with respect to time, commitment and emotions,
401 in comparison to a woman with fewer children who are older and independent.

402 This research finds that the older participants have experienced the former, more
403 concentrated mother role and now that the children have grown and have gained more
404 independence, they have more time to focus on the work of the farm business, entrepreneurial
405 activity or off-farm careers. However, caring for younger or older generations tend to be
406 allocated via "a 'natural' distribution of work on the basis of certain gender specific attributes"
407 (Brandth, 2002, p.184).

408 **4.5 Labourer**

409 The final role characteristic that emerges is the labourer. The role of a labourer in the
410 farm business is one that most of the participants highlighted, whether it be full-time, part-time,
411 permanent or temporary role. There are many aspects involved with being a woman as a
412 labourer on the farm business. Firstly, their capability and passion to work hard and to a high
413 standard is prominent throughout the interviews.

414 *"I'm a workaholic. I work seven days a week: but that's just farming. And I love what I do."*

415 (P7)

416 *"I do all of the labour: the pruning, the tractor-driving and the spraying."* (P8)

417

418 The labourer role interrelates with notions of the contribution that women provide to
419 the farm household income. Most participants who could comment on their economic status
420 stated that their financial contribution was equal to their male partner. One farm manager
421 participant explained that she contributes two thirds with her husband contributing the
422 remaining third of the financial contribution from his separate business. It should be noted that
423 the traditional perception of working farm women can still influence the way that they work.
424 The study found that women, particularly younger participants (P1, P2, P8), believe that they
425 need to prove themselves in terms of labour because of the traditional stereotype perception of
426 women by older male farmers.

427 *“It’s wrong to think that women can physically do the same things as men because we are*
428 *built different... I feel I have to prove myself more than the men, so I always put extra effort*
429 *in and work harder” (P1)*

430 *“There’s always that classic older generation view of girls in agriculture that we’re not as*
431 *strong or intelligent as men.” (P2)*

432 Although there is agreement between participants regarding negative perceptions and the need
433 to ‘prove oneself’, younger participants assume this is the same for all female farmers.

434 *“To begin with there may be hesitancy with regards to females in agribusiness, but if they*
435 *prove themselves, then that soon goes away.” (P4)*

436

437 Tara-Satyavathi et al., (2010) compare work ethics between males and females stating that
438 women work harder on more tasks and for longer hours. Findings on emotional strength was,
439 with participants who note that their motherly traits were beneficial for caring for livestock and
440 crops, concurring with Morris and Evans (2001).

441 *“We have a female touch when it comes to handling livestock. You’ve got to be quieter,*
442 *gentler and understand things, which I think women are better at because they’ve got the*
443 *patience for it, and men don’t have that much patience.” (P2)*

444 *“Women have an advantage because we’re often seen to have better husbandry skills for*
445 *looking after plants and animals.” (P8)*

446 Translating this into a woman’s role with respect to their involvement in particular areas of
447 farm business, the research finds that certain sectors of the agricultural industry embrace and
448 empower women more than others due to the nature of such businesses.

449

450 *“Machinery and arable... [has] always been a man’s job... but if you look at livestock-based*
451 *areas, you have got more females.” (P2)*

452 *“Entry into arable farms and the red meat sector, where they are not family businesses and*
453 *have a masculine culture, is a challenge. It’s hard for women to get into these sectors, not*
454 *impossible, but you have to be resilient... Horticulture, poultry and pigs have a strong*
455 *presence of women” (P5)*

456 Smith et al. (2020) recognises the higher number of women connected to agri-
457 industries, such as equestrian, horticulture and dairy, rather than in those perceived to have a
458 more masculine culture, such as arable and red meat, with the focus on men and machinery
459 being described as the ‘tractor-gene’ (Heggem, 2014). Perceptions of limited labour skills can
460 damage women’s reputation, confidence, involvement and ability to work hard and means they
461 constantly need to justify their credentials. Mechanisation, advancements in technology and
462 machinery for physically demanding day-to-day operations means that women can carry out
463 the same tasks as men.

464 *“Now, women are active and involved on the farm...I think mechanisation has reduced the*
465 *differences between men and women.” (P5)*

466 *“Because of modern farming, you don’t have to be as physical because so much of it now is*
467 *equipment.” (P7)*
468

469 In summary, the five role characteristics that emerge from the primary research
470 underline the augmented and diversified roles of women in farm businesses. This research
471 positions that role descriptions alone e.g., farmer, farm manager, etc. do not fully capture the
472 multi-faceted contributions of women within the farm business and the plurality of
473 contributions (Braisier et al., 2014). Additionally, this research underlines the key role
474 characteristic of women as mothers, emphasizing the multi-dimensional contributions of
475 women to the farm business, and farm household. Rather than defining job roles within the
476 farm, this research shows the nature of multifaceted contributions that are invisible if farm
477 businesses are characterised solely in a hierarchical job description approach.

478 **5. Conclusion**

479 Our research study investigates the role and contribution of women in UK farm businesses
480 adopting a qualitative semi-structured methodology. This research expands debates within a
481 growing body of research on rural women entrepreneurs (Becot, 2015; Elkafrawi and Refai,
482 2022) which discusses empowerment and roles of women in entrepreneurship. Whilst previous
483 studies on this topic have primarily examined the job role of women in farm businesses
484 (Gasson, 1980; 1992; Shortall and Kelly, 2002; Dunne et al., 2021; Smith et al., 2021), this
485 research explores the roles women play in the farm business; the extent that women contribute
486 to the farm business through these roles or characteristics of roles; the woman’s contribution
487 to decision-making in farming businesses and the perceptions of women themselves of their
488 roles in the agribusiness industry. This socially embedded nature of family and business has
489 been identified in other studies (Salder, 2022; Stirzaker et al., 2022). Based on the findings of
490 this research, we argue that previous literatures’ portrayal of the role of women (notably

491 Gasson, 1980; Brasier et al., 2014) in agricultural businesses is outdated, as the role of women
492 in agriculture has evolved to one which is of multi-skilled/multi-characterisation. Therefore,
493 this research establishes a new conceptualisation of the roles and contribution of women to
494 farm businesses, defined as an entrepreneur, decision-maker, supporter, mother, and labourer.
495 The way in which a woman performs these role characterisations will vary as farm businesses
496 demonstrate wide heterogeneity and the role characteristics for an individual can change over
497 a woman's working and personal life.

498 This research suggests that a woman's status, involvement and decision-making
499 participation levels within the farm business is highly dependent on their family and business-
500 related role. Within the study population, tactical day-to-day decisions are made by those who
501 identified as farmers, farm managers and entrepreneurs of diversified businesses, whether they
502 are male or female. The farm managers may also delegate operational decision-making to an
503 employee if they have several staff. With long-term financial decisions, female farm managers
504 and entrepreneurs had most control, often with input from their significant male counterparts.
505 Off-farm income careerists tended to be involved in decision-making through discussions, but
506 not necessarily in the final decisions. For the farmer who works on her family farm business,
507 she is involved in decision-making more than the farmer who works for a larger commercial
508 farm business. Therefore, it should be noted that the type of farming/agribusiness can also
509 affect a woman's status and decision-making involvement. In addition, the off-farm income
510 careerist often takes on the role of administration and office activities and so their association
511 with large financial decisions is still valuable (Braiser et al., 2014).

512 The interviews identify that there is a variation in industry perceptions of women in
513 farming/agri-businesses. Most of the participants receive positive feedback from the external
514 community, with some experiencing praise for their efforts. However, participants have also
515 experienced negative remarks and behaviour including actions presenting concern over a

516 woman's capability and their physicality. These perceptions if they extend to bias may be
517 barriers to entry for women in the sector. Despite this, the barriers that currently exist are
518 beginning to be broken down as evidenced by the participants. Whilst the study provides
519 evidence on the role and contribution of women on UK farm businesses, the findings allow for
520 further exploration. The exploratory nature of this research has limitations in its scope, and
521 future research should look to expand on these findings on a larger scale and in different
522 contexts.

523 The work informs both industry and policy of the multifaceted contribution of women
524 on farms, notably in the context of the UK, where this research was conducted. For those who
525 contribute financially through off-farm income, this income stream provides stability and
526 security to a potentially sporadic and fluctuating farm business income. For policy makers,
527 consideration must be given to increasing the number of female farmers, and the increased,
528 evolving and fluid role characteristics for women working in agricultural businesses. As such,
529 policies should consider farm household structure and dynamics in a more holistic approach
530 where previously they have focused mainly on the principal farmer.

531 **References**

- 532 Annes A, Wright W, Larkins M (2021). A Woman in Charge of a Farm': French Women
533 Farmers Challenge Hegemonic Femininity. *Sociologia Ruralis*, 61: 26-51.
- 534 Ball JA (2020). Women farmers in developed countries: a literature review. *Agriculture and*
535 *Human Values*, 37(1): 147-160.
- 536 Barlett P (1993) *American Dreams, Rural Realities: Family Farms in Crisis*. Chapel Hill and
537 London: University of North Carolina Press.
- 538 Becot F, Conner D, Kolodinsky J. (2015). Where Do Agri-Food Entrepreneurs Learn Their Job
539 and are There Skills They Wished They Had Learned? *The International Journal of*
540 *Entrepreneurship and Innovation*, 16(3): 207–215.

541 Bokemeier J, Garkovich L (1987). Assessing the Influence of Farm Women's Self-Identity on
542 Task Allocation and Decision Making. *Rural Sociology*, 52(1): 13-36.

543 Bosworth G, Wilson-Youlden L, (2019). Women tourism entrepreneurs and the survival of
544 family farms in North East England. *Journal of Rural and Community Development*, 14(3):
545 126-145

546 Brandth B, (2002). Gender Identity in European Family Farming: A Literature
547 Review. *Sociologia Ruralis*, 42(3) :181-197.

548 Brasier K, Sachs C, Kiernan N, Trauger A, Barbercheck M, (2014). Capturing the Multiple and
549 Shifting Identities of Farm Women in the Northeastern United States. *Rural Sociology*, 79(3):
550 283-309.

551 Braun V, Clarke V, (2006). Using thematic analysis in psychology. *Qualitative Research in*
552 *Psychology*, 3(2): 77-87.

553 Burton R, Wilson G, (2006). Injecting Social Psychology Theory into Conceptualizations of
554 Agricultural Agency: Towards a Post-productivist Farmer Self-identity? *Journal of Rural*
555 *Studies*, 22: 95-115.

556 Carruth A, Logan C, (2002). Depressive Symptoms in Farm Women: Effects of Health Status
557 and Farming Lifestyle Characteristics, Behaviours, and Beliefs. *Journal of Community Health*,
558 27(3): 213-228.

559 Cush P, Macken-Walsh A, Byrne A, (2018). Joint farming ventures in Ireland: gender identities
560 of the self and the social. *Journal of Rural Studies*, 57: 55–64.

561 Daigle K, Heiss S, (2021). Perceptions of Social Media Use Among US Women
562 Farmers. *Journal of Applied Communications*, 105(1): 15.

563 Damisa M, Yohanna M, (2007). Role of Rural Women in Farm Management Decision Making
564 Process: Ordered Probit Analysis. *World Journal of Agricultural Sciences*, 3(4): 543.

565 Daghigh Yazd S, Wheeler S.A, Zuo A, (2019). Key risk factors affecting farmers' mental
566 health: A systematic review. *International Journal of Environmental Research and Public*
567 *Health*, 16(23): 4849.

568 Dexter K, Barber D, (1960). *Farming for Profits*. Harmondsworth: Penguin.

569 Dunne C, Sietto C, Wilson P. (2021). Investigating the economic visibility and contribution
570 of UK women in agriculture through a systematic review of international literature. *Journal of*
571 *Rural Studies*, 86: 330-345.

572 Elkafrawi N, Refai D, (2022). Egyptian rural women entrepreneurs: Challenges, ambitions and
573 opportunities. *The International Journal of Entrepreneurship and Innovation*, 23(3): 203–214.

574 Gasson R, (1980). Role of Farm Women in England. *Journal of the European Society for Rural*
575 *Sociology*, 20(3): 165-178.

576 Gasson R, (1992). Farmers' Wives - Their Contribution to the Farm Business. *Journal of*
577 *Agricultural Economics*, 43(1): 74.

578 Glazebrook T, Noll S, Opoku E, (2020). Gender matters: Climate change, gender bias, and
579 women's farming in the global South and North. *Agriculture*, 10(7): p.267.

580 Groth T, Curtis, A. (2017). Mapping Farmer Identity: why, how and what does it tell
581 us? *Australian Geographer*, 48(3): 365-383

582 Heggem R, (2014). Exclusion and Inclusion of Women in Norwegian Agriculture: Exploring
583 Different Outcomes of the 'Tractor Gene'. *Journal of Rural Studies*, 34: 263-271.

584 HESA (2020). *What do HE students study?* Retrieved from HESA:
585 <https://www.hesa.ac.uk/data-and-analysis/students/what-study>

586 Joosse S, Grubbström A, (2017). Continuity in farming-Not just family business. *Journal of*
587 *Rural Studies*, 50:198-208.

588 Keller J, (2014). "I wanna have my own damn dairy farm!": Women Farmers, Legibility, and
589 Femininities in Rural Wisconsin, U.S. *Journal of Rural Social Sciences*, 29(1): 75-96.

590 Kurian G, (2013). *The AMA Dictionary of Business and Management*. New York; Atlanta;
591 Brussels; Chicago; Mexico City; San Francisco; Shanghai; Tokyo; Toronto; Washington D.C.:
592 AMACOM Division of American Management Association International.

593 Lehberger M, Hirschauer N, (2015). What Causes the Low Share of Female Farm Managers?
594 An Explorative Study from Eastern Germany. *Jahrbuch der Österreichischen Gesellschaft für*
595 *Agrarökonomie*, 23: 111-120.

596 Lewis T, (1998). Evolution of Farm Management Information Systems. *Computers and*
597 *Electronics in Agriculture*, 19(3): 235.

598 Malcolm L, (2004). Farm Management analysis: a core discipline, simple sums, sophisticated
599 thinking. *AFBM Journal*, 1(1): 45-56.

600 McElwee G, Al-Riyami R, (2003), Women entrepreneurs in Oman: some barriers to
601 success, *Career Development International*, 8(7): 339-346.

602 McElwee G, (2006). The Enterprising Farmer: A Review of Entrepreneurship in Agriculture.
603 *Royal Agricultural Society of England Journal*, 1-8.

604 McGuire J, (2010). The Hewitt Creek Watershed Group: A study of mechanisms that led to the
605 adoption of farm management practices to improve water quality. *Graduate Theses and*
606 *Dissertations*.

607 Merriam Webster (nd) Role. Available at: <https://www.merriam-webster.com/dictionary/role>

608 Miles MB, Huberman AM, Saldana J, (2014). *Qualitative Data Analysis: A Methods*
609 *Sourcebook*. SAGE Publications.

610 Morris C, Evans N, (2001). 'Cheese Makers Are Always Women': gendered representations of
611 farm life in the agricultural press. *Gender, Place and Culture*, 8(4): 384.

612 Morris W, Henley A, Dowell, D, (2017). Farm diversification, entrepreneurship and
613 technology adoption: Analysis of upland farmers in Wales. *Journal of Rural Studies*, 53: 134.

614 Nain M & Kumar P, (2010). A Study of Women Participation and Decision Making in Farm
615 Management. *Journal of Community Mobilization and Sustainable Development*, 5(1): 67.
616 Nomis. (2020). *Annual Population Survey - Employment by occupation by sex*. Retrieved
617 March 2021, from Nomis: [https://www.nomisweb.co.uk/datasets/aps168/reports/employment-](https://www.nomisweb.co.uk/datasets/aps168/reports/employment-by-occupation?compare=K02000001)
618 [by-occupation?compare=K02000001](https://www.nomisweb.co.uk/datasets/aps168/reports/employment-by-occupation?compare=K02000001)
619 Nuthall P, (2010). *Farm Business Management: The Human Factor*. CAB International.
620 Oxford English Dictionary. (2021). *Contribution*. Retrieved February 2021, from OED Online:
621 <https://www.oed.com/view/Entry/40530?redirectedFrom=contribution#eid>.
622 Pettersson K, Cassel S, (2014). Women Tourism Entrepreneurs: Doing Gender on Farms in
623 Sweden. *Gender in Management: An International Journal*, 29(8): 487-504.
624 Pini B, (2005). Farm Women: Driving Tractors and Negotiating Gender. *International Journal*
625 *of Sociology of Agriculture and Food*, 13(1): 1-7.
626 Price L, (2010). The Damaging Impacts of Patriarchy on UK Male Family Farmers. In: D.
627 Winchell D, Ramsey R, Koster and G. Robinson, *Geographical Perspectives on Sustainable*
628 *Rural Change*, Brandon University, 61.
629 Salder J, (2022). Embeddedness, values and entrepreneur decision-making: Evidence from the
630 creative industries. *The International Journal of Entrepreneurship and Innovation*,
631 14657503221082586.
632 Saugeres L, (2002). “She's not really a woman, she's half a man”: Gendered discourses of
633 embodiment in a French farming community. *Women's Studies International Forum*, 25(6):
634 641-649.
635 Shortall S, Kelly R, (2002). Farmers’ wives’: women who are off-farm breadwinners and the
636 implications for on-farm gender relations, *The Journal of Sociology*, 2002: 104
637 Shortall, et al., (2017). Women in farming and the agriculture sector: research report.
638 Agricultural and rural delivery directorate. In: Shortall, S., Sutherland, L.A., McKee, A.,

639 Hopkins, J. (Eds.), *Women in Farming and the Agriculture Sector*, vol. 2017. Scottish
640 Government, Edinburgh, UK. From. [https://www.gov.scot/publications/women-farming-](https://www.gov.scot/publications/women-farming-agriculture-sector/)
641 [agriculture-sector/](https://www.gov.scot/publications/women-farming-agriculture-sector/).

642 Shortall, et al., (2019). Final report of the women in agriculture Taskforce. Agricultural and
643 rural delivery directorate. From. [https://www.gov.scot/publications/final-r eport-women-](https://www.gov.scot/publications/final-report-women-agriculture-taskforce/)
644 [agriculture-taskforce/](https://www.gov.scot/publications/final-report-women-agriculture-taskforce/).

645 Shortall S, Mckee A, Sutherland L, (2020). The performance of occupational closure: the case
646 of agriculture and gender. *Sociol. Rural.* 60(1): 40–57.

647 Smith R, Manning L, McElwee G, (2020). Farm Women: An overview of the literature in a
648 UK context. *Virtually ISBE*, 1-22.

649 Smith R, Manning L, McElwee G, (2021). Farm Women: An overview of the literature in a
650 UK context. ISBE Rural Entrepreneurship Seminar, 25th February 2021.

651 Stirzaker R, Kapasi I, Galloway, L. (2022). Organising family and business: Affective value
652 prioritisation amongst older entrepreneurs. *The International Journal of Entrepreneurship and*
653 *Innovation*, 0(0): <https://doi.org/10.1177/14657503221114014>

654 Tanner B, (1999). *The Entrepreneurial Characteristics of Farm Women*. Garland Publishing.

655 Tara-Satyavathi C, Bharadwaj C, Brahmanand P, (2010). Role of Farm Women in Agriculture.
656 *Gender, Technology and Development*, 14(3): 441-449.

657 Trauger A, (2004). 'Because they can do the work': women farmers in sustainable agriculture
658 in Pennsylvania, USA. *Gender, Place and Culture*, 11(2):290-301.

659 Yin RK, (2009). *Case study research: Design and methods* (Vol. 5). Sage.