

## Reviewer 1.

### Reviewer 1

I enjoyed reading this exploratory paper and believe it has the potential to contribute to the literature on gender and farming through the more critical lens of race/class. My comments reflect the areas where I feel the paper could be developed further.

This paper offers an interesting exploration of how a very small sample of women within the Mallee region of Australia view their roles as decision makers around matters concerning drought and water management. As such, it fits the scope of the special issue. It offers some novel insights into how the roles may differ in the different operating environments of dryland and irrigated farming eg the utility of identity as a farmer rather than internal identity; questions of difference around who has the 'right' to be there in terms those with longer/shorter connection to place; women's role in community cohesion as a form of community resilience in the face of drought.

While I understand the population of interest in the Mallee is small, **the arguments would be more persuasive if there were more than 6 participants.** There is a reflection in the paper that the online interview approach may have limited the sample (p.5) - if the research is to be developed further it would be worth investing in face to face interviews to build the sample size. I **recognise that reference is made to the themes being checked with a local working group (p.5 lines 140-145) but as little detail is provided here, I am still left feeling there needs to be more input from the women.**

I am interested in the distinctions flagged in Figure 1 - my queries are:

- a) **under irrigation you have flagged *small farm* whereas for dryland you have labelled as *small family farm* - is**

### Official Response to Reviewer 1

First of all, we'd like to say how much we appreciate the time you've taken to review our manuscript. You have provided some great suggestions that will make the paper that much stronger!

We agree that the sample size was limited, but as an exploratory paper, the findings are nevertheless unique and provides the basis for further research.

Due to funding constraints, COVID travel limitations and family commitments, the study was designed to be only exploratory in nature. Another aspect was that there was a sense in the region that many felt they were 'overstudied', ie. that they have received many requests for study participation over the last few years. This severely reduced the ability to gain a larger number of relevant participants within the funding and ethics timeframe. To counter this, we have worked to ensure an in-depth analysis of each of the responses. Although it cannot be said to be representative, its main purpose is to shine a light on issues for further consideration in future studies.

As such, and in response to your great suggestions, we will make the following changes:

- Expand upon the limitation and opportunities that exist from the sample size. Further information will also be provided to readers on the

this deliberate? My understanding is that irrigated small farms would be family owned too - so am assuming this is slippage, but the later section about the 'transient' nature of irrigated farms suggests it could be an implicit value judgement. I am also left asking are there no large scale farms in dryland farming in the Mallee? Mapping the players out more fully would be a useful development of this section of the paper.

b)

b) the break up of the irrigated small family farms into 'settlers' or 'migrants' prompted me to think about the values implicit in the words, which is touched on in section 4.2, but I think could be interrogated more critically. It seems from p.6 (lines 185-) that migrants are those who have come in the past 20 years (and non-English speaking) - while settlers (arguably they are simply earlier migrants) have been there for more than one generation and are more 'like' those in dryland farming. The 'othering' of those in irrigated horticulture is flagged by the authors and while I agree that race and class based distinctions (identified by Castro Rodriguez and Pini) deserve more attention, the arguments included in this paper would have more credence if the sample was larger and there was more primary data to support the claims. It seems there is a mix of the authors' observations of the communities more generally in here, rather than them emerging clearly from the small sample.

Other issues I believe warrant attention include:

- p.5 lines 130-135 - reference is made to 'the broad questions being developed as a guide... from themes in the literature about gender and drought' but no details are provided about the questions. How the coding occurred then seems like a black

methodology, and the way that the interviews were structured and coded. Another aspect that will be further explained is the role of the working group.

- Ensure consistency across small family farm vs family farm in the text.
- Add in extra quotes about the 'othering' – also include definition of migrants (recent vs. not-recent) and settlers. Perhaps even calling them 'recent migrants'
- Provide further information on coding practices and frameworks in the appendix, including the coding schedule, and the interview guide.
- Clarify that professional Ag women are not the ones that are 'carers of the community'
- Make out that all women in farming are 'non-dominant' voices but that migrant women as being intersectional

<p>box. Fleshing this section out further for the reader would be helpful.</p> <ul style="list-style-type: none"> <li>• p.9 lines 265-270 - reference is made to the increasing number of women in professional ag roles as though they may take on caring for the community roles too. Why are transient(?) (white/educated) professional women seen as better carers of their community than the 'migrant' women? I am playing devil's advocate here, but think the arguments need to be interrogated more for their implicit assumptions.</li> <li>• On p.10 line 320 reference is made to paying attention to non-dominant voices, but it's not clear to me that there are any non-dominant (in this case migrant women) voices included. Fleshing out the characteristics of (a larger) sample population would help to make visible the diversity of voices included.</li> </ul> <p>(editing - there remain a few typos throughout and some missing references on p.7)</p> <p>I wish you well in the further development of this timely, place-based interrogation of gender and farming around water issues. I look forward to seeing its further development.</p>	
<p><b>Official Response to Reviewer 1</b></p>	
<p><b>Reviewer 2</b></p> <p>This paper explores the gendered dimensions of farming in the Mallee Region of Australia. While it is an important research area and the results presented hint at new complexities, the extremely small sample size, lack of critical women's voices, and lack of discussion around or measurement of saturation are highly problematic. <b>The sample size needs to be increased along with diversity of voices.</b> In addition to a lack of migrant voices and Indigenous voices, there is a lack of perspectives of men, which are critical in understanding gendered dimensions and how women's experiences may be shaped. Further, irrigation</p>	<p>Thank you ever so much for taking the time to consider this paper. I can understand that the main concern regarding the paper is a fair one: the small sample size. The small sample size was decided upon early in the project to account for a range of factors: limited funding, timing changes due to COVID lockdowns, caring responsibilities (meant that unable to travel readily), and also the consideration (as reflected by the reference group) that there is a sense in the community of being 'over-studied'. As</p>

versus dry agriculture are identified as being different with respect to women's experiences, but there is no indication that the sample size included **different representatives from these agricultural practice types**.

The choice of timing being difficult for participants is concerning as study design should have incorporated availability of participants, especially when there was a local working group established as part of the study, although I recognize the challenges that COVID presented for community-based research.

While the ethics statement is included in the additional material, **the ethics certificate, recruitment strategy, informed consent etc should be included as part of the methods**.

**Please include a short paragraph summarizing the themes / sub themes that emerged (ie your code set) and any changes as a result of the discussions with your local working group as a way to orientate the reader to better follow the results and discussion.** The intersectionality presented is very useful, but the layout is difficult to follow, as you speak to immigrant / non immigrant in one sentence and irrigated / non irrigated in another and gender, the focus of the article, sometimes comes across as an add on. A matrix table summarising the characteristics of different groups / identities would be a very useful addition to the manuscript, but this also pre-supposes that you have all voices represented in your sample, otherwise you should not be speaking to groups from the perspective of another group.

**FINISHED UP TO HERE.**

Specific edits:

- **Please pay attention to sex (biological; male, female terminology) versus gender (cultural; man, woman terminology) throughout. In most cases the terms being used should be man/woman given the research question.**
- **Lack of spaces between in text citations Line 25 - not sure why the double year in the citation Line 38 -**

such, we decided to pivot this study to be one that is exploratory in approach, rather than one that will necessarily provide the wide representativeness of larger-scale approaches. But nevertheless, we believe that small sample studies still have significant value in research – and is not uncommon in a range of HASS disciplines. There are many studies that reflect a smaller sample size that are nonetheless incredibly valuable for their insights. For example, in the study by [Young and Casey \(2019\)](#), they examined a range of qualitative research projects to determine at what point they achieved saturation of themes. They found that the majority of projects they surveyed had 100% of the themes covered by n=5 or n=6. Of course, this does not mean that all projects (including ours) will necessarily reach saturation point by such a small sample size. But it does still highlight that these types of studies can still be meaningful – which we think ours is!

The main theme that has been raised (and not raised in other studies) is the link between recent first-generation migrant farmers and settler farmers. In this, it provides a unique insight to provide the basis to explore these factors further in future studies.

We would love to be able to do this ourselves in our current positions, but unfortunately due to lack of funding, we are unable to – this is something that we may very well explore in the future, subject to grant funding outcomes, or we invite other researchers to develop these themes in more depth.

facilitate (singular) Line 84 - reference/date for the Bureau of Meteorology definition of drought Line 93 - resulted in at the time, or has resulted in?

- Line 94-95 - A market based assessment... introduced in 2012 Line 118 - gender dynamics playing out?
- Line 137 - please provide data/estimates on numbers of women involved in the different agricultural groups identified Line 186 - Please explain - are migrants into regions working other peoples farms or settling farmland themselves? Are they workers or renting farmland to farm themselves?
- Line 191 - was there a gendered difference associated with this distinction?
- Line 197, 201 - in-text citations missing Line 218 - Not sure that "unravelling" is the correct word to use here Line 220 - as employees of the corporation? Noted.
- Line 221 - You need to unpack this further - is it against larger corporations or non-English speaking families? If you did not have representatives of non-English speaking families in your sample, then the bias prevents you from drawing these types of findings.
- Line 222 - "Other" being a man? Or feeling that they were "other" as women? Did all respondents feel this way, or was there a specific identity of women who did?
- Line 243 - were rather than was
- Line 252-52 - this sentence needs to be edited or completed Line 254 - there is a lot in this sentence that could be unpacked further Line 265 - could this be sample bias?
- Line 269 - Use of "othering" in a different way. Please specify the context for each use
- Line 297 - typically do not introduce references in conclusions, which are a summary of findings Line

Your insights and feelings about the study are valid (and something that I would have raised myself if I was a reviewer on this paper!) As a result, we will provide more information on the methodology, the coding schedule as well as the interview guide. We will describe with greater detail the exact approach we took to analyse the data.

In addition to this, we will also make the following changes, as per your feedback:

- We will add more information on diversity of voices and add a section to the limitations.
- A breakdown of dryland vs irrigator participants will be included in paper.
- The funding stipulated that the study needed to be completed within a certain timeframe. Interviews were undertaken during COVID and lockdowns so unable to travel to the region. Caring responsibilities affected the ability to travel and insufficient funding was provided for a research assistant to undertake the travel.
- Ethics: ethics approval number was provided. Add more to recruitment strategy and add all consent documents and also the coding guide as supplementary.
- Ensure all wording related to gender is consistent (use 'women')
- Proof read to check spacing for in text citations and update with grammatical changes.

<p><b>310-11 - length of farming as stark, yet not really unpacked in the results / discussion</b></p>	<ul style="list-style-type: none"> <li>- Demographics – searched for this information, but there was available data that we could find.</li> <li>- Clarify that migrant farmers that are referred to in the paper are those that are working their own farms. No data to tell whether there is a gendered difference.</li> <li>- Mention in introduction and also limitations that there is an opportunity to expand research to collect data on women and migrant families in the region.</li> <li>- Line 220. Good point, change to reflect that this is a perception of one of the interviewees.</li> <li>- Include a description of ‘othering’ in various contexts.</li> </ul> <p>Once again, thank you for taking the time to run through this paper. As shown above, there are many changes that we will make based on your suggestions – and we think it will make the paper that much stronger!</p>
<p><b>Reviewer 3</b> To add to the comments posted by the first two reviewers:</p> <p>1. <b>Sample Size:</b> I agree that the sample size is too small, with only six participants. Can the authors increase this to at least 20-30? They mentioned conducting online interviews, so increasing the sample size should be feasible.</p> <p>2. <b>Qualitative Interviews:</b> Given the small sample size, the qualitative interviews should be rich, with a thorough thematic analysis. The authors should detail how the thematic analysis was conducted, how the themes were developed, and how they align with the research objectives. The results section should</p>	<p>A huge thank you for the time taken to review our manuscript.</p> <p>The small sample size is a completely understandable concern to have! We had designed the study with the small number of participants purely for the research to act as an exploratory piece of work, and by no means representative. Also, as described to the other reviewers, funding and travel constraints had limited the ability to turn this into a wider study (ie. 20-30 participants). Due to limited</p>

<p>clearly reflect this alignment.</p> <p><b>3. Literature Review:</b> Summarize the literature review on gender and drought, and explain how it informed the development of the questionnaire.</p> <p><b>4. Research Locale Map:</b> Please add a map of your research locale.</p> <p><b>5. Theoretical Framework:</b> The research objective focuses on the decision-making power of female-identifying farmers. Provide the theoretical framework related to this focus. Explain how the concept of power was studied in this research.</p> <p><b>6. Conclusion:</b> Improve the conclusion section by connecting it to the research objective, specifically the decision-making power of women farmers. Add recommendations on how women can be further empowered.</p>	<p>funding at the moment, we are unfortunately not in a position to be able to expand this study further right now. Having said this, we believe that this study is incredibly useful as is! It reflects some themes (eg. the migrant dynamic) that had never been previously reported, opening the path for future studies to document this in more depth. In this way, we see this paper as creating an opportunity window for future research!</p> <p>In response to your other questions, we will also:</p> <ul style="list-style-type: none"> <li>- Give more information about coding/methodology including how the questionnaire was developed.</li> <li>- Add map</li> <li>- We explain power dynamics in sections x and x, and can expand on this and the framework used.</li> <li>- Reiterate research question in conclusion. Include recommendations, and future opportunities in the conclusion as well.</li> </ul> <p>Thank you again.</p>

Change Register	Column1	Column2
- Expand upon the limitation and opportunities that exist from the sample size. Further information will also be provided to readers on the methodology, and the way that the interviews were structured and coded. Another aspect that will be further explained is the role of the working group.	Done	Lines 150-155
- Ensure consistency across small family farm vs family farm in the text.	Done	
- Add in extra quotes about the 'othering' – also include definition of migrants (recent vs. not-recent) and settlers. Perhaps even calling them 'recent migrants'	Done	Changed migrants to either 'recent' migrants or 'first generation' migrants. No other quotes that are relevant to the 'othering' factor apart from what was in there.
- Provide further information on coding practices and frameworks in the appendix, including the coding schedule, and the interview guide.	Done	Added more in methodology
- Clarify that professional Ag women are not the ones that are 'carers of the community'		
- Make out that all women in farming are 'non-dominant' voices but that migrant women as being intersectional	Done	Line 329-330
- A breakdown of dryland vs irrigator participants will be included in paper.	Done	In Methods section
- Ethics: ethics approval number was provided. Add more to recruitment strategy and add all consent documents and also the coding guide as supplementary.	Done	Line 120
- Ensure all wording related to gender is consistent (use 'women')	Done	
- Proof read to check spacing for in text citations and update with grammatical changes.	Done	
Add text in Demographics – searched for this information, but there wasn't available data that we could find.	Demographic data for industry or migrant status was not available at this time	
- Mention in introduction and also limitations that there is an opportunity to expand research to collect data on women and migrant families in the region.	Done	
- Line 220. Good point, change to reflect that this is a perception of one of the interviewees.	Done	
- Include a description of 'othering' in various contexts.	Done	Lines 292-298
- Give more information about coding/methodology including how the questionnaire was developed.	Done	Line 14-141
- Add map	Done	Background Section
- We explain power dynamics in sections x and x, and can expand on this and the framework used.	Done	Findings section
- Reiterate research question in conclusion. Include recommendations, and future opportunities in the conclusion as well.	Done	Conclusion