© Yaw Niel/Shutterstock.com

Agricultural research

with Dr Kelly McShane, Dr Gustavo Fonseca de Almeida, Dr Valerie Babatope and Ayesha Tabassum

Talking *points*

Knowledge

1. What are the aims of conservation agriculture?
2. What are some examples of conservation agriculture practices?

Comprehension

3. Why is it important that the team creates visual aids to accompany their training programmes for smallholder women farmers?

Analysis

4. Why is the team focusing on women farmers specifically? How does climate change impact women differently to men?
5. Why is it important that this research project is conducted by an interdisciplinary team? What do Kelly, Gustavo, Valerie and Ayesha each bring to the research?

Evaluation

6. Why is a participatory approach essential for the success of this project? How different do you think the project outcomes would be if the team simply went to Brazil and Nigeria to teach conservation agriculture practices to smallholder women farmers, without involving them in policy discussions and designing the training programmes?

Creativity

7. What barriers do you think the team will discover that prevent smallholder women farmers from implementing conservation agriculture practices?
8. The team members are using their skills and interests to improve climate resilience for smallholder women farmers. If you were a member of the team, what skills could you contribute to the project and how could your interests be applied to the research topic?

More *resources*

- Learn more about the team's research: **nupas.ufscar.br/inicio/pesquisas**
- This blog explains how food production is responsible for 25% of global greenhouse gas emissions: **ourworldindata.org/food-ghg-emissions**
- The Food and Agriculture Organization of the United Nations provides a wealth of information about sustainable agriculture and offers internships and volunteer programmes: **fao.org**

Activities

The importance of interdisciplinary collaboration

For each of the four researchers profiled in the article, write a list of the skills and expertise that they bring to the project due to their different disciplinary backgrounds. What disciplinary backgrounds do you think other team members might have? Write additional lists of skills and expertise that you think other team members might contribute to the project.

Write a separate list of the different tasks required to promote conservation agriculture as a method to improve smallholder women farmers' climate resilience in LMICs (from the article plus any other tasks you think may be involved that have not been mentioned).

For each task on your list, assign a team member (or team members) to complete it and state why their background makes them suitable for the role. Re-read your task allocation document and reflect on the importance of interdisciplinary collaboration for addressing real-world challenges.

Then, in groups of three to four, choose a social or environmental issue that you are passionate about (e.g., deforestation of the rainforest, homelessness in your town, recycling in your school).

Design a participatory project that could help to address this issue. Who will the participant subjects in your project be, and how will you ensure they are engaged in all stages of the project? Write a list of the different tasks that would be required to carry out your project.

Write a list of your own personal skills, expertise and interests. In your group, divide your project tasks between team members, based on each person's skills and interests. What skills is your team missing to carry out your project? Can you find other classmates who could fill these gaps?

Barriers to conservation agriculture

In pairs, role-play an interaction between a smallholder farmer who uses conventional farming practices and a researcher working with Kelly, Ayesha, Valerie and Gustavo.

If you are the researcher, encourage the farmer to adopt conservation agriculture techniques. Think about how you will persuade them that conservation agriculture is important, what tools and training they will need, and how they would receive these.

If you are the farmer, explain the barriers you face in implementing new practices. Think about what concerns you have about trying new methods.

Have a discussion – can the researcher persuade the farmer to adopt conservation agriculture practices?