

Analysing the practice of conservation agriculture through a gender lens: towards a better understanding of opportunities and obstacles

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Introduction

The role of women in agriculture is globally acknowledged: In sub-Saharan Africa, women, who constitute the majority of smallholder farmers, provide most of the labour and manage most of the farm activities on a daily basis (Saito, 1994) and produce 80% of all basic foodstuffs (Norad Report 5/2011). Therefore, poverty alleviation and economic development cannot be fully realized without involving women.

Within the framework of the European Union funded ABACO project¹, efforts are undertaken to identify and implement innovative solutions to enhance conservation agriculture (CA) in semi-arid areas in seven African countries. The project adopted a holistic approach that integrates technical, technological, agro-ecological, environmental as well as economic and social dimensions into its framework. Explicit attention for the gender perspective proves highly relevant and improves the understanding of opportunities and obstacles for CA in specific contexts. Insights gained from adopting a gender perspective allow identifying innovative and alternative pathways to promote CA, while at the same time pursuing a more equitable distribution of ‘pains and gains’ of CA across women and men, more equality and improved welfare of the concerned communities. This paper focuses on the case of Madagascar, where ABACO is active in the region of Lake Alaotra, The objectives of the discussion were to determine gender implication in the identification of innovations, adoption and impacts of CA.

Materials and methods

The study sites of ABACO in the region of Alaotra Mangoro are the communities of Amparihitsokatra and Mahatsara which presenting two contrasting landscapes. Amparihitsokatra, located 45 km north of Ambatondrazaka the capital of the region, is dominated by slopes and hills know as “*tanety*”. While Mahatsara is located 5 km south of Ambatondrazaka and dominated by irrigable plains but mainly *tanety* poor soils.

¹ ABACO is an EU-funded project (DCI-FOOD 2010/230-178), implemented in the period 2011–2014. It is coordinated by the African Conservation Tillage (ACT) network. It has activities in semi-arid areas of West (Mali, Burkina Faso), East (Kenya, Tanzania) and Southern (Zimbabwe, Mozambique, Madagascar) Africa.

The empirical work on which this paper draws includes two focus group discussions (FGDs), one in each community, which took place early July 2014. The FGDs were conducted with 13 men, 3 women from 4 different villages in Amparihitsokatra, 8 men, and 2 women in Mahatsara. There was no sampling method to select participants for the FGDs, invitations were sent to the communities and the discussion was conducted with those who came. The FGDs consist in two main subjects: Firstly, about CA technologies gender disaggregated: utilization, improvement or innovation, advantages and disadvantages, and dissemination; Secondly, about positive and negative impacts of CA technologies, income or gain and money management.

Results

Gender role division

Findings indicate that while traditional, stereotypical role divisions between women and men persist in these communities, these do not prevent men from taking up tasks that are traditionally viewed as women's, like transplanting and weeding rice. Men and women confirm that decision-making about the farming activities is together in a couple.

Utilization of conservation agriculture technologies

ABACO's approaches and methods encourage both men and women to express their ideas and opinions about the CA technologies. The community of Amparihitsokatra found the previous approaches to be top down and now they can propose new adaptations or innovations. Women were the principal source of innovation but the couple jointly took decisions. Example of woman's proposition was about spacing. She considered the spacing of the crop too broad; she proposed to narrow the spacing and the testing of three types of spacing was organized. The association of two types of cover crops was also found very interesting for them. The group of Mahatsara appeared to be less innovative and pro-active than the first group. They did not mention suggesting adaptations to technical or innovations to be tested. However, they have confirmed, although in a less strongly expressed, the difference in Abaco approach. There is a dialogue, listening, and a very different style of approach, which is appreciated.

Advantages and disadvantages of conservation agriculture

The most appreciated advantages of CA cited by the groups were their ability to produce foods earlier than the normal season. Early production is the effects of early sowing. According to the groups, CA systems improve soil quality and humidity.

With CA, they buy fewer amounts of seeds, weeds are under control, workload decreased, and yield increased. The control of cover crop is the main constraint for both men and women, as they were obliged to perform it weekly. They have to work in the field during sunny hours.

Dissemination

Farmers did not disseminate CA techniques and systems. They found it too complicated to be copied. They judged the previous projects too normative, which gave negative effects. The reluctance of neighbors is also linked to the association. Register requires a lot of time to attend meetings.

Saving of time and gain money

The primary use of free time and money won by practicing CA is counter-season cropping. Both groups confirmed it. Men spontaneously mentioned as reasons to invest the gains in counter-season crops: the carryover of the fertilization for the following main season and to keep loose soil. However, when deepens, it was found that the main benefit of this approach is for women. It's all about vegetable growing (beans, tomatoes, potatoes ...) which are the responsibility of women. From the point of view of women, the gains are more diversified food for the family, savings on food to buy, and a surplus that can be sold at market. Women in general hand on the use of these revenues to improve the lives of the family. A common real gain is also the possibility to postpone the sale of rice after harvest in July. If the family is able to set aside money through income vegetables, she can afford to postpone the sale of rice and thus increase the income from the main crop rice.

Both male and female involved in CA suggest the need for training on financial planning, especially for decision-making on use of financial gains from CA, investments to be made and on managing the agricultural operations.

Access to training and information

This question on access to training and meeting was followed by a lively discussion in Mahatsara in which several men involved, women just gave short comments and somewhat agreed with what was said. The key ideas return to the stereotype that men are attending meetings and not women. It is they who receive training and go after explaining to their wives. The examples they give proof of the need to involve women, because men are a filter and do not really pass information.

Discussion

Giller et al (2009) mentioned the reduction of men's labour through the no tillage systems while weeding workload increase for women in some contexts in Africa. Nevertheless, according to Norad Report 5/2011, CA has proven to be beneficial for women because it

reduces and spreads women's workload over time; Enables planned and systematic planting of crops; Makes women less dependent on oxen or mechanical tillage equipment; Increases crop productivity and production of different crops; And increases food-security crops production. Although the above findings may be context-specific, it is interesting to note that CA is indeed beneficial for women in Madagascar.

Earlier work had already confirmed that there is some flexibility in the division of the work in communities of Alaotra (Kendzior, 2013). In this respect, the risk of work overload for women due to shift in labour brought by CA as suggested other work on CA in Africa does not seem a real obstacle for CA in Madagascar.

In this study, it was found that women can be a driver and a barrier for CA. Findings showed that women were the change agent for CA and the livelihoods of the family. Women play a key role in bringing in ideas, alternatives and innovation pathways for CA. This indicates the importance to fully and deeply consult with women about the ideas they have for enhancing CA. In the other hand, women are less informed about CA principles and its potential because they do not participate in meetings due to traditional role division and but also they find such meetings time-consuming, therefore they might hold back uptake of CA. Women may be withheld from attending training sessions because of their daily duties.

There is a need to ensure that women are adequately informed about CA as from the beginning of works. Solutions should be explored in order to promote a higher female participation (e.g. consulting women and men about the more convenient hour/day/week schedules and calendars; choosing a training location that can be easily accessed by both women and men or arrange transport; providing for childcare facilities...).

Conclusion

This study shows the importance of gender analysis within development and research work. The findings can serve further work on CA, and in terms of research approaches and issues that need further exploration. More research is needed to explore in more depth distribution of 'pains and gains' of CA for men and women respectively; differences in situations of couples versus women alone running the agricultural activities and their family.

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