Effects of Crop Diversity and Farm Income on Dietary Diversity of Women in Family Farms

Relatively high agricultural production AND low dietary diversity were observed in Western Burkina Faso. While food security policies mainly recommended boosting agricultural production, recent literature reviews showed ambiguous effects of higher production on overall diet of members in farm households.

In order to clarify these confusing results, we investigated more accurately which farms characteristics improve the dietary diversity of women (as indicator of nutritional quality of food), with a focus on crop diversity and socio-economic characteristics of women in family farms.

We surveyed 580 farm households representative of the region, 3 times (2013/14)
Within the same family farms in the Hauts-Bassins region (Western Burkina Faso), we collected data on food consumption, farm characteristics, and production outcomes (harvested quantities and sales amount, designed here as “farm income”).

We computed Simpson’s Index, as marker of both richness and evenness of crop diversity.
From a qualitative 24-h recall, we computed the Minimum Dietary Diversity Index for Women (MDD-W) which comprises 10 food groups; the threshold of 5 food groups consumed identifies women who are more likely to cover their micronutrient needs.

On this MDD-W, we regressed crop diversity, farm income, demographic and socio-cultural variables.

Across seasons women’s dietary diversity didn’t vary, but food groups consumed did
The mean number of food groups consumed by women was low: 3.43 (SD: 1.35) and 80% of women didn’t reach the threshold of 5 food groups consumed out of 10. Unsurprisingly, the dietary diversity remains stable across seasons (see Graph1).

According to seasons, women consumed more vitamin A-rich fruits during the mango period (dry season) and more vegetables when it’s raining during lean and post-harvest seasons (see Graph 2).

Women who had a higher dietary diversity score-more often ate eggs, nuts or flesh foods.

Crop diversity and farm income had very slight effects on dietary diversity
During the dry season, women’s dietary diversity was strongly and positively associated with farm income per capita, but not with the Simpson’s Index.
During the lean season, women’s dietary diversity was not associated with any of the variables related to farm characteristics or agricultural production.

Moreover, variables concerning women’s wealth and empowerment were significantly associated with women’s dietary diversity across seasons, while characteristics of the farm head were not.

Let’s watch the trailer of the documentary film below

Here, the documentary film is available on Cirad Vimeo

REFERENCES

CONCLUSION
On-farm crop diversity is not related to dietary diversity of women.
Farm Income has a Seasonal effect.
Women’s dietary diversity depends primarily on their own social and economic status.