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"Can agroecological farming feed the world?
Farmers' and academia's views"

Can domestic staple crop production meet the demand in Burkina Faso?

Rahel Laudien[1], Christoph Gornott[2,1], Bernhard Schauberger[3,1], Jillian Waid[1]

[1] *Potsdam Institute for Climate Impact Research, Research Department II: Climate Resilience, Germany*
[2] *University of Kassel, Fac. of Organic Agricultural Sciences, Germany*
[3] *University of Applied Sciences Weihenstephan-Triesdorf, Dept. of Sustainable Agriculture and Energy Systems, Germany*

Abstract

Almost half of the Burkinabe population is moderately or severely affected by food insecurity. Due to ongoing armed conflicts and the outbreak of COVID-19 in 2020, the number of food insecure people is even expected to increase. Moreover, climate change further jeopardises domestic food production and thus food security. Comparing the actually supplied calories in the current growing season with those usually consumed from staple crops, allows us to provide early information on shortages in domestic cereal production. This information can contribute to increased food security and enable governments to take anticipatory actions to adjust food imports in case of expected harvest losses or ask for external food assistance.

In this session, we would like to discuss how a forecast of staple crop production can inform early warning systems of food insecurity. Based on a statistical crop model, we provide a within-season forecast of crop production for maize, sorghum and millet in Burkina Faso one month before the harvest. Moreover, we compare actually supplied calories with those usually consumed from staple crops, allowing us to provide early information on shortages in domestic cereal production on the national level.

Results show that for most years, there is a surplus in supplied calories from maize, sorghum and millet on national level. Despite sufficient domestic cereal production from these crops on average, a considerable level of food insecurity prevails for large parts of the population. This highlights the importance of a comprehensive assessment of all dimensions of food security, i.e. food availability, access, utilisation and stability, to rapidly develop counteractions for looming food crises.

Keywords: Burkina Faso, climate change, food security, maize, millet, sorghum, statistical crop modelling, yield forecasting

Contact Address: Rahel Laudien, Potsdam Institute for Climate Impact Research, Research Department II: Climate Resilience, Potsdam, Germany, e-mail: laudien@pik-potsdam.de