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Towards sustainable maize production in East Africa: Cropping system resilience under climate change (Resilient push-pull)

Ensuring that yield gaps are reduced and that yields are resilient to climate change is critical to ensure food security for a growing global population. The push-pull cropping system has proven effective in many situations, but it is not known how it will function in the future. In the current project, with partners from SLU, Icipe, JKUAT, Cornell University and Lund University, we evaluate the resilience of push-pull under land-use and climate change and make predictions about how push-pull will perform in the future.

Specifically Resilient push-pull will:

1) Use monitoring data to analyse how push-pull cropping systems contributes to maize production level and stability across land-use and climate gradients.

2) Study pest control level and food-web structure and explore whether push-pull increases food-web redundancy and resilience in different land-use and climate contexts.

3) Synthesize findings with a model for maize yield formation, predicting where in the region push-pull will contribute to closing yield gaps now and in the longer term.

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