

Evidences

Study #3216

Contributing Projects:

- P1569 - AfricaRice Contribution to RICE Flagship Project 1

Part I: Public communications

Type: OICR: Outcome Impact Case Report

Status: On-going

Year: 2019

Title: Impact of drought-tolerant rice varieties (DTRV) on the livelihood of smallholder farmers

Short outcome/impact statement:

Adoption of DTRV increased the rice yield by 570 kg/ha (24% increase) leading to an increase in income of US\$ 126 per ha in Benin, Madagascar and Nigeria. Adoption also improved household food security.

Outcome story for communications use:

To adapt to climate change and continue to improve the productivity of staple food crops such as rice, drought-tolerant rice varieties (DTRV) were developed and released in sub-Saharan African (SSA) countries. We assessed the contribution of DTRV adoption on the productivity, income and food security status of smallholder farmers in three countries (Benin, Madagascar and Nigeria). We found that adoption of DTRV helped smallholder farmers to increase the rice yield by 570 kg/ha (corresponding to an increase of 24%) and lead to an increase in income of US\$ 126 per ha. Adoption also improved household food security status. Large-scale dissemination of drought-tolerant rice varieties will help smallholder rice farmers in SSA not only to adapt to climate change but also to improve their food security and livelihoods.

Links to any communications materials relating to this outcome: <Not Defined>

Part II: CGIAR system level reporting

Link to Common Results Reporting Indicator of Policies : No

Stage of maturity of change reported: Stage 3

Links to the Strategic Results Framework:

Sub-IDOs:

- Increased household capacity to cope with shocks
- Reduced smallholders production risk
- Closed yield gaps through improved agronomic and animal husbandry practices

Is this OICR linked to some SRF 2022/2030 target?: Yes

SRF 2022/2030 targets:

- Increased rate of yield for major food staples from current 1%/year
- # of people, of which 50% are women, assisted to exit poverty

Description of activity / study: <Not Defined>

Geographic scope:

- Regional

Region(s):

- Sub-Saharan Africa

Comments: <Not Defined>

Key Contributors:

Contributing CRPs/Platforms:

- Rice - Rice

Contributing Flagships:

- F1: Accelerating impact and equity
- F5: New rice varieties

Contributing Regional programs: <Not Defined>

Contributing external partners:

- NCRI - National Cereals Research Institute
- INRAB - Institut National de Recherche Agricole du Benin
- FOFIFA - Centre National de Recherche Appliqué au Développement Rural

CGIAR innovation(s) or findings that have resulted in this outcome or impact:

ARICA 16

Innovations: <Not Defined>

Elaboration of Outcome/Impact Statement:

Adoption of drought-tolerant rice varieties (DTRV) increased the rice yield by 570 kg/ha (24% increase) leading to an increase in income of US\$ 126 per ha. Adoption also improved household food security. We recommend large-scale dissemination of drought-tolerant rice varieties to help smallholder rice farmers in SSA not only to adapt to climate change but also to improve their food security and livelihoods.

References cited:

1. Arouna, A., Aboudou, R. (2019). Impacts of drought-tolerant rice varieties for adaptation to climate change: evidence from three Sub-Saharan African countries. Invited paper presented at the 6th African Conference of Agricultural Economists, September 23-26, 2019, Abuja, Nigeria.

<https://ageconsearch.umn.edu/record/295793/files/243>. Rice in three African countries.pdf

Quantification: <Not Defined>

Gender, Youth, Capacity Development and Climate Change:

Gender relevance: 0 - Not Targeted

Youth relevance: 0 - Not Targeted

CapDev relevance: 0 - Not Targeted

Climate Change relevance: 2 - Principal

Describe main achievements with specific **Climate Change** relevance: ARICA 16 is a drought tolerant variety to help smallholder farmers to adapt to climate change

Other cross-cutting dimensions: No

Other cross-cutting dimensions description: <Not Defined>

Outcome Impact Case Report link: [Study #3216](#)

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