



Cost-Benefit analysis of crop trials under the Africa RISING project in Mali

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Key research activities

- Perform a comparative analysis of costs and benefits of crop trials promoted under the project in Bougouni district in Mali.
- Identify the most economically beneficial technology for the smallholder farmers.
- Partial budget analysis has been used for conducting this research.

Results and main findings

- Technological treatments applied to the maize, cowpea, soybean and sorghum-cowpea intercropping production are economically beneficial.
- For the maize production T5 is the most economically beneficial because an investment of FCFA 1 in application of T5 provides an additional gain of FCFA 0.62 against FCFA 0.39 for T6 (see table at right).
- Develop a regular collection system of data on crop trials for facilitating the cost-benefit analyses.
- Improve sharing information system between the partners and between the partners and researchers.

Implications of the research for generating development outcomes

- This research highlighted that the improved technologies promoted under the project are economically beneficial for the smallholder farmers.
- Next steps would be to develop the extension approaches for facilitating the scaling adoption of these improved technologies with a great impact on the livelihoods.

How this work would continue in Africa RISING phase 2

- Undertake an early adoption study of the improved technologies promoted in the Africa RISING – phase 1.
- Evaluate utilization of the improved technologies in line with to market participation of the smallholder farmers.
- Conduct an impact assessment of adoption of the economically beneficial technologies to smallholder on their livelihoods.

Table: Cost and benefit analysis of maize trials in Bougouni district in Mali

	T1	T2	T3	T4	T5	T6
Treatment	No compost and fertilizer	No compost and 1/2 dose of fertilizer	No compost and full dose of fertilizer	6000 kg/ha of compost and no fertilizer	6000 kg/ha of compost and 1/2 dose of fertilizer	6000 kg/ha of compost and full dose of fertilizer
Gross farm gate benefit	183888	324288	411624	261432	407232	532224
Total variable input cost	35700	125700	215700	35700	125700	215700
Net benefit	148188	198588	195924	225732	281532	316524
Change in net benefits between two treatments					55800	34992
Change in total variable input costs					90000	90000
Marginal rate of return					62.00	38.88

Current partnerships and future engagements for out scaling

- IER - Institut d'Economie Rurale
- AMEDD - Eveil au développement Durable
- GRAADECOR - Action et assistance pour le Développement
- AMASSA - Sécurité et souveraineté Alimentaires
- CAAD – Appui a l'autopromotion pour le Développement
- CRS - Catholic Relief Services
- AKF - Aga Khan Foundation
- EUCORD - European Cooperative for Rural Development
- AOPP - Organisations professionnelles paysannes



The Africa Research In Sustainable Intensification for the Next Generation (Africa RISING) program comprises three research-for-development projects supported by the United States Agency for International Development as part of the U.S. government's Feed the Future initiative.

Through action research and development partnerships, Africa RISING will create opportunities for smallholder farm households to move out of hunger and poverty through sustainably intensified farming systems that improve food, nutrition, and income security, particularly for women and children, and conserve or enhance the natural resource base.

The three projects are led by the International Institute of Tropical Agriculture (in West Africa and East and Southern Africa) and the International Livestock Research Institute (in the Ethiopian Highlands). The International Food Policy Research Institute leads an associated project on monitoring, evaluation and impact assessment.

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