

Adoption and Impact of NERICA Rice Varieties in Western Region of Burkina Faso

Mathieu Ouedraogo¹

¹ INERA / Farako-Bâ , Burkina Faso

oued_mathieu@yahoo.fr

Rice production in Africa in general and Burkina Faso in particular, is characterized by low productivity. However, the government has invested in rice research. Currently, many new rice technologies (varieties, fertilizers, pesticides, etc.) have been developed by the national rice research program of INERA. The adoption of these technologies is expected to improve rice farmers' income and food security. The main question is how to ensure the efficient dissemination of these technologies at farmer's level. The New Rice for Africa (NERICA) is developed by WARDA in the mid-1990s and offer opportunities for increasing rice productivity. There are the result of the inter-specific crosses between *Oryza sativa*, the high yielding rice species from Asia, and *Oryza glaberrima*, the locally adapted and multiple-stress resistant African rice species. This paper examines the determinants of NERICA rice varieties adoption and assesses the impact of NERICA rice varieties adoption on farmers' income in the western region of Burkina. The data were collected from 300 rice farmers in 10 villages selected through stratified random sampling. The study area includes villages where the INERA had been conducting PVS activities on NERICA varieties since 2006.

We have estimated adoption rate and assessed impact of NERICA by using the semi-parametric method (weighting Inverse Propensity Score-IPSW).

The study showed that farmers use many varieties of rice. About 18% of rice producers use NERICA varieties, 51% use non-NERICA improved varieties from the national research institute (INERA). Only 6% of producers use Chinese varieties and 13% of them use unidentified varieties.

The study indicates that the common rate of exposure and adoption of NERICA is 18.3% in the western region of Burkina Faso. The potential adoption rate of NERICA varieties is 43%. The access to technical services (such as extension and research), the access to credit and the participation of producers in PVS activities increase the adoption of NERICA rice varieties. The adoption of NERICA varieties encountered constraints due to the lack of information and the availability of seeds.

The results showed that the NERICA rice varieties have a positive impact on farmers' income. The gain of income is 4,497 CFA F / ha (or 7 Euros / ha) within the study population. The potential impact of NERICA is estimated at 65,546 CFA F / ha (100 Euros / ha). In order to benefit from the positive impact of NERICA rice varieties, some efforts should be done by the government to improve the dissemination of NERICA varieties through the country.

Keywords: NERICA varieties, adoption, impact, income, Rice, Burkina Faso.