

## **Enhancing rainwater and nutrient use efficiency for improved crop productivity, farm income and rural livelihoods in the Volta Basin (PN5)**

### ***Objectives***

Integrating water use efficiency, soil and nutrient management, and improved germplasm in a systems approach addressing major constraints in agricultural and water productivity of rain fed agriculture, with a focus on marketing, policy and participatory approaches to empower poor farmers

***Where:*** Small-scale farmers who rely on rain-fed agriculture in the Volta basin

### ***Method/Activities***

- Evaluate and adapt best bet technologies that improve water and nutrient use efficiencies and increase crop productivity in partnership with farmers
- Use the Decision Support System for Agricultural Technology Transfer (DSSAT) to analyze the effect of mineral fertilizer in sorghum cultivation in two management systems, and train project partners in its use.
- Test with the farmers the *warrantage* or inventory credit system for warehousing of farm products, which allows farmers to benefit from micro-credits

### ***Key Achievements***

- In Burkina Faso and Ghana, the project has been able to stimulate and strengthen farmers based associations and community based organizations to collaborate with researchers and other stakeholders. Strengthening the research-extension-farmer linkage provided a good foundation for enhancing the adoption of new and promising technologies.
- Strategic alliances established between key stakeholders including NGOs, Government staff, extension units, farmers' organizations, private sectors and other research organizations to promote 'best bet' crop, water, and nutrient management strategies for scaling up and out across the Volta Basin

### ***Conclusions***

The study on farmers perception highlighted three major strengths:

1. the technologies (varieties and fertilizers) are adapted to the agro-climatic conditions, which ensures good yields;
2. the technical/field protocols do not constitute anymore a constraint to the adoption of technologies;
3. at the community level, sharing of seeds constitutes a major driver for the increase in agricultural production and dissemination at larger scale

### ***Value/relevance for the BDC***

- Volta BDC project V1, *Targeting and scaling out*. PN5 has identified 'best bet' crop, water, and nutrient management strategies and has established strategic alliances between key stakeholders for scaling up and out most promising technical, marketing and policy approaches.