

# Bridging the Yield Gap: Digital Tools as Catalysts for Rice Productivity

Rice is a staple food across West Africa, playing a significant part in daily nutrition, food security and job creation. Despite its importance, rice cultivation faces persistent challenges. A major concern is the growing disengagement of young people from farming, which is often driven by the perception that agriculture is outdated, unprofitable and labour-intensive. This disengagement is exacerbated by the continued reliance on traditional methods, low productivity and the misuse of fertilizers as well as environmental degradation resulting from excessive use of chemicals.

One promising solution to these challenges is the adoption of digital agricultural practices. These digital solutions not only support with agronomic guidance or efficient nutrient management, but they also make the sector more interesting and engaging for young people. However, adoption is still limited by barriers such as poor connectivity, particularly in Africa, low digital literacy and high costs. Unless these constraints are addressed, the sector risks losing its next generation of farmers and failing to reach its productivity potential.

## An Inclusive and Scalable Approach to Transform Rice Farming in West Africa

To support rice productivity, promote sustainable practices and make the sector more attractive for the youth, MOVE introduced a solution-driven digital tool for the rice value chain in partnership with AfricaRice.

## RiceAdvice Lite: Making Digital Agriculture Accessible

RiceAdvice Lite is a free, user-friendly Android application available on the Google Play Store. Designed to help farmers make informed decisions on fertilizer applications, planting and resource use, it provides practical, location-specific guidance on nutrient management and crop practices.

Since its launch in 2022, the app has been downloaded over 5,000 times, reflecting strong interest and uptake among smallholder farmers and extension agents.

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**More than 5,000 downloads  
in 3 years**

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The app is designed for a variety of stakeholders, including farmers, extension workers, agribusinesses and development partners. Key features include:



Tailored crop management and  
fertilizer recommendations

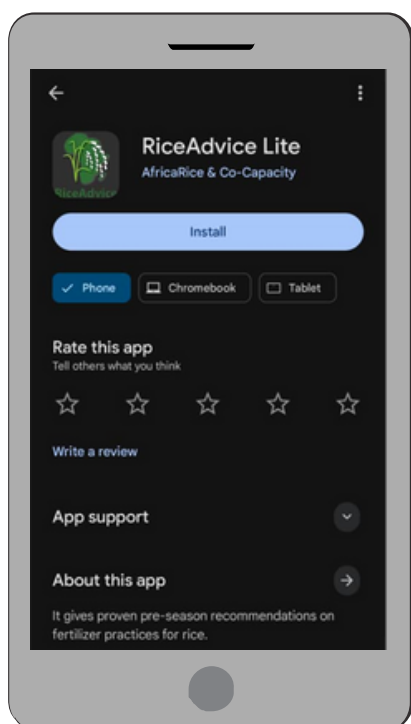


Access via mobile devices, printed  
guides, SMS and extension support



Local language usability to reach  
diverse farming communities

In order to make the app more accessible to end users and encourage its use, AfricaRice organised training sessions for extension agents. These agents primarily work in the public sector, for instance for the Ministry of Agriculture. Following the training, the agents share their knowledge by training farmers under the supervision of AfricaRice, thereby supporting rice mills in their various supply areas.



Between 2022 and 2024, **more than 25,000 smallholder rice farmers**, including **40% of women and 25% of young people**, from Nigeria, Ghana, Burkina Faso, Sierra Leone and Côte d'Ivoire, benefited from RiceAdvice Lite. They received advice either through extension agents or by using the app.

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**I used to think farming was old-fashioned. Now, with this tool, I see rice as a real business.**

~ Kwabena Mensah, Youth Farmer, Volta Region, Ghana

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## Tangible Results for Lasting Impact

By the end of the 2024 season, the project had achieved remarkable results, proving the effectiveness of its integrated approach: combining digital agronomic support with market-oriented value chain development.

- **65% increase in yield:** from 2.3 t/ha to 3.8 t/ha.
- **20–25% reduction in fertilizer use**, cutting costs.
- **35% higher net income per hectare** compared to control groups.
- **78% adoption rate:** farmers continued to use RiceAdvice Lite in subsequent seasons.

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**With RiceAdvice Lite, I now know when and how to apply fertilizer without wasting money.**

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~ Amina Abdullahi, Rice Farmer, Kebbi State, Nigeria

Combined with MOVE's value chain approach, RiceAdvice Lite empowers to increase both their productivity and their earnings by reducing input costs. In addition to improving productivity, the initiative promotes sustainable practices, empowers women and young people, and strengthens community ownership.



**RiceAdvice**



Scan to download the app.

