

4 YEARS OF 4R SOLUTION IN AFRICA



4Rs Triple Yields and Increase Farm Incomes

Improved 4R-based crop and nutrient management practices developed by the 4R Solution project is helping smallholder farmers in Ethiopia, Ghana and Senegal increase crop yields and farm incomes. In northern Ghana, most smallholder farmers cultivate maize and groundnut with minimal fertilizer use, which results in very low yields and declining soil fertility. By implementing the 4R principles of Right Source, Right Rate, Right Time, and Right Place for fertilizers, plus improved cropping practices, such as improved seed varieties and timely weeding, yields of maize and groundnut increased by up to 170 and 190%, respectively. In the Amhara region of Ethiopia, where farmers regularly apply substantial amounts of fertilizers to their wheat and teff crops, locally adapted 4R practices that improved the timing of fertilizer application helped to further enhance yields and farm incomes.

4R facts on yield and income increases

- Maize yields in northern Ghana increased from 1.4 to 3.8 tons per hectare.
- Groundnut yields in northern Ghana increased from 1 ton to 3 tons per hectare.
- Higher yields with 4Rs doubled farm incomes from maize and groundnut cultivation.
- Improved fertilizer application timing in Ethiopia increased wheat yields from 5 to 6.2 tons per hectare with the same quantity of fertilizer.
- Improved fertilizer application rates and application timings in Ethiopia increased teff yields from 2.1 to 2.5 tons per hectare.
- Higher yields with 4Rs increased farm incomes from wheat and teff cultivation by 30 and 20%, respectively.

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