Assessing the Coverage of Biofortified Foods: Development and Testing of Methods and Indicators in Musanze, Rwanda

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Objectives: Biofortification is a promising approach to increase micronutrient intakes, especially among populations that are hard to reach with other interventions. Information on the coverage of biofortified foods is needed to ascertain potential for impact, understand program performance, and identify bottlenecks. In this study, we aimed to develop and test methods and indicators for assessing household coverage of biofortified foods.

Methods: We developed five recall-based indicators of household coverage to assess biofortification programs building on approaches previously used to assess targeted and large-scale food fortification programs. These were: 1) consumption of the food; 2) awareness of the biofortified food; 3) availability of the biofortified food; 4) consumption of the biofortified food (ever); and 5) consumption of the biofortified food (current). We tested these indicators in a cross-sectional, cluster, household survey in 20 rural and five peri-urban areas in Musanze, Rwanda where two biofortification programs, i.e., biofortified beans and orange fleshed sweet potatoes (OFSP), were implemented.

Results: Among the 242 households surveyed, consumption of beans and sweet potatoes was high (99% and 96%, respectively) while awareness of biofortified beans or OFSP was 66% and 49%, respectively, and availability was 24% and 11%, respectively. Overall, 15% and 11% of households had ever consumed biofortified beans and OFSP, respectively, and 10% and 2% of households were currently consuming them, respectively. The major bottlenecks to coverage were awareness and availability of the biofortified foods.

Conclusions: The proposed methods and indicators fill a gap in the availability of tools to assess biofortification program coverage and the results of the survey highlight their utility for assessing program performance and identifying bottlenecks. Further testing is warranted to confirm the generalizability of the coverage indicators and inform their operationalization when deployed in different contexts.

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