



## EVALUATING THE IMPACT AND EFFECTIVENESS OF REALIGNING AGRICULTURE TO IMPROVE NUTRITION IN MUMBWA DISTRICT, ZAMBIA

Concern Worldwide, Zambia

### The Challenge

Zambia is currently experiencing an alarming hunger situation, with major deficits in nutrition and child survival.<sup>1</sup> The prevalence of undernutrition has increased since 1990, remaining stable between 40–45% between 2000 and 2014.<sup>2,3</sup> Many Zambians rely on farming for their food and livelihood, but productivity can be low due to poverty and poor infrastructure. Studies have shown that utilising a multisectoral approach to nutrition programming, such as integrating agriculture and women's empowerment, can enhance the impact on nutrition and food security among these rural, agrarian populations.



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### The Intervention

Concern Worldwide—with Mumbwa Child Development Agency and the International Food Policy Research Institute (IFPRI)—implemented the Realigning Agriculture to Improve Nutrition (RAIN) project in rural Zambia. The project targeted women and children during the 1,000-day window—from conception to age two. The district-level agriculture intervention sought to increase year-round availability and access to nutritious food at the household level, and in some areas was accompanied by promotion of optimal health, nutrition and care seeking behaviour. The intervention was delivered through local women's groups and household visits in which trained female smallholder model farmers provided agricultural support and supplies, and community health volunteers conducted nutrition and health education.

### The Evaluation

This cluster randomised study was conducted in the Mumbwa District, Central Region in Zambia over four years. It compared two intervention arms (agriculture alone and agriculture plus

nutrition/health promotion) with a control group. Evaluation participants included households with children between 24 and 59 months of age. Overall, the study aimed to assess the impact of the two intervention arms on child stunting, as well as to assess the project's influence on infant and young child feeding (IYCF) practices, health and nutrition knowledge, women's empowerment and access to nutritious food at the household level.

### The Results

Overall, the evaluation revealed mixed results from the RAIN project. On one hand, there was no discernible impacts on reducing the prevalence of stunting, on improving IYCF practices or on improving caregiver health and nutrition knowledge. On the other hand, while the results showed that all study groups increased their nutritious food consumption, the agriculture-nutrition arm also had an increase in dietary diversity. There was also a prominent increase of women's empowerment in agricultural decisions among the intervention arms, especially regarding what crops are grown and what

is done with crop sales. Compared to the control, both intervention arms had greater increases in the total number of foods produced and the number of agricultural activities carried out. Lastly, significantly less wasting was observed in the agriculture-only and agriculture-nutrition arms than the control (3.86% and 2.79% differences vs. 7.42%) by project end.

### The Lessons Learnt

A success of RAIN was the formation of a District Nutrition Coordination Committee to strengthen the technical, strategic and leadership capacity of local stakeholders. Typically, this process is initiated at the national level, but often does not engage with local structures or context. This innovation allowed for local learning during implementation, which was then fed up to national policy and programming. Another implementation lesson was the need to develop a robust monitoring system at project start-up. This step would have allowed RAIN to take appropriate action to adjust implementation to better achieve the project objectives.

### Looking Ahead

RAIN's agricultural component achieved its aim to increase both diversity and stability of plant foods available to households. However, there was no identified benefit to the agriculture-nutrition component. Low project exposure could be one factor contributing to the lack of consistent impacts across both components. Despite the mixed results, this evaluation contributes to the limited number of rigorous impact evaluations that cover agriculture and nutrition programmes. There are clear and important benefits to this type of intervention, which should be considered in future nutrition programming and scale up.

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## References

- <sup>1</sup>K. von Grebmer, J. Bernstein, et al.. *2015 Global Hunger Index - Armed Conflict and the Challenge of Hunger*. Bonn, Washington D.C., Dublin, Welthungerhilfe: IFPRI and Concern Worldwide; 2015.
- <sup>2</sup>World Food Programme (WFP) and Food and Agriculture Organisation of the United Nations (FAO). *The State of Food Insecurity in the World: Addressing food insecurity in protracted crises*. Rome: WFP and FAO; 2010. Available at <http://www.fao.org/docrep/013/i1683e/i1683e.pdf>.
- <sup>3</sup>Central Statistical Office (CSO), Zambia Ministry of Health, and ICF International. *Zambia Demographic and Health Survey 2013-14*. Rockville, Maryland: CSO, and ICF International; 2015. Available at <https://www.dhsprogram.com/pubs/pdf/FR304/FR304.pdf>.

## From the Publication

Harris J, Nguyen PH, Maluccio J, Rosenberg A, Mai LT, Quabil W, & Rawat R. An impact evaluation report prepared by the International Food Policy Research Institute of the Realigning Agriculture to Improve Nutrition (RAIN) project in Zambia. *IFPRI and Concern Worldwide*, 2016.



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