



FEED THE FUTURE

The U.S. Government's Global Hunger & Food Security Initiative

Food Systems and Nutrition: Emerging Evidence and Research Opportunities

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Abstract

This evidence review summarizes recent thinking and research findings on how agriculture and food systems affect diets and nutrition. It identifies gaps where new work is needed to guide policies and the investment in evidence-based programs in low-income countries.

Since 2008, the primary focus of agriculture-nutrition research has been how a household's production may affect the nutrition of women and children, mainly through eating their own produce or selling commodities and using that income to purchase more diverse, sometimes higher-quality diets. Key findings of this work concern the generally positive value of productivity and production diversity; the value of livestock ownership for potential consumption of animal-source foods; the importance of gender roles in time-use, decision-making and control of own-produced products; the importance of access to markets (for sale and purchase); 'market literacy' when selling higher value (nutrient-rich) foods; the importance of food safety (particularly managing mycotoxin risks); 'next generation' technology adoption that adds value to nutrient-dense foods (moving towards innovations in processing, drying, storage and transportation); and the importance of linking agricultural and market interventions to effective behavior-change communication to achieve nutrition gains.

At a more macro level, recent research has also provided insights into the role of climate shocks and seasonality on birth outcomes and child growth, which links to growing concerns about the importance of building resilience for agricultural livelihoods, and smoothing diet quality and nutrition outcomes. There is also realization of the importance of rural markets and infrastructure relative to the delivery of nutritious commodities.

Emerging priority issues requiring deeper research-based understanding include: i) empirical evidence of pro-resilience interventions at different points in the food system that protect diets and nutrition in the face of shocks and climate change; ii) innovations and scale-up of productivity-enhancing technologies/practices along the value chain relating specifically to nutrient-dense foods; iii) impacts of agriculture-based interventions for adolescent girls' diets, micronutrient status and energy expenditure, and those of women of reproductive age; iv) drivers of consumption choice among low-income smallholder households close to markets (with access to diverse and nutritious foods to purchase); v) comparison of cost-effectiveness of alternative approaches and entry points in the food system for changing behaviors on adoption of new inputs, behaviors regarding food choices, and impetus to market farm outputs; vi) combined food safety threats in relation to health and nutrition at household level; and vii) untangling WASH elements to gain better understanding of which interventions can have measurable impacts on nutrition

Underlying all such research streams has been important emphases on the validation of appropriate metrics, whether in the realm of agricultural production, food markets, or nutrition and health, to better understand problems and promote solutions focused on determining the relative cost-effectiveness of multisector versus single-sector approaches, and on meeting appropriate thresholds of empirical evidence to underpin informed policy and program designs.