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"Global food security and food safety:
The role of universities"

Keynote to the Panel Discussion: Does Diversified Agricultural Production Automatically Lead to Improved Nutrition?

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Abstract

Undernutrition, low dietary diversity, and micronutrient deficiencies remain big problems in many developing countries. A large proportion of the people affected are smallholder farmers. Against this background, it is often assumed, that further diversifying small-farm production could be a good strategy to improve dietary diversity and nutrition. But is there really such a clear link between production diversity on the farm and dietary diversity in the farm household? In this overview, key factors that can influence this relationship are discussed, including issues of measurement. Empirical evidence from various developing countries is presented. Farm production diversity is positively associated with dietary diversity in some situations, but not in all. Especially when production diversity is already high, the association is not significant, or it can even turn negative when diverse production entails lower cash incomes due to foregone benefits from specialisation. Markets seem to be more important for dietary diversity than subsistence production.

The evidence from selected countries is supplemented with a systematic review and meta-analysis of the available literature. Using transparent selection and inclusion criteria, 45 original studies were identified, reporting results from 26 countries and using various indicators of diets and nutrition. While the majority of these studies highlight positive associations between production diversity and dietary diversity and/or nutrition, in less than 20 % of the studies positive and significant associations were found for all of the relationships analysed. Around 60 % of the studies report positive associations only for certain subsamples or indicators, the rest found no significant associations at all. The mean marginal effect of production diversity on dietary diversity is positive but small. On average, farms would have to produce 16 additional crop or livestock species to increase dietary diversity by one food group. The mean effect is somewhat larger in sub-Saharan Africa than in other regions, but even in Africa farms would have to produce around 9 additional species to increase dietary diversity by one food group. While results may look differently under very specific conditions, there is little evidence to support the assumption that increasing farm production diversity is a highly effective strategy to improve smallholder diets and nutrition in most or all situations.

Keywords: Dietary diversity, nutrition, production diversity

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