



LANSA
Leveraging Agriculture for
Nutrition in South Asia



Buy or Make? Farm production diversity, market food availability & diet diversity in Afghanistan

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Production diversity & dietary diversity

- “Agriculture for Nutrition”: Emphasis on production interventions to improve diet diversity, eg. home gardens, livestock donations.
- Academic literature linking farm production diversity to household diet diversity.



Market provision of nutrition

- Recent debate: Markets or own-production for improving dietary diversity?
- Characterization of market sourcing of nutrition is limited in this literature.
- In this paper:
 - We further explore the relative importance of markets versus own-production in providing dietary diversity and nutrition.
 - We characterize market food availability in a richer way.
 - Seasonality considerations.



Afghanistan: Setting

- Limited production diversity.
- Wheat-dominated diets.
- Poor overall nutrition profile.
- Poor infrastructure & difficult terrain:
variable food market conditions.



Data and Methods

- Data: National Risk and Vulnerability Assessment (NRVA) data of >20,000 households in 2011-12.
- Key variables:
 - Production Diversity Index: count of crops and livestock species in the year.
 - Market Food Availability Index: Based on availability of a set of key foods in market (at time of survey).
 - Food Consumption Score (Diet Diversity): a weighted score based on frequency of consumption of different food groups (at time of survey).
- We estimated a series of regressions to explore association of diet diversity with production diversity and market availability , with a number of controls for other variables.

Summary statistics

Food Consumption Score (FCS)	59.4
Household Dietary Diversity Score (HDDS)	9.0
Production Diversity Index	2.7
Market Food Availability Index	0.91
Market in the community (dummy)	0.16

Market versus own-production sourcing



Dietary diversity score: **Total (average): 9, Market: 8, Own production: 1**

Own-production sourcing of consumption is strongest for milk, followed by cereals and vegetables.

Explaining Dietary Diversity: Regression results

Production diversity index (IV)	1.48***
Market food availability index	2.11**
Market in the community	2.41***

(Regression also controls for wealth and economic status indicators, household characteristics, calorie intakes, region, urban/rural, sources of income)

Seasonality

	Poor	Borderline	Acceptable
Wheat harvest season (May-July)	1.6%	7.6%	90.8%
Late ag. season (Aug-Nov)	2.1%	13.4%	84.6%
Lean Season (Dec-Apr)	2.9%	18.4%	78.7%

	Wheat harvest season	Late ag. season	Lean season
Production diversity index (IV)	1.72***	0.97**	1.92***
Market food availability index	4.42***	0.84	-1.89

Conclusions

- Afghan households are remarkably adept at obtaining diverse diets in spite of production limitations and seasonal challenges.
- Markets provide bulk of dietary diversity currently
- **Both** production diversity and market food availability are important in improving dietary diversity in Afghanistan.
- Improved production diversity can be particularly helpful in improving dietary diversity in the lean season.

Conclusions

- Role for market development interventions in addition to production interventions.
- Further work: Understanding storage, cash constraints, *etc* in seasonality (qualitative).