



**USAID**  
FROM THE AMERICAN PEOPLE

**SUAAHARA**  
Building Strong & Smart Families



Government of Nepal  
Ministry of Health & Population

# Homesteaded Food Production and Dietary Diversity of Women and Children (6-23m) in rural Nepal: an associational analysis

Bishnu Prasad Dulal, Rojee Suwal, Ram Kumar Neupane, Laura Brye, Pooja Pandey Rana, and Dr. Kenda Cunningham

July 18-19, 2016





Government of Nepal  
Ministry of Health & Population

## Background: Suaahara and HFP

- **Goal:** to improve maternal and child nutrition increasing access to and consumption of locally produced nutrient dense and diverse food (homestead food production)
- **Scale:** Out of 41 Suaahara districts, 14 districts plus 25% of DAG VDCs in 27 districts had HFP activities
- **Activities:**
  - Seasonal seed distribution
  - Chicks distribution
  - Improved vegetable gardens (fencing, techniques)
  - HFPB group participation
  - Technical support (site visits, problem solving)
  - Agriculture and livestock trainings

# Study objective

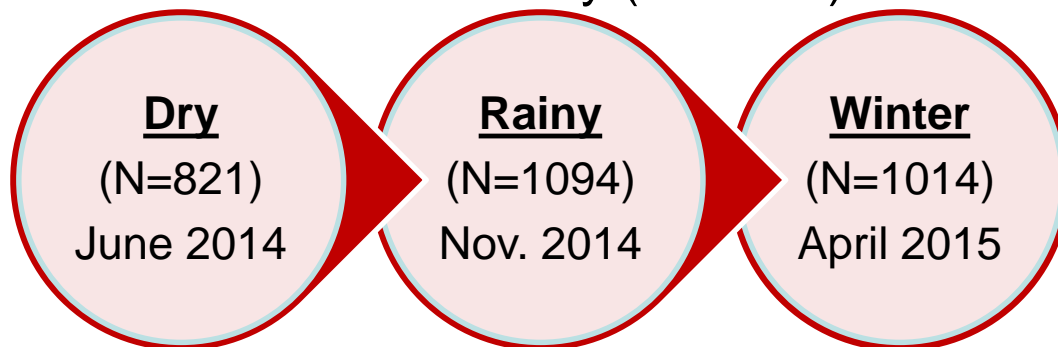
- Examine the association between participation in Suaahara homestead food production (HFP) activities and dietary diversity among mothers and children 6 to 23 months of age in rural Nepal



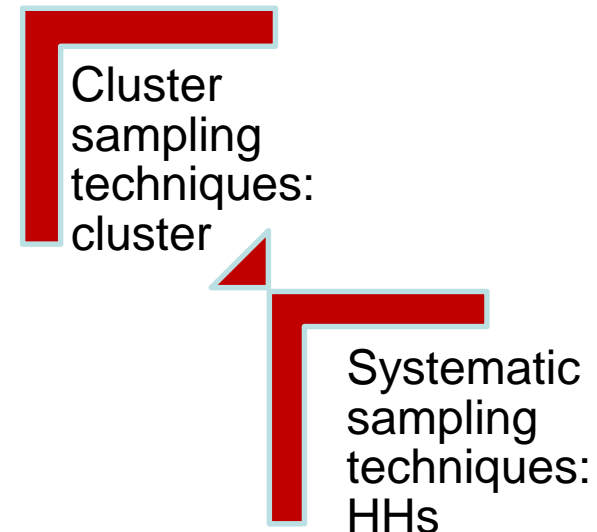
# Methodology

## Study design:

- Monitoring data collected seasonally among program beneficiaries
- RIDA, external local survey firm
- NHRC ethical approval
- Cross sectional survey (N=2929)



## Sampling:



**Data analysis:** descriptive statistics and linear regression  
(adjusted for potentially confounding factors)

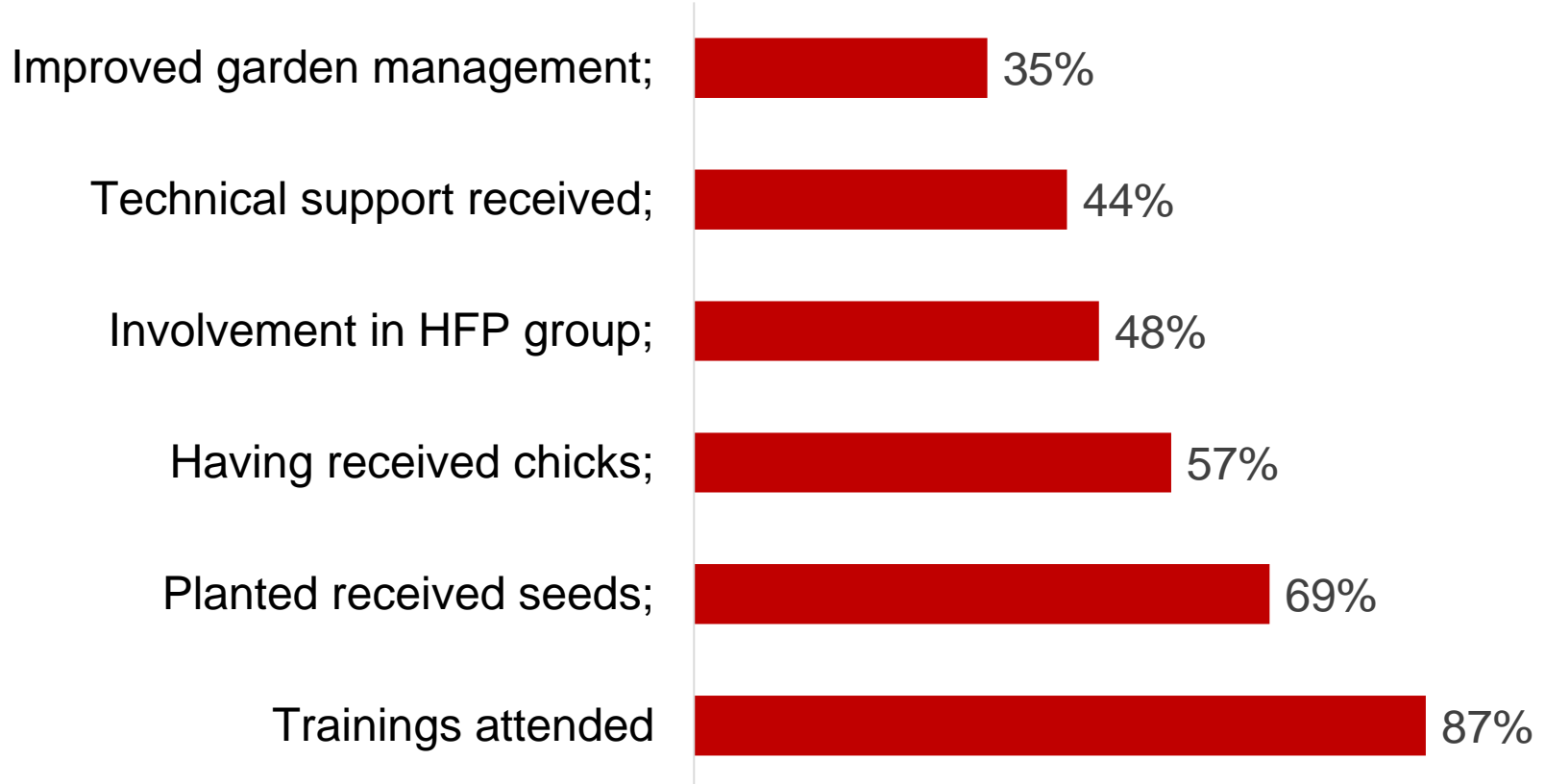


# Characteristics of study participants

Characteristics	Mean/%
Average age of mother (years)	27
Mother's literacy (%)	79
Average household size (persons)	6.5
Average household income (NRS)	15,281
Household member migrated abroad for labor (%)	36
Dalit households (%)	17
Access to market (minute)	110
Household from mountain (%)	81

# Results: Primary explanatory variables

(Exposure to homestead food production activities)



# Results: Dietary Diversity

Food Groups	Maternal	Child (6-23 m)
	N=2929	N=1837
	Mean (SD)/ %	Mean (SD)/ %
Starchy staples	100.0	98.8
Beans and peas	97.6	92.3
Nuts and seeds	12.9	
Eggs	48.9	57.9
Dairy products	67.9	70.6
Flesh foods	73.6	62.6
Vitamin A rich dark green, leafy vegetables	91.1	86.9
Other vitamin A-rich fruits & vegetables	46.5	
Other vegetables	86.7	83.9
Other fruits	62.6	
Average dietary diversity score (Range)	6.9 (1-10)	5.5 (1-7)

# Results: HFP participation positively and significantly associated with dietary diversity for both mothers and young children

	Crude		Adjusted	
	$\beta$	P-value	$\beta$	P-value
Maternal dietary diversity	0.06	0.002	0.05	0.001
Child (6-23 months) dietary diversity	0.05	0.042	0.07	0.017

## Adjusted model included controlling for the following confounders:

- Women's age and education
- Household size, number of children <5 years, migrant labor status, income, caste, access to market, agro-ecological zone of residency
- Child sex (only for CDD)
- Seasonal survey participation





Government of Nepal  
Ministry of Health & Population

## Conclusions and Recommendations

- Degree of participation in HFP activities and maternal and child dietary diversity had a significantly positive association in the context of rural Nepal and a large integrated nutrition program.
- Homestead food production may be one important component of a multi-sectoral nutrition approach; potential pathways include production-to consumption and income.
- Rigorous studies are needed to further analyze the impacts of agriculture programs on maternal and child nutrition.



Suaahara would like to thank the Government of Nepal for their leadership.



**USAID**  
FROM THE AMERICAN PEOPLE

Suaahara is made possible by the generous support of the American people through USAID.

