



# HG Approach for Enhancing Nutritional Security of Small holder farming families of Nepal

PP Khatiwada, P Biswakarma, R Adhikari, R  
Pudasaini, RB Rana and P Chaudhary

**Local Initiatives for Biodiversity,  
Research and Development (LI-BIRD)**  
[www.libird.org](http://www.libird.org) • [info@libird.org](mailto:info@libird.org)



# Background



## 2 ZERO HUNGER



**End hunger, achieve food security and improved nutrition, and promote sustainable agriculture**

# Background



- Overall nutritional status improving
- Nutritional status of children improved over two decade (NDHS, 2016)
- Still challenge to meet SDG target (NPC, 2015)
  - Stunting 36% and Underweight 27% (NDHS, 2016)
- Anemia in reproductive women increased to 41% (2016) from 35% (2011)
- Severe problem in poor and marginal households
- Need of continuous efforts for nutritional improvement through agriculture

- About 1/3<sup>rd</sup> of population depend on agriculture
- Predominantly subsistence in nature
- More diversity in subsistence farming
- Easy to promote food based nutrition promotion interventions



# Home garden



Land use system situated around a homestead maintained with several components by the household members



It contributes to family nutrition, income, agro-biodiversity conservation and a resilient system

Research (HG)



Modeling and validation



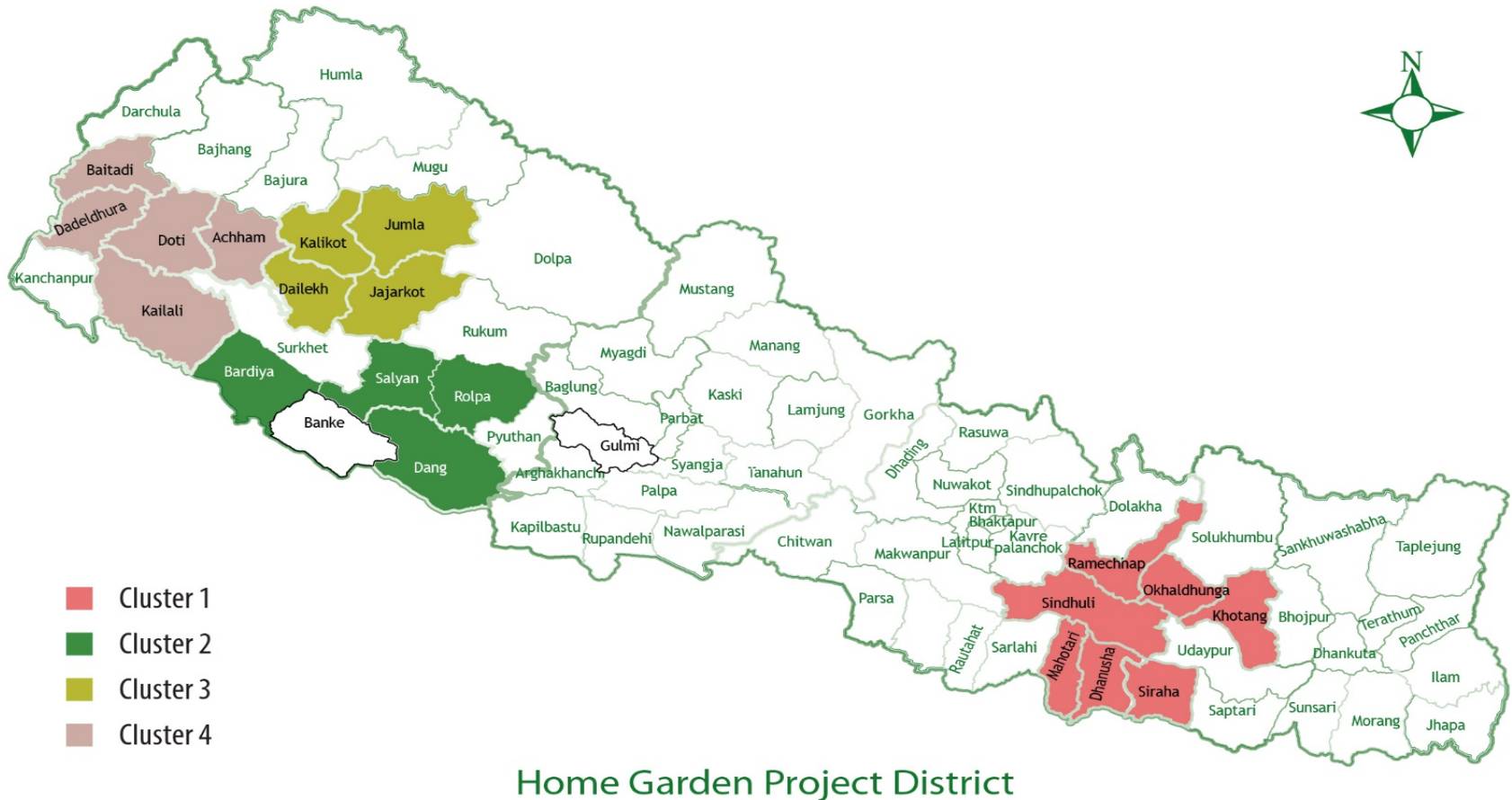
Piloting for scaling up



Integration and scaling up



# Data collection



- Six districts from Terai, 13 from mid-hills and 1 from high hills
- 10 VDCs of each district
- Started in 2015

# The respondents

- Residence of remote areas (identified by DADC)
- > 75% Small holders and disadvantage group (based on UCPA and well being ranking)
- Out of 35,000 beneficiary, 6320 HH are randomly selected (baseline)
- Semi-structured questionnaire was administered
- 1000 respondents selected randomly (50 HHs/district) for OMS after one year of intervention



# On-farm food production situation



Caste/ethnicity	<=6 months	7-11 months	>11 months
BCT	1644 (64.2)	464 (18.1)	452 (17.7)
Janajati	908 (53.9)	232 (13.8)	546 (32.4)
Dalit	887 (81.1)	95 (8.7)	112 (10.2)
Madhesi	56 (28.6)	45 (23.0)	95 (48.5)
Muslim	11 (55.0)	1 (5.0)	8 (40.0)
Others	30 (63.8)	15 (31.9)	2 (4.3)
<b>Total</b>	<b>3536 (63.1)</b>	<b>852 (15.2)</b>	<b>1215 (21.7)</b>

Note: Numbers in parenthesis are percent

# Key findings

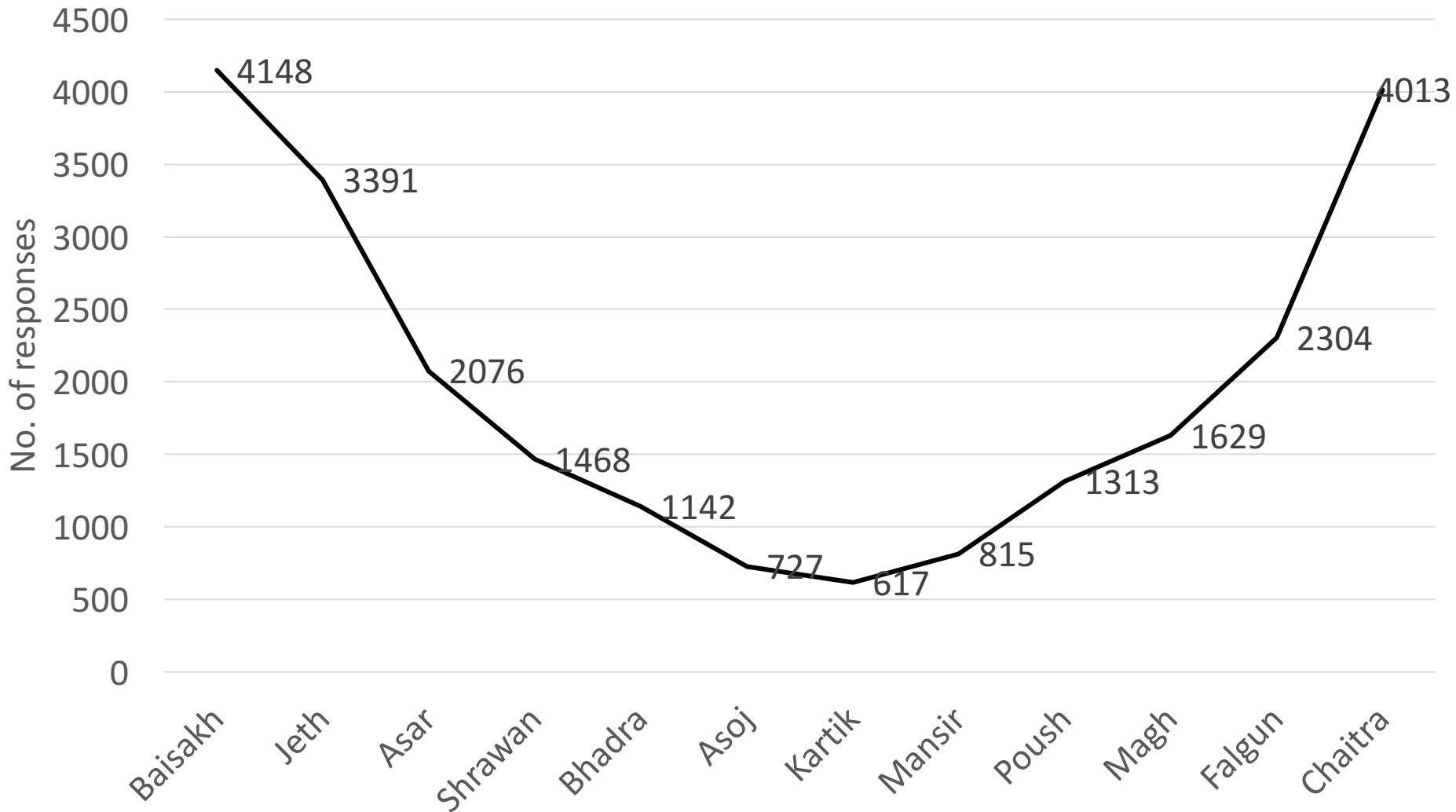


Variable	PCC	P-value
Food sufficiency and food type consumption	0.21	.000
Cultivated area and food type consumption	0.085	.000
Education and food type consumption	0.102	.000
Ethnicity and food type consumption	0.17	.000
Cultivated area and vegetable type	0.101	.000

# Key findings

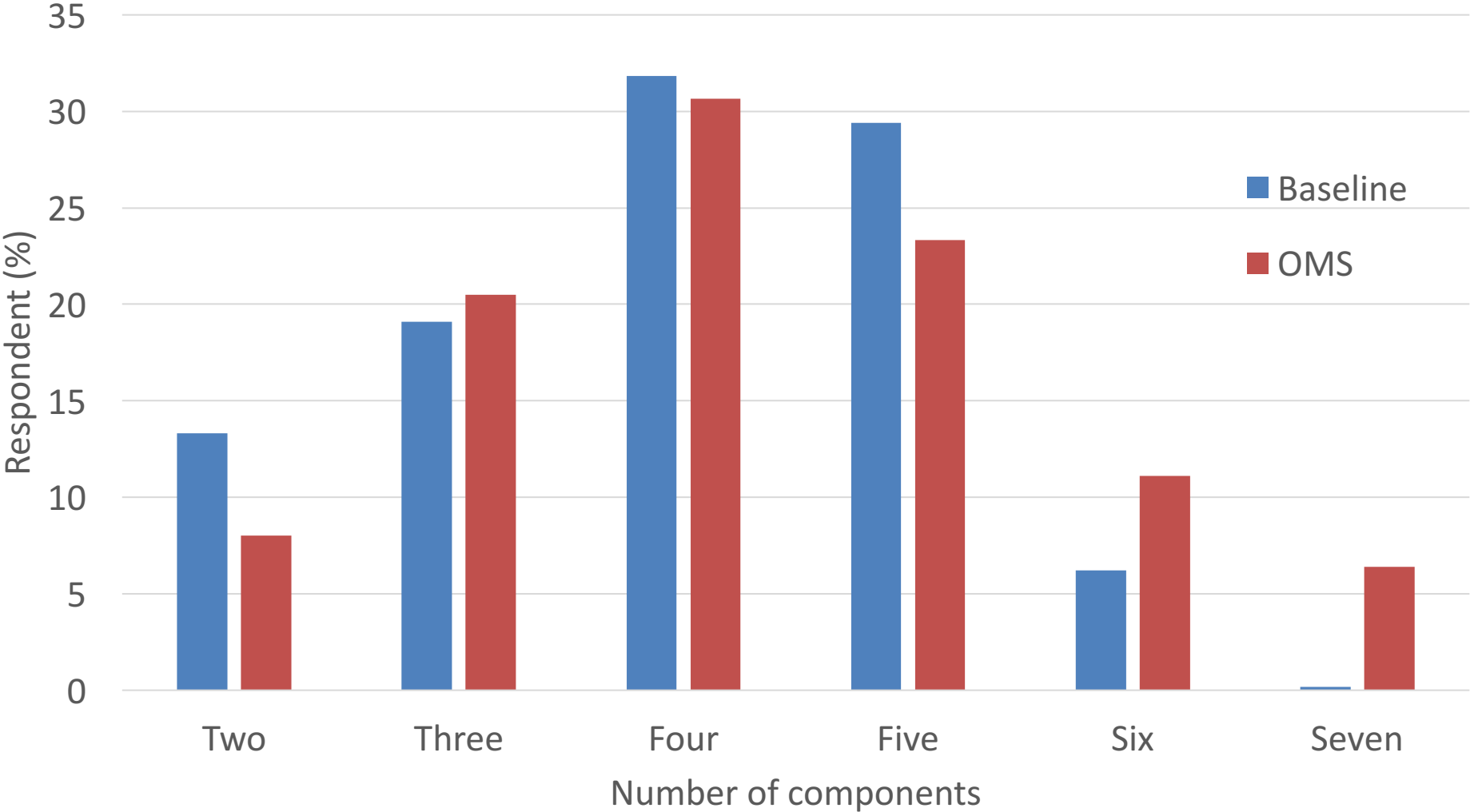


## Vegetable scarcity month



- 92% responding households growing 2.9 leafy vegetable species
- 40% HHs growing average 1.04 Vitamin A rich vegetable
- Assured availability is challenge during dry season (February to June)
- 25.1% consumed fresh vegetable all year round after getting diversity kits for two seasons (21.1%)
- 29.7% sold the surplus vegetables after a year (22.5% in baseline)

# HG components

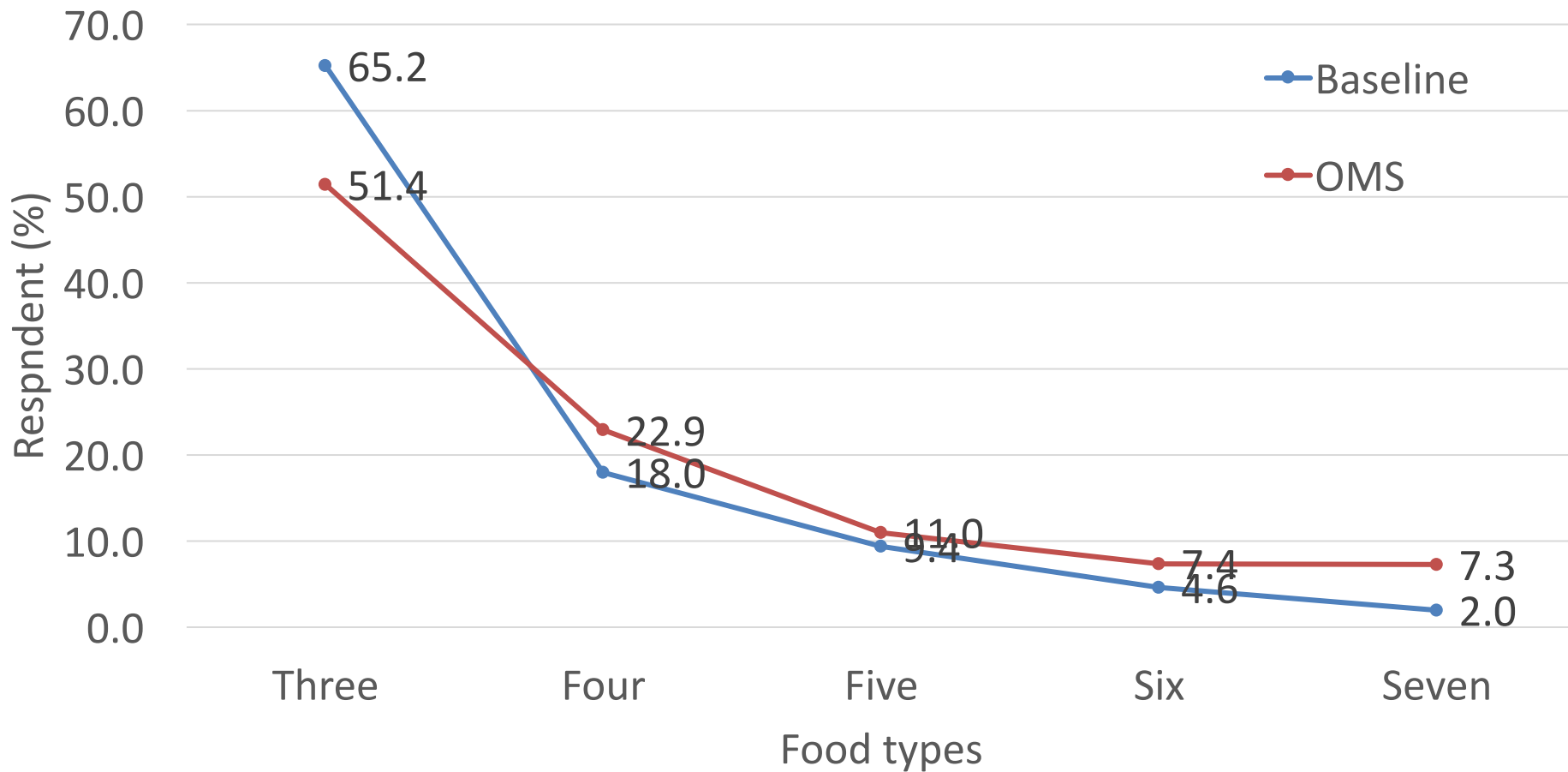


# Food type consumption



S N	No of food types	Proportion	Food category
3	Three	62.2	Cereals, fat/oil, leafy vegetable or pulses
4	Four	18.0	Cereals, fat/oil, leafy vegetable or pulses, livestock protein
5	Five	9.4	Cereals, fat/oil, leafy vegetable, pulses, livestock protein
6	Six	4.6	Cereals, fat/oil, leafy vegetable, pulses, livestock protein, other vegetables and fruits
7	Seven	2	Cereals, fat/oil, leafy vegetable, pulses, livestock protein, Vitamin A rich vegetables and fruits

# Food types consumption



# Conclusion

- SHDGs have poor dietary diversity
- Deliberate vegetable species selection is must for the improvement of household nutrition
- Pertinent need of low cost moisture conserving technologies
- More focus needed to supply animal source protein from HG
- Home garden approach can be promoted for household nutritional security of SHDGs





# Thank you

**Local Initiatives for Biodiversity,  
Research and Development (LI-BIRD)**

[www.libird.org](http://www.libird.org) • [info@libird.org](mailto:info@libird.org)

