

# Increasing the Productivity and Market Linkages Among Smallholder Dairy Producers in Bangladesh: The effects on Total Amount Sold Versus set Aside for Home Consumption

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# Bangladesh Nutrition and Livestock

## Nutrition

- Stunting: 36.1%
- Wasting: 14.3%
- Low BMI women of reproductive age: 28%
- Anemia CU5: 52.7%
- Anemia women of reproductive age: 44.7%

## Livestock

- 1.7 heads of cattle
- Average milk production/cow/day: 1.5-3
- Adoption of good animal husbandry practices is low



# Livestock Production for Improved Nutrition\*

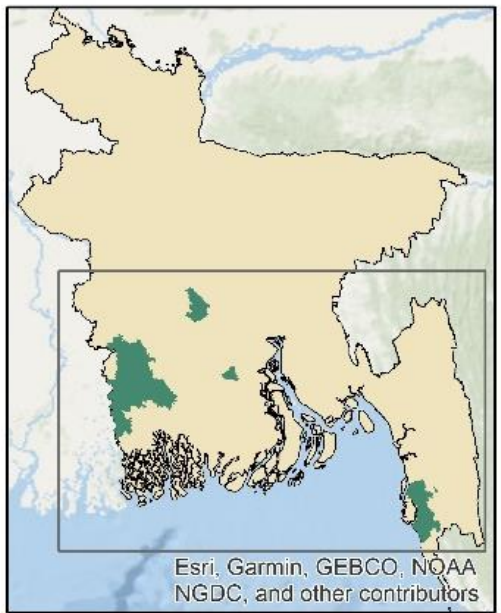
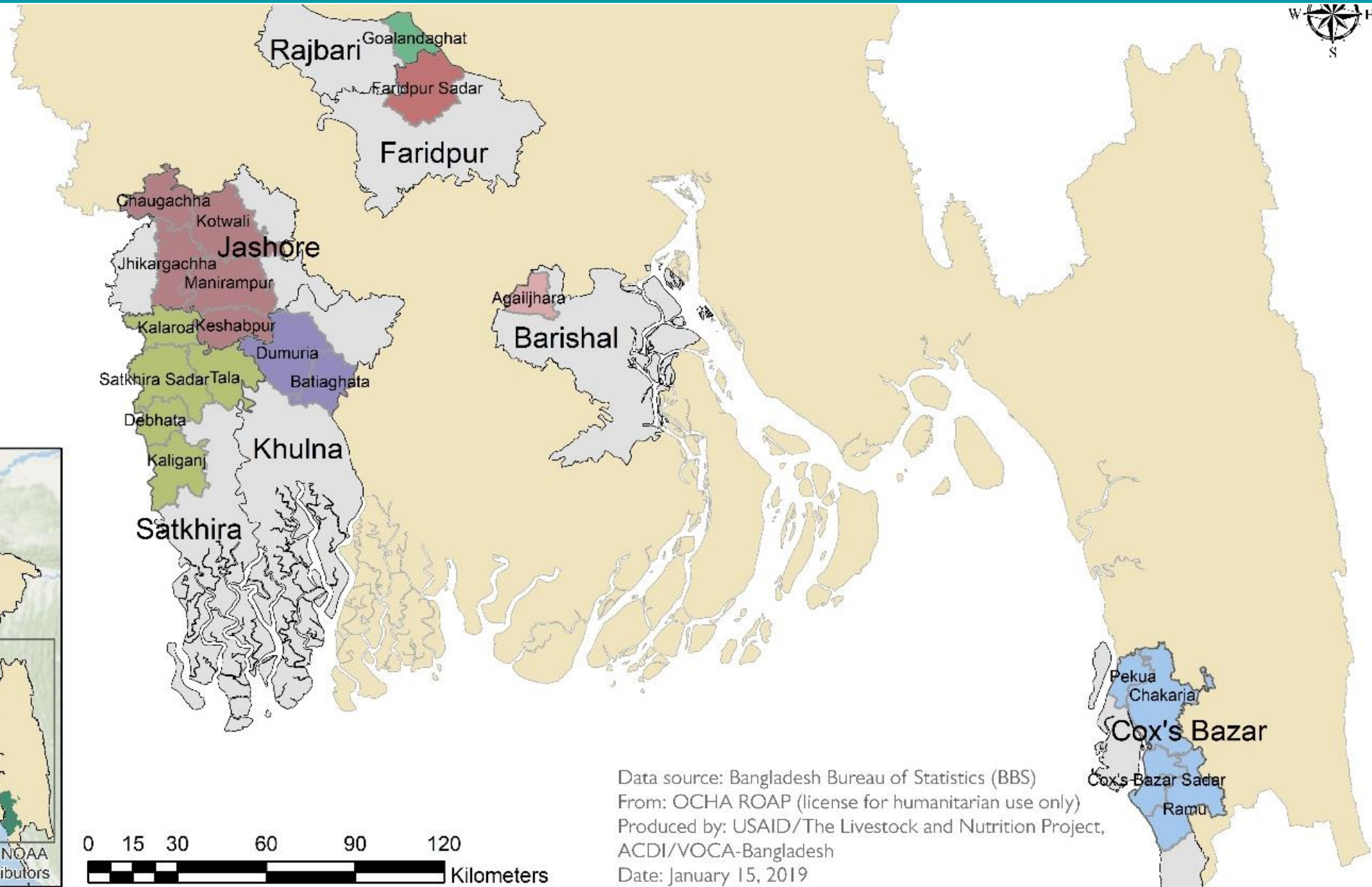
- Development of livestock service provider cadre/skills
- Promotion of good animal husbandry practices
- Facilitation of linkages between smallholder farmers and buyers
- Promotion of nutrition (milk and meat consumption) and hygiene

\*Feed the Future funded project





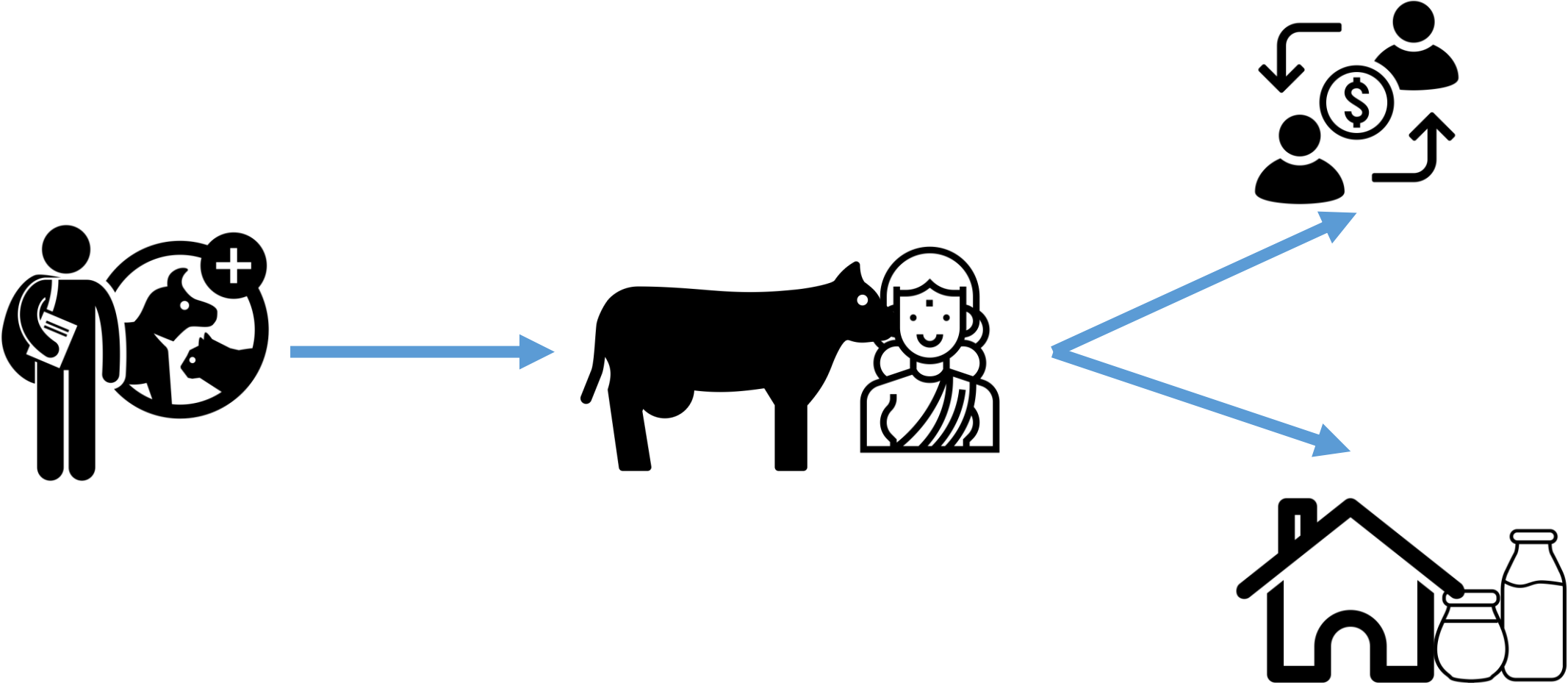
- Khulna** District Name
- Dumuria** Upazila Name
- District Boundary
- Upazila of Barishal
- Upazila of Cox's Bazar
- Upazila of Faridpur
- Upazila of Jashore
- Upazila of Khulna
- Upazila of Rajbari
- Upazila of Satkhira



Data source: Bangladesh Bureau of Statistics (BBS)  
From: OCHA ROAP (license for humanitarian use only)  
Produced by: USAID/The Livestock and Nutrition Project,  
ACDI/VOCA-Bangladesh  
Date: January 15, 2019

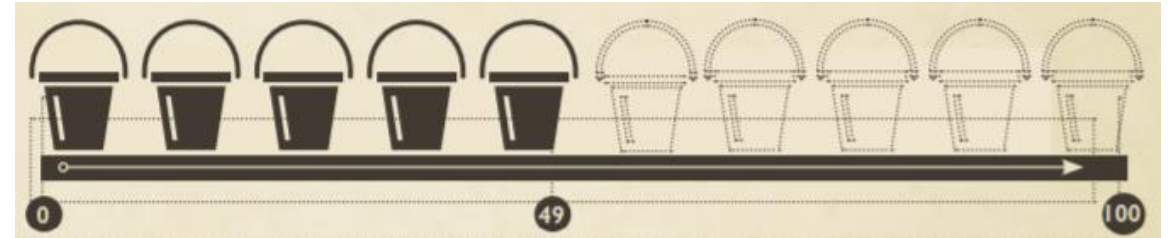


# Livestock Service Provider and Milk Collector Model





Application of improved technologies = almost 3 times higher production of meat and 2.5 times higher production of milk



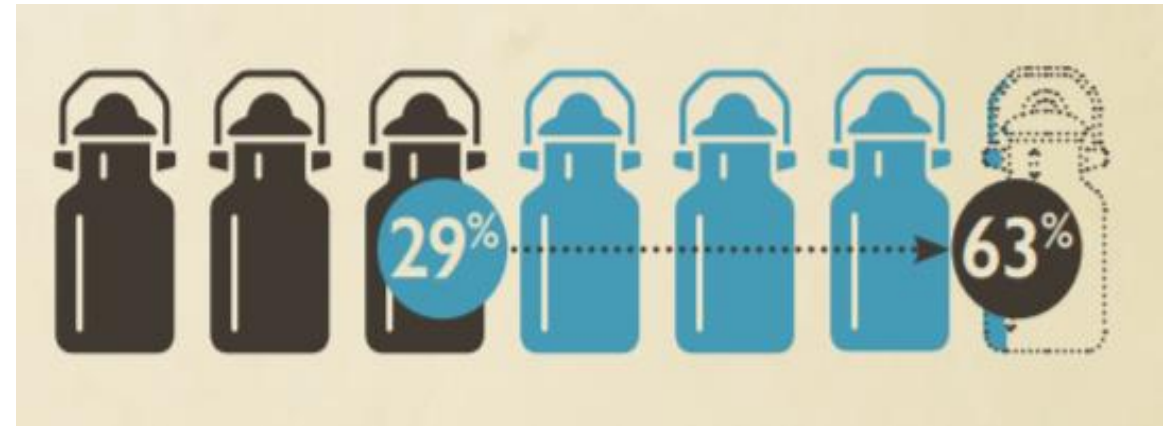
The average household production of litres of milk per milk producing cow increased by almost 49% since the baseline

# Livestock Achievements

# Nutrition Achievements



Percent HH with regular meat consumption went from 41% to 59%



Percent HH with regular milk consumption went from 29% to 66%

# Status of the Milk Collectors (MC)

- Average number of HHs served per MC: 29
- Average number of liters collected per HH/month: 67.4
- 96.4% increase in income of MCs
  - Greater number of farmers to collect from
  - Increased quantity of milk being produced
- Selling to:
  - 10.7% to neighbors
  - 67.9% to sweetshops
  - 46.4% to local market
  - 35.7% to chilling centers



Critical question: Does the quantity of milk consumption increase as production increases?  
When there is an increase in linkages?

- Data:

- Annual survey data from livestock rearing households (n=294)
- Logistic and multiple linear regression
- Private sector interviews with milk collectors

## B2. Dairy production and consumption information from Oct' 17 to Sep' 18

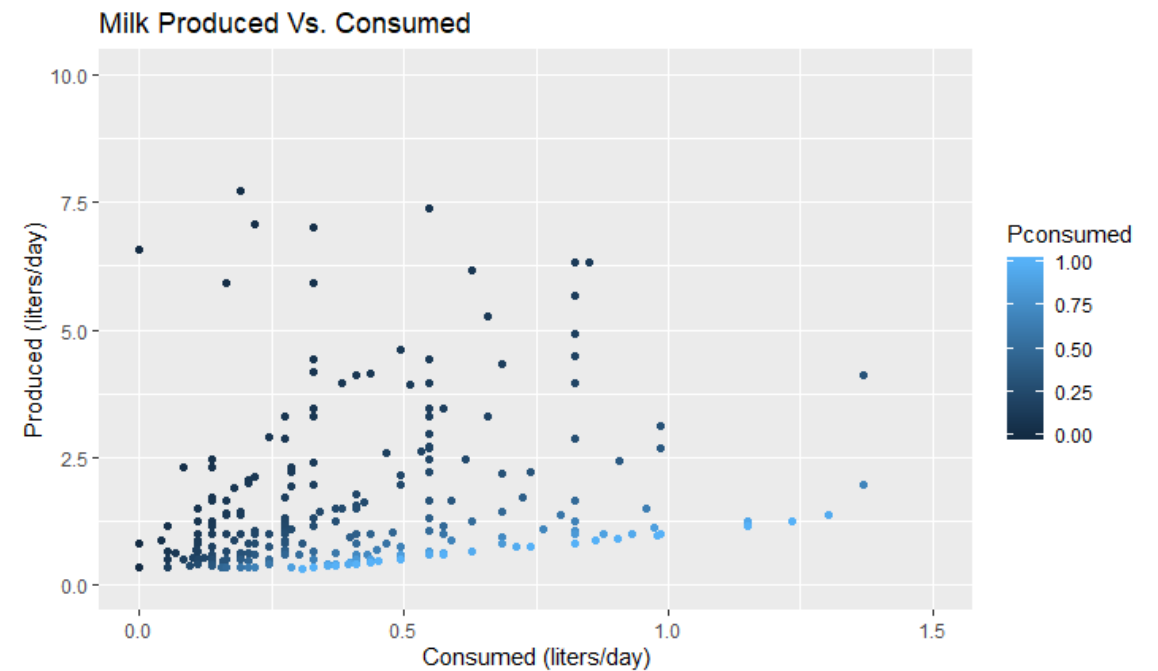
Cattle serial number	Last calving interval (no. of months) <i>[keep blank for first calving]</i>	Period of giving milk (no. of months)	Milk collection days from the cow during last 12 months (October 17 to September 18)	Average milk production per day from October 17 to September 18 (Liter)	Total Milk Produced from October 17 to September 18 (Liter) <i>[see guideline for daily milk production calculation]</i>	Total quantity of milk sold (Liter)	Total quantity of milk consumed (Liter)	Total quantity of milk given as gift (Liter)
	B2.1	B2.2	B2.3	B2.4	B2.5	B2.6	B2.7	B2.8
Cow 1								
Cow 2								
... ..								



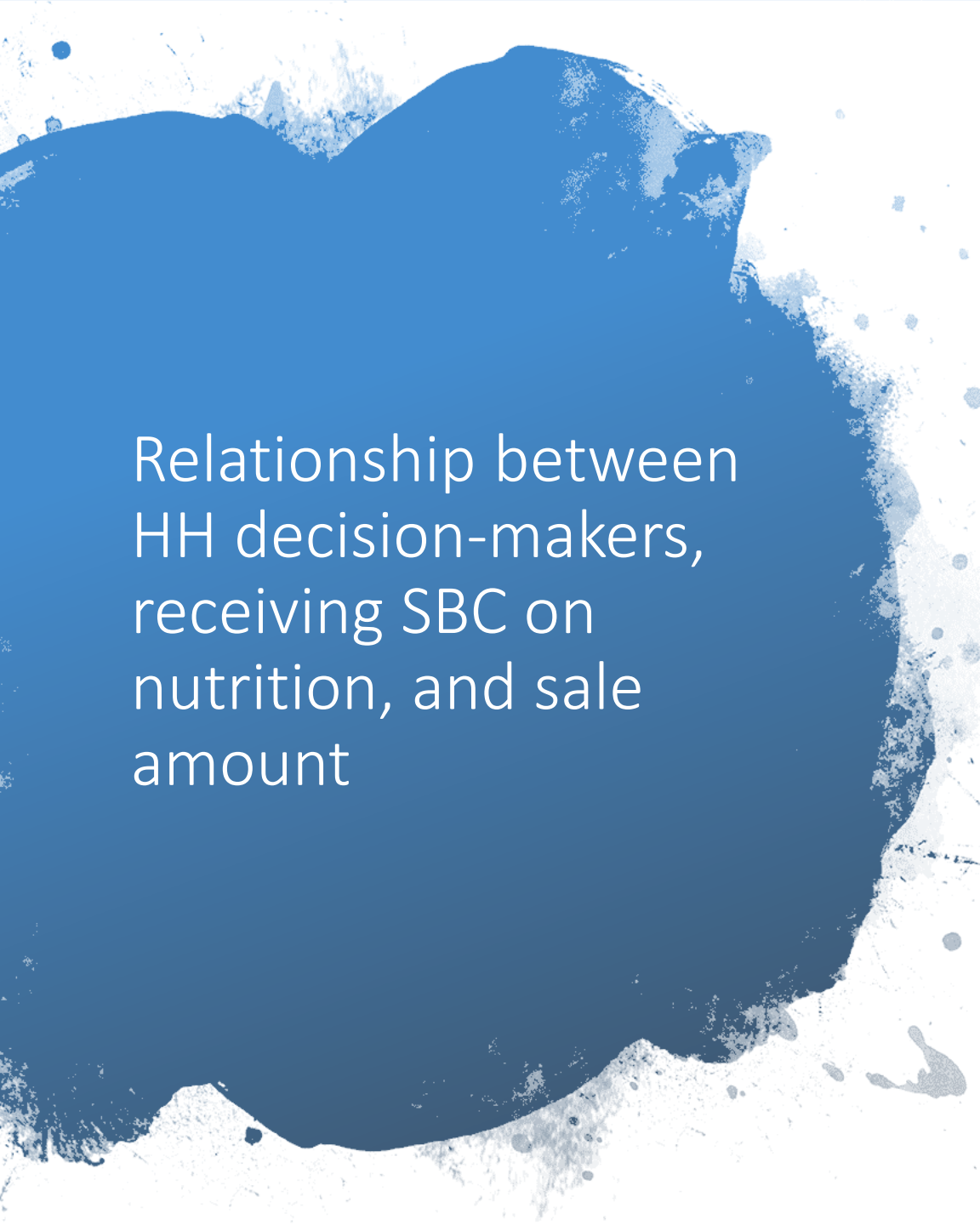
## Increased milk production and MC linkages

- Milk production under 1 liter/day was associated with increased likelihood that milk was set aside for home consumption
- Increase by one liter was associated with 13.5% reduction in milk set aside for home consumption
- 5.3% of households were setting aside an average of 1 liter or more a day

# Sale vs Consumption Points: Animal-source Foods







## Relationship between HH decision-makers, receiving SBC on nutrition, and sale amount

- Households with women participating in decision-making about whether/when to sell milk production set aside 18% less milk than HHs where women were not participating in decision-making ( $6.94e-09^{***}$ )
- Households that reported receiving training on nutrition set aside 6.68% less milk than HHs that did not receive training on nutrition ( $0.023266^*$ )



# Imperative: Consider the Consumption Points

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# Conclusions

- Frequency of milk consumption increased from baseline
- Milk productivity increased, especially with adoption of improved animal husbandry practices
- Quantity of milk consumed remains a challenge
- Increased production and increased linkages may result in lower quantities set aside for home consumption

# Next Steps

- Run analysis again with 2018-2019 program data
- Look into preference for sale vs. consumption via qualitative methods
  - Understand if HH food purchasing for nutrient-rich foods is increasing
- Look into SBC strategies aimed at increasing quantity of consumption vs. frequency of consumption

Thank you!

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