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Introduction

India

- World's largest milk producer - 22%
- Cattle population - 193 M
- Milk yield- 187 Mt per year

Impacts of COVID 19

- Economy shrunk - 2.8 to 4.8 %
- Loss from dairy sector- 9 Mil.\$
- Farm level study- not yet done
- Factors: Feed, Milk & Marketing

Aim of the study

To analyze and understand impacts of COVID-19 on dairy farming especially:

- Feeding
- Milk yield
- Herd size
- Long-term effects

Results and discussion

Feed acquisition

= Problem after lockdown

- Dry forage: + 13% of farmers
- Lakeside grazing: + 13%
- Lakeside cutting grass: + 8%
- Concentrate: + 6%

Reason

- Movement restrictions



Fig. 2 Dairy cow grazing in the lake areas of Bellanduru, Bengaluru, India

Herd size

- 31% - decreased herd size
- 30% - selling lactating cows
- 5% - selling all cows

Reasons

- Feed - high price & unavailability
- Decrease of milk price

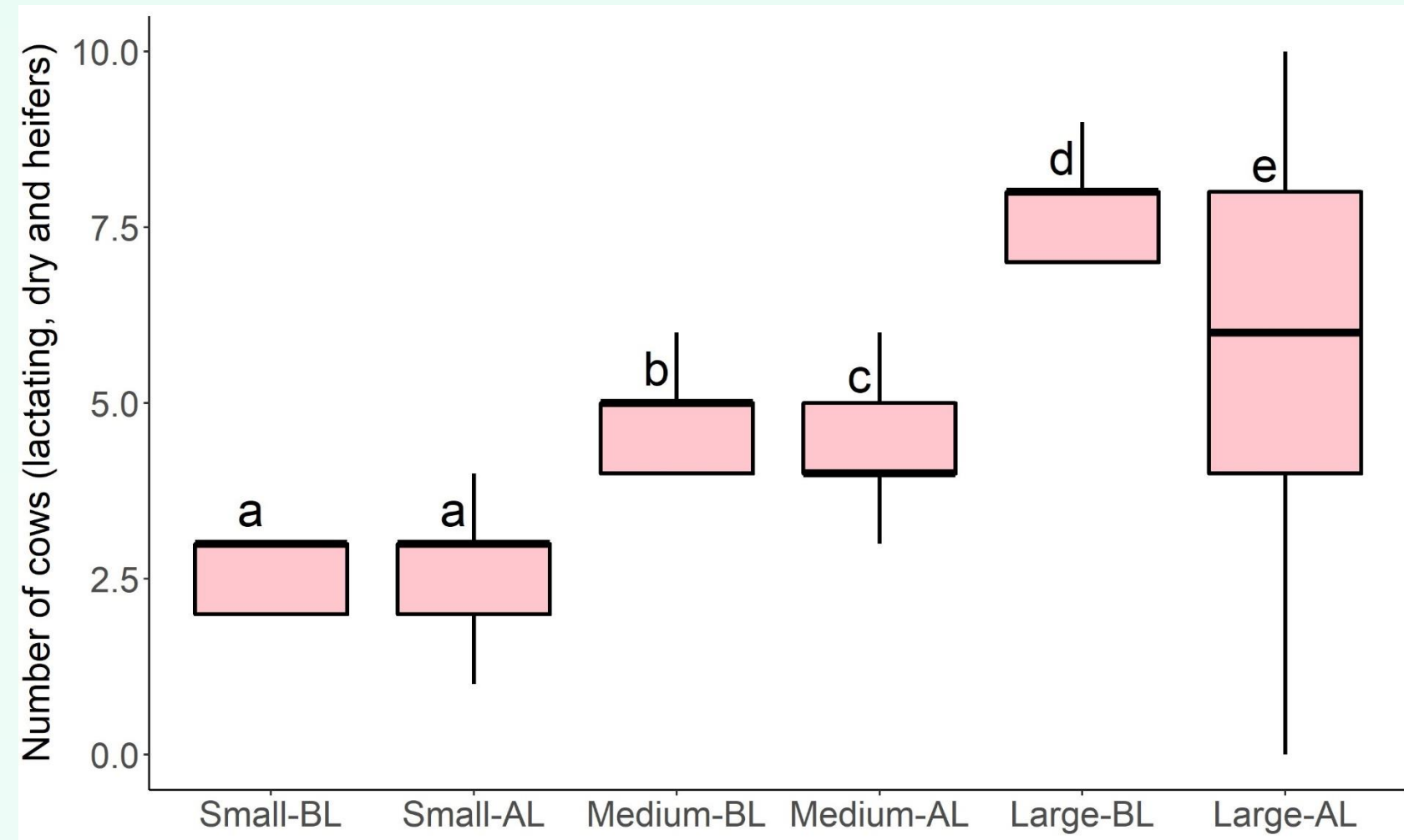


Fig. 3 Number of lactating & dry cows plus heifers before (BL) and after lockdown (AL) on small, medium and large dairy farms in Bengaluru. Different letters indicate differences at $P < 0.05$.

Milk yield

- 26% decrease compared to pre-Covid level ($P < 0.05$)

Reasons

- Selling of lactating cows
- Early drying of lactating cows
- Lower amount of feed offer

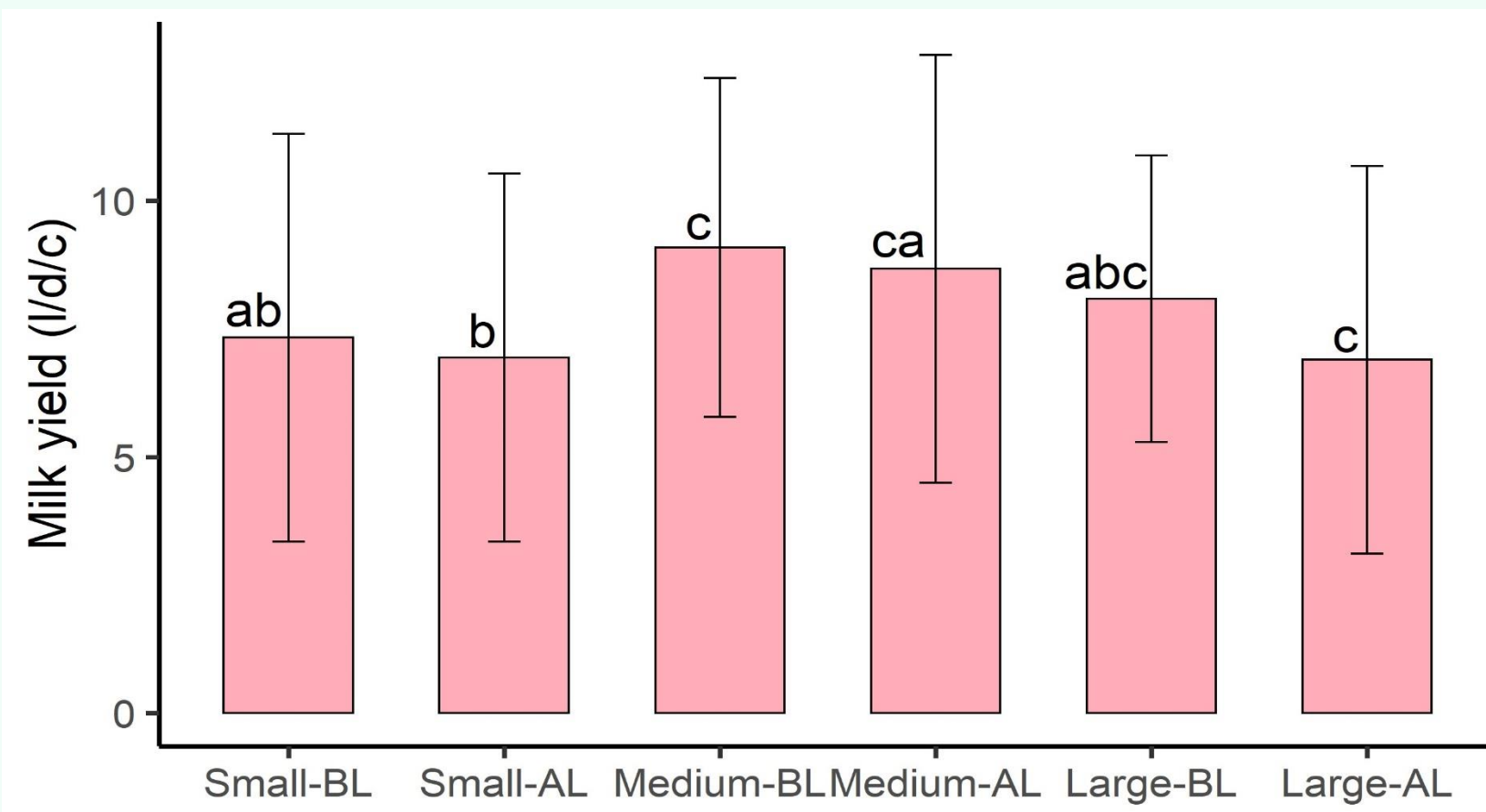


Fig. 4 Milk yield before (BL) and after lockdown (AL) on small, medium and large dairy farms in Bengaluru. Different letters indicate differences at $P < 0.05$.

Methodology

Study area

- 2 districts in Bengaluru, India

1st interview

- Jan to Mar 2021 (Before lockdown)

2nd interview

- Aug to Sep 2021 (After lockdown)

583 dairy animals

- Milking: 80%, Dry: 19% & Heifer: 1%

129 dairy farmers

- Small: 40%, Medium: 42% & Large 18%

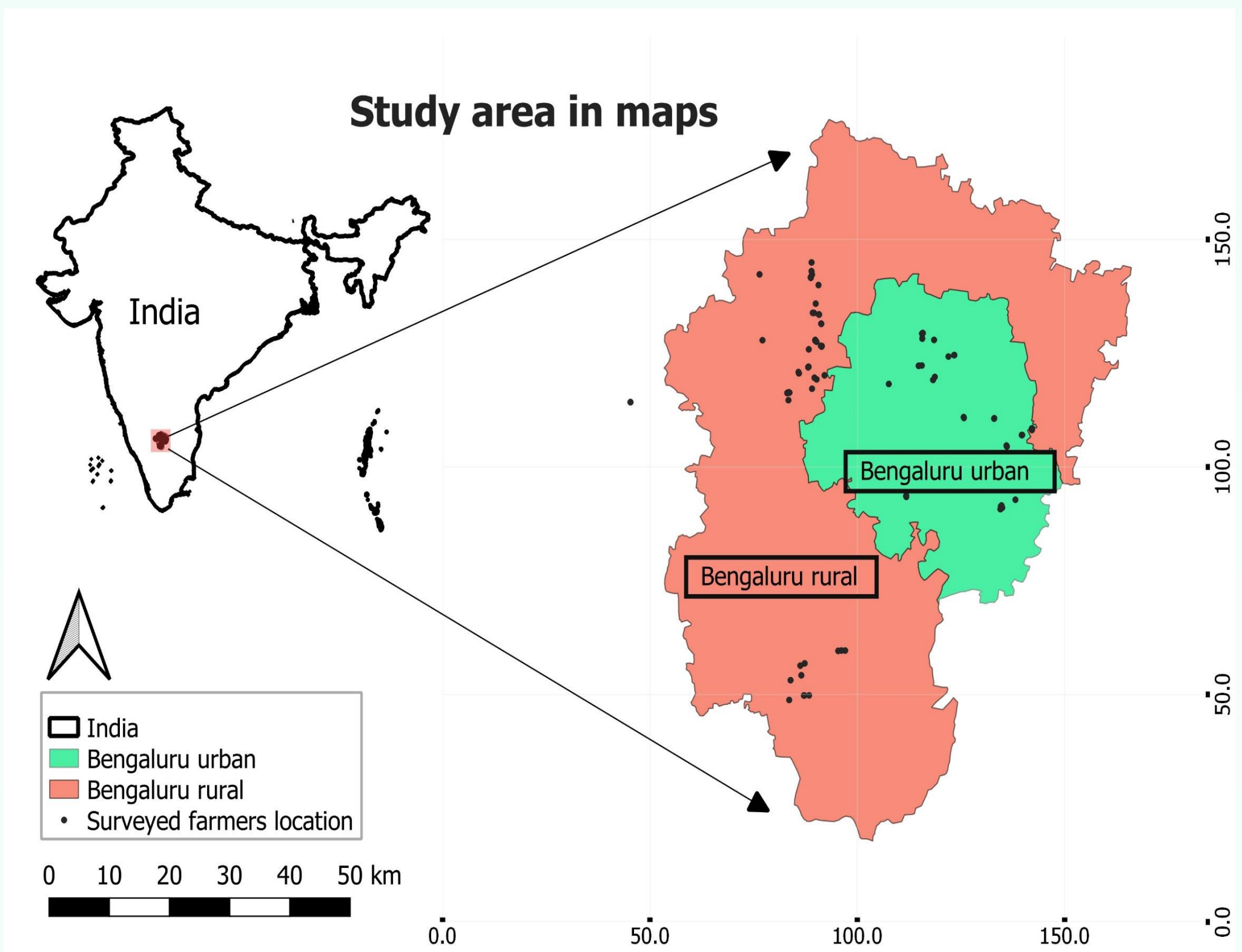


Fig. 1 Location of the 129 surveyed dairy farms in Bengaluru

Highlights

Major impacts of COVID-19 on dairy farming:

- Increase**

 - ☐ Feed costs
 - ☐ Selling cows
 - ☐ Early drying
 - ☐ Marketing difficulties
 - ☐ Management problems

- Decrease**

 - ☐ Milk yield
 - ☐ Milk price
 - ☐ Herd size
 - ☐ Public land forage
 - ☐ Dry forage availability

Long-term effects

Table 1: Problems due to COVID 19 as experienced by dairy farmers before and after lockdown in Bengaluru (n=129)

Aspect	Reply	%
Milk marketing problems (1st week of lockdown)	No	78
	Yes	22
Milk marketing problems (After lockdown)	No	90
	Yes	10
Farm management problem (1st week of lockdown)	No	22
	Yes	78
Farm management problem (After lockdown)	No	80
	Yes	20

Main challenges after lockdown

- Reduced milk price : + 36% of farmers
- Higher feed costs: + 24 %
- Milk marketing problems: + 12 %

