

Dairy intensification and grassland access for livestock: A comparative study of India and Bangladesh

Braja Swain¹, Dhiraj Singh², Nils Teufel³, Lucy Lapar⁴ and Alok Jha²



Photo credit: Braja Swain

Introduction

- ❖ Dairying is one of the most important sources for rural livelihood security and more than 60 per cent of population depends on it.
- ❖ The milk production is concentrated both in rain-fed and irrigated crop-livestock farming system in India.
- ❖ More than 80 per cent of milk is produced by small and marginal farmers.
- ❖ Grazing and stall feeding is the main source of feed for dairy animals among small and marginal farmers as commercial feed is not economical for them.
- ❖ However, access to grass land is declining over the years due to urbanisation, construction of roads and railways.
- ❖ Dependency on grazing varies by farming system, market intensification and agro-ecology.
- ❖ Objective of this paper is examine the level of access to grassland for livestock feed by level of market intensification.

Materials and methods

- ❖ Three sites were selected (Karnal, Udaipur and Dinajpur) from two countries with response to diverse mixed farming system.
- ❖ Karnal (IND-1) is considered as high intensification (both agriculture and livestock), while Dinajpur is considered as medium and Udaipur as low intensification level.
- ❖ From each site, eight villages were selected randomly bases on GPS method.
- ❖ Twenty households (HHs) were selected from each village, resulting 160 HHs from each site and total 480 HHs.
- ❖ HHs were divided into four wealth categories which were created for each village based on land and livestock ownership.
- ❖ Simple tabulation method were followed to analyse the survey data.

Results

- ❖ The results show that in high intensity zone, farmers have less access to grazing land; though there is an increase in milk yield but the cost of production also goes up.

Breeds	IND-1	BD	IND-2
Cattle, local	12 (2)	88 (3)	48 (2)
Cattle, cross	34 (3)	4 (2)	1 (5)
Buffalo	91 (5)	1 (3)	28 (2)
Goat	1.3 (3)	52 (3)	53 (5)
Sheep	0	3 (2)	2 (4)
Poultry	0	52 (11)	1.3 (5)

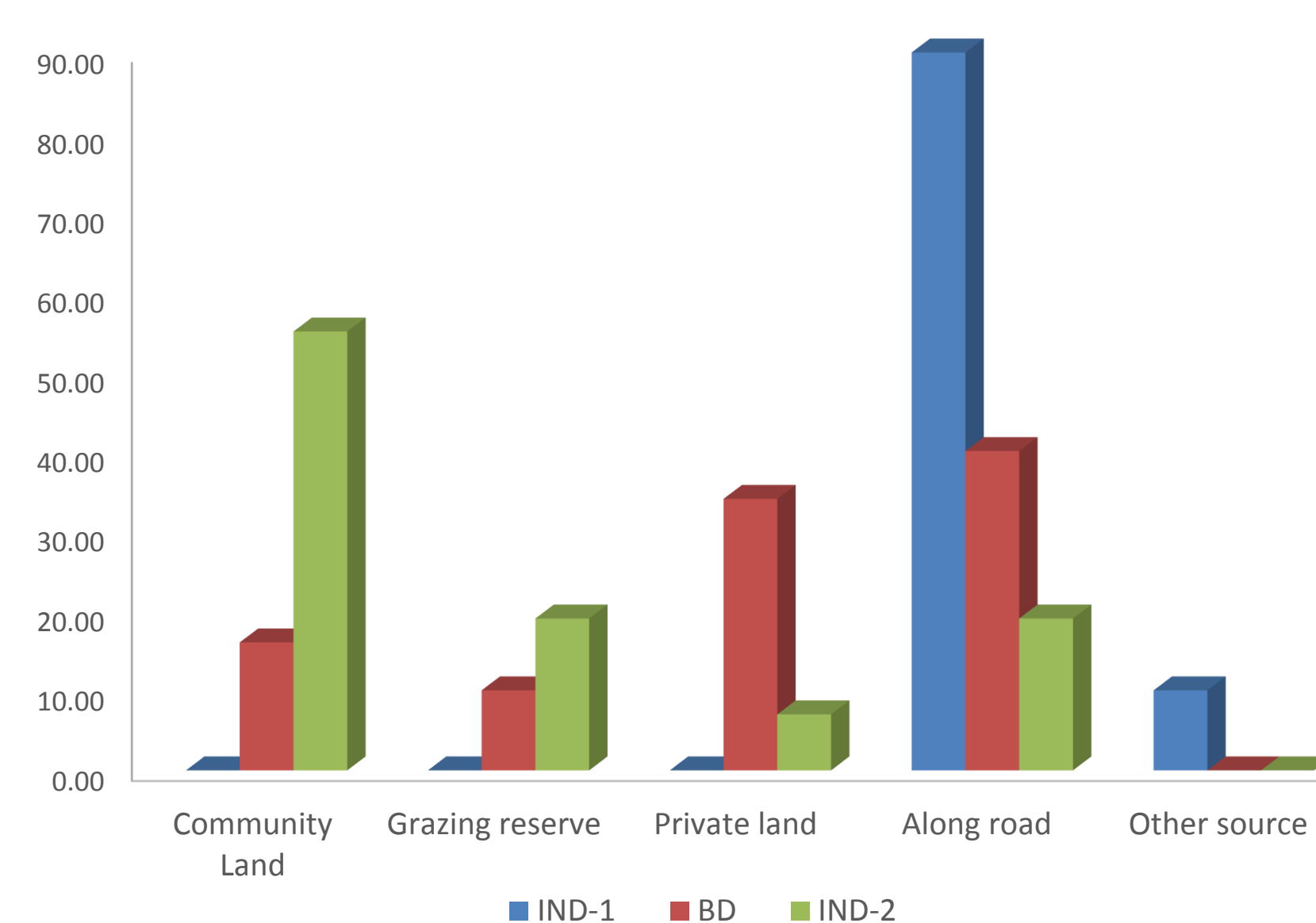


Figure 1: Sources of grazing for dairy (%)

Type of feeds	IND-1	BD	IND-2
Open grazing	0	11	14
Stubble Grazing	0	3	2
Rice straw	14	57	0
Wheat straw	52	0	15
Maize Stover	0	3	68
Green fodder	17	15	1
Concentrate	17	11	0
Avg. intake (kg/d)	11	5	4.7

Breeds	IND-1	BD	IND-2
Cattle, local	3.8	1.5	1
Cattle, cross	6.5	4	0
Buffalo	5.5	0	2
Goat, local	0	0	0.4

Research into use

- ❖ Buffalos are the major livestock breed in high intensity zone while it is the local cattle both in low and medium intensity zone.
- ❖ High dairy intensity zone farmers have less access to any grazing land.
- ❖ Community land contributes major share of grazing for livestock in low intensity zone while it is grass along road/river sides.
- ❖ In low intensity zone, farmers don't have better access to market and as a result more pressure on grazing land.
- ❖ Milk yield is found to be lower in low intensity zone as they only depend on grazing.
- ❖ Focus should be on low and medium intensity zones to increase the total biomass production.



¹ International Livestock Research Institute, Hyderabad, India
² International Livestock Research Institute, New Delhi, India
³ International Livestock Research Institute, Nairobi, Kenya
⁴ International Livestock Research Institute, Hanoi, Vietnam

