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Case study: Relation of herd size to annual income

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Abstract
The present study was conducted on 120 women dairy farmers selected from 8 villages of Mathura
district to assess the Relation of Herd Size to Annual Income the data were collected through pre-tested
structured interview schedule by holding personal interview with the dairy farmers during 2016-17. The
result revealed that 56.67 per cent had large herd size, 23.33 per cent had medium herd size, and 20.00
per cent respondents had small herd size. In case of annual income of the respondents the result reveals
that 43.33 per cent respondents had high income levels, 40.00 per cent had medium income and 16.67
per cent of respondents had low income. Similar results were reported by Ali (2011) and Kumar (2003).

Keywords: Herd size, annual income, dairy farmers, respondents, interview schedule

Introduction
Meaning of herd size is that a group of same species domestic animals lived together and
feed together, large herd size of milking animals leads to higher milk production of total
milk, which in turn leads to high amount of sold milk. Agriculture is considered as a critical
sector to the economy as it contributes around 17 per cent to the total GDP provides
employment to 58 per cent of the total population of India, if we consider increasing cost of
cultivation then we will realize that, total annual income of the farmers is not increasing at
that cost. Government had constituted an inter–ministerial committee in April, 2016 to
examine issues relating to doubling of farmers income, and recommended strategies to
achieve the same.

Methodology
This study was conducted in Mathura district of Uttar Pradesh which is purposively selected
for the study. Mathura geography has a major influence on its climate and topography.
Mathura lies between the coordinates 27°41'North latitude and 77° 41 ' East longitudes. This
city in Uttar Pradesh is located on the beautiful banks of the river Yamuna. Mathura,
popularly known as Brajbhoomi, is 145 km south of the capital city, New Delhi. The holy
city is just 50 km from Agra, where the beautiful Taj Mahal is located. Total population of
Mathura district is 2,541,894 in which 70.32 per cent rural population and 29.68 per cent
urban population and constitutes 1.27 percent of total population of Uttar Pradesh Mathura
was an economic hub, located at the junction of important caravan routes. Today, it is a fast
expanding city with over 2.5 million residents. Mathura has been divided into four tehsils
and ten Blocks with Geographical Area of 3340 Sq Km. Mathura had 89 Nyaya Panchayat
479 Gram Panchayatsand 736 Revenue villages. The study was conducted during 2016-
2017, to know the personal and socio-economic characteristics and extent of adoption of
recommended improved dairy management by the practices by the famers. 8 villages were
selected from the district randomly. From each village 15 respondents were selected on
random sampling techniques, thus the total sample constituted for the study was 120. The
information was gathered from the respondents personally using pre tested structured
interview schedule. The gathered information was analyzed by using appropriate statistical
tools like frequency, percentage, mean, standard deviation etc.

Herd size
It refers to the total number of cattle, buffaloes own by the respondent at the time of
investigation. Herd size of respondents will be classified on the basis of mean and standard
deviation.

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SL. No.	Category	Number
1.	Small	<8 animals
2.	Medium	8-10 animals
3.	Large	>10 animals

Annual income

It is operationally defined as the income generated from various sources in one year by the respondent family at the time of investigation. Annual income of respondents was categorized on the basis of mean and standard deviation.

SL. No.	Category	In Rupees
1.	Low	< 2 lakhs
2.	Medium	2-3 lakhs
3.	High	>3 lakhs

Results and Discussion

It was revealed from Table 1 That 56.67 percent of the respondents were having large herd size and possess more than 10 animals. Murrah breed of buffalo and graded Murrah were the first choice of the respondents because it is best suitable to climatic conditions. Among cattle breeds Sahiwal and Jersey were also preferred by the respondents because of their high yielding potential.

Table 1: Distribution of respondents according to their Herd Size (n= 120)

SL. No.	Variable	Category	Frequency	Percentage
7.	**Herd size** Mean: 10.66 SD: 0.191	Small (< 8 animals)	24	20.00
		Medium (8-10 animal)	28	23.33
		Large (>10 animals)	68	56.67

Annual income

The mean annual income Table 2 the respondents was 3.25 lakh. The data state that 43.33 per cent of respondents were in high income levels, 40.00 per cent were in medium income and only 16.67 per cent of respondents were in low income respectively.

Table 2: Distribution of respondents according to their Annual Income (n= 120)

Sl. No.	Variables	Category	Frequency	Percentage
6.	**Annual income** Mean:3.25 lakhs SD: 0.091	Low (< 2.00 lakhs)	20	16.67
		Medium (2- 3 lakhs)	48	40.00
		High (> 3 lakhs)	52	43.33

Conclusion

The average herd size among the respondents of the study area was 8-10 dairy animals per household. Milch breed like cross breed murrah and among cattle sahiwal and jersey were maximum reared by the livestock owners which is quite encouraging especially under the condition where large majority are medium and small farmers. A clear interpretation of this results provide empirical support to the observations made by Ghosh *et al* (2001) [6], and Sah (2005) [7] who reported majority of the respondents possessing medium herd size in their respective studies. In contrast, Kannan (2002) [8] found that majority of the respondents had herd size of 16-12 dairy animals. This describes that Indian dairy entrepreneurs especially under rural settings are still living under vulnerable condition. The good income level of respondents in the study area might be due to the scientific dairy farming, adequate input facilities, efficient marketing channel and enterprising skill prevalent. Similar results were reported by Ali (2011) [9] and Kumar (2003) [10].

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