

3 Results and Analysis

3.1 Descriptive statistics of household and income variables

The results show that bean-producing households had an average family size of 6.15 members (Table 1). On average, 2.42 members per household were actively involved in agriculture, indicating reliance on family labor alongside hired labor. The mean age of the farmers was 43.02 years, suggesting that production is mainly managed by middle-aged, experienced farmers. The average annual household income was NPR 1,041,800, of which agriculture contributed NPR 624,200, highlighting farming as a major income source.

Table 1 Descriptive statistics of household and income variables

Variable	Unit	Mean	SD	Min	Max
Family members	Number of members	6.15	1.81	2	10
Active members involved in agriculture	Number of members	2.42	1.14	1	5
Age	Years	43.02	6.03	29	67
Total income	NPR	1,041,800	499,176	160,000	4,500,000
Agriculture income	NPR	624,200	563,677	60,000	3,200,000

Note: SD = Standard deviation; Min = Minimum; Max = Maximum; NPR = Nepalese Rupee

3.2 Cost of production of French bean

The results reveals that the variable costs accounted for almost the entire cost of cultivation (99.64%), indicating a labor- and input-intensive production system. Among the variable cost components, labor cost was the dominant expense constituting 45.32% of the total cost (Table 2). This was followed by expenditures on organic manure (24.71%), land preparation (14.94%), and seeds (14.66%), suggesting that soil fertility management and field operations also require substantial investment. It emphasizes that production costs are largely driven by variable inputs, particularly labor, and that any increase in labor efficiency or access to improved inputs could reduce the cost of cultivation and improve farm profitability

Table 2 Cost of production of French bean per ropani

Particulars	Cost (NRs.)	Percentage (%) of total cost
Variable cost		
Seed	1,665	14.66
Organic manure	2,805	24.71
Land preparation	1,696	14.94
Labour cost	5,144	45.32
Total variable cost (A)	11,310	99.64
Fixed cost		
Land tax	40	0.36
Total fixed cost (B)	40	0.36
Total cost (A+B)	11,350	100

3.3 Price of French beans

It reveals that the average farmgate price of French beans was NRs. 202/kg while the market price was NRs. 260/kg, resulting in a price margin of NRs. 58/kg (Table 3). Price variability was greater at the farm level than in the market, highlighting challenges in price stability and the need for better market access and information for the farmers.

Table 3 Price of French beans

Price	Observations	Mean	Std. Dev.
Farmgate price (Rs)	100	202	15
Market price (Rs)	100	260	7.5