

The secondary data were gathered from a variety of published and unpublished materials from different sources. These materials contain annual reports from Ministry of Agriculture and Livestock Development (MoALD), Nepal Agriculture Research Council (NARC), and District Agriculture Development Office (DADO), as well as research papers, articles, and journals.

2.4 Data analysis

The gathered data were organized, coded and analyzed using Microsoft excel. Descriptive statistical tools were used to summarize the characteristic of respondents and their production practices. Frequency and percentage analysis were used to describe the socioeconomic characteristics, tunnel structures, irrigation methods, marketing channel and income categories. Results were presented using tables, figures, and graphical representations.

The study mainly used descriptive analysis because the objectives was simply to assess the current status, production practices, income patterns, and perceived livelihood contribution of tunnel based vegetable farming among surveyed households.

3 Results and Analysis

3.1 Socio-demographic information of the respondents

The socio-demographic information of the respondents is presented in (Table 1). Among the 100 respondents, 68% were male and 32% were female farmers. The majority of the respondents (40%) belonged to active age group of 30-50 years followed by those between 50-70 years (30%), 20-30 years (20%), and above 70 years (10%).

Table 1 Socio-demographic information of the respondents

Demographic characters	Category	Percentage (%)
Gender	Male	68
	Female	32
Age group	20-30	20
	30-50	40
	50-70	30
	70 above	10
Literacy status	Illiterate	22
	Literate	18
	Below SLC (School Leaving Certificate)	34
	Plus 2	19
	Graduate	7
Occupation	Farming	60
	Business	10
	Service	9
	Wage labour	13
	Others	8
Total land under plastic tunnel cultivation	0.05-0.25 ha	37
	0.25-0.50 ha	40
	More than 0.50 ha	23

Regarding educational status, most respondents had basic education. About 34% had education below the School Leaving Certificate (SLC) level, 19% had completed higher secondary education, 7% had a university degree, while 22% were illiterate.

In terms of occupation, a significant 60% of the population were engaged in farming activities as primary occupation while a relatively smaller percentage were engaged in wage work, businesses, and services, at 13%, 10%, and 9%, respectively. In terms of land allocation for tunnel cultivation, 40% of farmers cultivated vegetables on small to medium-sized plots (0.25-0.50 ha), while 37% cultivated on less than 0.25 ha and 23% cultivated on