The Pharma Innovation Journal 2023; SP-12(12): 485-491

www.ThePharmaJournal.com

The Pharma Innovation

ISSN (E): 2277-7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2023; SP-12(12): 485-491

www.thepharmajournal.com
Received: 17-10-2023
Accepted: 21-11-2023

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To study the socioeconomic status of farmers in Madhya Pradesh who have benefitted from the agri clinic and agri business centres scheme

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Abstract
Agri Clinic and Agri Business Centre Scheme govern by The Department of Agriculture & Farmers Welfare, Ministry of Agriculture and Farmers Welfare, Govt. of India has formulated the Central Sector Scheme with an objective to mobilize a medium long-term debt financing facility for investment in viable projects relating to post-harvest management Infrastructure and community farming assets through incentives and financial support in order to improve agriculture infrastructure in the country.
For conduction of the study randomly select 100 sample farmers for successfully conduction of the research. Socio Economic profile majorly focused on the Land Holding capacity, Age, Education, Farming Experience, Income and Occupation. According to the survey average cultivating land holdings of the farmers is 3.70 Hectare, Majority of farmers having the Age between 30 to 50 years, 38 percentage of farmers having high school education.

Keywords: Socio economic, percentage, chi-square test

Introduction
Agri-Clinics are intended to provide farmers with expert advice and services on a variety of topics in order to promote crop/animal output and farmer revenue. Agri-Business Centres are commercial agri-venture units founded by trained agricultural specialists. These operations may include farm equipment maintenance and custom hiring, the sale of inputs, and other agricultural and allied services, such as post-harvest management and market linkages for revenue generation and entrepreneurship development. The AC and ABCs is highly beneficial to all the farmers for were the we find selected beneficiaries from AC&ABC schemes in Madhya Pradesh

Research methodology
Sampling Design
A multistage purposive sampling procedure utilize to choose the Respondents.

Selection of beneficiary farmers
24 farmers from each chosen district who had profited from agricultural initiatives were chosen at random in order to assess the efficiency of the agribusiness centres and clinics. As a result, 120 farmers who might benefit from the research were chosen. There are 36 small farmers and 60 marginal farmers listed in table 1
Because there are so few large farmers and they receive so little benefit from this programme, the third numerical category in this table has been combined with the medium and large categories. There are 24 example farmers in this group. Large farmers and the AC & ABCs programme do not directly interact.

Table 1: Selected Beneficiary farmers in selected study area

S. No.	Particulars	Sample Farmers
1	Marginal	60
2	Small	36
3	Medium and Large	24
	Total	120

Source: Ministry Government of India

Analytical methods and tools

Percentage

In regards to training requirements, trainee and trained agriculture graduate profiles, programme enrolment elements, and training institute facilities, scores, percentages, frequencies, and averages will be employed. Additionally, the trainees' profile will be taken into account. Once the percentages are determined, the following formula will be used to give ranks:

$$\text{Percentage (\%)} = \frac{\text{No.of respondents (frequency)}}{\text{Total no.of respondents}} \text{ X } 100$$

In a similar manner, proportional weights for every element (including infrastructure and instruction) were employed in order to conduc0t research on the comments made by trainees on the training institutes. The proportion of weights determined by applying the formula that follows:

$$\text{Percentage Weight} = \frac{\text{Scores obtained}}{\text{Total no.of scores}} \text{ X } 100$$

Chi – Square Test

As one kind of non-parametric test, the chi-square test is used to determine whether or not there is an association between two qualitative factors. Formulas like the one below can be used to perform an analysis on it:

$$x^2 = \sum_{i=1}^{n} \frac{O_i - E_i}{E_I}$$

Where,

O_i = The frequency seen
E_i = Anticipated occurrence
i = Any definite value (i = 0, 1, 2, 3……. n)
Degrees of Freedom
df = (r – 1) (c – 1)

We conclude that the test lacks statistical significance if the calculated chi-square value is smaller than the value indicated in the chi-square table or the theoretical value, and vice versa.

Result and Discussion

Socio-economic Profile of beneficiary farmers

Data on various socioeconomic factors, including land ownership, age, education, farming experience, crop-growing season, yearly average income, occupation, and knowledge of the AC and ABCs scheme, were gathered from a sample of beneficiary farmers in the research field sequentially to study the socioeconomic profile of these farmers. Findings from the analysis using averages and percentages on the data acquired in this way are shown in the table below.

The cultivated land holdings in the various farm sizes are described

Table 2A: Detail description of the cultivated land holdings in the group of farms of varying sizes

S. No.	Specific	The Forms Group's Size			Total
		Marginal	Small	Medium & Large	
1	Farms Group size	60 (50)	36 (30)	24 (20)	120 (100)

Note: Figures in parenthesis are percentage

Table 2B: Detail description of the cultivated land holdings in the group of farms of varying sizes

S. No.	Specific	The Forms Group's Size			Average
		Marginal	Small	Medium & Large	
1	Average size of cultivated land Holdings in hectare	0.94 (50)	1.34 (30)	5.79 (20)	3.70 (100)

Note: Figures in parenthesis are percentage

The majority (50.00%) of the recipients' farmers had tiny land holdings, then marginal land holdings (30.00%), medium and big (20.00%), and then large (50.00%) land holdings, according to Table 2A and Fig. 1 A. Possession of marginal land holdings may make it simpler to use modern technology. Possession of a small or marginal amount of land may result from the division of a parcel of land owing to family separation, whereas a medium or large amount of land may result from the preservation of ancestral property. Following the observation of the respondent's cultivated land, it was discovered that the average cultivated land of marginal, small, medium, and large farmers was, respectively, 0.94 h, 1.34 h, and 5.79 h.

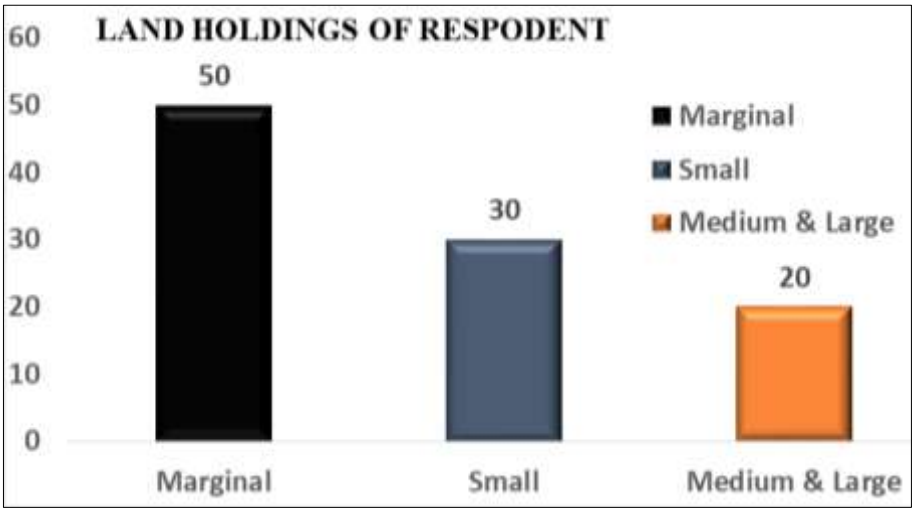

Fig 1A: The cultivated land holdings in the various farm sizes are described

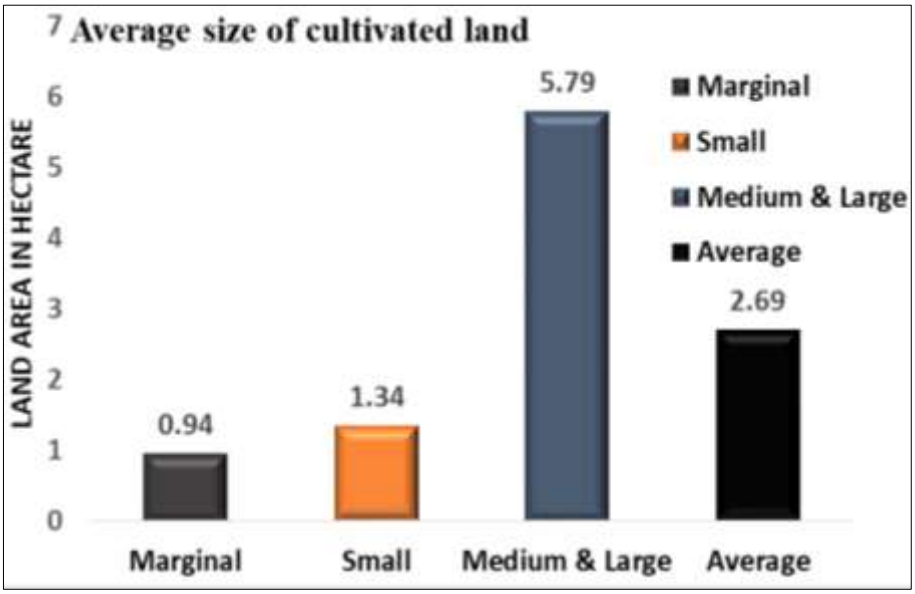

Fig 1B: Description of the average size of cultivated land

Distribution of respondents according to their age

Three categories were created from the responses according to chronological age: young, middle age, and old age. Table 3 and Fig 2 reported the findings.

Table 3: The age distribution of the responders

S. No.	Age	Respondents (Percentage)			
		Marginal	Small	Medium & Large	Total Percentage
1.	Below 30years	18 (30.00)	10 (27.78)	8 (33.33)	36 (30)
2.	Between 30 to 50 years	30 (50.00)	18 (50.00)	12 (50.00)	60 (50)
3.	Above 50 years	12 (20.00)	8 (22.22)	4 (16.67)	24 (20)
	Total	60 (100)	36 (100)	24 (100)	120 (100)

Note: Figures in parenthesis are percentage

From this table 3, it could be concluded that, out of the total respondent's majority (i.e., 50 percent) of respondents come between 30 to 50 yrs., following other 30 percent respondents fall in the below 35 yrs., and 20 percent respondents fall in the age of above 50 yrs.

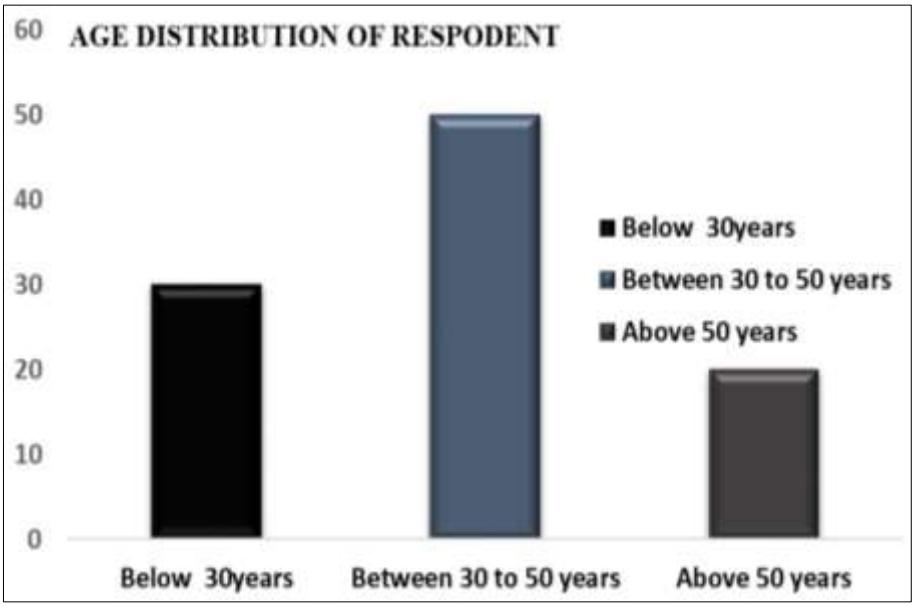

Fig 2: Distribution of respondents according to their age

3 Distribution of respondents according to their education

The participants were split up into seven categories based on their level of education levels include none, elementary, middle, high school, intermediate, graduate, and postgraduate. Table 4 and Fig. 3 show the findings.

Table 4: Distribution of respondents according to their education

S. No.	Education	No of Respondent (Percentage)			Total Percentage
		Marginal	Small	Medium & Large	
1.	Illiterate	3 (5.00)	2 (5.56)	1 (4.17)	6 (5.00)
2	Primary level	5 (8.33)	4 (11.11)	2 (8.33)	11 (9.17)
3	Middle school	10 (16.67)	6 (16.67)	3 (12.50)	19 (15.83)
4	High school	16 (26.67)	14 (38.89)	8 (33.33)	38 (31.67)
5	HSC	12 (20.00)	7 (19.44)	6 (25.00)	25 (20.83)
6	Graduate	8 (13.33)	2 (5.56)	3 (12.50)	13 (10.83)
7	Post Graduate	6 (10.00)	1 (2.78)	1 (4.17)	8 (6.67)
	Grand Total	60 (100)	36 (100)	24 (100)	120 (100.00)

Note: In parenthesis, percentages are displayed.

It might be deduced from Table 4. and Fig. 3 that marginally under one-third of the beneficiary farmers had a high school education (31.67%), with the remainder having an intermediate education (20.83%), less than a high school education (15.83%), a graduate degree (10.83%), a primary education (9.17%), a postgraduate degree (6.67%), or no education (5.00%). It's evident that a larger percentage of farmers just completed high school and chose not to pursue additional education. This may be due to their average annual income, a lack of comprehension of the importance of education, or absence of backing from family members. In order to raise the level of education, efforts must be made to educate the illiterate and school dropouts through adult education and functional literacy programmes in villages.

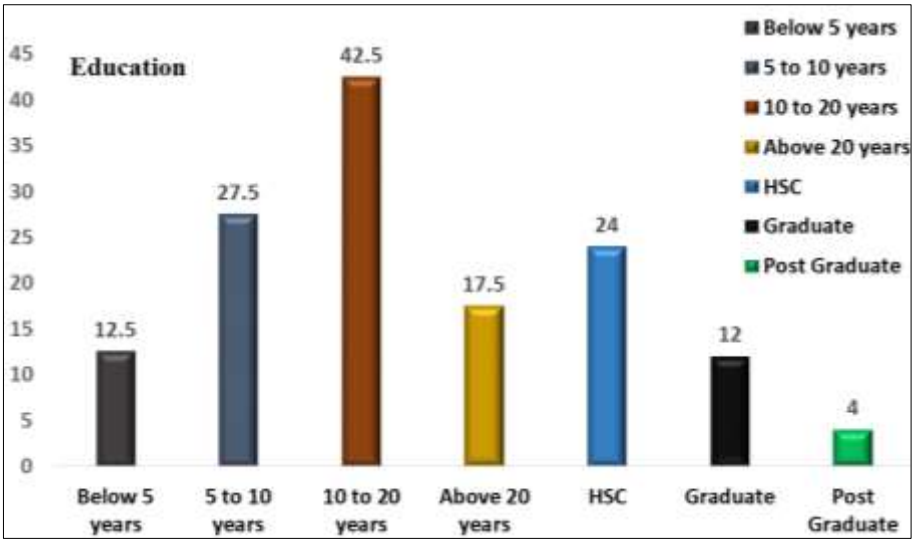

Fig 3: Distribution of respondents according to their education

Respondents' distribution based on farming experience

Table 5: Distribution of respondents according to their farming experience

S. No.	Experiences	Respondents			
		Marginal	Small	Medium & Large	Total Percentage
1.	Below 5 years	8 (8.33)	5 (13.89)	2 (8.33)	15 (12.5)
2.	5 to 10 years	17(28.33)	10 (27.78)	6 (25.00)	33 (27.5)
3.	10 to 20 years	24 (40)	15 (41.67)	12 (50.00)	51 (42.5)
4.	Above 20 years	11 (18.33)	6 (16.67)	4 (16.67)	21 (17.5)
	Total	60 (50)	36 (30)	24 (20)	120 (100)

Note: Percentages are shown in parenthesis

It is clear from Table 5 and Fig. 4 that the majority of beneficiary farmers (42.5%) had 10–20 years of farming experience, followed by 27.5% of respondents with 5–10 years of experience, 17.5% of farmers with more than 20 years of experience, and 12.5% of beneficiaries with less than 5 years. It might be concluded that contemporary agricultural methods could be adopted more effectively using their experience.

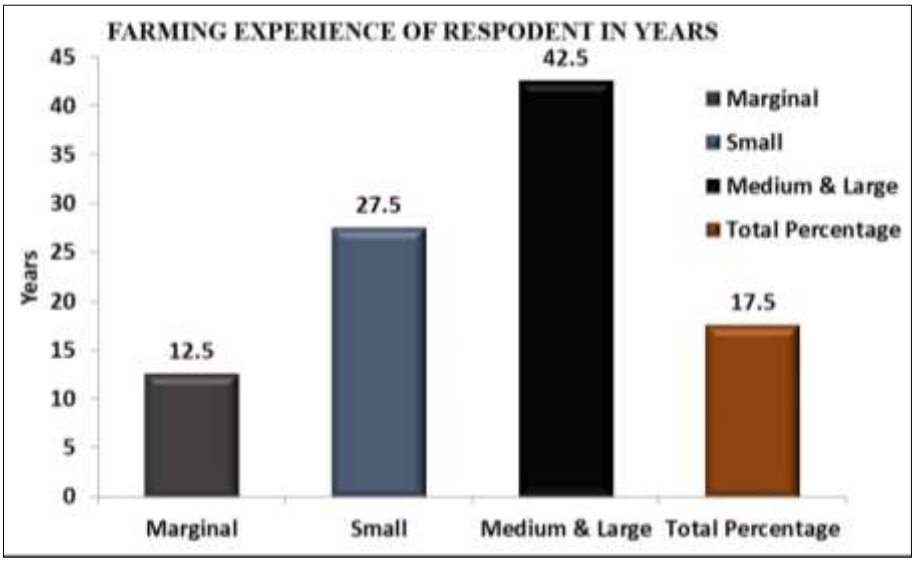

Fig 4: Respondents' distribution based on farming experience

Respondents' distribution based on the growing crop season

Table 6: Respondents' distribution based on the growing crop season

S. No	Season	Respondents (Percentage)			
		Marginal	Small	Medium & Large	Total
1.	Kharif	7 (11.67)	3 (8.33)	2 (8.33)	12 (10.00)
2.	Rabi	8 (13.33)	4 (11.11)	3 (12.50)	15 (12.50)
3.	Both	45 (75.00)	29 (80.56)	19 (79.17)	93 (77.50)
	Total	60 (100)	36 (100)	24 (100)	120 (100)

Note: Percentages are shown in parenthesis

The above Table 6 indicates a majority of (i.e., 77.5 percent) of respondents were growing crop in both season (Kharif and Rabi). Only 12.5 percent farmers were growing crop in Rabi and 10percent farmers were growing crop in Kharif season. In Kharif season farmers were took crops like maize, rice, chilly, castor, and sugarcane. In Rabi took crops like pea, maize, wheat, vegetables etc. In both season farmers took crop like cotton, watermelon, vegetables etc.

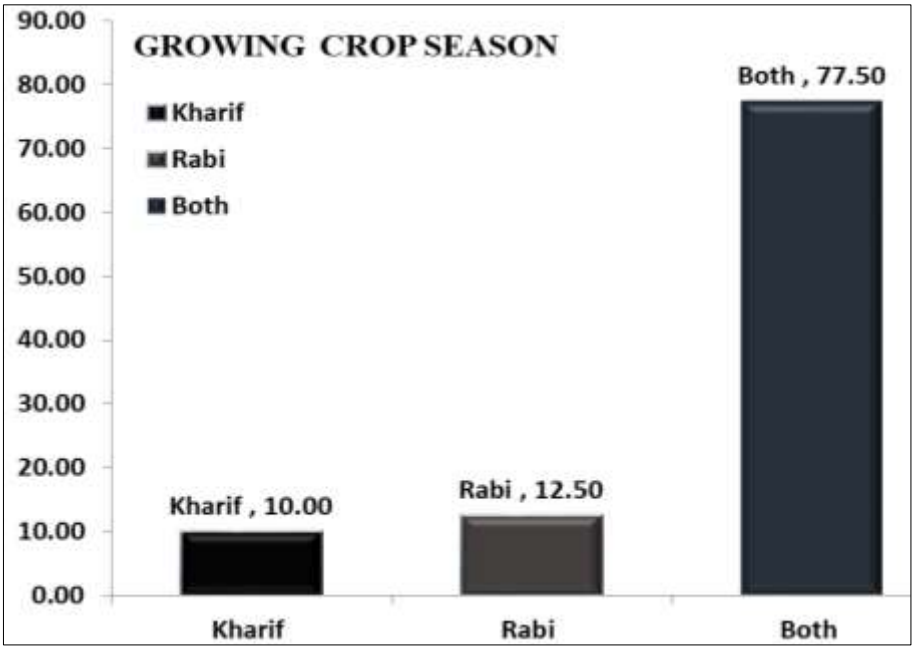

Fig 5: Growing crop Season

Distribution of sample income levels year-over-year beneficiary farmers (Rs/Yr)

Table 7: Distribution of sample income levels year-over-year beneficiary farmers (Rs/Yr)

S. No.	Income	Respondents (Percentage)			
		Marginal	Small	Medium & Large	Total
1.	Below 50000	5 (8.33)	3 (8.33)	1 (4.17)	9 (7.50)
2.	50001 to 100000	12 (20.00)	8 (22.22)	4 (16.67)	24 (20.00)
3.	100001 to 150000	40 (66.67)	16 (44.44)	10 (41.67)	66 (55.00)
4.	150001 to 200000	3 (5.00)	8 (22.22)	6 (25.00)	17 (14.20)

5.	Above 200000	0 (0.00)	1 (2.78)	3 (12.50)	4 (3.30)
	Total	60 (100)	36 (100)	24 (100)	120 (100)

Note: Percentages are shown in parenthesis

As seen in the above table, detailed details regarding the average annual salary (Rs/Yr) of respondents in the study area. A majority (i.e., 66 percent) of respondent's income fall in range of 1,00,001-1,50,000, following others 20percent belongs to range 50,001-1,00,000, 14.2 percent belongs to range 1,50,001-2,00,000, 7.5percent belongs to below 50,000 and 3.3percent. Belongs to range above 2,00,000. This indicate that majority of farmers had household income in range 2,00,001-5,00,000.

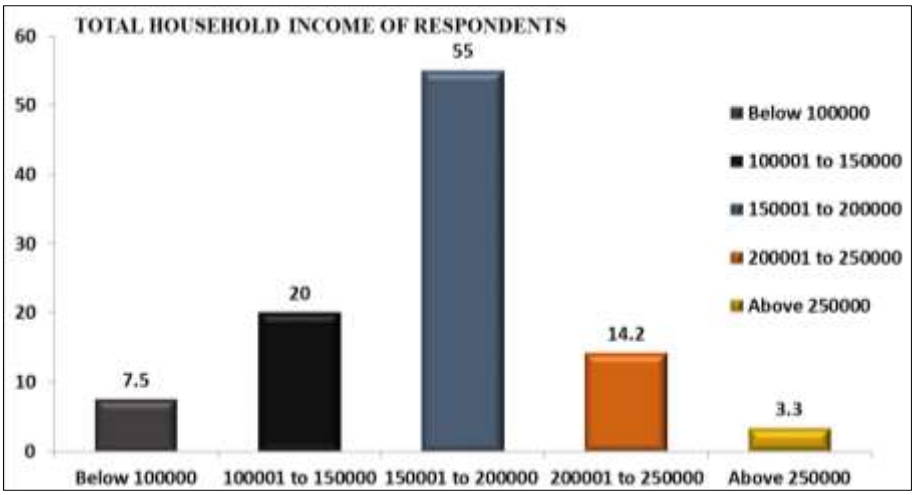

Fig 6: Distribution of Total household income of respondents

Beneficiary farmers are distributed based on their occupation

Table 8: Distribution of the beneficiary farmers according to their occupation

Experiences	Respondents (Percentage)			
	Marginal	Small	Medium & Large	Total
Agriculture	38 (63.3)	21 (58.33)	7 (29.17)	66 (55.00)
Animal Husbandry	12 (20.0)	6 (16.67)	5 (20.83)	23 (19.17)
Salaried	6 (10.0)	5 (13.89)	2 (8.33)	13 (10.83)
Business/Profession	4 (6.7)	4 (11.11)	10 (41.67)	18 (15.00)
Total	60 (100.0)	36 (100.00)	24 (100.00)	120 (100.00)

It is evident from the Table 8 and Fig. 7 that majority (55.00percent) of the sample beneficiary farmers do Agriculture and followed 19.17 percent of sample beneficiary farmers do animal husbandry, of the sample beneficiary farmers, 15.0% are business owners, and 10.83 percent have a salaried position.

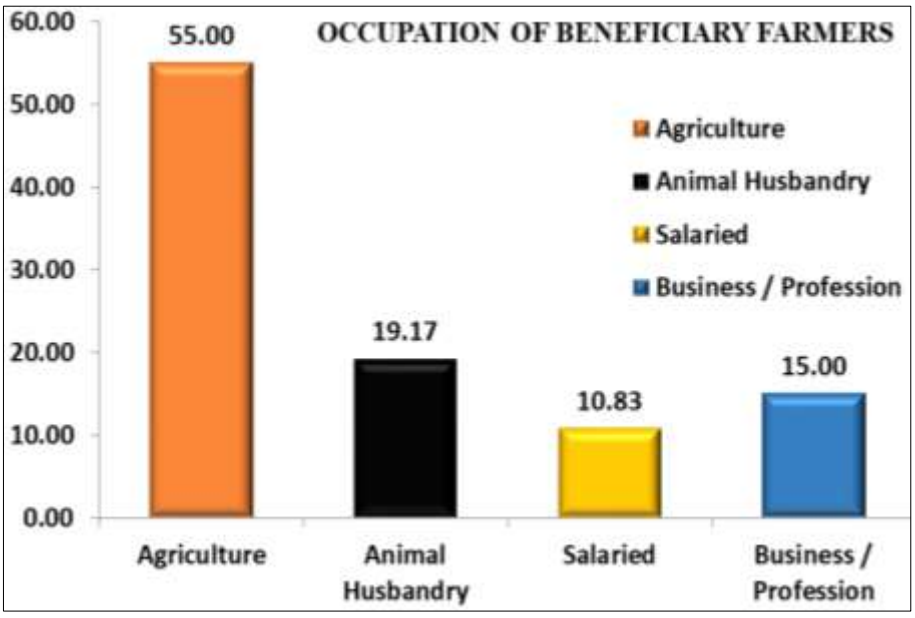

Fig 7: Distribution of the beneficiary farmers according to their occupation

Conclusion

Most of these young, ambitious grads have degrees, but they don't have the money to invest because they don't get enough subsidies and there isn't enough collateral security. As a result, the provision requiring loans with a lower interest rate and margin money need must be included immediately. For those who have finished their education in agricultural programmes and want to launch agricultural enterprises, a 44% subsidy is encouraging.

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