

**AGRICULTURAL DIVERSIFICATION AMONG THE FARMERS****H. C. Dudhatara<sup>1</sup>, J. K. Patel<sup>2</sup> and K. N. Raval<sup>3</sup>**

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**ABSTRACT**

*Agricultural diversification is slowly picking up momentum in favor of high value food commodities primarily to enhancement of income rather than the traditional concept of risk management. The nature of diversification differs across regions due to existence of wide heterogeneity in agro-climatic and socio-economic environments. It was considered interesting to delineate the key regions and sub-sectors of agriculture where diversification was catching up fast. Crops, livestock, horticulture and forestry constitute the core sectors of agriculture. Total 160 respondents were selected from sixteen villages belongs to Dhanera, Deesa, Vadgam and Lakhani talukas of Banaskantha district of Gujarat state. The data were collected by personal contact method with help of structured interview schedule and data were coded, classified, tabulated and analyzed in the light of objectives. The appropriate statistical methods were used for analysis of data. The result found that Vast majority of the respondents had medium to low level of crop diversification, had medium level of enterprise diversification and nearly three fourth of the respondents had medium to high level of agricultural diversification. Whereas, in case of nature of diversification two fifth of the respondents had diversified their agriculture by Shift from one crop to another crop from less remunerative crops to more remunerative crops both and majority of the respondents had diversified addition of new enterprises to exiting profile.*

**Keywords:** *diversification, enterprise, commodities, remunerative crops*

**INTRODUCTION**

Agricultural diversification as measured by increase in the percent of non-food crops has grown; whereas diversification as measured by the concentration indices has remained consistent in the recent decade (Patel *et al.*, 2021). There have been significant changes in the pattern of agricultural diversification at the regional level. Within a region, smaller sub regions or pockets of specialization in certain crops and crop-groups have emerged. Farms do not remain diversified and the usual notion of crop diversification as a risk management practice is also belied in the present study. The study also found certain kind of structural changes in all sub-sectors of agriculture: crop, livestock, and fisheries.

Crop diversification is intended to give a wider choice in the production of a variety of crops in a given area so as to expand production related activities on various crops and also to lessen risk (Saran *et al.*, 2020). Crop diversification in India is generally viewed as a shift from traditionally grown less remunerative crops to more remunerative crops, governmental policies and thrust on some crops over a given time, market infrastructure development and certain other price related supports, low volume high-value crops, higher profitability and also the resilience/stability in production

and soil problems. The crop sector is the principal income-generating source in agriculture followed by the livestock sector. It is depicted a steady diversification herewith replacement of food-grain crops with nonfood-grain crops. Several non-food-grain crops such as fruits, vegetables, and medicines have substituted mainly coarse cereals in the farmers' business for higher income.

**OBJECTIVE**

To identify the extent of agricultural diversification

**METHODOLOGY**

The present study was confirmed to "Ex-post Facto" research design as the independent variables were already operated in the study area. The multistage sampling technique was used for select a representative sample of respondents for present investigation. The present investigation was carried out in Banaskantha district of Gujarat state among the 14 talukas of Banaskantha district four talukas *viz.*, Dhanera, Deesa, Vadgam and Lakhani were randomly selected for the study. Four villages were randomly selected from each selected taluka. Thus, total 16 villages were selected. The proportionate random sample size was drawn from each village by multiplying the total number of farmers of each

village to 40 (desired sample for each taluka) and divided by total number of farmers of the respective taluka. In this way 40 respondents were selected from each taluka. Thus, the sample size for the study comprised of 160 respondents. The data were collected by personal contact method with help of structured interview schedule. To measure the extent of agricultural diversification Simpson index of Diversification (1949) was used.

## RESULTS AND DISCUSSION

### I Extent of agricultural diversification

The extent of agricultural diversification can be cropping intensity which reflect the efficient use of land resource.

measure by the study of crop diversification and enterprise diversification of the study area. The data in this regards were collected from the respondents and presented into following Table.1, Table.2, and Table.3.

The data presented in Table 1 reveal that more than two third (70.00 per cent) of the respondents had medium level of crop diversification with (0.413 to 0.773 SDI) followed by 19.38 per cent of them had high crop diversification with SDI Above 0.773 and 10.62 per cent of them had low level of crop diversification with up to 0.412 SDI. The probable reason of above finding might be that although majority of farmers had medium to big land holding but they have good

**Table 1 : Distribution of the respondents according to their crop diversification at farm level** (n = 160)

Sr. No.	Extent of crop diversification	SDI	Frequency	Per cent
1	Low level of crop diversification	Up to 0.412	17	10.62
2	Medium level of crop diversification	0.413 to 0.773	112	70.00
3	High level of crop diversification	Above 0.773	31	19.38
Mean = 0.59				S.D.= 0.18

**Table 2 : Distribution of the respondents according to their enterprise diversification** (n=160)

Sr. No.	Extent of enterprise diversification	SDI	Frequency	Per cent
1	Low level of enterprise diversification	Up to 0.192	49	30.62
2	Medium level of enterprise diversification	0.193 to 0.391	67	41.88
3	High level of enterprise diversification	Above 0.391	44	27.50
Mean = 0.29				S.D.= 0.10

The data presented in Table 2 reveals that more than two fifth (41.88 per cent) of the respondents had medium level of enterprise diversification (SDI between 0.192 to 0.391) followed by 30.62 per cent of them had low level of enterprise diversification (SDI up to 0.192) and 27.50 per cent of them had high level of enterprise diversified (SDI above

0.391). The probable reason of above finding might be that majority of the farmers had medium to high land holding and high family income capacity to start other new enterprises in the initial investment. Moreover, training need was perceived one of the catalyzing factors in enterprises diversification.

**Table 3 : Distribution of the respondents according to their agricultural diversification** (n = 160)

Sr. No.	Extent of Agricultural Diversification	SDI	Frequency	Per cent
1	Low level of agricultural diversification	Up to 0.374	44	27.50
2	Medium level of agricultural diversification	0.375 to 0.752	94	58.75
3	High level of agricultural diversification	Above 0.752	22	13.75
Mean = 0.56				S.D.= 0.19

The data presented in Table 3 shows that nearly three fifth (58.75 per cent) of the respondents had medium level of agricultural diversification (SDI 0.375 to 0.752) followed by 28.12 per cent of them had low level of agricultural diversification (SDI up to 0.374) and 13.75 per cent of them

high level of agricultural diversification (SDI above 0.752). The probable reason of above finding might be that majority of the farmers had found crop as well as enterprise level of diversification.

**II. Nature of agricultural diversification**

The nature of agricultural diversification can be measure by the study of whether diversification takes place due to addition of new crops or enterprises to the existing one or due to the shift from less remunerative crops or

enterprises more profitable one or due to both. Besides this study of cropping intensity of the study area also provides the information about the efficient utilization of available land resource. The data in this regards were collected from the respondents and presented into following Table 4, Table 5 and Table 6.

**Table 4 : Distribution of the respondents according to their cropping intensity** (n = 160)

Sr. No.	Level of cropping intensity	Frequency	Percent
1	Low cropping intensity (<215.67)	21	13.13
2	Medium cropping intensity (≥216.67 to <276.33)	107	66.87
3	High cropping intensity (≥276.33)	32	20.00
Mean = 246			S.D.= 30.33

The data presented in Table 4 indicates that more than two third (66.87 per cent) of the respondents had medium cropping intensity followed by 20.00 per cent of them had high cropping intensity and 13.13 per cent of them had low cropping intensity. The probable reason of above finding might be that majority of farmers had medium to big land

holding, which requires efficient use of land resource for raising number of crops round the year to fulfill their basic needs.

**Table 5 : Distribution of the respondents according to their nature of crop diversification** (n = 160)

Sr. No.	Nature of crop diversification	Frequency	Percent
1	No change	00	00.00
2	Shift from one crop to another crop	67	41.87
3	Addition of new crops to exitingcrop profile	42	26.25
4	Both addition and shift of crops	51	31.88

The data presented in Table 5 shows that more than two fifth (41.87 per cent) of the respondents had diversified their agriculture by Shift from one crop to another crop from less remunerative crops to more remunerative crops both. Whereas, 31.88 per cent of them diversified their agriculture by both addition and shift of crops and 26.25 per cent go for addition of new crops to their existing crop profile. Moreover, none of the respondent found who had not gone through any change in their cropping pattern.

through shifting from less remunerative enterprise to more remunerative enterprise and only 08.12 per cent of them diversified through both adding new enterprise and shifting to new more remunerative enterprise. Moreover 19.38 per cent of the respondents found who had not gone through any change in their enterprise level. The probable reason of above finding might be that majority of the farmers had milch animals as hereditary occupation along with farming to supplement family income; therefore, instead of shifting they try to add new enterprises in order to achieve diversification to increase income, reduce risk and secure livelihood of their family.

The data of Table 6 reveals that more than half (51.88 per cent) of the respondents had diversified through addition of new enterprises while, 20.62 per cent diversified

**Table 6 : Distribution of respondents according to their nature of enterprise diversification** (n = 160)

Sr. No.	Nature of enterprise diversification	Frequency	Percent
1	No change	31	19.38
2	Shift from one enterprise to another enterprise	33	20.62
3	Addition of new enterprises toexiting profile	83	51.88
4.	Both addition and shift of enterprises	13	08.12

The data of Table 6 reveals that more than half (51.88 per cent) of the respondents had diversified through addition of new enterprises while, 20.62 per cent diversified through shifting from less remunerative enterprise to more remunerative enterprise and only 08.12 per cent of them diversified through both adding new enterprise and shifting to new more remunerative enterprise. Moreover 19.38 per cent of the respondents found who had not gone through any change in their enterprise level. The probable reason of above finding might be that majority of the farmers had milch animals as hereditary occupation along with farming to supplement family income; therefore, instead of shifting they try to add new enterprises in order to achieve diversification to increase income, reduce risk and secure livelihood of their family.

Therefore, from the above results presented in table 1, 2, 3, 4, 5 and 6 inferred that general agricultural diversification of the study area were recorded medium (average SDI 0.59) due to good crop diversification with 246 per cent average cropping intensity. It reflected efficient use of available land resources by the farmers of the study area. The results also inferred that all most all the respondents were diversified at farm level by adoption of crop diversification either by addition of new crops to their existing crop profile or shifted from less remunerative crops to more remunerative crops or by both. On the other hand, results also indicated that majority of the respondents had medium diversification at enterprise level (average SDI 0.290). The enterprise diversification generally exists due to addition of new enterprises with existing one. It increases alarming concern about enterprise diversification in the study area.

The findings are similar with Rai *et al.* (2015), Basavaraj, (2016), Swaminathan, (2018), Malik, (2019) and Nyiatagher, (2019).

## CONCLUSION

The finding related Extent of agricultural diversification the above result that more than two third of the respondents had medium level of crop diversification followed by high level crop diversification. Whereas, more than two fifth of the respondents had medium level of enterprise diversification. While majority of the respondents had medium to low level of agricultural diversification. In case of nature of diversification, two fifth of the respondents had diversified their agriculture by shift from one crop to another crop from less remunerative crops to more remunerative crops both and majority of the respondents had diversified addition of new enterprises to exiting profile.

## RECOMMENDATION

The result also indicted that majority of the respondents had good crop diversification but medium enterprise diversification therefore; it is recommended that some other enterprises *viz*; animal husbandry, poultry, beekeeping, nursery management, mushroom production, duckery and sericulture etc. should be popularized among rural people by the Government and Non-Government organizations. This may help in contributing better and secure livelihood to the rural people.

## CONFLICT OF INTEREST

The authors of the paper declare no conflict of interest

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