

Agri-Financing and Krushi Mahotsav: An Empirical Study

by Dr. Jigna Chandrakant Trivedi^[a] & Dr. Bindiya Kunal Soni^[b]

Abstract

Access to financial services in rural areas, is an essential condition for agricultural development. A stoppage or stagnancy of rural finance would cease agricultural activity, which in turn, would aggravate the problem of poverty, unemployment and food security. Considering the importance of the provision of timely and adequate finance to the agriculture sector, the paper attempts to study the need, usage and types of borrowings undertaken by farmers from Dena bank in Gandhinagar district. Apart from studying the borrowing pattern, the researchers also studied the participation and awareness of these farmers for Krushi Mahotsav organised in various villages of Gandhinagar district. The findings revealed that farmers' agriculture income was sufficient to maintain the livelihood but insufficient to meet unforeseen contingency. Failure of crop was noted to be the major reason of default in the repayment of loan. Further, the profit earning capacity of the farmers participating in Krushi Mahotsav was observed to be higher. And they were not having enough knowledge regarding various government schemes and subsidies available in Krushi Mahotsav.

Keywords: Agri-finance, Non-Performing Asset, Krushi Mahotsav, **JEL Classification:** N5, Q1, Q14

<p>^[a]Dr. Jigna Chandrakant Trivedi Associate Professor Shri Jairambhai Patel Institute of Business Management and Computer Applications Gandhinagar. jigna2804@gmail.com (M) 09979607566</p>	<p>^[b]Dr. Bindiya Kunal Soni Associate Professor Anand Institute of Management Anand. drbindiyasoni@gmail.com (M) 09825039205</p>
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1. Introduction

A strong and efficient agricultural sector can enable a country feed its growing population, generate employment, earn foreign exchange and provide raw materials for industries. The vibrancy of agriculture sector has a multiplier effect on any nation's socio-economic and industrial fabric (Salami and Arawomo, 2013). There are multiple factors responsible for the growth of this sector and provision of adequate and timely finance is one of them. For the development of agriculture in India, credit flow has a strategic role to play.

Since the savings of the small farmers are observed to be negligible, agricultural credit appears to be an essential input along with modern technology for higher productivity. The agricultural credit system of India consists of informal and formal sources of credit supply. The informal sources include friends, relatives, commission agents, traders, private moneylenders,

etc. Three major channels for disbursement of formal credit include commercial banks, cooperatives and micro-finance institutions (MFI) covering the whole length and breadth of the country (Das *et al*, n.d.).

With this backdrop, the study analyses the current scenario of agri-financing in Gandhinagar district with respect to Dena bank. Apart from the analysis of agri-financing, the study also highlights the participation of the farmers surveyed from this region in Krushi-Mahotsav and their awareness for various activities and perceptions for the benefits from participation in such agri-fairs.

2. Literature Review

As the study covers two aspects i.e. Agri Financing and KrushiMahotsav; the available literature with respect to these two themes is reviewed as follows.

Agri-Financing

In a study on Microfinance, Andrews *et al* (2006) clarified the terminologies of rural, agriculture and micro finance. Rural finance is the provision of a range of financial services such as savings, credit, payments and insurance to rural individuals, households and enterprises, both farm and non-farm, on a sustainable basis. Agricultural finance is a subset of rural finance dedicated to financing agricultural related activities such as input supply, production, distribution, wholesale, processing and marketing. While microfinance is the provision of financial services for poor and low income people and covers the lower ends of both rural and agriculture finance as seen in the diagram below.

A report compiled by Miller (2015) highlighted the new trends with respect to understanding demand of smallholder households, digital financial services, financing for women in the agricultural sector, value chain finance and agricultural insurance. The synthesised report revealed that a large portion of smallholders did not need credit. Rather they need digital payments services/savings-based products. The study highlighted an emerging trend of bundling the insurance with credit or input suppliers.

In one such report by International Finance Corporation (2011), certain recommendations were made to scaling up access to finance for agricultural SMEs. These include: developing country specific diagnostics and strategies, developing a supportive legal and regulatory framework, designing effective government support mechanisms, strengthening the financial infrastructure, building consistent and reliable data sources and building capacity of financial institutions and their clients. In the second report, by International Finance Corporation (2012), innovative agriculture SME finance models such as financing model, distribution model and risk management models were discussed based upon the case studies. The findings from the case studies support the policy recommendations made in IFC's previous report.

Ruete (2015) stressed the need for a combination of good laws, a specialized financial sector and profitable businesses of small and large farmers and companies in the agriculture sector; for successful agriculture finance.

Mann and Singh (2013) studied the role of NABARD and RBI in agricultural sector growth for India. The study reported that since its inception, the NABARD has played a central role in providing financial assistance, facilitating institutional development and encouraging promotional efforts in the area of rural credit. NABARD also administers the Rural Infrastructure Development Fund (RIDF), which was set up in 1995-96. NABARD has been playing a catalytic role in micro-credit through the conduit of Self-Help Groups (SHGs). In a study by Kumar and Gambhir (n.d.), farmers specified higher interest rates and cumbersome process of getting loan as the major problems faced by them in availing credit from the banks.

A joint discussion paper of The World Bank, German Federal Ministry of Economic Cooperation And Development (BMZ), Food and Agriculture Organization of the United Nations (FAO), German Agency for International Cooperation (GIZ), International Fund for Agriculture Development (IFAD), and United Nations Capital Development Fund (UNCDF), authored by Meyer (2011), discussed the emergence of new paradigm approach with strong focus creating sustainable institutions, treating borrowers and savers as clients rather than beneficiaries, developing products that clients demand and pricing products and services to cover costs and risks.

From the above mentioned studies, it may be seen that there are no empirical studies on the awareness and usage of loans by the farmers in Gandhinagar district. The present study is an attempt to fill this research gap.

Krushhi-Mahotsav

A report on task force to derive suggestions to increase agriculture development in Gujarat (2015) discussed various initiatives taken by Government of Gujarat and initiation of Krushi Mahotsav is one of them. In order to increase the income level of the farmers and provide continuous support to increase the productivity, Gujarat has taken initiative by organizing Krushi Mahotsav since year 2005-06. Punjab was the first State of the country to bring in green revolution due to abundance of water. Now Gujarat state is ready to initiate the second green revolution in country through this unique initiative. Till 2017, 12 such agri-fairs have been successfully organised in the state.

According to a report on *AAU's Role in Krushi Mahotsav Model*, Krushi Mahotsav is an intensive convergence and mass contact strategy held every year during May-June for one full month and begins in the auspicious planetary affluence of "AkshayTritiya (AkhaTrij), a day for worshipping Balramji, the God of farmers. It brings together the farmers, scientists, government officials and many more individuals concerned in agriculture and allied fields for a month. Every year, the Krushi Mahotsav is celebrated with new themes and objectives. However, the major themes of Krushi Mahotsav include: latest agricultural practices, use of latest farm implements, water conservation, electric power saving, agri-business and marketing, child welfare, specific participation of farm women and youth, use of progressive farmers of the state, soil Health Card, micro-nutrient mapping, finance schemes from state and central Governments, organic farming and slogan writing among others.

In this festival, agriculture scientists and officers provide guidance to farmers about various agriculture aspects such as scientific farming, organic farming, farm mechanization, micro irrigation, crop value addition and agriculture related information as well as provide knowledge of Government Scheme. Along with advising and assisting individual farmers, free input kits to resource poor farmers are distributed (Directorate of Agriculture, n.d.) Chandawat *et al* (2013) studied usefulness of Krushi Mahotsav programme organized in Kheda district of Gujarat. The findings revealed that majority of respondents perceived Krushi Mahotsav as moderately useful to them. A study by Chauhan (2015) for Vadodara district also highlighted the similar findings.

In one more study on impact of Gujarat's Krushi Mahotsav (Agrarian Festival) Campaigns: Results of a Perception Survey of 1445 Farmers from 25 Districts; Shah *et al* (2013) reported that Krushi Mahotsav did better in generating awareness about improved practices than in promoting their adoption. Further, it was observed in the study that large land owners and Muslim farmers participated and benefited the most from Krushi Mahotsav while rain-fed, landless, ST/ SC farmers and women headed farming households had neither participated nor benefited from the initiative.

As per the data available from Government of Gujarat, during Kharif Krushi Mahotsav from 2005-2015, total 198,07,034 farmers have been guided. In addition to that, 13,22,197 agriculture kits, 14,81,014 animal husbandry and 10,11,382 horticulture kits have been distributed among the participants.

Further, the progressive government of Gujarat initiated Rabi Krushi Mahotsav in 2014-15 and two such fairs have been successfully organised. 5,22,773 farmers took part in these two Rabi Krushi Mahotsav. Sanction letters and cheques worth Rs. 15,905 lakh have been distributed among the beneficiaries.

Animal check-up camps are also organised as a part of Krushi Mahotsav. During Rabi Krushi Mahotsav, 417 camps across the state were organised by the animal husbandry department and 33,854 cattle keepers participated in the same.

From the above mentioned literature review, it may be seen that there are empirical evidences on the participation and usefulness of Krushi Mahotsav for various districts of Gujarat. However, for Gandhinagar district, no such studies are available. Hence, the present study extends the available literature and highlights the perspective of the farmers of Gandhinagar district for usefulness of Krushi Mahotsav.

3. Problem Statement, Research Questions and Research Objectives

As per the Reserve Bank of India's data, the short-term and long-term institutional credit for agriculture and allied activities for 2016-17, were Rs.2,178.97 billion and Rs.108.78 billion respectively. Agriculture lending is considered as the priority sector lending in India. Increase in 15% lending was witnessed in the long-term disbursement. Mainly farm-credit, agriculture infrastructure and ancillary activities are included in the agri-finance category (Reserve Bank of India, 2017). Lokare (2014) expressed that average share of Non-Performing Assets (NPAs) is

14.1% as per statistics of September, 2012. The high growth in credit in agriculture sector might contribute to the growth in NPAs, due to deterioration in credit quality. Agriculture Debt Waiver and Relief Scheme (ADWRS) was implemented to clean the Bank’s balance-sheet in the crisis year of 2008. Thus, it is a common problem to note that agriculture finance and problems of NPAs have a positive correlation. This study addresses the importance of agricultural finance and role of Krushi Mahatsoav in raising the income of the farmers.

Table 3.1: Snapshot on Research Questions, Context and Objectives

Research Questions	Research Context	Research Objectives
What is agricultural finance? What is the importance of Krushi Mahotsav?	Theoretical	To understand the meaning and importance of agriculture finance and Krushi Mahotsav.
What are the nitty-gritty’s of agricultural finance and Krushi Mahotsav?	Literature Review	To explore the current scenario of agricultural credit and motives of Krushi Mahotsav.
Why do farmers borrow? Where do they use the borrowed funds?	Empirical Study	To empirically test the need, usage and types of borrowings undertaken by farmers of Gandhinagar district.
How has Dena Bank funded the farmers of Gandhinagar District?	Empirical Study	To examine the secondary data of loans provided by Dena bank to farmers

(Source: Authors’ Compilation)

4. Research Methodology

The roadmap of research is described below.

Table 4.1: Snapshot on Research Methodology

Parameter	Description	Empirical Survey	Secondary Data
Research Design	The problem or research statement was identified at the pre-commencement of research.	Descriptive	
Sub-Type of Research Design	The data were collected once from the respondents, during a specific time-period.	Single Cross Sectional	
Nature of Study	Questions were open-ended as well as close-ended.	Qualitative and Quantitative	

Sampling Procedure	Method of selection of samples.	Probability	Non-Probability
Sampling Technique	Lottery system was adopted to elicit response from respondents. Bank managers guided to collect the data on loans.	Simple Random Sampling	Judgmental
Sample Size	Number of respondents and loan cases.	120	Loan cases of 2015-16
Sample Size Determination	Methodology of determining the number of samples.	$n = Z^2 * p * q / e^2$, i.e. $(1.96)^2 * (0.5) (0.5) / (0.09)^2$	As suggested by Bank Manager
Sampling Duration	Timing of collection of data from samples.	January 2017 to April 2017	January 2017 to April 2017
Sampling Extent	Broad geographical location of research.	Gandhinagar District	
Sampling Area	Identified places for visit.	Pundhara, Lodara, Mahudi	Data available from Sector-16's Bank's Branch of loan disbursed to farmers of Delwada, Itadara, Mansa, Pundhara.
Sampling Unit	Physical Infrastructure	Households	Branch Office
Sampling Element	The respondent of the research.	Farmers	Bank Manager
Research Approach	Method of conducting the research.	Survey	Schedule
Contact Method	Method to get in touch with respondents.	Personal Visit	
Research Instrument	Modus-operandi of research.	Questionnaire	Data cells (186)
Questionnaire Filling Method	Method of getting the questionnaire filled.	Self-Administered	Structured Interview
Nature of Survey	Contribution of outcome of research.	Conclusive	
Type of Questions	Varieties of questions used.	Open- Ended, Close-Ended, Multiple Choice	Open- Ended
Type of Scale	Usage of Scale in	Comparative	Non-Comparative

Scale Measurements	Questionnaire.	Nominal, Ordinal, Interval, Ratio	Ratio
Theme of Questions	Varieties of questions.	Demographic, Type of Cultivation Pattern, Farming Income and Expense, Non-Agriculture Loans, Agri-Finance, Agri-Loan Repayment Delay and Rationale of Krushi Mahotsav	Land Area and Loan Amount
Sources of Data Collection	Methodology of availing the answers to the questions.	Primary and Secondary	Secondary
Sources of Secondary Data	Modus-operandi of collecting other researcher's data.	Online and Offline Journals	Loan Books of Bank
Tools for Secondary Data Collection	Reference material.	Internet and J-Gate	Loan Ledgers
Data Processing and Management	Proper sorting, coding and storage of data.	SPSS and Excel	
Data Analysis	Concise way of presenting the data.	Frequency Table	Tabulation
Descriptive Statistics	Single tool to reflect the data.	Mean, Median, Mode, Standard deviation, Minimum, Maximum, Range	
Inferential Statistics	Testing of sample for population conclusion.	Factor Analysis, One-Sample T-test	ANOVA

(Source: Authors' Compilation)

Pilot Survey

A pilot survey on 30 respondents was conducted. In the pilot survey, the values of Cronbrach's Alpha of all the scale variables were less than 0.6 and were considered poor in reliability test. This indicates that the internal consistency of the measures in the pilot survey was considered to be poor. In order to ensure the adequate reliability, the adjustment of changing the wording of the questionnaire was carried out. Due to this, respondents found it easy to understand and were able to choose the most appropriate answer. Thus, the internal consistency of the scale measures was considered acceptable. In the second pilot survey, all the reliabilities were above 0.6 in the range and were considered acceptable.

Hypothesis Construction

The details of construction of hypothesis are described as under:

Table 4.2: Construct of Hypothesis

Attributes Used for Hypothesis	Premise	Scale	Null Hypothesis Statement	Test Administered and its and Justification	Thumb Rule
Reasons for availing non-agricultural loans	Multiple reasons may persist to avail loan for purpose other than agriculture	Likert Scale (Strongly Agree=5 to Strongly Disagree=1)	H ₀₁ : Variables were uncorrelated in the population.	Factor Analysis- Data Reduction Technique	If p-value is >0.05, do not reject H ₀ and if the p-value <0.05 then reject H ₀ .
Awareness on Various Agricultural Loans	Agri-finance being a priority sector lending is disbursed in various forms to the farmers	Likert Scale (Know Very Well Agree=5 to Never Heard Of=1)	H ₀₂ : Variables were uncorrelated in the population.		
Opinion on benefits from Krushi Mahotsav	Krushi Mahotsav shares new farming techniques and governmental schemes	Likert Scale (Strongly Agree=5 to Strongly Disagree=1)	H ₀₃ : Variables were uncorrelated in the population.		
Awareness on various Activities Carried out in Krushi Mahotsav	Krushi Mahotsav disseminates knowledge and kits to farmers	Likert Scale (Know Very Well Agree=5 to Never Heard Of=1)	H ₀₄ : Respondents significantly did not differ in the mean ratings provided on the opinion on activities carried out in Krushi Mahotsav.	One Sample T-Test, Parametric: $\mu=3$ i.e. Neutral	

Land size in four different villages of Gandhinagar district	Land size determines the borrowing capacity of the farmers.	Ratio Scale (Land Size in Vighas)	H ₀₅ : There was no significant difference in the land area of the farmers of the Delwada, Itadara, Mansa, Pundhra.	ANOVA, Parametric Test: Examines relationship between groups and within groups
Loan amount provided to farmers of four different villages of Gandhinagar district	Loan amount varies in proportion to land-size and reflects the disbursement policy of banks.	Ratio Scale (Amount in Rupees)	H ₀₆ : There was no significant difference in the loan amount disbursed to farmers of Delwada, Itadara, Mansa, Pundhra.	

(Source: Authors' Compilation)

5. Findings and Discussion

The discussion of the same is as under:

Table 5.1: Snapshot of Variables and Measurement

Variables	Specification and Type of Scale	Observed Statistics	Implication
Age (in years)	Open-Ended, Scale	X= 52.46, M=53.50, Z= 56, SD= 8.39, Mini.= 33 and Maxi.=76	The junior most farmer was of 33 years and the most experienced farmer was of 76 years. The surveyed (100%) farmers had taken agricultural loan and it may be noticed that agriculture loans were provided to the farmers, irrespective of the age limit. The agricultural loan was provided to the farmers after creating a charge / mortgage on

			the land, so age limit was not emphasized on prime basis.
Location	Open-Ended, Nominal	Ajol (2%), Badpura (1%), Bilodhara (3%), Delwada (2%), Itadara (2%), Kotadi (2%), Lodara (7%), Mahudi (8%), Mansa (47%), Paldi (5%), Pundhara (13%), Ranasan (3%), Veda (3%) and Vijapur (2%)	All the farmers were from Mansa Taluka of Gandhinagar District, where farming is the primary activity. It shows that Dena Bank has lent to the farmers, who belong to core agriculture activity in Mansa Taluka. This indicates that bank fulfills its mandatory obligation of priority sector lending.
Land Size (in Vighas)	Open-Ended, Nominal	Z= 2, Mini.=1 and Maxi.=15	Land area depends on the original holding of land. It may be noticed that the land size might have diminished due to either sale or division of land. The income of the farmer is directly related to the land size.
Family Members and Working Members (in Units)	Open-Ended, Nominal	Family Members: Z=5, Mini.=3, Maxi.= 15. Working Members: Z=1, Mini.=1, Maxi.= 4.	Population pyramid structure is still followed in rural area, where the working members are few and dependent members are many. Still the practice of joint-family living is prevalent in rural areas.
Education Qualifications	Close-Ended, Nominal	Below SSC (41%), SSC (22%), HSC (22%) and Others (15%).	Other qualification includes-Diploma, Graduation, Industrial Training Institute and Post-Graduation. From the cross-tabulation of the data, it was observed that farmers who studied just upto SSC, were not only engaged in the farming activity, but they were also occupied in service and tiny business. Despite such a hard work they borrowed money. Whereas farmers who possessed education above SSC, hardly undertook service or business, it might be possible that those farmers

			were either satisfied with the agricultural income or they lacked entrepreneurial spirit or they financial management was sound enough, due to which they did not feel the need of borrowing.
Occupation	Close-Ended, Nominal	Farming (77%), Service (18%) and Others (5%).	The secondary source of income is essential to build upon, so that income from agriculture does not face critical pressure. Agriculture is dependent on erratic monsoon, so a standby and regular source of the fixed income is essential to maintain the livelihood.
Total Annual Income of Family (in Rs.)	Close-Ended, Nominal	1 lakh-3 lakh (37%), 3 lakh-5 lakh (47%), Above 5 lakh (16%).	The income of the farmers depends on the land size. Majority of the farmers were having good income to live quality life.

(Source: SPSS Output)

Farming Income and Expenses

The yearly income from farming was reported to be, $X=Rs.3,29,750$; $M=Rs.3,00,000$; $Z=Rs.3,00,000$; $SD= Rs.1,65,346$; $Range= Rs.7,30,000$; $Mini.= Rs.70,000$ and $Maxi.= Rs.8,00,000$. Farmers opined on the satisfaction of agri-income at a mean value of 3.70 and a SD of 0.76 i.e. income was sufficient to meet the livelihood, and respondents were happy for the same. The yearly farming expenses were, $X=Rs.2,00,750$; $M=Rs.1,80,000$; $Z=Rs.1,50,000$; $SD= Rs.1,07,778$; $Range= Rs.4,50,000$; $Mini.= Rs.50,000$ and $Maxi.= Rs.5,00,000$. It may be noticed that the agriculture activity is a laborious task with less percentage of margin as revenue. From the range of income and expense, it can be commented that the farmers' net profit was just 61%. This can be improvised by adopting efficient farming techniques. The figures on income were given arbitrary by respondents under the fear of income tax and stoppage of any government help. They might have showed high expense to highlight low income. The details of various types of farming expenses are as under:

Table 5.2: Details of Various Expenses

Particulars	Mean	Mode	S.D.	Range	Min.	Max.
Tilling the land	30092	20000	28051	143000	7000	150000
Labour expense of tilling the land	8607	5000	11002	49000	1000	50000
Labour expense for sowing the seeds	13513	10000	19028	109500	500	110000
Diesel expense of running the tractor	7360	5000	6465	29000	1000	30000
Purchase of seeds	7450	1000	8755	49000	1000	50000

Fertilizer	26042	25000	19694	99000	1000	100000
Labour in sprinkling of fertilizer	4986	5000	3317	12500	500	13000
Water expenses taken on sharing	20192	20000	21488	99000	1000	100000
Electricity expenses if water is taken out through motor	5609	5000	3717	14600	400	15000
Diesel expenses to run the motor	5107	5000	2841	14000	1000	15000
Labour expenses for weeds removal	17750	20000	18494	69000	1000	70000
Total labour expenses from harvesting to storage	6283	5000	3667	19000	1000	20000

(Source: Excel Output)

The major component of expenses in farming is of fertilizer, since artificial fertilizer like urea is used in farming, which is often black marketed by trader, ultimately resulting in inflated prices of fertilizer. The other major expense relates to labour which is highest from all the set of expenses. Since the agriculture activity is not mechanized, it is purely dependent on the manual labor. The wages paid to the laborers depends on the man-hours and man-days. In agriculture activity there is necessity to engage labours at every point, right from sowing seeds to final packaging of the product. The amount for water and tilling expense were also identical, indicating that tilling was fundamental expense required at the inception of farming activity and water expense was to be incurred on continual basis as the agricultural in India is still rain-fed. In the absence of rain water, the watering was carried out either through bore-well in the own farm or drawing water from the canal. Running a bore-well or drawing the water from canal involved usage of either power or diesel, which resulted in the cultivation cost escalation.

Cultivation Pattern

In last year, the cultivation of crop were $X=5$, $Z=4$, $SD=2$, $Mini.=2$ and $Maxi.=12$. The higher the intensity of cropping, the higher is the revenue. It may be noted that farmers grew minimum 2 crops in a year. This shows that there was no optimum utilization of land. Farmers who were growing 12 crops in a year indicated optimum utilization of land by growing not only the food crops but also the horticulture crops. Farmers grew varieties of crops such as wheat (20%), Oats (12%), Potato (9%), Linseed (3%), Onion (6%), Tomato (6%), Paddy (2%), Castor (11%), Cotton (7%), Chilly (6%), Jowar (2%), Soyabean (5%) and Fennel (11%). Wheat was the most favoured crop grown, last year by the farmers. Wheat being a cereal crop is easily sold to the traders, which has monetary value and a longer shelf life so it is grown by majority of the farmers. 53% farmers grew vegetables and 47% did not grow any vegetables. Vegetables are any time source of money for farmers. It provides regular income to the farmers.

Borrowing Funds for Non-Agriculture Activity

68% farmers borrowed funds for non-agriculture activity. 32% farmers did not borrow any funds for non-agriculture activity. The loans were raised to meet the unforeseen expenses of the family. In the qualitative discussion it was explained by farmers that agriculture income was sufficient to maintain the livelihood but insufficient to meet unforeseen contingency. Farmers took home loan (13%), personal loan (14%), educational loan (6%), vehicle loan (41%), gold

loan (15%), business loan (5%), marriage loan (2%) and others (4%). Farmers had taken vehicle loan mainly to buy 2-wheelers and 4-wheelers. It indicated the consumption nature of the farmers. Gold loan and Personal loan were taken to meet any kind of personal expenses.

The reasons for availing agricultural loans were tested through factor analysis. H_{01} : Variables were uncorrelated in the population. The KMO Measure of Sampling Adequacy was 0.74, Approximate Chi-Square value was 376.76, Df=66 and Sig.p-value=0.00. *Factor 1* was labeled as “*Capital Expenses*” which was formed of variables such as (renovation of house-0.76, buying car-0.76, start new business-0.80 and buying new two-wheeler-0.81). *Factor 2* was labeled as “*Personal Expenses*” which was formed of variables such as (migration to city-0.66, clearance of old debt-0.59, fund religious expenses-0.72 and service traditional customs-0.78). *Factor 3* was labeled as “*Social and Schooling Expenses*” which was framed from the statement (marriage in family-0.78 and children’s education-0.54). *Factor 4* was labeled as “*Unplanned Expenses*” which was framed from the statement (sickness-0.74 and purchase of home appliance-0.60). Thus, depending on the requirement, the type of loan of specific period was availed by the farmers.

Awareness on Agri-finance

A multiple choice question was probed on awareness of various types of agricultural loans, such as warehousing loan, operating loan etc. A SD of more than 1 indicates that there is no consensus in the response of the respondents. Lot of ignorance was found amongst the farmer regarding awareness of various types of agriculture loan. Proper matching of the purpose of loan and tenure of loan will help the farmers to ease the financial burden and become cost effective in agriculture activity.

The level of awareness on different types of agricultural loans was tested through factor analysis. H_{02} : Variables were uncorrelated in the population. The KMO Measure of Sampling Adequacy was 0.71, Approximate Chi-Square value was 834.15, Df=66 and Sig.p-value=0.00. *Factor 1* was labeled as “*Term Loan*” which was formed of variables such as (warehousing loan-0.59, farm ownership loan-0.56, Kisan Credit Card-0.74, land development-0.79, minor irrigation scheme-0.89, group loan for harvester purchase-0.85, horticulture finance-0.94). *Factor 2* was labeled as “*Operational Loan*” which was formed of variables such as (farm ownership loans-0.89, crop loans-0.67 and Kisan Shakti Yojana-0.60). *Factor 3* was labeled as “*Mortgage Loan*” which was formed of variables such as (Produce marketing loan-0.81, and loan against warehouse receipts-0.80). Thus, long-term and short-term loans were availed by the farmers, depending on their financial needs.

Delay in Repayment of Agri-Loan

91% respondents admitted that they delayed in the payment of agricultural loan in last 5 years. 9% respondents were on time as far as the payments of agriloans were concerned. The reply to the reason of delay was ranked as failure of crop (1st), low income (2nd), bad weather condition (3rd), emergency usage of funds (4th), mis-utilization of funds (5th) and poor recovery of receivables (6th). It was positive to note that farmers did not default on repayment, but at times crossed the deadline of repayment. Some of the reasons are beyond the control of the farmer due

to which there is delay in repayment of loan. A deliberate attempt was noticed among the farmer on account of mis utilization of fund and emergency usage of fund which led to the delay.

Rationale of Krushi Mahotsav

80% respondents participated in Krushi Mahotsav whereas 20% did not show interest in participation. Respondents who knew about the Krushi Mahotsav were able to learn the effective farming techniques. One-sample T-Test was applied to test the awareness on different types of activities being carried out in Krushi Mahotsav. H_{04} : Respondents significantly did not differ in the mean ratings provided on the opinion on activities carried out in Krushi Mahotsav ($\mu=3$). The results pertaining to various activities were farm mechanization (p-value=0.66), scientific farming (p-value=0.46), micro irrigation (p-value=0.00), value addition techniques in crop (p-value=0.00), agriculture related information (p-value=0.00), free-kit distribution to small farmers (p-value=0.61) and knowledge of government schemes (p-value=0.00). Regular participation increased the knowledge base of farmers. Occasional participation just provided the glimpse and lacked the depth of the matter.

The opinion on benefits of participation in Krushi Mahotsav was analyzed through factor analysis. H_{03} : Variables were uncorrelated in the population. The KMO Measure of Sampling Adequacy was 0.85, Approximate Chi-Square value was 659.59, Df=66 and Sig.p-value=0.00. *Factor 1* was labeled as “*Innovation and Productivity*” which was formed of variables such as (teaches about productivity enhancement-0.52, shows the methods to reduce cost-0.73, reduces hard work and improves safety in operation-0.76, teaches how to efficiently utilize inputs such as seeds, chemicals, fertilizers and energy-0.57, teaches which type of crop should be grown in particular seasons-0.69, can avail the knowledge of the using the fertilizers according to the soil type and farming technique- 0.58, can get the help in knowing various farming methods for different type of seasons- 0.76, seeking business opportunities by using technologies platform via Krushi Mahotsav-0.80). *Factor 2* was labeled as “*Judicious Land and Water usage*” which was formed of variables such as (guides on usage of cultivable waste land-0.63, provides information on land-levelling-0.82, educates on effective and efficient usage of water by various methods-0.57). *Factor 3* was labeled as “*Government Support*” which was framed from the statement- providing advantage of the government subsidies in various types of agricultural tools and techniques, with the heavy weight factor loading of 0.61. Thus, it may be inferred that Krushi Mahotsav touched on the micro to macro insights of farming.

Loan Books Data Analysis

The loan disbursed during 2015-16, by Dena Bank to the farmers of Delwada, Itadara, Mansa, Pundhra region were studied. 186 disbursement cases were analysed in the study. ANOVA test was applied in the study. H_{05} : There was no significant difference in the land area of the farmers of the Delwada, Itadara, Mansa, Pundhra. H_{06} : There was no significant difference in the loan amount disbursed to farmers of Delwada, Itadara, Mansa, Pundhra.

Table 5.3: Test Statistics for ANOVA

Particulars	Groups	Sum of Squares	df	Mean Square	F	Sig.	Result
Land Area (in Hectors)	Between	7.04	3	2.35	2.95	0.03	H ₀ is rejected
	Within	144.89	182	0.80			
	Total	151.93	185				
Loan Amount	Between	95162890771	3	31720963590	1.23	0.30	H ₀ is not rejected
	Within	4.70	182	25836615689			
	Total	4.80	185				

(Source: SPSS Output)

The land holding of the farmers differed due to either sales or fragmentation of agriculture land. The loan applications are processed by the bank in a uniform way irrespective of the location. Banks are meticulous to follow the standard operating process for providing loans.

6. Conclusion

The study concluded that the farmers surveyed had awareness regarding different loan schemes of Dena bank to a lesser or a greater extent. They were not found to be ignorant about the availability of the loans. However, they were not completely utilizing different loans. Further, they were observed to be taking non-agriculture loans such as home loan, personal loan, education loan, vehicle loan etc; as the agriculture income was not sufficient to meet unforeseen contingency. As far as the repayment is concerned, there was delay in majority of the cases mainly due to failure of crops which is beyond their control. Provision of agriculture and non-agriculture loan to the farmers in Gandhinagar district by Dena bank, is a significant way forward towards the financial inclusion, leading to agriculture development and improvement in the living standard of the farmers. Dena bank should attempt to spread more awareness about various loan offerings through local media, village panchayats, farmers' clubs etc; which can influence the farmers' participation in the banking system. The bank should continue and further strengthen the ecosystem for funding the needs of the farmers.

As far as the participation in Krushi Mahotsav is concerned, majority of the surveyed farmers of Gandhinagar district, were a part of such gatherings and they agreed to the fact that Krushi Mahotsav helped them in using cultivable waste land, enhancing the productivity, informing them about land leveling, showing the methods to reduce the cost, getting government subsidies, developing business opportunities by using technologies from platform via Krushi Mahotsav and knowing the farming methods for different type of seasons among others. Thus, Krushi Mahotsav is an effective initiative by government to bring itself closer to the farmers and make them aware of the different schemes available. Further research can be conducted to find out the impact of Krushi Mahotsav at the grass root level based upon secondary data.

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