

IMPACT OF CROP LOAN AND CROP INSURANCE ON GROWTH OF AGRICULTURE

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ABSTRACT

Crop Loan and Crop Insurance policies are seen as the tool that lets farmers manage farm profits, savings, as well as safeguard the harmful effects of losses owing to low crop prices or natural hazards. Crop protection has gained value with large-scale destruction done by insect assaults, environmental vagaries & crop diseases. The aim is to provide farmers with compensation protection as well as financial assistance in the case of failure of some reported crops because of usual calamities, pests And ailments. The scope of crops eligible by protection ranges from one state to another. Such crops are covered at panchayat block rate. Crop insurance systems provide growers with financial support and are of tremendous aid. Poor profitability, lower earnings as well as heavy loans for agriculture are pushing Indian farmers to commend suicide. They live in a very difficult world after offering others a quiet existence by fulfilling their desired needs in the way of agricultural products. To function effectively farmers require regular up keep as well as repair. Loans to agriculture may be used for costly property or network enhancements or improvements.

Keywords: Crop, loan ,farmers, insurancre, secondary data

INTRODUCTION

Agriculture is considered a primary sector of Indian financial system because of 3 causes - One, approximately 70% of the Indian population is dependent over the field of agriculture. Two, it comprises a substantial portion of the national income of the region. Third, the development of other industries and the entire economy relies to a large degree on the success of agricultural. Therefore, agriculture is a means of survival as well as food stability for a substantial majority of India's enormous population. Yet the pressure of uncertainty as well as factors rests on agriculture across the globe. Despite, various systems planned for protecting as well as promoting the concern of cultivators, suicide by various farmers are reported due to income loss for numerous reasons that include the failure of crop along with later globalization effects now- a days. In India, farm incomes and agricultural production are affected frequently by natural disaster for instance storms, drought, cyclones, earthquakes as well as landslides. Agricultural Insurance is a way of shielding farmers from financial risks related to uncertainty that may result in agricultural problems because of identified or other unexpected hazards outside their command. [3, 6]. Farming insurance is one means for farm workers to maintain

agricultural profits as well as savings, but to defend against the disastrous effects of damages caused by natural disasters or low market rates. Agriculture insurance is not limited to crop insurance only, even though it is one of agricultural insurance's most relevant but also largest constituents. Agricultural insurance is much wider in reach as well as substance as well as covers crop insurance, livestock protection, horticulture, gardens, forestry, sericulture, aquaculture, poultry, viniculture and all the practices connected with farming [1, 3]. Throughout their markets, the developed countries provide sufficient room for agricultural protection. Such nations have pumped huge amounts of funds into agriculture to increase sector profitability. Any investment made in agriculture takes such risks with everything and insurance firms may take on those risks. Seed crop insurance is one of the areas which gives insurance companies sample possibilities. Likewise, the threats arising from the professional responsibility of seed farmers as well as merchants in case there is either total failure or restricted growth of plants on the farms utilizing hybrid seed. Moreover, the potential for more insurance activities in this field is very small [8]. Each of these factors, agriculture is at the center of Indian society's socio-economic growth or even advancement, and proper agricultural policy is key to

Crop Loan

Crop loans are a short-term loan but are still usually collected from a village's main lending cooperative or commercial bank. The loan duration is roughly one year, with the exception of sugar cane in which the term is 18 months. Cost of planting is the prerequisite for issuing seed loans. Just products such as 34 plants, manures, fertilizers, chemicals, diesel / electricity, employed labour, etc. are known to include direct paid-out expenses in the cost of production. All direct expenses to be borne by the farmer are required to be compensated and sufficient credit will be secured appropriately. Because crop loan is for one season, during the crop's harvest its recovery is made in one instalment. Crop loans are an annual obligation and growing time farmers have to repay fresh loans for a new crop season. He will then reimburse the previous loan with interest in a fixed time. As this loan is needed in all season, the process for obtaining this loan is easy as well as suitable, but is rendered accessible via the village Co-operative Credit Society by the District Central Co-operative Banks. Therefore, the farmer in the village that gets his loan. There is a three-tiered framework which provides crop lending via cooperative institutions.

- Apex Bank- State Co-op. Bank.
- District Central Co-op. Bank.
- Village Co-operative Credit Society

Features of a Crop Loan

- Depending on the form of crop to be cultivated as well as the field under cultivation.
- High-value crops will get larger quantities of loans.
- Promotes modernization as well as the introduction of state-of-the-art technical innovations in cultivation

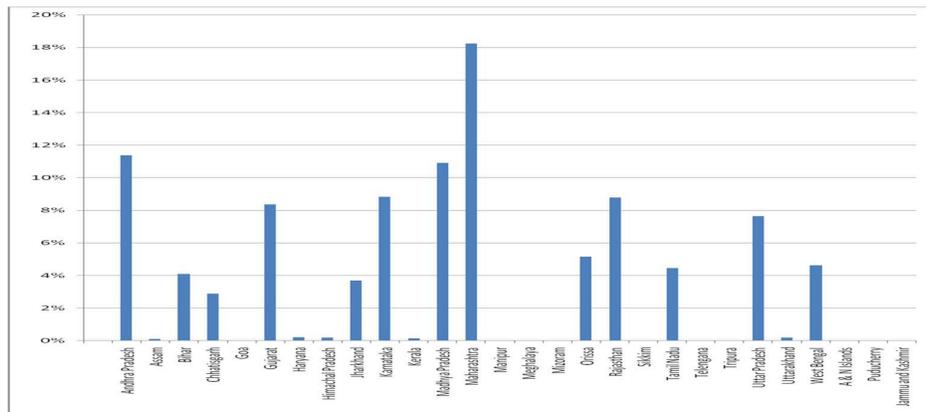
Disbursement is in the form of overdraft. Kisan Credit Card is issue to lenders which might be utilized for different reasons. The first objective of the study is analyzed by calculating annual

growth rate of number of farmers covered under the scheme, number of farmers benefitted, area insured, sum insured, gross premium, and premium subsidy. The said calculations are done after segregating the data for the two crop seasons – Kharif and Rabi. The trend is analyzed with the help of graphs.

Farmers Benefitted from PMFBY up to 2014 (Number and Percentage-wise)

Figure 1 shows the number of farmers benefitted from National Agriculture Insurance Scheme (PMFBY) for the participating States and Union Territories from Rabi 1999-2000 till Kharif 2014, i.e., for 30 seasons. Further, the percentage share of number of farmers benefitted has been calculated. The calculations Figure 1 are analyzed by plotting it on a graph. Figure 1 shows the graph of state-wise percentage share of participating States and UTs from PMFBY. The highest share is shown by Maharashtra (18.24%) followed by Andhra Pradesh (11.37%) and Madhya Pradesh (10.91%). Haryana has a low percentage share of number of farmers benefitted from PMFBY at only 0.22%.

Figure 1: Bar-chart of Farmers Benefitted from PMFBY upto 2014 (Number and Percentage-wise)



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Farmers Covered and Benefitted from PMFBY in Haryana (Annual Growth Rate)

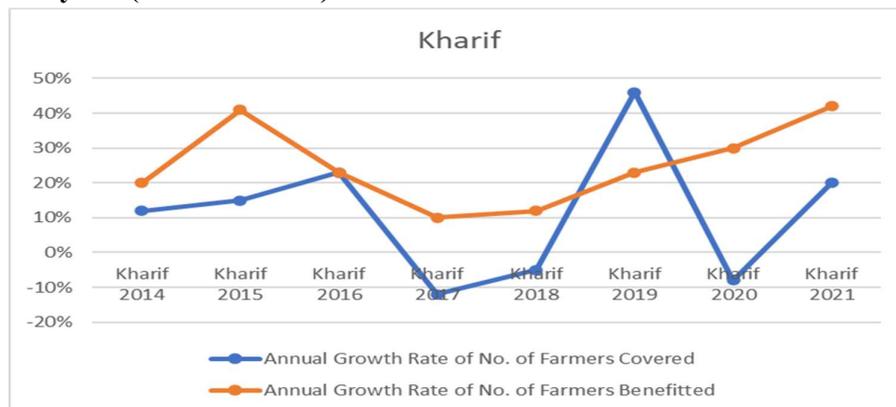
H06: There is no significant impact of crop Insurance on Growth of Agricultural sector in Haryana. The data for number of farmers covered under the scheme and number of farmers benefitted by the scheme for the state of Haryana is first segregated for the two crop seasons – Kharif and Rabi.

Kharif Season

Figure 2 shows the data for the Kharif season for the state of Haryana. The calculations are made to find out the annual growth rate of number of farmers covered under PMFBY and annual growth rate of number of farmers benefitted by PMFBY. The calculations done in Table 4.2 are analyzed by plotting it on a graph. **Figure 2** shows the trends in the changes in the growth rates with respect to farmers covered and farmers benefitted under the National Agriculture Insurance Scheme (PMFBY) during the Kharif seasons in the state of Haryana. In the case of farmers covered under the scheme, the trend shows major fluctuations with high crests and deep troughs, if observed on yearly basis. The major positive change in growth

is observed in the year 2009 whereas, the lowest is found in the year 2013. In the case of farmers benefitted under the scheme, huge decline is observed in the number of farmers benefitted after three years of inception of scheme in Haryana, i.e., in the year 2006, after which it remains almost constant till 2014. The highest positive change is seen in 2005 and the lowest in 2007.

Figure 2: Trend showing Growth Rate of Farmers Covered and Farmers Benefitted in Haryana (Kharif Season)



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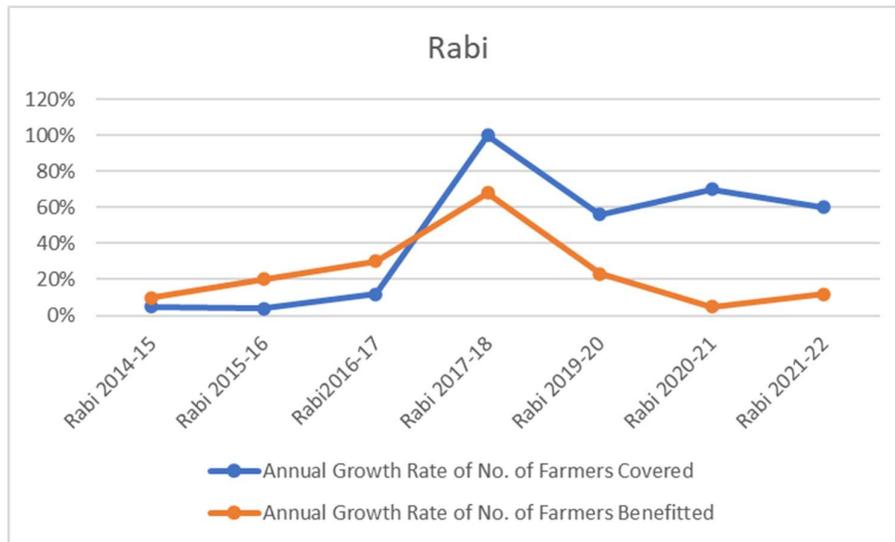
Rabi Season

Figure 3 shows the data for the Rabi season for the state of Haryana. The calculations are made to find out the annual growth rate of number of farmers covered under PMFBY and annual growth rate of number of farmers benefitted by PMFBY.

The calculations done in **Figure 3** are analyzed by plotting it on a graph. Figure 4.3 shows the trends in the changes in the growth rates with respect to farmers covered and farmers benefitted under the National Agriculture Insurance Scheme (PMFBY) during the Rabi seasons in the state of Haryana. In both the cases, the trend shows major fluctuations with high crests and deep troughs.

In the case of farmers covered under the scheme, the trend shows major fluctuations with high crests and deep troughs, if observed on yearly basis. The major positive change in growth is observed in the year 2007-08 whereas, the lowest is found in the year 2008-09. In the case of farmers benefitted under the scheme, the highest positive change is seen in 2008-09 and the lowest in 2013-14.

Figure 3: Trend showing Growth Rate of Farmers Covered and Farmers Benefitted in Haryana (Rabi Season)



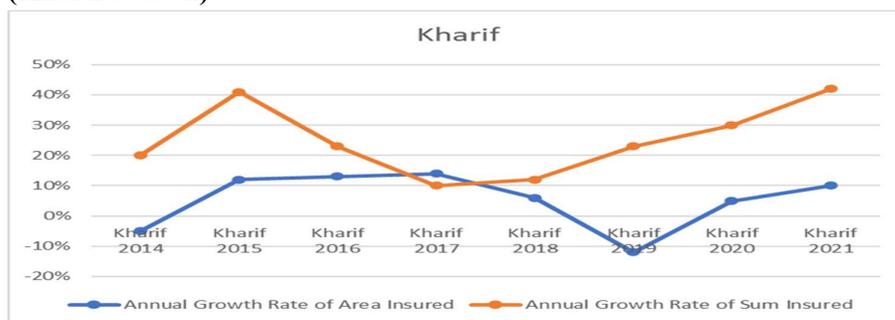
Area Insured and Sum Insured under PMFBY in Haryana (Annual Growth Rate)

The data for area insured under the scheme and sum insured by the scheme for the state of Haryana is first segregated for the two crop seasons – Kharif and Rabi.

Kharif Season

Figure 4 shows the data for the Kharif season for the state of Haryana. The calculations are made to find out the annual growth rate of area insured under PMFBY and sum insured by PMFBY. The calculations done in Table 4.4 are analyzed by plotting it on a graph. Figure 4 shows the trends in the changes in the growth rates with respect to area insured and sum insured under the National Agriculture Insurance Scheme (PMFBY) during the Kharif seasons in the state of Haryana. In both the cases, the trend shows major fluctuations with high crests and deep troughs. In the case of area insured under the scheme, the trend shows major fluctuations with high crests and deep troughs, if observed on yearly basis. The major positive change in growth is observed in the year 2009 whereas, the lowest is found in the year 2013. In the case of sum insured under the scheme, the highest positive change is seen in 2006 and the lowest in 2013.

Figure 4: Trend showing Growth Rate of Area Insured and Sum Insured in Haryana (Kharif Season)

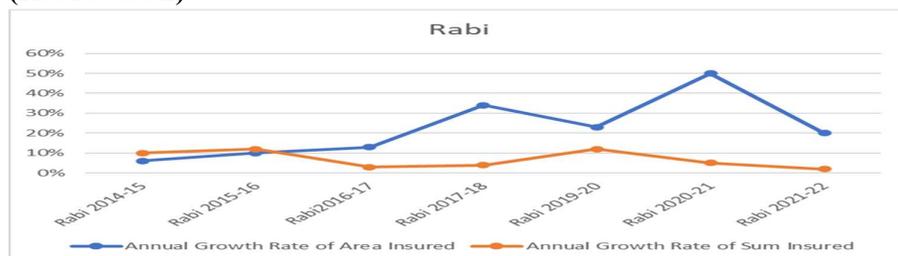


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Rabi Season

Figure 5 shows the data for the Rabi season for the state of Haryana. The calculations are made to find out the annual growth rate of area insured under PMFBY and sum insured by PMFBY. In the case of area insured under the scheme, the trend shows major fluctuations with high crests and deep troughs, if observed on yearly basis. The major positive change in growth is observed in the year 2009-10 whereas, the lowest is found in the year 2013-14. In the case of farmers benefitted under the scheme as well, the highest positive change is seen in 2009-10 and the lowest in 2013-14.

Figure 5: Trend showing Growth Rate of Area Insured and Sum Insured in Haryana (Rabi Season)



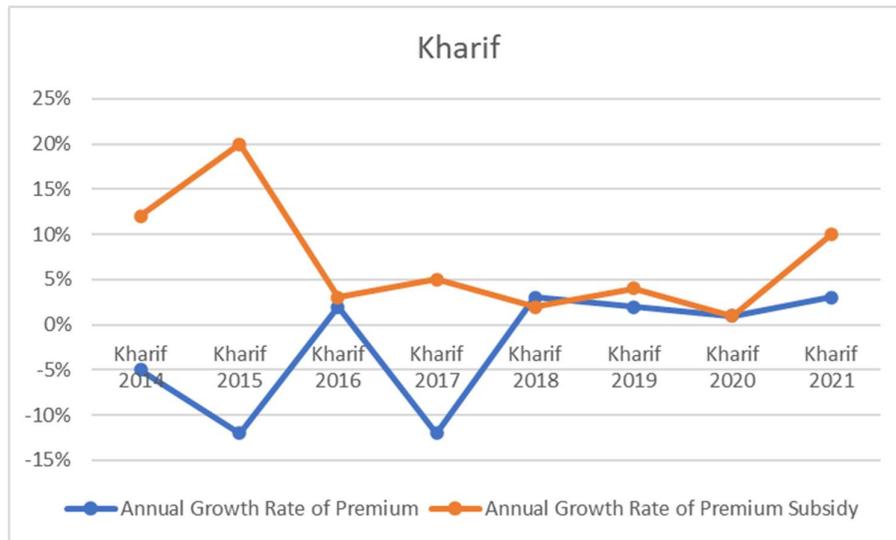
Premium and Premium Subsidy under PMFBY in Haryana (Annual Growth Rate)

The data for premium and premium subsidy under the scheme for the state of Haryana is first segregated for the two crop seasons – Kharif and Rabi.

Kharif Season

Figure 6 shows the data for the Kharif season for the state of Haryana. The calculations are made to find out the annual growth rate of premium under PMFBY and premium subsidy by PMFBY. The calculations done in Figure 6 are analyzed by plotting it on a graph. Figure 4.6 shows the trends in the changes in the growth rates with respect to premium and premium subsidy under the National Agriculture Insurance Scheme (PMFBY) during the Kharif seasons in the state of Haryana. In both the cases, the trend shows major fluctuations with high crests and deep troughs. In the case of premium under the scheme, the trend shows major fluctuations with high crests and deep troughs, if observed on yearly basis. The major positive change in growth is observed in the year 2006 whereas, the lowest is found in the year 2013. In the case of premium subsidy under the scheme, the highest positive change is seen in 2009 and the lowest in 2011.

Figure 6: Trend showing Growth Rate of Premium and Premium Subsidy in Haryana



(Kharif Season)

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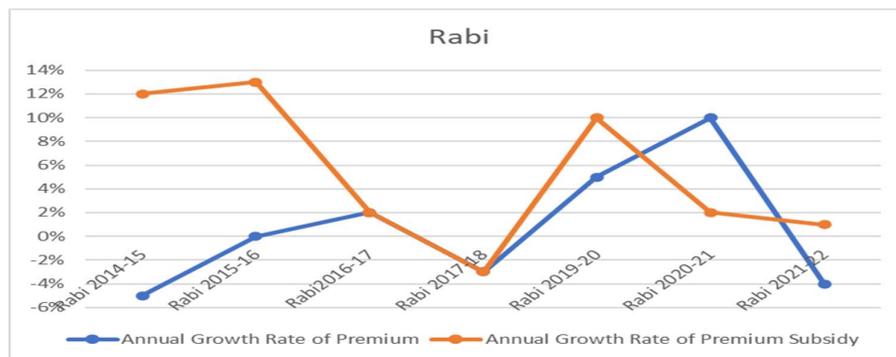
Rabi Season

Figure 7 shows the data for the Rabi season for the state of Haryana. The calculations are made to find out the annual growth rate of premium under PMFBY and premium subsidy by PMFBY.

The calculations done in **Figure 7** are analyzed by plotting it on a graph. Figure 4.7 shows the trends in the changes in the growth rates with respect to premium and premium subsidy under the National Agriculture Insurance Scheme (PMFBY) during the Rabi seasons in the state of Haryana. In both the cases, the trend shows major fluctuations with high crests and deep troughs.

In the case of premium under the scheme, the trend shows major fluctuations with high crests and deep troughs, if observed on yearly basis. The major positive change in growth is observed in the year 2011-12 whereas, the lowest is found in the year 2013-14. In the case of premium subsidy under the scheme, the highest positive change is seen in 2007-08 and the lowest in 2012- 13.

Figure 7: Trend showing Growth Rate of Premium and Premium Subsidy in Haryana (Rabi Season)



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figure 7 shows that the average awareness scores towards crop insurance schemes between male and female. It is reported that female farmers were having more awareness than male.

CROP LOAN YEAR WISE GROWTH AND RECOVERY

H₀₅: There is no significant impact of crop Loan on Growth of Agricultural sector in Haryana.

Table 1

Beneficiaries of SBI (rural branches) repayment performance in sample districts

District	Size of farm	Marginal	Small	Medium and Large	Total
Jhajjar	Amount Demanded	1407690	4983840	4581000	10972530
	Amount Repayed	1238970	4360860	4581000	10180830
	Per cent of repayment	88.01	87.5	100	92.78
	No of Beneficeries	20	36	24	80
Karnal	Amount Demanded	1528550	5975385	2919000	10422935
	Amount Repayed	1446400	5520265	2442000	9408665
	Per cent of repayment	94.62	92.38	83.65	90.26
	No of Beneficeries	25	40	15	80
Total	Amount Demanded	2936240	10959225	7500000	21395465
	Amount Repayed	2685370	9881125	7023000	19589495
	Per cent of repayment	91.45	90.16	93.64	91.55

	No of Beneficiaries	45	76	39	160
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Table 1 shows the beneficiaries of SBI's rural branches' repayment performance in both districts. In the district of Jhajjar, the payback performance of marginal, small, and medium-large farmers was determined to be 88.01, 87.5, and 100 per cent, individually. District Karnal has excellent payback record, with 94.62 per cent, 92.38 per cent, and 83.65 per cent marginal small and medium-large farms, respectively. The payback performance of medium and big farms in District Jhajjar was 100 per cent. In the district of Karnal, marginal farmers did the best, with a score of 94.62 per cent. In the case of all types of farmers, the overall payback performance is above 90 per cent.

Table 2 Term wise repayment performance in two districts

District	Size of farm	Short Term		Medium Term		Long Term		Total	
		BANKS	PACS	SBI	PACS	SBI	PACS	SBI	PACS
Jhajjar	Amount Demanded	7025419	22122850	11030	21740	--	141000	7036449	22285590
	Amount Repayed	2890966	18951115	11030	21740	--	121000	2901996	19093155
	Per cent of repayment	41.15	85.66	100	100	--	85.81	41.24	85.66
	No of Borrowers	75	144	5	9	--	7	80	160
Total	Amount Demanded	29148269		32770		141000		29322039	
	Amount Repayed	21842081		32770		121000		21995851	
	Per cent of repayment	74.94		100		85.81		75.01	
	No of Borrowers	219		14		7		240	
Karnal	Amount Demanded	6735744	21452125	11000	17670	--	99000	6746744	21568795
	Amount Repayed	1985910	18192035	6600	17670	--	99000	1992510	18308705
	Per cent of repayment	29.47	84.80	60	100	--	100	29.53	84.88
	No of Borrowers	74	148	6	7	--	5	80	160
Total	Amount Demanded	28187869		28670		99000		28315539	

	Amount Repayed	20177945	24270	99000	20301215
	Per cent of repayment	71.57	84.65	100	71.69
	No of Borrowers	222	13	5	240
Grand Total	Amount Demanded	57336138	61440	240000	57637578
	Amount Repayed	42020026	57040	220000	4229766
	Per cent of repayment	73.28	92.83	91.66	73.38
	No of Borrowers	441	27	12	480

Source : <https://www.nabard.org/CircularPage.aspx?cid=504&id=2922>

In both districts, the period wise payback performance is shown in Table 2. PACS, SBI, and rural SBI branches in Jhajjar district showed 41.15, 78.82, and 92.7 per cent, approximately. The medium-term loan payback record of all three types of institutions providing loans to farmers in District Jhajjar was determined to be 100 per cent. SBI has a repayment record of 66.10 per cent for long-term loans. PACS, on the other hand, does not offer long-term loans. Short-term loan repayment performance in Karnal district was determined to be 29.48, 79.76, and 90.20 per cent in the case of PACS and SBI, individually. The medium-term loan repayment performance watch 60 per cent, 100 per cent, and again hundred per cent in case of PACS, SBI respectively. In long term loan the repayment performance was found hundred per cent in case of SBIs. The repayment performance was only 29.53 per cent in case of PACS of district Karnal. In case of district Jhajjar PACS it was 41.24 per cent.

Table 3 Overall Reimbursement Performance by Farm size

District	Size of farm	Marginal	Small	Medium and Large	Total
Jhajjar	Amount Demanded	5407825	13052120	10862094	29322039
	Amount Repayed	3845600	9529970	8620281	21995851
	Per cent of repayment	71.10	73.01	79.36	75.01
	No. of Borrowers	80	99	61	240

Karnal	Amount Demanded	4621014	14686225	9008300	28315539
	Amount Repayed	3065410	11757305	5478500	20301215
	Per cent of repayment	66.33	80.05	60.81	71.69
	No. of Borrowers	85	104	51	240
Total	Amount Demanded	10028839	27738345	19870394	57637578
	Amount Repayed	6911010	21287275	14098781	42297066
	Per cent of repayment	68.91	76.74	70.95	73.38
	No. of Borrowers	165	203	112	480

<https://www.nabard.org/CircularPage.aspx?cid=504&id=2922>

Table 3 shows the total payback performance of farmers depending on the expanse of their farm. The payback performance of medium and large farms in District Jhajjar was the best, at 79.36 per cent. Small farmers in the Karnal district had the highest payback performance of 80.05 per cent. The total payback performance of marginal, small, medium and big farmers was determined to be 68.91, 76.74, and 70.95 per cent correspondingly. The total repayment performance of small farmers was shown to be the best. Several times, the government has implemented loan forgiveness programs to help farmers reduce their debt.

While debt forgiveness is not a solution, it is a treatment for the problem. According to the findings, frequent beneficiaries do not have the financial means to repay their loans. Some regulars were also recognized as being unable to repay, despite the fact that they were paying on time. On the other hand, it was discovered that some defaulters have a repayment capacity but do not pay on a regular basis. Except for basic agricultural co-operative societies, the payback performance of all forms of credit institutions in the state of Haryana is excellent. Prior to the government's announcement of the loan waiver program, co-operatives had been doing exceptionally well. PACS's field team was not particularly attentive when it came to debt collection. SBI's field team is particularly attentive and engaged in the loan recovery procedure. Though a hundred per cent recovery is not possible, but a reasonable and certain per centage is the must for healthy working of finance institutions.

CONCLUSION

- Purpose-wise borrowings of the respondents show that more than 25.96 per cent of credit has been borrowed for banana cultivation, 23.07 per cent for paddy cultivation, 34.62 per cent has been borrowed for tapioca and coconut cultivation and the remaining 16.35 per cent has been borrowed for rubber cultivation.
- The total cultivated area before crop loan was 523.6 acres. After availing crop loan, it increased to 582.8 acres (11.3 per cent). It is proved that there is significant difference

between the crop loan and area of cultivation under banana, rubber and coconut. 254

- The production of rubber before crop loan was ₹68.45 lakh. After availing crop loan, it increased to ₹77.39 lakh (13.06 per cent). Paddy production has declined from 27.97 lakh to 26.52 lakh (-5.19 per cent). The total production of all the crops under study before crop loan was ₹420 lakh. After availing crop loan, it increased to ₹460.97 lakh (9.75 per cent). It is also proved that there is significant difference between crop loan and production of banana, rubber and coconut.
- The total expenditure of all the crops before crop loan was 139.43 lakh. After availing crop loan it increased to ₹151.12 lakh (8.3 per cent) in which that of paddy alone has increased from ₹12.96 lakh to ₹15.73 lakh (21.37 per cent). It is higher than that of other crops. It is assessed that there is significant difference between crop loan and expenditure on paddy and tapioca.
- The total income from all the crops before crop loan was ₹279.63 lakh. After availing crop loan, it increased to ₹318.22 lakh (13.8 per cent). The income from banana has increased to a larger extent (16.6 per cent) than the income from other crops. It is assessed through Paired 't' test technique that the crop loan and cultivated income are dependent. The income from banana, rubber and coconut has been impacted by credit.

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