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The Impact of Pradhan Mantri Kisan Samman Nidhi Scheme on the Farm Income of Beneficiaries in Uttar Pradesh

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PREFACE

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a new Central Sector Scheme to provide income support to all landholding farmers' families in the country to supplement their financial needs for procuring various inputs related to agriculture and allied activities as well as domestic needs. Under the PM-KISAN scheme, all landholding farmers' families shall be provided the financial benefit of Rs. 6000 per annum per family payable in three equal instalments of Rs. 2000 each, every four months. PM-Kisan Samman Nidhi Yojana was announced on February 1, 2019, during the Interim-Union Budget 2019 and was effective from December 2018. Prime Minister Narendra Modi launched PM-Kisan Samman Nidhi Yojana on February 24, 2019, in Gorakhpur. PM Modi transferred the first instalment to 1 Crore farmers of Rs. 2000 each ahead of the Lok Sabha Elections 2019.

The scheme aims to strengthen the financial capability of the farmers in procuring agricultural inputs and encourage adoption of modern techniques in the crops to obtain optimum yield. Apart from this, it also helps in reducing the liquidity constraints and easing the access to credit. The programme is totally funded by the Government of India.

At present 2 crores, 56 lakh farmers of Uttar Pradesh are covered under the scheme. Out of the total 10 crore 46 lakh beneficiaries under this scheme in the country in 2018-19, more than 26.93% belonged to U.P alone. Therefore, it was relevant to know the outcome of this huge investment at the ground level. In order to know the impact of this scheme on the farm income of the beneficiaries, a study has been conducted by the Agro-Economic Research Centre of University of Allahabad, Prayagraj in the third week of May 2022, taking 2020-21 and 2021-22 as the reference year. In this context, **120 beneficiaries** and **120 non-beneficiaries** were selected from **4 districts of 4 different economic regions** of Uttar Pradesh. A comparative analysis has been done to measure the impact of the scheme on the farm income of the beneficiaries with the non-beneficiaries.

This report has been drafted by Shri. D.K. Singh, Ex-Research Officer of the Centre, under my guidance and supervision.

The Director of Agriculture, Statistics and Crop Insurance of U.P had provided full support and cooperation to the research team of the Centre during the collection of the secondary and primary data for the study. I am highly obliged to him. The Deputy Director of Agriculture of the four

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Sri. Hasib Ahmad and Dr. H.C. Malviya of the Centre had put a lot of effort from the planning to the completion of this study. Their efforts are praiseworthy for which they deserve the credit. Sri. Ovesh Ahmad and Miss. Divya Tiwari had typed the draft report and the executive summary. Their efforts are also creditable. Dr. Ramesh Yadav, Assistant Economic Adviser (AER), Ministry of Agriculture and Farmers Welfare, Directorate of Economics & Statistics had given valuable suggestions for the improvement of the study proposal. I am grateful to him for his sincere guidance.

I do hope that the report will be useful for policy makers and researchers.

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Executive Summary

The PM Kisan Scheme was launched on December 1st, 2018 across the country. On 24th February, 2019 Prime Minister, Sri Narendra Modi had started this scheme in Gorakhpur district of Uttar Pradesh to transfer the first instalment of Rs. 2000 to each eligible beneficiary which covered over one crore farmers. The foremost objective of this scheme is to provide financial support to the farmers to procure agricultural inputs for getting better yield from the crops. Majority of farmers of the country as well as states are not financially sound to procure better quality of seeds, fertilizers, pesticides as per their required need due to lack of adequate capital at the peak season of crops. Apart from this, large numbers of farmers were also unable to borrow the money from lending institutions. Around 50 percent of the farmers of the country had only access to formal credit.

The liquidity constraints, lack of information, credit etc. are the major hurdles in the way of better adoption of the modern techniques in the agriculture. In order to ease the liquidity constraints, the financial support to farmers under PM Kisan Scheme is one of the better programmes of Government of India for welfare of poor and resource less farmers. The cash transfer of Rs. 6000 per annum to the eligible farmers under this scheme strengthens the financial capability of the beneficiaries to spend more money on the purchase of the agricultural inputs. It is also useful in the adoption of the modern techniques in agriculture. It is very helpful in easing the credit and liquidity constraints in purchasing the agricultural inputs. In addition to this, the PM Kisan Scheme is a better option than waiving of the loans. It is also observed that out of the total farmers of the country, one fifth of them procure agricultural inputs on credit. It is a very promising scheme for the overall betterment of the farmers. At the initial stage of the scheme, it was only for the small and marginal farmers possessing cultivable land up to 2 hectares. From June 2019, it was extended to all the 140 million farmers of the country. As per data of the Government of India, 50 million farmers of the country have been covered under the PM Kisan Scheme by 15th September, 2019. The cash under this scheme is transferred directly through the DBT system in the bank accounts of the beneficiaries. This has no involvement of any middlemen, thus ensuring in curbing the leakages in the process of transferring the cash amount in the accounts of the beneficiaries.

More than 10 crore, 46 lakh farmers of the country have been covered under this scheme during 2018-19, of which the share of U.P is highest being 26.93% followed by Maharashtra (10.96%), Madhya Pradesh (8.62%), Bihar (8.01%), Rajasthan (7.54%), Gujarat (6.20%) and Andhra Pradesh (5.57%). More than 2 crore 56 lakh farmers of U.P have been covered under this scheme till 2021. Out of total transferred benefit of Rs. 26475652 of the country under the PM Kisan Scheme during 2018-19, the share of U.P was 42.24% which was highest among all the other states of the country. The main idea of this scheme is to raise the farm income of the farmers, by efficient use of quality inputs and adoption of the latest techniques in the crops.

In order to know the impact of the scheme on farm income of the beneficiaries, the study had been undertaken by the Agro-Economic Research Centre, University of Allahabad, Prayagraj in third week of May 2022 taking 2020-21 and 2022 as the reference year.

Socio-Economic status of Sample Beneficiaries and Non-beneficiaries

Out of the total 120 sample beneficiary families, **46.67** percent belonged to **OBC** followed by **29.17** percent and **24.16** percent of **General** and **SC/ST** categories respectively.

It was observed that 98.34% of the sample beneficiaries and 99.17% of the non-sample beneficiaries owned up to 2 hectares of land. It shows that the sample farmers were generally small and marginal. Out of total respondents of sample families only 66.67 percent were educated and rest 33.33 percent was illiterate. The educational level was very limited among the respondents of sample beneficiary families. Illiteracy still persists among the farmers. The population per sample family was 6.73 against 5.93 of non-sample beneficiary family. Out of total 340 members of 120 samples beneficiary families, 53.24 percent was engaged in non-farming activities against 46.76 percent engaged in farming activities.

Table-1
Distribution of sample farmers according to size of farms

Size of farms (Hect.)	Number of Beneficiaries	Number of Non-Beneficiaries
0.00 – 1.00	98 (81.67)	107 (89.17)
1.01 – 2.00	20 (16.67)	12 (10.00)
2.01 – 4.00	02 (1.66)	01 (0.83)
4.01 and above	00 (0.00)	00 (0.00)
Total	120 (100.00)	120 (100.00)

Note: Figures in brackets are the percentage to all

Land Utilization and Cropping Pattern on the Sample Farms in the Study period i.e., 2020-2021 and 2021-22

It is evident from the analysis of data that entire land of the sample beneficiary and non-sample beneficiary farmers were under cultivation during the reference period of the study. The average land holding of the sample beneficiary farmers was 0.71 hectare against 0.60 hectares of the non-sample beneficiary farmers. The per farm owned land was 0.71 hectare on the sample beneficiary farms against 0.60 hectare on non-sample beneficiary farms. Both the sample beneficiary and non-beneficiary farmer had not leased-out their land during the reference period. The leasing practice of the land was not prevalent in the study areas. All the cultivated land of sample beneficiary and non-sample beneficiary farms were fully irrigated. The main source of irrigation was owned/private tube-wells and canal. On account of this, the cropping intensity was 168.20 percent and 168.01 percent on beneficiary and non-beneficiary farms respectively. It was observed that the sample beneficiary and non-beneficiary farmers had sown mainly the kharif and rabi crops on their farms in the reference year.

Of the gross cropped area, cereals were sowed on 77.35%, pulses on 18.70% and oilseeds on 3.95% on the sample beneficiary farms. Paddy and wheat were the two major cereals which together accounted for 77.35 percent of the gross cropped area on the sample beneficiary farms. Among all the crops, share of wheat was 45.07 percent and the share of paddy was 32.28 percent on the sample farms. The non-sample, beneficiary farms also depicted the same cropping pattern. From the data it is evident that preference of the farmers was for wheat and paddy on both the

sample farms. Among the oilseeds, groundnut and mustard were the dominant crops on the sample farms during the same period. The preference of the sample farmers was for paddy and wheat. It appears that these crops have limited risk in comparison to oilseeds and pulses. Due to the assured return from these two crops, farmers spend more capital on paddy and wheat as compared to oilseeds and pulses.

Cost of cultivation of different crops on the sample farms

The main crops grown were wheat and paddy by both the sample beneficiary as well as non-beneficiary farmers. The per hectare cost of production of wheat and paddy was estimated at Rs. 33,244 and Rs. 40,583 on sample beneficiary farms respectively. In case of non-sample beneficiary farms, the per hectare cost of production of wheat and paddy was Rs. 38,831 and Rs. 37,937 respectively during the reference year. The total input costs of all crops on sample beneficiary farms were Rs. 47,73,875. 38.77% of the total cost was incurred on the purchase of material inputs .31.80% was paid as rent on machinery. 14.43% on labour and wages and rest 15% was spent on other related inputs. It shows that the sample beneficiary farmers had given due weightage to the purchase of seeds, fertilizers and pesticides.

Table-2
Per Hectare cost of production on different crops on the sample farms

(Rs.)

Name of Crops	Beneficiary farms					Non- Beneficiary farms				
	Costs incurred					Costs incurred				
	Machinery costs	Material costs	Labour charge	Others costs	Total costs	Machinery costs	Material costs	Labour charge	Others costs	Total costs
Paddy	15799	15675	4946	4163	40583	13596	14164	5414	4763	37937
Urd	3922	7272	4282	3019	18495	4470	6588	4000	3040	18098
Groundnut	4043	15671	7159	4106	30979	7000	9807	7393	4621	28820
Moong	4000	6640	4000	2000	16640	4000	6400	4000	2109	16509
Wheat	9866	12429	4702	6247	33244	10082	12733	4846	6170	33831
Pea	5657	14486	4628	5415	30186	5128	14654	4635	5404	29821
Gram	4167	10000	3400	4167	21734	6250	14000	5350	7000	32600
Mustard	5000	6200	4000	4000	19200	5000	3600	4000	4000	16600

The analysis also indicates that total per hectare costs of production of all the crops on the sample beneficiary farms in 2020-21 worked out to be Rs. 33003, out of which the share of PM Kisan Scheme was only 9.65%. This was due to the diversion of the funds to unproductive purposes.

Pattern of the utilisation of the funds of the PM Kisan Scheme

All the selected 120 beneficiaries have been regularly getting Rs. 6,000 per annum from 2019-20 to 2020-21, under this scheme. The data reveals that out of Rs.7,20,000 of the PM Kisan Scheme during 2020-21, Rs.4,60,700 (63.99%) was used in agriculture while the rest Rs.2,59,300 (36.01%) was used in non-agriculture sectors. It is also evident that out of total amount of Rs.4,60,700 incurred on agriculture cultivation, the maximum amount of 40.82% was spent on ploughing followed by 22.69% and 21.01% on fertilizers and seeds respectively. While the pesticides, irrigation, machinery, labour and other charges accounted for 15.48% of the total agriculture fund under the PM Kisan Scheme. It is also noticed that out of total amount, Rs.2,59,300 was used for unproductive purposes. The maximum amount that is 39.30% was spent on health followed by 27.02%, 20.25%, 9.53% and 3.90% on the social ceremonies, purchase of non-agricultural assets, and construction of house and others respectively during 2020-21. Thus, major expenditure of non-agriculture purpose was on medicines and social ceremonies. They together accounted for 66.32% of the total amount of Rs. 2,59,300 used for unproductive purposes. The beneficiaries were also interested in purchasing non-agricultural assets. But the maximum amount of PM Kisan scheme was spent on agriculture and that to on wheat and paddy crops. The maximum amount of PM Kisan Scheme was spent on wheat and paddy crops.

Table-3**Utilized of funds of PM Kisan Scheme in reference year 2020-21 & 2021-22 by Beneficiary Farmers**

Years/ Instalment	No. of Beneficiary Farmers	Amount received (Rs.)	Utilized funds	
			Agriculture	Non- Agriculture
			(Rs.)	(Rs.)
2020-2021	120	240000	167100	72900
I st Installment		(100)	(69.63)	(30.37)
2020-2021		240000	160900	79100
II nd Installment	120	(100)	(67.04)	(32.96)
2020-2021		240000	132700	107300
III rd Installment		(100)	(55.29)	(44.71)
2021-2022	120	240000	159230	80770
I st Installment		(100)	(66.35)	(33.65)
2021-2022		240000	156800	83200
II nd Installment	120	(100)	(65.33)	(34.67)
2021-2022		240000	123500	116500
III rd Installment		(100)	(51.46)	(48.54)
Total	360	1440000	900230	539770
		(100)	(62.52)	(37.48)

Note: Figures in brackets are percentage to total funds

The pulses and oilseeds did not get due weightage under the PM Kisan Scheme. The data analysis of the utilisation of funds under the PM Kisan Scheme reflects that the timing of the instalments and spending pattern are very closely related to each other. The instalments of the PM Kisaan Scheme received by the beneficiaries at the peak of the agricultural season are largely spent on agricultural. The disbursement of the funds in the off season of agriculture, are generally spent on non-agriculture purposes. Undoubtedly, the PM Kisan Scheme is playing a significant role in enhancing the production and income from crops on the beneficiary farms which is supported by the analysis of the data.

Production and income of the beneficiary farms Vs. Non-Beneficiary farms

I) Per hectare yield

Both the sample and the non-sample beneficiary farmers were focused only on two crops. They are paddy and wheat. Therefore, the comparative analysis is confined to paddy and wheat crops only. The per hectare yield of paddy was 54.58 qtls on sample beneficiary farms while it was

52.90 qtls on sample-non beneficiary farms, thereby showing an increase of 3.08% over the non-sample farms. The per hectare yield of wheat was estimated at 43.05 qtls on sample beneficiary farms against 42.22 qtls yield on non-sample farms, showing 1.93% increase over the non-sample beneficiaries. It shows that the per hectare yield of paddy and wheat was higher by 3.08% and 1.93% on sample beneficiary farms respectively than yield of paddy and wheat on non-sample beneficiary farms during the same period.

Table-4
Production and Productivity of different crops on the sample farms

(Quantity in Qtls.)

Name of the Crops	Beneficiary farms			Non- Beneficiary farms		
	Area (Hect.)	Production	Per Hect. Yield	Area (Hect.)	Production	Per Hect. Yield
Paddy	48.70	2549	54.58	40.30	2132	52.90
Urd	18.05	188	10.42	14.80	146.50	9.90
Groundnut	4.70	91.50	19.47	7.25	145	20.00
Moong	2.50	26	10.40	2.75	27.50	10.00
Wheat	65.20	2807	43.05	55.05	2324	42.22
Pea	3.50	88.50	25.29	7.80	195	25.00
Gram	3.00	57	19.00	2.00	33	16.50
Mustard	1.00	12	12.00	0.50	6	12.00
G. C.	144.65			130.45		

II) Net Income

The farm income of both the beneficiary and non-beneficiary farms are compared to see the impact of the PM Kisan Scheme. The per household net income was estimated at Rs. 48,334 of the beneficiary farms in the reference year against Rs. 43,573 per household income on non-beneficiary farms, thereby showing 9.85% increase over non-beneficiary farms. The per capita net farm income was worked out to be Rs. 7,178 on beneficiary farms against Rs.7, 354 of the non-beneficiary farms. This shows that the per capita income of the beneficiary farms was lower than that of the non-sample beneficiary as the family size of the non-beneficiary was smaller. The per hectare net farm income worked out to be Rs. 40,098 on beneficiary farms against Rs. 40,082 on non-beneficiary farms in the reference year. It shows that per hectare net farm income was higher only by 0.04% on the beneficiary farms over the non-beneficiary farms. This shows that the impact of the PM Kisan Scheme was positive but not very significant in the reference

year. This clearly indicates that a large amount of the PM Kisan funds is being diverted for non-agricultural purposes. In spite of this, financial support of Rs. 6,000 per annum to the beneficiary farmers under the scheme has been encouraging to farmers to purchase seeds, fertilizers, pesticides etc for getting optimum production of the crops. It is helpful in increasing the risk-taking capacity of the farmers. Overall, this scheme is a boon for the farmers.

Table-5
Gross income, cost of inputs and net income of crops grown on the sample farms (Rs.)

Name of the Crops	Beneficiary farms			Non- Beneficiary farms		
	Gross income	Cost of inputs	Net income	Gross income	Cost of inputs	Net income
Paddy	3696050 (79144)	1895250 (40583)	1800800 (38561)	3081400 (76461)	1528855 (37937)	1552545 (38524)
Urd	1128000 (62493)	33850 (18496)	794150 (43997)	879000 (59392)	267850 (18098)	611150 (41294)
Groundnut	457500 (97340)	145600 (30978)	311900 (66362)	725000 (100000)	208950 (28820)	516050 (71179)
Moong	169000 (67600)	41600 (16640)	127400 (40960)	178750 (65000)	45400 (16509)	133350 (48490)
Wheat	4491200 (690049)	2167525 (33244)	2323675 (35639)	3718400 (67546)	1862380 (33831)	1856020 (33715)
Pea	309750 (88500)	105650 (30186)	204100 (58314)	682500 (87500)	232600 (29820)	449900 (57679)
Gram	256500 (85500)	65200 (21733)	191300 (63767)	148500 (74250)	65200 (32600)	83300 (41650)
Mustard	66000 (66000)	19200 (19200)	46800 (46800)	34800 (69600)	8300 (16600)	26500 (53000)
Total	10574000 (73100)	4773875 (33003)	5800125 (40098)	9448350 (72428)	4219535 (32346)	5228815 (40082)

Note: Figures in brackets are per hectare

Policy Implications

The rationale behind the amount `6,000 per landholding is not clear from any of the policy documents. However, from the basic theory of production, it can be inferred that a farmer is likely to incur severe loss or may even stop cultivating if the average variable costs fall below the price they receive. Thus, PM-KISAN needs to cover at least the basic expenditure on cultivation to be effective. On the basis of the responses from the beneficiaries and after analysis of the primary data, certain suggestions emerged from the study. Whenever the policy makers undertake a review of the PM Kisan Samman Nidhi Yojana, the AERC Allahabad, would make an earnest request to the Policy-Makers to take into account the following suggestions. If feasible

these suggestions incorporate changes, in order to make this PMKSNY more effective and productive.

- (i) Most of the sample beneficiary farmers were of the view that the amount under the PM Kisan Scheme should be increased at least to Rs. 12000 per annum to meet out the increasing prices of the inputs.
- (ii) The land less crop sharers and the tenants should also be included in the list of the PM Kisan Scheme
- (iii) The cash transfers under this scheme should be made during the peak season of the crops. It will be helpful in checking the diversion of the funds to unproductive activities.
- (iv) Few of the sample beneficiaries had also expressed their views that the seeds, fertilizers, pesticides etc. should be made available in kind (through vouchers or stamps) under this scheme in the place of cash transfer.
- (v) In spite of the efforts made by the non-beneficiary samples they could not succeed in registering themselves for this scheme, so the registration procedure should be more simplified in order for universal coverage

The role of K.V.K was not found very effective in guiding the farmers about the adoption of the modern techniques in agriculture. Only very few of the sample beneficiaries could avail the guidance of K.V.K. The scientists of K.V.K. did not approach remote villages of the selected districts during the study period. Extension, education, training, dissemination of new modern techniques etc are basic activities of K.V.K. which could not reach up to small and marginal farmers. On account of this, the sample beneficiaries could not apply latest modern techniques in their crops. Therefore, it should be ensured that the K.V.K should expand their activities to the remote villages of the districts.

The PM Kisan Scheme and K.V.K. should be integrated with each other. The bogus and fraud beneficiaries should be deleted from the list of the beneficiaries under the PM Kisan Scheme.

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Introduction

I.1. Background

The Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) is a new Central Sector Scheme to provide income support to all landholding farmers' families in the country to supplement their financial needs for procuring various inputs related to agriculture and allied activities as well as domestic needs. Under the PM-KISAN scheme, all landholding farmers' families shall be provided the financial benefit of Rs. 6000 per annum per family payable in three equal instalments of Rs. 2000 each, every four months. PM-Kisan Samman Nidhi Yojana was announced on February 1, 2019, during the Interim-Union Budget 2019 and was effective from December 2018. Prime Minister Narendra Modi launched PM-Kisan Samman Nidhi Yojana on February 24, 2019, in Gorakhpur. PM Modi transferred the first installment to 1 Crore farmers of Rs. 2000 each ahead of the Lok Sabha Elections 2019.

The scheme aims to strengthen the financial capability of the farmers in procuring agricultural inputs and encourage adoption of modern techniques in the crops to obtain optimum yield. Apart from this, it also helps in reducing the liquidity constraints and easing the access to credit.

Box: 1

Pradhan Mantri Kisan Samman Nidhi (PM-KISAN): At a Glance
1. Vulnerable landholding farmer families, having cultivable land up to 2 hectares, will be provided direct income support at the rate of Rs. 6,000 per year.
2. This income support will be transferred directly into the bank accounts of beneficiary farmers, in three equal instalments of Rs. 2,000 each.
3. The complete expenditure of Rs 75000 crore for the scheme will be borne by the Union Government in 2019-20.

Under the **Pradhan Mantri Kisan Samman Nidhi Yojana**, an amount of ₹ 6000 is provided to all the small and marginal farmers of the central government every year, this amount is sent to all the lower middle-class farmers through online medium who all are farmers **PM**

Kisan Samman Nidhi Yojana.¹ The revised Scheme is expected to cover around 2 crore more farmers, increasing the coverage of PM-KISAN to around 14.5 crore beneficiaries, with an estimated expenditure by Central Government of Rs. 87,217.50 crores for year 2019-20. The amount is being released in three 4-monthly installments of Rs.2000/- each over the year, to be credited into the bank accounts of the beneficiaries held in destination banks through Direct Benefit Transfer mode. The scheme was launched in a record time of 3 weeks, on 24th February at a huge programme in Gorakhpur; Uttar Pradesh where the first rounds of installments was paid to several farmers.

Box: 2

Eligibility Criteria: PM KISAN

For getting the registration of Pradhan Mantri Kisan Samman Nidhi Yojana, it is necessary for all the farmers to have the following eligibility criteria given below: -

- Under PM Kisan Yojana, all small and marginal farmers of our country can get registered.
- All the farmers who will register for PM Kisan Yojana, the data of all those farmers or landlords should be with the Government of India.
- It will be mandatory for all the farmers to have a record of their land details.

Source: <https://duac.org/pm-kisan-gov-in-registration/>

The programme, PM-KISAN, is similar to other such schemes like the Rythu Bandhu of Telangana and Kaalia programmes of Odisha. Bhavantar Bhugtan Yojana in Madhya Pradesh sought to provide relief to farmers by providing the differential between MSPs and market prices. The Rythu Bandhu scheme of the Telangana government provides ₹ 4,000 per acre for every season to all the farmers of the state. Similar initiatives have also framed in Jharkhand and Odisha. In December 2018, Odisha launched the Krushak Assistance for Livelihood and Income augmentation (KALIA). KALIA is more complicated in design and implementation. It commits to give Rs 5,000 per SMF, twice a year that is Rs 10,000 a year.

¹ <https://duac.org/pm-kisan-gov-in-registration/>

As per the agricultural census 2015–16 data, there are 99,858 marginal landholdings (less than 1 ha) and 25,777 small landholdings (1 ha to 2 ha) in India. Therefore, there are 1,25,635 landholdings eligible for the benefits under the PM-KISAN programme. At Rs. 6,000 per landholding, the total annual expenditure works out to approximately `Rs. 75,381 crores. Subsequently, the criteria of eligibility for the scheme were changed from June 2019 onwards and it was extended to cover all the 140 million farmers of the country.

The rationale behind the amount Rs. 6,000 per landholding is not clear from any of the policy documents. However, from the basic theory of production, it can be inferred that a farmer is likely to incur severe loss or may even stop cultivating if the average variable costs fall below the price they receive. Adoption of modern technologies is one of the most promising strategies to increase farm incomes. Among the constraints to technology adoption, the most prominent are lack of information and lack of credit. In India, more than half of farming households do not have access to formal credit and one fifth farmers purchase inputs on credit. In such a situation, the introduction of a cash transfer scheme (Pradhan Mantri Kisan Samman Nidhi) (PM-Kisan) to ease the liquidity constraints of Indian farmers for procuring inputs is important and relevant. Thus, PM-KISAN needs to cover at least the basic expenditure on cultivation to be effective. Following this line of reasoning, the cost considered here is the A2 cost, which covers only the paid-out costs of the farmer. This weighted A2 cost works out to Rs. 9,500 per acre. Thus, Rs. 6,000 per ha under PM-Kisan Nidhi Samman is not sufficient to cover even A2 cost.

Presently 2 crores, 56 lakh farmers of Uttar Pradesh are covered under the scheme. Out of the total 10 crore 46 lakh beneficiaries under this scheme in the country in 2018-19, more than 26.93% belonged to U.P alone. Therefore, it was relevant to know the outcome of this huge investment at the ground level. In order to know the impact of this scheme on the farm income of the beneficiaries, a study has been conducted by the Agro-Economic Research Centre of University of Allahabad, Prayagraj in third week of May, 2022, taking 2020-21 and 2022 as the reference year. In this context, **120 beneficiaries** and **120 non-beneficiaries** were selected from **4 districts of 4 different economic regions** of Uttar Pradesh. A comparative analysis has been done to measure the impact of the scheme on the farm income of the beneficiaries with the non-beneficiaries.

I.2. Implementation of the Scheme

The scheme was launched by the Govt. of India in December 2018 across the whole country. It aimed at providing Rs. 6,000 per annum as income support to the families of all the farmers who own cultivable land. A total sum of Rs. 6,000 per year is transferred. Rs. 2,000 as quarterly instalments is transferred in the bank accounts of the registered beneficiary farmers since the inception of the PM Kisan Scheme. The first instalment of the scheme was transferred on 24th February, 2019. The prevailing land ownership system was used for the identification of the targeted beneficiaries. Those whose names were found in land records till February 2019 were entitled to get the benefit under this specific scheme. Telangana, was the first state to recognise and initiate the scheme at state level. It implemented the scheme under the name of Ritu Bandhu Scheme. Following this, a certain amount was given directly to the eligible farmers. This scheme was highly appreciated by various entities and got world-wide recognition by organisations like World Bank etc. for its successful implementation at the grass root level. It was observed by many economists that this scheme was a much better alternative than waiving of the loan which amounted up to Rs. 20,000 crores. For the year 2018-19, Rs. 20,000 crore was allocated under this scheme. For the subsequent year 2019-20, the scheme was revised to benefit nearly 2 crores more farmers extending the coverage of the scheme to 14.50 crore beneficiaries by allocating 87,275 crores by the Central Govt. on 24th February, 2019. In this context, the Hon'ble Prime Minister Shri Narendra Modi had launched the PM Kisan Scheme at Gorakhpur district of UP, by transferring the first instalment of Rs. 2,000 each to over one crore farmers. The important objective of this scheme is to supplement the financial need of all the farmers in procuring various inputs to ensure proper crop health and appropriate yield, proportionately with the anticipated farm income. All the farmers who own cultivable land are being covered under this scheme. The identification of the targeted beneficiaries is based on the existing land ownership system across the country. Further specification requires clear and updated land records.

The Aadhaar, mobile number and Bank accounts are mandatory requirements to get registered under this scheme. The State/UT Governments expedite the progress of digitalization of land records and linking the same with Aadhaar card as well as the bank details of the beneficiaries. The list of eligible beneficiaries is published at village level to ensure transparency. The farmers who are eligible for the benefit but are not included in the list of

beneficiaries have the option to represent their case to get registered under the scheme. The amount due to the beneficiaries is to be paid directly in their accounts under the mechanism of Direct Benefit Transfers (DBT).

The scheme is fully funded by the Govt. of India. The State Govt. is assigned with the role of identifying the eligible farmers and uploading the related details on the online portal of the PM Kisan scheme. An annual amount of Rs.75, 000 crore is being transferred across the country under this scheme. The cut-off date for the determination of the eligibility of beneficiaries was 01/02/2019. There is no provision to change the cut off dates for the next five years. However, it can be relaxed in some cases which have been given in the operational guidelines of the scheme. The States/ UTs are solely responsible for the preparation of the list of beneficiaries which is valid only for a year. The adoption of modern techniques in the cultivation of crops requires huge investment annually. The prices of essential inputs such as seed, fertilizers, pesticides, etc. are also increasing every year. On account of these difficulties, the economically deprived section of the society is not in a position to invest adequately in the required capital and raw material for the crop production. In the wake of the following complications the Govt. of India had launched the Pradhan Mantri Kisan Samman Nidhi Yojana in 2018 to supplement the financial need of the farmers. The annual help of Rs. 6,000 has earned deep gratitude and satisfaction of the farmers from all over the country. This augment in the financial income of the farmers would be a key step in paving the way for the adoption of the modern techniques. Consequently, increased productivity would lead towards self-sufficiency and fulfilling the agenda of 'doubling farmer's income'.

The economy of Uttar Pradesh is based primarily on agriculture and around 65% of the total population is dependent on agriculture. Uttar Pradesh is the top producer of food grain accounting for 17.83% share in the country's total food production. According to the data of 2019-20, about 165.98 lakh hectares (68%) area is cultivated in the state. The average holding size of agriculture in Uttar Pradesh is 0.76 hectare which is less than the national average of 1.5 hectares. The State produces all weather crops i.e., rabi, kharif and zaid.

The progress of the scheme within different states from year 2018-19 to 2021-22 has been analysed in the Table-I.1. Table 1.1 reveals that 2.82 crore farmers were benefited during 2018-19 in Uttar Pradesh. The amount of Rs. 1,11,92,506 crore had been transferred to bank accounts of the beneficiary farmers during the year 2018-19. It can also be noticed from Table-I-1 that the

number of benefitted beneficiaries was highest in Uttar Pradesh. Out of the total covered beneficiaries of the country under PM Kisan Scheme, the share of UP was maximum being 26.93% of the country in 2018-19 followed by 10.96%, 8.62%, 8.011%, 7.54%, 6.20% and 5.57% in Maharashtra, Madhya Pradesh, Bihar, Rajasthan, Gujarat and Andhra Pradesh respectively. Thus, it is relevant to know the impact of PM Kisan Scheme on the farm income of the beneficiaries in Uttar Pradesh.

Table-I-1

State-wise number of Beneficiaries and allocated funds in different years under PM (Kisan) Scheme

(Rs.)

Name of State	Year							
	2018-19		2019-20		2020-21		2021-22	
	No. of Beneficiaries	Amount of allocated fund	No. of Beneficiaries	Amount of allocated fund	No. of Beneficiaries	Amount of allocated fund	No. of Beneficiaries	Amount of allocated fund
Andaman and Nicobar Islands	17307 (0.02)	10106 (0.04)	17307 (0.02)	17498 (0.02)	17307 (0.02)	16111 (0.02)	17466 (0.02)	15370 (0.01)
Andhra Pradesh	5832389 (5.57)	3316854 (12.53)	5832389 (5.57)	4953065 (6.02)	5832389 (5.57)	4575809 (4.90)	5974748 (5.82)	4764306 (4.31)
Arunachal Pradesh	99653 (0.09)	1814 (0.01)	99653 (0.09)	93570 (0.11)	99653 (0.09)	97051 (0.10)	99656 (0.10)	92041 (0.08)
Assam	313133 (0.30)	155381 (0.58)	313133 (0.30)	2020702 (2.46)	313133 (0.30)	1598871 (1.71)	3293136 (3.21)	1183178 (1.07)
Bihar	8379065 (8.01)	250802 (0.95)	8379065 (8.01)	6516995 (7.93)	8379065 (8.01)	7806056 (8.36)	8572852 (8.35)	8649579 (7.83)
Chandigarh	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Chhattisgarh	3960098 (3.78)	112947 (0.43)	3960098 (3.78)	2187393 (2.66)	3960098 (3.78)	3121861 (3.34)	4031692 (3.93)	3039850 (2.75)
Dadra and Nagar Haveli	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Daman and Diu	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Delhi	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Goa	11893 (0.02)	2437 (0.01)	11893 (0.02)	7368 (0.01)	11893 (0.02)	9080 (0.01)	11894 (0.01)	83250 (0.01)
Gujarat	6491371 (6.20)	2858488 (10.80)	6491371 (6.20)	5022065 (6.11)	6491371 (6.20)	5437165 (5.82)	6621523 (6.45)	6253768 (5.66)
Haryana	1963198 (1.88)	966131 (3.65)	1963198 (1.88)	1569461 (1.91)	1963198 (1.88)	1927036 (2.06)	1985613 (1.93)	1927960 (1.75)
Himachal Pradesh	992400 (0.95)	456941 (1.73)	992400 (0.95)	904642 (1.10)	992400 (0.95)	906858 (0.97)	995214 (0.97)	962207 (0.87)
Jammu and Kashmir	1219428 (1.16)	457830 (1.73)	1219428 (1.16)	1124120 (1.37)	1219428 (1.16)	1165229 (1.25)	1231951 (1.20)	1469087 (1.33)
Jharkhand	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Karnataka	5762228 (5.50)	19872 (0.07)	5762228 (5.50)	5248657 (6.38)	5762228 (5.50)	5316294 (5.69)	5842646 (5.69)	10938068 (9.90)
Kerala	3722168 (3.56)	957944 (3.62)	3722168 (3.56)	3420647 (4.16)	3722168 (3.56)	3569548 (3.82)	2731150 (2.66)	3761077 (3.41)
Lakshadweep	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)

Madhya Pradesh	9016140 (8.62)	9286 (0.04)	9016140 (8.62)	7059095 (11.85)	9016140 (8.62)	8392023 (8.98)	9211174 (8.97)	8680792 (7.86)
Maharashtra	11468960 (10.96)	2184057 (8.25)	11468960 (10.96)	9740978 (11.85)	11468960 (10.96)	11002954 (11.78)	1182585 (1.15)	10938068 (9.90)
Manipur	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Meghalaya	188895 (0.18)	9306 (0.04)	188895 (0.18)	105921 (0.13)	188895 (0.18)	184057 (0.20)	205373 (0.20)	192140 (0.17)
Mizoram	200054 (0.19)	27075 (0.10)	200054 (0.19)	64431 (0.08)	200054 (0.19)	49934 (0.05)	200154 (0.19)	103286 (0.09)
Nagaland	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Odisha	4054640 (3.87)	973794 (3.68)	4054640 (3.87)	2562605 (3.12)	4054640 (3.87)	2795381 (2.99)	4087593 (3.98)	3848936 (7.49)
Puducherry	11236 (0.01)	4264 (0.02)	11236 (0.01)	9835 (0.01)	11236 (0.01)	1485 (0.01)	11285 (0.01)	10247 (0.01)
Punjab	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Rajasthan	7888684 (7.54)	64961 (0.25)	7888684 (7.54)	5170488 (6.29)	7888684 (7.54)	7162767 (7.67)	8017625 (7.8)	7620755 (6.90)
Sikkim	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Tamilnadu	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Telangana	3934691 (3.76)	2027512 (7.65)	3934691 (3.76)	3322140 (4.04)	3934691 (3.76)	3649526 (3.91)	3937485 (3.83)	3762171 (3.41)
Tripura	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
Uttar Pradesh	28175093 (26.93)	11192506 (42.26)	28175093 (26.93)	20299216 (24.69)	28175093 (26.93)	11246421 (25.43)	28295224 (27.56)	25910776 (23.46)
Uttarakhand	936914 (0.90)	415344 (1.56)	936914 (0.90)	784324 (0.96)	936914 (0.90)	871644 (0.93)	943471 (0.92)	932694 (0.84)
West Bengal	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	5173556 (5.03)	5372161 (4.86)
Total India	104639638 (100.00)	26475652 (100.00)	104639638 (100.00)	82205216 (100.00)	104639638 (100.00)	93427889 (100.00)	102675066 (100.00)	110436842 (100.00)

Source: Agriculture Situation in India, 2018-19, 2019-20, 2020-21, 2021-22

Note: Figures in brackets are percentage to country

I.3. Need and Scope of the Study

The basic objective of the PM Kisan Samman Nidhi Yojana was to provide financial assistance to the farmers who own land. Under this programme, Rs. 6000 per year is provided to each farming family. This amount is provided in three equal instalments of Rs.2000 each and is deposited directly into the beneficiary's account. The programme is totally funded by the Government of India. This scheme was initially confined to small and marginal farmers till December 2018 but about 14% of the farmers were still not covered under the scheme in Uttar Pradesh. The reason of this non-coverage could be the unavailability of genuine land records, Aadhar cards, mobile number and bank accounts. These four are the mandatory documents for the registration process of the eligible applicants. Therefore, a thorough verification of these

documents and related inquiries are required to get the registration under the PM Kisan Scheme. Therefore, it requires examining these hurdles in the context of UP, being the most populous state of the country. In view of this, Agro-Economic Research Centre, University of Allahabad has undertaken this study to find out the impact of the PM Kisan Scheme on the farm income of the beneficiaries in UP. This study is confined to UP, taking 2020-21 and 2022 as the reference year for the study.

Since the number of beneficiaries in UP are large, it is difficult to cover all the beneficiaries under the study. In order to know the impact of the PM Kisan Scheme on the farm income of the beneficiaries in UP, this study would be helpful and significant in the context of Uttar Pradesh. Understanding the grievances and complaints of the eligible farmers is the need of the hour for the proper implementation of the scheme across the State. Considering the huge amount invested in the scheme, it is necessary to know whether the beneficiaries are utilising the amount received for productive purposes or not?

What does Research Suggest?

A study by IFPRI-ICAR in UP with respect to the success of Pradhan Mantri Kisan Samman Nidhi reveals that the scheme, along with agricultural advisory services, has the potential to pull farmers out of poverty. This scheme marks as a tectonic shift of the government towards farmers of India. The scheme is aimed to cater the liquidity constraints of farmers for meeting their expenses for purchase of agricultural inputs and farm machinery. Several studies emphasize the fact that access to formal credit considerably augmented the investment in small businesses. (Banerjee et al. 2017) In India, where the formal credit structure is still absent or has negligibly penetrated, more than half of the farming households do not have access to formal credit. In such a case the apt introduction of a cash transfer scheme (Pradhan Mantri Kisan Samman Nidhi, PM-KISAN) will definitely relieve the liquidity constraints of farmers for acquiring inputs. There are studies that claim that the scheme is pitched as a general cash transfer for the farmers, but its impact in the adoption of modern technologies still remains a significant question that is addressed in this study. There are several other studies that have focused on general effects of cash transfers on results such as household consumption, educational attainment, and health (Gertler, 2004; Fiszbein & Schady, 2009, Adato & Bassett, 2009). In this context, PM Kisan shows a natural experiment to assess the impact of cash transfers. For any intervention/catalyst to

give long-term impacts there is need for productive investments. In this situation, Gertler et al. (2006) and Handa et al. (2018) demonstrate that a small monthly cash transfers result in increased consumption even after beneficiaries left the program. Such cash transfers to poor households may increase future earnings by encouraging investments in livestock. Sadoulet et al. (2001) show multiplier-effect of cash transfers. Theoretically or say ideally, cash transfer can support farmers to spend the amount in the productive activities. First, it may help in easing incumbent credit and liquidity constraint in purchasing agricultural inputs. It is noteworthy to state here that it is extremely important in India where more than 50 per cent farmers depend on informal credit and one-fifth farmers purchase inputs on credit. Secondly, cash transfer enhances the net income of farmers and consequently may raise farmer's risks taking capacity but reasonably in productive investments. Thus, the review suggests that a productive investment in the short-run lead to sustained long-term impacts. Now, the question is how does PM-KISAN cash transfer perform in this context? Let us explore in the present study and its analysis.

I.4. Research Design Adopted

A scientific approach has been adopted in the selection of the districts, blocks, villages, and sample farmers, to obtain the desired result. This study is confined to Uttar Pradesh only which is one of the largest states of the country. It is broadly divided into four economic regions i.e., East, West, Centre and Bundelkhand. These regions are different from each other location wise but there are some similarities on the basis of topography, soil texture, cropping patterns, sources of irrigation, etc. In order to get the proper representation, one district having the maximum number of beneficiaries under PM Kisan Scheme during 2020-21 and 2021-22 was selected from each region.

Azamgarh, Hardoi, Shahjahanpur and Jhansi regions were selected from the **East, Central, West and Bundelkhand** regions respectively. Out of 75 districts of UP, only four districts were selected and from each district one block and one village having maximum number of beneficiaries under the PM Kisan Scheme during 2020-21 and 2021-22 were selected for the study. 30 beneficiaries and 30 non-beneficiaries were randomly selected from each village. This was done for the comparative analysis of the farm income of the samples. In total 120 beneficiaries and 120 non-beneficiaries were selected from the four villages of the four chosen districts from the four regions of U.P. to study the impact of PM Kisan Scheme. These are illustrated in Table-I-2 and I-3.

Table-I-2
Region wise name of selected districts from Uttar Pradesh

Name of the regions	Number of districts in the region	Name of the selected district	Number of beneficiaries in the selected districts
Eastern	28 (37.33)	Azamgarh	462996
Central	10 (13.33)	Hardoi	542602
Western	30 (40.00)	Shahjahanpur	343224
Bundelkhand	07 (9.34)	Jhansi	176010
Uttar Pradesh	75 (100.00)		16776558

Note: Figures in brackets are percentage to region

Table-I-3

Details of selected units i.e. blocks, villages and sample farmers from selected districts of different regions of Uttar Pradesh

Name of the regions	Number of districts in the region	Name of selected district	Name of selected block	Name of selected village	Number of selected beneficiaries	Number of selected non-beneficiaries
Eastern	28	Azamgarh	Jahanganj	Khanpur	30	30
Central	10	Hardoi	Sursa	Kasrawa	30	30
Western	30	Shahjahanpur	Bhawalkhera	Udaipur	30	30
Bundelkhand	07	Jhansi	Mauranipur	Rupadhamana	30	30

I.5. Objectives of the Study

Following objectives have been framed for the study-

- i. To examine the differences in the economic level of the beneficiaries and non-beneficiaries in U.P under the PM Kisan Samman Nidhi Scheme.
- ii. To analyse and compare the inputs, outputs and resources on the farms of the beneficiaries with the non-beneficiaries.
- iii. To evaluate the impact of scheme on farm incomes
- iv. To examine the utilisation of the funds of the scheme by the beneficiary.
- v. To examine the inconvenience faced by the farmers and implementing agency in receiving and disbursing the funds.

Socio- Economic levels of Sample Beneficiary and non-Beneficiary Farmers

This Chapter attempts to understand the profile of sample beneficiaries and non-beneficiaries in the sample region. As mentioned in the Chapter I of the report, 120 beneficiaries were covered under the PM Kisan Samman Nidhi Scheme and equal number of non-beneficiaries was also selected for this study for the reference period of 2020-21 and 2021-22. The socio-economic profile of the sample farmers has been described as under.

II.1. Number of family members in the sample households

The number of family members in the sample households is shown in Table-II-1. The table reveals that per household member was 6.73, and 5.93 in the non-sample households. In the total population of the sample beneficiary, children consisted for 37.25%, male 32.67% and female 30.08%. Compared to this in case of the non-sample beneficiary households, the total population were 711 of which children comprised 40.79%, male 30.10% and female 29.11%. From the Table-II-1, it is clear that the male population was higher than the female population in both the sample households. The female population was 920 per 1000 male in the sample beneficiary of the farmers and it was 967 in non-sample beneficiaries. It is observed that the larger the farm size, lesser the members within the family. Among the beneficiary households, 79.83 % were marginal farmers and 20.17% were small farmers. Similar was the trend in the case of non-beneficiary households. It may be concluded that in both the sample households the average size of the family of small farmers were lower than the marginal farmers.

Table-II-1**Number of family members in the sample households according to size of farms**

Size of farms (Hect.)	Number of Family Members							
	Beneficiary Farms				Non-Beneficiary Farms			
	Male	Female	Child	Total	Male	Female	Child	Total
0.00 – 1.00	205 (77.65)	197 (81.07)	243 (80.73)	645 (79.83)	190 (88.79)	184 (88.89)	251 (86.55)	625 (87.90)
1.01 – 2.00	58 (24.97)	45 (18.52)	55 (18.27)	158 (19.55)	22 (10.28)	22 (10.63)	36 (12.42)	80 (11.25)
2.01 – 4.00	01 (0.38)	01 (0.41)	03 (1.00)	05 (0.62)	02 (0.93)	01 (0.48)	03 (1.03)	06 (0.84)
4.01 and above	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)
All	264 (100.00)	243 (100.00)	301 (100.00)	808 (100.00)	214 (100.00)	207 (100.00)	290 (100.00)	711 (100.00)

Note: Figures in brackets are percentages to all

II.2. Caste wise distribution of the respondents

It has been a priority of the Government of India to spend in schemes exhaustively, helpful in eliminating the socio-economic backwardness of the downtrodden. The caste plays a significant role in getting the financial aids from various benefit schemes of the Central and the State governments. However, in the case of PM Kisan Scheme, it gives an equal opportunity to all the farmers registered under it. According to this scheme, irrespective of their caste, all the farmers who own some cultivable lands are eligible. The distribution of the respondents of sample families, according to their castes, can be observed from table-II-2. This table shows that out of 120, sample beneficiary families, 46.67% belonged to OBC, followed by 29.17% and 24.16% of General and SC/ST castes respectively. As far as non-sample families are concerned, Table-II-2 shows that 52.50% respondents were OBC, while 25.00% respondents belonged to SC/ST followed by 22.50% of General Caste. It shows that most of the respondents of both sample families were OBCs. Since the OBC families are maximum in number in UP, therefore; the OBCs had been covered in maximum number under the PM Kisan Scheme. This is also confirmed by this study that the caste is not a criterion in the selection of the beneficiaries under this scheme. All these farmers get equal opportunities to enrol under this scheme.

Table-II-2
Caste-wise distribution of Respondents

Castes	Beneficiary respondents	Non-Beneficiary respondents
SC/ST	29 (24.16)	30 (25.00)
OBC	56 (46.67)	63 (52.50)
General	35 (29.17)	27 (22.50)
All	120 (100.00)	120 (100.00)

Note: Figures in brackets are the percentage to all

II.3. Educational status of respondents

The illiteracy is a major constraint in getting the essential documents for the registration process under the PM Kisan Scheme. The literate people do not find much difficulty in the registration process of the ongoing scheme in comparison to the illiterate people. A large number of farmers in UP are still not covered under the PM Kisan Scheme due to illiteracy and unawareness about the scheme. The educational status of the respondents of both the sample families is shown in table-II-3. It is evident from table-II-3 that out of total 120 samples beneficiary households, 23.33% were illiterate while it was 33.33% in case of non-sample households. Most of the respondents of the sample beneficiary households had obtained secondary level education. It can also be observed from table-II-3 that 11.67% of the total respondents of the sample beneficiaries were graduates. Table-II-3 also reveals that out of 120 non samples beneficiaries, 42.50% had obtained secondary level education. It reflects from the above analysis that most of the respondents of both the sample households had obtained secondary level education. It can also be observed that illiteracy is more persistent among the small and marginal sample farmers. Maximum number of illiterate respondents was found in small and marginal sample farms.

Table-II-3
Education Status of Respondents

Education Status	Beneficiary respondents	Non-Beneficiary respondents
Illiterate	28 (23.33)	40 (33.33)
Primary	18 (15.00)	15 (12.50)
Secondary level	66 (55.00)	51 (42.50)
Graduate level	14 (11.67)	08 (6.67)
All	120 (100.00)	120 (100.00)

Note: Figures in brackets are percentage to all

II.4. Occupation of respondents

The occupation of respondents of sample beneficiary and non-beneficiary farmers is worked out in table-II-4. Table-II-4 shows that agriculture was the main occupation of respondents of both the sample farms. Table-II-4 shows that 96.67% of respondents of sample beneficiary farms were engaged in agriculture and rest 3.33% were involved in subsidiary occupation. In case of non-sample beneficiary farms, Table-II-4 shows that out of 120 respondents, 87.50% were engaged in agriculture followed by 12.50% in subsidiary occupations. It shows that the agriculture was the main occupation of respondents of both the sample families. However, the subsidiary occupations were marginally higher of non-sample beneficiaries than that of the beneficiaries. This shows that agriculture is still a dominant occupation of majority of the farmers of Uttar Pradesh. Overall, three fourth of sample beneficiaries as well as non-sample beneficiary farmers were dependent on agriculture. They were mostly small and marginal landholders who had limited access to formal credit.

Table-II-4
Occupation of Respondents

Occupations	Beneficiary respondents	Non-Beneficiary respondents
Agriculture	116 (96.67)	105 (87.50)
Subsidiary	04 (3.33)	15 (12.50)
All	120 (100.00)	120 (100.00)

Note: Figures in brackets are percentage to all

II.5. Members of sample households engaged in agricultural and non-agricultural activities

Farm as well as the non-farm activities; augment the income of the farmers. Table-II-5 reveals that out of total members of 808 on the sample beneficiary farms 42.08% were engaged in different agricultural and non-agricultural activities. In case of the non-sample beneficiaries, 45.25% were engaged in various agricultural and non-agricultural activities on non-sample beneficiary farms. From the above it becomes clear that during the reference year non-sample beneficiaries were more employed than the sample beneficiary families

From the Table-II-5 we can observe that out of 340 members of sample beneficiary families, 46.77% were engaged in agriculture and 53.23% in non-agriculture activities. This clearly reflects that the family members were under-employed in agriculture. Similar is the situation in the case of non-sample beneficiary families. From the above analysis it is obvious that the marginal and small farmers because of inadequate land holdings are forced to work in the non-farm activities for their livelihood. This is supported by the study.

Table-II-5
Members of Sample Households Engaged in Farming and Non-Farming Activities

Particular	Beneficiary Households		Non-Beneficiary Households	
	Total members (male & female)	Engaged members	Total members (male & female)	Engaged members
Farming activities	264	159 (46.76)	214	141 (43.79)
Non-Farming activities	243	181 (53.23)	207	181 (56.21)
All	507	340 (100.00)	421	322 (100.00)

Note: Figures in brackets are percentage to total engaged members of HH

II.6. Income of Beneficiary and Non-Beneficiary Farmers in the Reference Year 2020-21 & 2021-22

The income of sample beneficiary and non-sample beneficiary is depicted in Table-II-6. The table shows that per household income of beneficiary is estimated at Rs. 1, 47,196 of which 32.83% was contributed by the agriculture sector, while the contribution of non-agriculture sector was 67.17% during the same period. The per capita income of the beneficiary was rupees 21,861 per annum in the reference year. In case of non-sample beneficiaries, table-II-6 shows that per household income was rupees 1, 30,477 of which the share of non-agriculture sector was 66.54% followed by 33.46% of agriculture sector. The per capita income of non-sample beneficiaries is worked out to be rupees 22,021 in the reference year 2020-21. Per household income of beneficiary farmers was higher by 11.36% over per household income of rupees 1, 30,477 of non-beneficiary farmers. This shows that the sample beneficiary farmers are better off than the non-sample beneficiary farmers. It is also clear that non-agricultural activities were the main source of income for both the sample farmers.

Table-II-6 also reveals that per hectare net income from agriculture was Rs. 40,159 on the sample beneficiary farms while it was Rs. 40,098 on non-sample beneficiary farms during the reference year. It shows per hectare net income from agriculture was more or less same on both the sample farms during the study period. The comparative picture of change in income shows a decline though in marginal terms. This could be associated with the impact Covid 19 which took the entire world under its grip. But the proportional distributions and deviations in income with respect to source (agriculture and non-agriculture) remains the same. Even the income status of the beneficiary families was found better compared to the non-beneficiary families.

Table-II-6
Income from different sources on the sample farms (Rs.)

Sources of income (Agriculture/ non- agriculture)	2020-21		2021-22	
	Beneficiary farms	Non- Beneficiary farms	Beneficiary farms	Non- Beneficiary farms
Crops	5800125 (48334)	5238815 (43657)	5765214 (48043)	5127724 (42731)
Non-Agricultural sector	11863364 (98861)	10418460 (86820)	11782253 (98185)	10307350 (85894)
All	17663489 (147196)	15657275 (130477)	17542378 (146187)	15548685 (129572)

Note: Figures in brackets show income per household.

Land Utilization and Cropping Pattern on the Sample Farms

This chapter deals with the various activities of land utilization including irrigation, cropping pattern, production and productivity of crops etc. The activities were covered for both on the sample beneficiary and non-beneficiary farms during the reference year 2020-21 and 2021-22. These issues have been described in details in the following sequences to make a comparative analysis of the use of the land for different purposes between sample and non-sample beneficiary farms. This would help us to understand the impact of PM Kisan Scheme in the present scenario.

III.1. Utilization of Land on the sample farms

Land area per household is very limited in the state of Uttar Pradesh. The average land holding stands merely at 0.75 hectare. Hence, it requires very intensive use of land for different seasonal crops like kharif, rabi and zaid. The use of land pattern on the sample farms is worked out in Table-III-1. It is evident from Table-III-1 that per household land was 0.71 hectare for the sample beneficiary farms while it was as low as 0.60 hectare for non-sample beneficiary farms during the year 2020-21 as well as 2021-22. It can also be observed from Table-III-1 that all the area of the owned land was under cultivation on the sample beneficiary and non-beneficiary farms. Two crops were grown in a year by the sample farmers. The cropping intensity was worked to be 168.20% on the sample beneficiary farms against 179.01% on non-beneficiary farms. It shows that non-sample beneficiary farms were producing more crops on their cultivable land compared to the sample beneficiary farmers. It is also evident from Table-III-1 that leasing of land was not so prevalent in the study areas.

It is also noticed from the table that total owned land was completely under cultivation on both the sample farms. Total net sown area on the sample farms was fully irrigated.

Table-III-1
Utilization of land on the Sample Farms

(Hect.)

Details of Land (Hect.)	Beneficiary Farms			Non-Beneficiary Farms		
	Irrigated land	Un- irrigated land	Total Land	Irrigated land	Un- irrigated land	Total Land
Owned Land	85.00 (0.71)	0.00 (0.00)	85.00 (0.71)	72.48 (0.60)	0.00 (0.00)	72.48 (0.60)
Leased-in Land	1.00 (0.01)	0.00 (0.00)	1.00 (0.01)	0.38 (0.01)	0.00 (0.00)	0.38 (0.01)
Leased-out Land	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Un-cultivated Land	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)	0.00 (0.00)
Cultivated Land	86.00 (0.72)	0.00 (0.00)	86.00 (0.72)	72.85 (0.61)	0.00 (0.00)	72.85 (0.61)
Gross Cropped Area	144.65	0.00	144.65	130.45	0.00	130.45
Cropping Intensity	-	-	168.20	-	-	179.01

Note: Figures in brackets show land owned per Household

III.2. Area Irrigated By Different Sources of Irrigation on Sample Farms

Assured irrigation plays an important role in increasing the yield of any area. The network of irrigation sources is extensively expanded across the state of UP. Almost all the cultivable land of UP is generally covered under different sources of irrigation. The pump-sets, canals and owned tube wells are the main sources of irrigation. Table-III-2 shows that out of total irrigated area of beneficiary farms, pump-sets accounted for 51.67% followed by 28.33% and 20.00% owned tube-wells and canals respectively. The similar trends can also be seen on non-beneficiary farms.

Table-III-2
Area Irrigated by different sources of irrigation on sample farms

(Hect.)

Sources of Irrigations	Beneficiary farms	Non- Beneficiary farms
Canal	24 (20.00)	19 (15.83)
Govt. tube-wells	0 (0.00)	0 (0.00)
Owned Tube-wells	34 (28.33)	41 (34.17)
Pump-set	62 (51.67)	60 (50.00)
Gross irrigated area	120 (100.00)	120 (100.00)

Note: Figures in brackets are percentage to gross irrigated area

III.3. Cropping Pattern on the sample farms

The detail of different crops of both the sample farms is given TableIII-3. From table-III-3 one can find that wheat and paddy were major crops on both the sample farms in the reference year. Out of Gross Cropped area of 144.65 hectares of beneficiary farmers, wheat accounted for maximum share being 45.07% followed by 32.28% of paddy. Thus, both crops jointly accounted for 77.35% of gross cropped area. The pulses and oilseed accounted for 18.70% and 3.95% of the gross cropped area respectively during the same period.

In the case of non-sample beneficiary farms, table-III-3 shows that wheat and paddy are the main crops. Out of the gross cropped area of 130.45 hectares, the share of wheat and paddy was 42.20% and 30.89% respectively. These two crops jointly occupied 73.09% of G.C. The share of pulses and oil seeds of G.C was 20.97% and 5.94% respectively during the same year. It shows that the cropping pattern on both sample farms was heavily tilted in favour of wheat and paddy. However, the non-sample beneficiary farmers gave more weightage to pulses and oilseeds in the cropping pattern. This indicates that the non-sample beneficiary farmers were getting more benefit from pulses and oilseeds, resulting in more income than wheat and paddy. Hence, there was more diversification in the cropping patterns on non-sample beneficiary farms compared to the sample beneficiary farms. In spite of the observed cropping pattern, the farmers should also be advised to grow more natural crops on their farms to maintain soil health and prevent soil erosion.

Table-III-3
Cropping Pattern on the sample farms

(Hect.)

Name of Crops	Area of Beneficiary farms	Area of Non- Beneficiary farms
Paddy	46.70 (32.28)	40.30 (30.89)
Urd	18.05 (12.48)	14.80 (11.35)
Groundnut	4.70 (3.26)	7.25 (5.56)
Moong	2.50 (1.73)	2.75 (2.11)
Wheat	65.20 (45.07)	55.05 (42.20)
Pea	3.50 (2.42)	7.80 (5.98)
Gram	3.00 (2.07)	2.00 (1.53)
Mustard	1.00 (0.69)	0.50 (0.38)
G. C.	144.65 (100.00)	130.45 (100.00)

Note: Figures in brackets are percentage to G.C.

Chapter IV

Impact of the Pradhan Mantri Kisan Samman Nidhi Scheme on the Farm Income of Sample Beneficiary Farmers

An effort has been made in this chapter to assess the impact of PM Kisan Scheme on production and productivity of different crops on the sample beneficiary farms. Apart from this, use of inputs, gross and net income has also been estimated in this chapter. A comparative analysis has also been done to understand the impact of the PM Kisan Scheme on the sample beneficiary farmers vs. Non sample beneficiary farmers. These aspects have been thoroughly examined in this study.

IV.1. Production of different crops on the sample farms

It has already been mentioned in the previous chapter i.e., Chapter-III that the paddy, urd, groundnut, moong, wheat, pea, gram and mustard were sown by the sample beneficiary farmers during the reference year. These crops have been taken into consideration to know the per hectare yield on the sample beneficiary and non-beneficiary farms in the reference year. The production and per hectare yield of different crops on both the sample farms are shown in Table-IV-1. It is evident from Table-IV-1 that per hectare yield of paddy and wheat was 54.589 quintals and 43.05 quintals respectively on the sample beneficiary farms while the per hectare yield of paddy and wheat was 52.90 quintals and 42.22 quintals on the non-sample beneficiary farms respectively during the same period. It shows that per hectare yield of paddy and wheat was higher by 3.08% and 1.93% respectively on sample beneficiary farms over the per hectare yield on non-sample beneficiary farms. The per hectare yield of urd, moong, pea and gram were higher on the beneficiary farms. Table-IV-1 also reveals that the per hectare yield of almost all the crops was a bit higher on the sample beneficiary farms than the non-sample beneficiary farms. It may be concluded with this result that the impact of the PM Kisan Scheme was by and large effective in increasing the productivity of the crops. This happened due to use of balanced doses of inputs and adoption of modern techniques timely and adequately in the crops.

Table-IV-1
Production and Productivity of different crops on the sample farms
(Quantity in quintals)

Name of the Crops	Beneficiary farms			Non- Beneficiary farms		
	Area (Hectare)	Production	Per Hectare Yield	Area (Hectare)	Production	Per Hectare Yield
Paddy	48.70	2549	54.58	40.30	2132	52.90
Urd	18.05	188	10.42	14.80	146.50	9.90
Groundnut	4.70	91.50	19.47	7.25	145	20.00
Moong	2.50	26	10.40	2.75	27.50	10.00
Wheat	65.20	2807	43.05	55.05	2324	42.22
Pea	3.50	88.50	25.29	7.80	195	25.00
Gram	3.00	57	19.00	2.00	33	16.50
Mustard	1.00	12	12.00	0.50	6	12.00
G. C.	144.65			130.45		

IV.2. Cost of Production of Different Crops on the Sample Farms

The cost of production of different crops on the sample farms has been calculated in Table-IV-2. Table-IV-2 shows that per hectare cost of production of all the crops on the beneficiary farm was Rs.33, 003 against Rs.32, 346 on the non-sample beneficiary farms during the same period. It reflects that the cost of production per hectare of different crops on beneficiary farms was higher by 1.99% over the per hectare cost of production of crops on non-sample beneficiary farms. This was due to the higher expenditure on the material costs (seed, fertilizer, pesticides etc.) on the beneficiary farms than the non-beneficiary farms. The sample beneficiary farmers had spent Rs. 12,795 per hectare to procure seed, fertilizers and pesticides while the expenditure incurred by the non-beneficiary farmers to the tune for Rs.12, 281.

It can also be noticed from the Table-IV-2 that out of the total input cost being Rs. 47, 73, 875 on the sample beneficiary farms, the share of material cost accounted for 38.77% followed by 31.80% and 14.49% was for machinery and labour respectively. As far as non-sample beneficiary farms are concerned, the material cost accounted for 37.97% followed by 30.47% and 14.43% for machinery and labour charges respectively. This proves that the material and machinery charges were the major components of the total input costs on both the sample farms.

The variable cost was merely higher on the beneficiary farms than the non-beneficiary farms in the reference year. The above analysis reflects that the sample beneficiary farmers had spent more money to procure inputs than the non-sample beneficiary farmers. This was due to the financial support of Rs. 6,000 per annum to the beneficiary farmers. The impact of the PM Kisan Samman Nidhi Scheme was positive for the beneficiary farmers. The variable cost is generally met out by the financial aid provided to the farmers under the following scheme. The sample beneficiary as well as the non-sample beneficiary farmers was still reluctant to produce oilseeds and pulses. Higher preference was given to wheat and paddy, since they are both assured crops. The per hectare cost of production of paddy and wheat on beneficiary farms was Rs. 40,583 and Rs. 33,244 respectively which was higher than the other crops. This type of observation was also seen on non-sample beneficiary farms. This analysis reflects that the amount received under PM Kisan Samman Nidhi Scheme is generally spent for paddy and wheat crops by the beneficiary farmers.

Tabl-IV-2
Cost Per Hectare cost of production on different crops on the sample farms

(Rs.)

Name of Crops	Beneficiary farms					Non- Beneficiary farms				
	Costs incurred					Costs incurred				
	Machinery costs	Material costs	Labour charge	Others costs	Total costs	Machinery costs	Material costs	Labour charge	Others costs	Total costs
Paddy	15799	15675	4946	4163	40583	13596	14164	5414	4763	37937
Urd	3922	7272	4282	3019	18495	4470	6588	4000	3040	18098
Groundnut	4043	15671	7159	4106	30979	7000	9807	7393	4621	28820
Moong	4000	6640	4000	2000	16640	4000	6400	4000	2109	16509
Wheat	9866	12429	4702	6247	33244	10082	12733	4846	6170	33831
Pea	5657	14486	4628	5415	30186	5128	14654	4635	5404	29821
Gram	4167	10000	3400	4167	21734	6250	14000	5350	7000	32600
Mustard	5000	6200	4000	4000	19200	5000	3600	4000	4000	16600

IV.3. Impact of Pradhan Mantri Kisan Samman Nidhi Scheme on the Farm Income of the Sample Beneficiaries

The main objective of the PM Kisan Samman Nidhi Scheme is to provide financial support to the farmers to procure the inputs for increasing the production of crops which were not generally procured by economically weaker farmers due to the dearth of money in sowing time of the crops. The financially deprived farmers used to borrow the money from the banks and money lenders at high interest rates to purchase seeds, fertilizers, pesticides etc. It has also been observed that the poor and resource less farmers were not in a position to use the quality agricultural inputs in their crops due to financial hardships particularly in the sowing seasons of the crops. On account of this, the crop production and productivity were not found up to the mark on the number of farms. The contribution of farmers of the country is very significant in building the strong nation. More than 75% of population of the nation is in the agricultural sector. Among the total farmers 80% are the small and marginal farmers in the country. It is very relevant to know the impact of this scheme on the farm income of the beneficiaries in UP. In this context, 120 farmers covered under this were selected from four regions of UP to examine the impact of scheme on the farm income of beneficiaries. In view of this the input costs, gross income and net income of crops on the sample farms are worked out in Table-IV-3.

The main purpose of the PM Kisan Scheme is to augment the farm income and to ease the credit and liquidity constraint for the farmers. An amount of Rs. 6,000 per annum is transferred in the bank accounts of the beneficiaries to invest in productive activities such as procuring agricultural inputs. This scheme also provides financial strength and risk-taking capacity to the benefitted farmers to adopt modern techniques of production in farming.

The input costs, gross income, and net income from the crops on the sample beneficiary farms and non-beneficiary farms during 2020-21 and 2021-22 are worked out in Table -IV-3. It is evident from Table-IV-3 that per hectare net income was Rs. 40,098 on the sample beneficiary farms against Rs. 40,082 on non-sample farms. Thereby showing only 0.04% rise compared to the net income of Rs.40082 per hectare on non-sample farms. As far as gross income is concerned table-IV-3 shows that per hectare gross income was Rs. 73,100 in the sample beneficiary farms while it was Rs. 72,428 on the non-sample farms, showing 0.92% increase over the non-sample beneficiary farms. It can also be witnessed from table-IV-3 that the per household income from agriculture on sample beneficiary farms was Rs. 48,334 against Rs.

43,573 per household income on non-sample beneficiary farms during the reference year. It shows that per household income from agriculture on the sample beneficiary farms was higher by 9.85% over per household income of the non-sample beneficiary farms. The cost and benefit ratio worked out to be 1:21.2 on the sample beneficiary farms against 1:1.3 on non-sample beneficiary farms. It shows that return per rupee was marginally higher on the non-sample farms than the sample beneficiary farms. So, it can be concluded that the impact of PM Kisan Scheme was positive but not very significantly. This was due to the non-beneficiary farmers who were also well to do and had used the adequate and balanced inputs in their crops. Some of non-beneficiary farmers had also borrowed the money from different financial institutions to procure the agricultural inputs for their crops.

The data for the year 2021-22 shows a uniform fall in income earned across various crops as well as simultaneous rise in costs. This was true for both the beneficiary farms as well as non-beneficiary farms. It is noteworthy to state here that when all the sectors of the economy were badly hit under the impact of Covid, farm sector was left no exception.

Table-IV-3 (A)

Gross income, cost of inputs and net income of crops grown on the sample farms (2020-21)
(Rs.)

Name of the Crops	Beneficiary farms			Non- Beneficiary farms		
	Gross income	Cost of inputs	Net income	Gross income	Cost of inputs	Net income
Paddy	3696050 (79144)	1895250 (40583)	1800800 (38561)	3081400 (76461)	1528855 (37937)	1552545 (38524)
Urd	1128000 (62493)	33850 (18496)	794150 (43997)	879000 (59392)	267850 (18098)	611150 (41294)
Groundnut	457500 (97340)	145600 (30978)	311900 (66362)	725000 (100000)	208950 (28820)	516050 (71179)
Moong	169000 (67600)	41600 (16640)	127400 (40960)	178750 (65000)	45400 (16509)	133350 (48490)
Wheat	4491200 (690049)	2167525 (33244)	2323675 (35639)	3718400 (67546)	1862380 (33831)	1856020 (33715)
Pea	309750 (88500)	105650 (30186)	204100 (58314)	682500 (87500)	232600 (29820)	449900 (57679)
Gram	256500 (85500)	65200 (21733)	191300 (63767)	148500 (74250)	65200 (32600)	83300 (41650)
Mustard	66000 (66000)	19200 (19200)	46800 (46800)	34800 (69600)	8300 (16600)	26500 (53000)
Total	10574000 (73100)	4773875 (33003)	5800125 (40098)	9448350 (72428)	4219535 (32346)	5228815 (40082)

Note: Figures in brackets are per hectare

Table-IV-3 (B)

Gross income, cost of inputs and net income of crops grown on the sample farms (2021-22)
(Rs.)

Name of the Crops	Beneficiary farms			Non- Beneficiary farms		
	Gross income	Cost of inputs	Net income	Gross income	Cost of inputs	Net income
Paddy	3588941	1984150	1604791	3078550	1528900	1552545
	76851	42487	34364	76391	37938	38453
Urd	1124870	33950	1090920	868850	267900	611150
	62320	1881	60439	58706	18101	40605
Groundnut	456400	145760	311900	724000	20900	516050
	97106	31013	66094	99862	2883	96979
Moong	168750	41650	127400	177890	46200	133350
	67500	16660	50840	64687.27	16800	47887.27
Wheat	4482800	2168250	2323675	3709500	1864390	1845110
	68755	33255	35499	67384	33867	33517
Pea	308650	105700	204100	681450	234500	449900
	88186	30200	58314	87500	29820	57679
Gram	255550	65500	190050	147520	66250	83300
	85183	21833	63350	73760	33125	40635
Mustard	65650	19700	46800	33900	8350	26500
	65650	19700	46800	67800	16700	51100
Total	10451611	4564660	5899636	9421660	4037390	5217905
	72,254	31,557	40,698	72,224	30,950	41,275

Note: Figures in brackets are per hectare

VI.4. Crop-wise Income on the Sample Beneficiary and Non-beneficiary Farms

The crop wise expenditure on inputs, gross income and net income are also worked out in Table-IV-3. It has already been pointed out that paddy, urd, groundnut, moong, wheat, pea, gram, and mustard were sown by the sample farmers during reference year i.e., 2020-21 and 2021-22. Among these 8 crops the paddy and wheat were the main crops on both the sample farms. The sample beneficiary as well as the non-sample beneficiary farmers had given weightage to these two crops. It can be noticed from table-IV-3 that per hectare net income of paddy was more or

less same on both the farms while the per hectare income of wheat was higher by 5.40% over the per hectare net income of Rs. 33,715 on non-sample beneficiary farms. It reflects that maximum amount of the fund of PM Kisan Scheme was spent on wheat. It is also witnessed from table-IV-3 that per hectare net income of urd, pea, and gram was higher by 6.14%, 1.09% and 34.68% over the per hectare net income of the mentioned crops respectively on non-sample beneficiary farms. The impact of the scheme on net income of pulse crops was positive and significant. In the case of oil seed crops, like groundnut and mustard, the performance was much better on non-sample beneficiary farms as compared to sample beneficiary farms. It may therefore be concluded with these results that the impact of PM Kisan Scheme was favourable for wheat and pulses.

Utilization of Funds under Pradhan Mantri Kisan Samman Nidhi Scheme in Different Purposes

The utilization of funds under PM Kisan Scheme for different purposes has been discussed in this chapter. Since the inception of this scheme in U.P, Rs. 6,000 per annum is being transferred in the bank accounts of each beneficiary continuously without any termination. The 3rd instalment of Rs. 2,000 per beneficiary was transferred on 12-03-2019. The year wise amount transferred under the scheme has been shown in table-V-1. The table shows that Rs. 6,000 per annum in three equal instalments has been transferred in the accounts of the sample beneficiary farmers. From 2019 to 2021 the beneficiaries are getting Rs. 6,000 per annum to procure the agricultural inputs.

Table-V-1
Amount received from PM (Kissan) scheme in different years by Beneficiary Farmers

Years	Beneficiary farms	
	No. of Beneficiary Farmers	Amount received (Rs.)
2018-2019	120	240000 (2000.00)
2019-2020	120	720000 (6000.00)
2020-2021	120	720000 (6000.00)
2021-22	120	720000 (6000.00)
Total	480	2400000 (5000.00)

Note: Figures in brackets refer to amount received per farm.

V.1. Utilization of the Funds under PM Kisan Scheme in Different Purposes in the Study Period i.e., 2020-2021

The main purpose of the PM Kisan Scheme is to provide financial support to the farmers to purchase agricultural inputs for earning more income from the production. This financial support enables the farmers to use better quality inputs in their crops. However, it is very relevant to know whether the beneficiary farmers are utilizing the funds of PM Kisan Scheme in agriculture or not, what is the method of the diversion of funds. The details of the utilization of funds are

examined in table-V-2. Table-V-2 shows that total amount of Rs. 7,20,000 in 2020-21 and 21-2022 respectively had been transferred to 120 sample beneficiary farmers each year. In the year 2020-21, 69.99% of this amount was utilized in agriculture and rest 36.01% was utilized in the non-agriculture purposes. It shows that a handsome amount of the PM Kisan Scheme was used for unproductive purposes. Similar results were witnessed in the year 2019-20. Table-V-2 also reveals that the maximum amount of the IIIrd instalment that is 44.71% was used for unproductive purposes. It can also be noticed from table-V-2 that more than 30% of the total amount of PM Kisan Scheme was not utilized in agriculture from 2019-20 to 2020-21.

Table-V-2
Utilized funds of PM Kisan Scheme in reference year 2020-21 and 2021-22 by Beneficiary Farmers

Years/ Instalment	No. of Beneficiary Farmers	Amount received (Rs.)	Utilized funds	
			Agriculture	Non- Agriculture
			(Rs.)	(Rs.)
2020-2021	120	240000	167100	72900
I st Installment		(100)	(69.63)	(30.37)
2020-2021	120	240000	160900	79100
II nd Installment		(100)	(67.04)	(32.96)
2020-2021	120	240000	132700	107300
III rd Installment		(100)	(55.29)	(44.71)
2021-2022	120	240000	159230	80770
I st Installment		(100)	(66.35)	(33.65)
2021-2022	120	240000	156800	83200
II nd Installment		(100)	(65.33)	(34.67)
2021-2022	120	240000	123500	116500
III rd Installment		(100)	(51.46)	(48.54)
Total	360	1440000	900230	539770
		(100)	(62.52)	(37.48)

Note: Figures in brackets are percentage to total funds

V.2. Utilization of the Funds of PM Kisan Scheme in Different Components of Non-Agricultural Sector in 2020-21 and 2021-22

The utilization of funds of Rs. 2, 59,300 of non-agricultural uses in 2020-21, received by 120 sample beneficiary farmers under the PM Kisan Scheme in 202-21 is shown in table-V-3. Table-V-3 shows that out of total amount being Rs.2, 59,300, 39.30% was spent on medicines followed by 27.02%, 20.05% and 9.53% on social ceremonies, purchase of non-agricultural assets and

construction of house items respectively during the reference year. This shows that the medicines and social ceremonies jointly accounted for 66.32% of the total of Rs. 2,59,300. The beneficiary farmers had also purchased non-agricultural assets during the same period. It may be concluded with this impression that most of the social obligations were met out from the funds of PM Kisan Scheme.

Table-V-3
Utilized fund in different head of non-agriculture activities

Year	No. of Beneficiary Farmers	Amount utilized non-agriculture	Components of non-agriculture sectors					
			Payment of Loan	Social ceremonies	Purchase of non-agriculture assets	Medicine	Construction of house	Others
2020-21	120	72900 (100.00)	0.00 (0.00)	13300 (18.25)	15500 (21.26)	33500 (45.95)	8200 (11.25)	2400 (3.29)
2020-21	120	79100 (100.00)	0.00 (0.00)	18400 (23.26)	15800 (23.77)	32000 (40.46)	8000 (10.11)	1900 (2.40)
2020-21	120	107300 (100.00)	0.00 (0.00)	38400 (35.79)	18200 (16.96)	36400 (33.92)	8500 (7.93)	5800 (5.40)
2021-22	120	115350 (100.00)	0 (0.00)	25750 (22.32)	9570 (8.30)	68595 (59.47)	3110 (2.70)	8325 (7.22)
Total	360	259300 (100.00)	0.00 (0.00)	70100 (27.02)	52500 (20.25)	101900 (39.30)	24700 (9.53)	10100 (3.90)

Note: Figures in brackets are percentage of fund under PM Kisan Scheme

V.3. Utilization of Funds under PM Kisan Scheme in Different Operations of the Crops on the Sample Beneficiary Farms in the Reference year 2020-21.

Land ploughing, seeds, fertilizers, pesticides, irrigation, harvesting and threshing are main operations of the crops. These operations require adequate capital to get optimum yield from the crops. Utilization of funds under the PM Kisan Scheme in different operations of the crops is presented in table-V-4. The per hectare input cost was estimated at Rs.33,003 on the beneficiary farms in the reference year 2020-21 out of the total operational cost of Rs. 4,77,875, the share of loan from the banks was 61.36% followed by 28.62% of the owned fund. It shows that the sample beneficiary farmers are still dependent on loans. Among the various operations of the crops, the maximum share of PM Kisan Scheme was spent on ploughing of land being 40.55%. Next to this, fertilizers and seeds accounted for 22.69% and 21.01% of total fund of the PM Kisan Scheme in 2020-21 respectively. The total fund being Rs. 4, 60,700 was spent in agriculture sector during 202-21. The share of ploughing, fertilizers and seeds jointly accounted

for 84.25%. The pesticides and irrigation accounted for 3.36% and 4.10% respectively of the total amount of Rs. 4,60,700 under the PM Kisan Scheme. It may be concluded from the result that the sample beneficiary farmers had spent maximum amount of PM Kisan Scheme in ploughing, fertilizers, and seeds in the reference year. As far as the non-sample beneficiary farmers are concerned, table-V-4 shows that out of total operational costs of Rs. 42,19,535 the contribution of owned fund was 48.26% followed by 48.77% of the borrowed amount. It shows that borrowed fund was more utilized in different operations of the crops by sample beneficiary farmers.

Table-V-4
Expenditure on different operations of crops on the Beneficiary and Non-Beneficiary sample farms during reference year

Name of the operations	Beneficiary farms					Non- Beneficiary farms			
	Total operational costs	Owned fund	PM (Kissan) scheme	Loan from banks	Other agencies	Total operational costs	Owned fund	Loan from banks	Other sources
Ploughing	457612 (100.00)	115406 (25.22)	186800 (40.82)	155406 (33.96)	--	292763 (100.00)	45713 (15.61)	202050 (69.02)	45000 (15.37)
Seed	657611 (100.00)	180306 (27.42)	96800 (14.72)	380505 (57.86)	--	282760 (100.00)	125720 (44.46)	157040 (55.54)	--
Fertilizer	707612 (100.00)	201512 (28.48)	104550 (14.77)	401550 (56.75)	--	628585 (100.00)	278585 (44.32)	350000 (55.68)	--
Pesticides	28000 (100.00)	5000 (17.85)	15500 (55.36)	7500 (26.79)	--	4900 (100.00)	4900 (100.00)	--	--
Irrigation	457975 (100.00)	65000 (18.19)	18900 (4.13)	370075 (80.81)	4000 (0.87)	393062 (100.00)	135812 (34.55)	257250 (65.45)	--
Machinery charges	1518190 (100.00)	550190 (36.24)	18000 (1.19)	950000 (62.57)	--	1285815 (100.00)	600725 (46.72)	605090 (47.06)	80000 (6.22)
Payment to labour	688900 (100.00)	235100 (34.13)	8800 (1.28)	441000 (64.01)	4000 (0.58)	657600 (100.00)	400350 (60.88)	257250 (39.12)	--
Others	257975 (100.00)	23313 (9.04)	11350 (4.40)	223312 (86.56)	--	674050 (100.00)	444730 (65.98)	229320 (34.02)	--
Total	4773875 (100.00)	1375827 (28.82)	460700 (9.65)	2929348 (61.36)	8000 (0.17)	4219535 (100.00)	2036535 (48.26)	2058000 (48.77)	125000 (2.97)

Note: Figures in brackets are percent to total variable costs

Chapter VI

Opinion and Views of the Sample Beneficiary Farmers Related to the Pros and Cons of the Pradhan Mantri Kisan Samman Nidhi Scheme

India has about 1.38 billion population and more than half of its population derives its employment from agriculture. The Indian Government launched Pradhan Mantri Kisan Samman Nidhi (PM-KISAN) scheme in 2018 to meet monetary needs of farmers to procure inputs for better crop health and productivity. The present study provides the perception of the sample beneficiaries with respect to the pros and cons of the Pradhan Mantri Kisan Samman Nidhi Scheme.

Study Objectives	Research Findings	PM-KISAN Stated Goals	Refer	Reviewed Findings
To examine the differences in the economic level of the beneficiaries and non-beneficiaries in U.P under the PM Kisan Samman Nidhi Scheme.	Table II-1, Table II-4 and Table II-6 Show the variations in Size of farm holding, occupation of respondents and income from different sources on sample farms respectively.	Vulnerable landholding farmer families, having cultivable land upto 2 hectares, will be provided direct income support at the rate of Rs. 6,000 per year.	Table II-1	Among the beneficiary households, 79.83 % were marginal farmers and 20.17% were small farmers. Similar was the trend in the case of non-beneficiary households. It may be concluded that in both the sample households the average size of the family of small farmers were lower than the marginal farmers.
To analyse and compare the inputs, outputs and resources on the farms of the beneficiaries with the non-beneficiaries.	Table IV-1 and Table IV-2 respectively show Production and Productivity of different crops on the sample farms and cost of Production on Different Crops on the sample farms	PM-KISAN scheme provided the input and harvesting support to the agricultural land holder.	Table V-2 and Table V-4	<ul style="list-style-type: none"> •The per hectare input cost was estimated at Rs.33,003 on the beneficiary farms in the reference year 2020-21 out of the total operational cost of Rs. 4,77,875, the share of loan from the banks was 61.36% followed by 28.62% of the owned fund. It shows that the sample beneficiary farmers are still dependent on loans. •Among the various operations of the crops, the maximum share of PM Kisan Scheme was spent on ploughing of land being 40.55%. Next to this, fertilizers and seeds accounted for 22.69% and 21.01% of total fund of the PM Kisan Scheme in 2020-21 respectively. The total fund being Rs. 4, 60,700 was spent in agriculture sector during 202-21.

<p>To evaluate the impact of scheme on farm incomes</p>	<p>Table V-2 and Table V-4</p> <ul style="list-style-type: none"> • The per hectare input cost was estimated at Rs.33,003 on the beneficiary farms in the reference year 2020-21 out of the total operational cost of Rs. 4,77,875, the share of loan from the banks was 61.36% followed by 28.62% of the owned fund. It shows that the sample beneficiary farmers are still dependent on loans. • Among the various operations of the crops, the maximum share of PM Kisan Scheme was spent on ploughing of land being 40.55%. Next to this, fertilizers and seeds accounted for 22.69% and 21.01% of total fund of the PM Kisan Scheme in 2020-21 respectively. The total fund being Rs. 4, 60,700 was spent in agriculture sector during 202-21. 			
<p>To examine the utilisation of the funds of the scheme by the beneficiary.</p>	<p>Table V-2 and Table V-3</p> <p>Provide details of utilization of PM Kisan funds</p>			
<p>To examine the inconvenience faced by the farmers and implementing agency in receiving and disbursing the funds.</p>	<p>To bring the maximum number of farmers under KCC so that they can get loan at a cheaper rate through the ISS scheme, the Government has been running a campaign for saturation of KCC to farmers since, February, 2019. The Govt has further taken up the task of covering 2.5 lakh crore PM KISAN beneficiaries under KCC in a mission mode</p>			

All marginal and small landowners involved in agriculture and farm operations benefited from the scheme, as they are supported with Rs. 6000 per year to cover their agricultural needs. Interestingly, there is approximately 28.73% hike in the number of farmers benefitted under this scheme from 2018 to 2021-2022, and an amount of about Rs. 22,000 crores have been successfully transferred to the farmers' bank account during Covid-19 lockdown. In addition, Rs 75,000 crores were distributed directly till August, 2020 without any commission to middlemen. The scheme proved to be a boon to the farmers and it should continue with the same pace. The performance of this scheme is also very helpful in stimulating the farm income of the beneficiaries. Still, the scheme requires some essential modifications for better implementation in longer term. The feedback of 120 sample beneficiary farmers has been taken into consideration in this regard which has been discussed in the following manners. As it has already been mentioned in the previous Chapter, 120 sample beneficiaries were selected from 4 districts of four different economic regions of Uttar Pradesh. The feedback of the farmers about their experiences related the scheme from all the regions have been mentioned in the following points

1. Almost all the sample beneficiary farmers expressed their opinions that the agriculture department of the district had played a crucial role in providing the first-hand information about the benefits of the scheme. Apart from this, radio, television, relatives, etc had also given the information about the scheme.
2. The lekhpal, Kisan Sewa Kendra and Krishi Vigyaan Kendra were the key units in providing the required information about the scheme.

Constraints and Suggestions of the Scheme

Since, this scheme is very comprehensive and has been framed in a very attractive manner, hence, the sample beneficiary farmers had a few complaints against this scheme which have been pointed out in the following sequences.

V.1. Constraints

1. Almost all the beneficiaries were of the opinions that Rs.6,000 per annum is not a sufficient amount to procure the required agricultural inputs. It was only about 9.65% of

the total operational costs of the crops. Therefore, they suggested to increase the amount of the financial assistance.

2. Most of sample beneficiaries had faced some difficulties in getting revenue records, opening of bank account etc. during, the registration process under PM Kisan Scheme. Apart from these wrong entry number and other mistake in Aadhar were also hurdle in the way of registration under PM Kisan Scheme. It requires a special attention to minimize difficulties at possible extent.

V.2. Opinion of Beneficiaries Farmers about PM Kisan Scheme

All the selected beneficiaries have been getting regularly the benefit from PM Kisan Scheme since its inception. They were hundred percent satisfied with this scheme.

1. More than 90 percent of 120 sample beneficiaries expressed their views that the lekhpal of a village had helped us in getting registration under this scheme at tehsil headquarter through on-line system. Few of them had paid few amounts for registration online while some of them did not pay any charges for registration.
2. The response of beneficiaries about transaction of amount in their account was quite positive and satisfactory. The instalments of amount of PM Kisan scheme are generally transferred to our account in due time. There is no if and but about transaction of amount of PM Kisan Scheme. No middle man is involved in the total process of this scheme. There is hundred percent transparency and accuracy in this scheme. They are generally informed through message about date and amount of transaction.
3. We go to banks to withdraw the required money without any hesitation and fear.

V.3. Suggestions for the Scheme

1. Most of the sample beneficiary farmers had strong views that the bogus and fraud beneficiaries should be shorted out from the list of beneficiaries. It has been found that the wife and husband both have been included in the list of beneficiaries. A part from this, the employees and pensioners are also taking the benefit under PM Kisan Scheme. These beneficiaries are not entitled to cover under this scheme. It is totally against the operational guideline of PM Kisan Scheme. The verification is going on and huge

number of fraud and bogus beneficiaries have been eliminated from this list of beneficiaries. It should be verified at village wise to get correct verification.

2. The sample beneficiaries had also suggested that the land less crop shareholders and tenants should also be covered under this scheme to increase their farm income.
3. The monitoring and review committee at state, district, block and village levels should be organized on regular basis to solve the grievances and problems of beneficiary and non-beneficiary farmers. The list of registered beneficiaries under this scheme should be published at village level to ensure full transparency. The farmers of the village who are eligible but have not been included in the beneficiaries list should get an opportunity to present their case.
4. The regular awareness programme should be organized at village level to propagate the benefit of PM Kisan Scheme. A compressive effort should be made to link huge number eligible farmers with this scheme.
5. A village wise camp should be organized at Kissan Sewa Kendra or Panchayat Bhawan on particular date and time. The employees of revenue, agriculture bank etc. at scheduled should present in camp to facilitate the registration activities. The eligible excluded farmers of the village will get an opportunity to enrolled themselves under this scheme. This integrated approach will be very helpful for excluded farmers in getting registration under PM Kisan Scheme.

Summary, Conclusion and Policy Implication

VII.1. Conclusion and Probable Solutions

The declaration of the benefit being transferred on-line to the Bank accounts of the beneficiary farmers is definitely a very good beginning for this massive scheme. As per our empirical analysis, it would be very difficult to take out such a populist and cost-effective scheme. But this centrally sponsored scheme if not executed appropriately by State Governments with adequate technical support, PM-KISAN may be burdened with serious confrontations. We examine few of them and suggest probable solutions:

1. Upbeat role of Banks: There are reports that after the loan waiver in Maharashtra or transfer of first instalment to the Bank accounts of farmers under KALIA scheme in Odisha, concerned bank branches adjusted the deposit money against past liabilities of few farmers (read Implementation challenges of PM-KISAN, February 4, 2019, The Times of India). Such situations may result in subversion of the objectives of the income support scheme, i.e. to assist the farmers with some disposable cash for purchase of inputs. Banks concerned in primary sector lending or disbursement of crop loans, require to sensitive on their vital role in implementation of PM-KISAN. Guidelines from Government and RBI should evidently define these points.

2. Powering IT Structure for Better Support: Evidently States with vigorous computerized land records data base and a good IT infrastructure will be better placed to implement PM-KISAN. With ICT usage and direct transfer of money to farmers' bank accounts, pilferage would also be less. Farmers without bank accounts may be promoted to open 'no-frills' accounts under the Jan-Dhan Yojana. Linking Aadhaar data base.

3. Targeting benefits and Updated Land Records: The PM-KISAN is planned to promote small and marginal farmers. In many States, land records are not updated on a regular basis and as a result, there could be instances where cultivating farmers would have partitioned their holdings from other family members, but the land records if not updated may deem them to be a disclaimer. Such genuine cases need to be addressed by revenue authorities so that eligible farmers are not deprived. Parallely, fraudulent claims should also be avoided.

4. What happens to lessee cultivators? The Union Budget has not openly declared about the benefits under PM-KISAN accruing to lessee cultivators or share- croppers.. Odisha revenue laws fail to recognize tenant farmers, but the recently KALIA scheme gives a benefit of Rs. 10,000 per such sharecropper/lease holder per year. But the problem remains to identify such lessee cultivators. It is anticipated that transfer of PM-KISAN benefits to land owners may reduce the lease amounts presently being collected from the lessee cultivators.

Aadhaar is well placed in India to aim the beneficiaries to stop leakages and make sure efficient and effective delivery of benefits under PM-KISAN. Given the political dynamics of India, the income support scheme is sure to be longstanding, hence it is advisable to implement it with suggested reforms ideas since inception.

The liquidity constraints, lack of information, credit etc. are the major hurdles in the way of the better adoption of the modern techniques in the agriculture. In order to remove the liquidity constraints, the financial support to farmers under PM Kisan Scheme is one of best programmes of Government of India for welfare of poor and resource less farmers. The cash transfer of Rs. 6000 per annum to the eligible farmers under this scheme encouraging the financial strength for the beneficiaries to spend more money on the purchase of the agricultural inputs. It is also fruitful in the adoption of the modern techniques in agriculture. It is very helpful in easing the credit and liquidity constraints in purchasing the agricultural inputs. In addition to this, the PM Kisan Scheme is better than waiving of the loans. It is also observed that out of the total farmers of the country, one fifth procure the agricultural inputs on credit. It is a very promising scheme for the overall betterment of the farmers. At the initial stage of the scheme, it was only for the small and marginal farmers possessing some cultivable land up to 2 hectares. From June 2019, it was extended to all the 140 million farmers of the country. As per the data of the Govt. of India, 50 million farmers of the country have been covered under the PM Kisan Scheme by 15th September, 2019. The cash under this scheme is transferred directly through the DBT system in the bank accounts of the beneficiaries. This has no involvement of any middlemen in transferring the cash amount in the accounts of the beneficiaries.

More than 10 crore, 46 lakh farmers of the country have been covered under this scheme during 2018-19, of which the share of U.P is highest being 26.93% followed by Maharashtra (10.96%), Madhya Pradesh (8.62%), Bihar (8.01%), Rajasthan (7.54%), Gujarat (6.20%) and Andhra

Pradesh (5.57%). More than 2 crore 56 lakh farmers of U.P have been covered under this scheme till 2021. Out of total transferred benefit amount of Rs. 26475652 of the country under the PM Kisan Scheme during 2018-19, the share of U.P was 42.24% which was highest among all the other states of the country. The main theme of this scheme is to raise the farm income of the farmers to use the better-quality inputs and adopt the latest techniques in the crops.

In order to know the impact of the scheme on farm income of the beneficiaries, a study had been conducted by the Agro-Economic Research Centre, University of Allahabad, Prayagraj in 2021 taking 2020-21 as the reference year.

VII.2. Socio-Economic status of Sample Beneficiaries and Non-beneficiaries

Almost all the sample beneficiaries (98.34 percent) possessed up to 2 hectares land. While in case of non-sample beneficiary's 99.17 percent had owned upto 2 hectares land. It shows that the sample farmers were generally small and marginal. Out of total respondents of sample families only 66.67 percent was educated and rest 33.33 percent was illiterate. The educational level was also very limited among the respondents of sample beneficiary families. The illiteracy still persist among the farmers. The population per sample family was 6.73 against 5.93 of non-sample beneficiary family. The main occupation of sample beneficiaries as well as non-beneficiaries was agriculture. As far as employment opportunity is concurred, the sample beneficiary families as well as non-sample beneficiary families had received maximum employment in non-agriculture sector as compared agriculture sector. Out of total 340 members of 120 samples beneficiary family's 53.24 percent was engaged in non-farming activities against 46.76 percent engaged in farming activities.

VII.3. Land Utilization and Cropping Pattern on the Sample Farms in the Study period i.e., 2020-2021

It is evident from analysis of data that entire land of sample beneficiary and non-sample beneficiary farmers were fully under cultivation in the reference year. The per farm owned land was 0.71 hectare on the sample beneficiary farms against 0.60 hectare on non-sample beneficiary farms. None of the sample beneficiary and non-beneficiary farmer had leased-out their land during the reference period. The leased-in and leased-out land were not so prevalent in the study areas. All the cultivated land of sample beneficiary and non-sample beneficiary farms were fully

irrigated. The main source of irrigation was owned/private tube-wells and canal. On account of this, the cropping intensity was 168.20 percent and 179.01 percent on beneficiary and non-beneficiary farms respectively. The sample beneficiary and non-beneficiary farmers had sown almost all the kharif and rabi crops on their farms in the reference year.

Among the crops, cereals, pulses and oilseeds had occupied 77.35 percent, 18.70 percent and 3.95 percent to G.C. on the sample beneficiary farms respectively. Paddy and wheat jointly accounted for 77.35 percent of G.C. on the sample beneficiary farms. Among the crops, wheat had occupied maximum share being 45.07 percent of G.C. followed by 32.28 percent of paddy on the sample farms. More or less the same cropping pattern was also noticed on non-sample beneficiary farms. It shows that cropping pattern was more favourable to wheat and paddy on both sample farms. Among the oilseeds, groundnut and mustard were also dominant crops on both sample farms during the same period.

The maximum attention was devoted to paddy and wheat crops by sample farmers. These two crops have very limited risk than pulses and oilseeds. The farmers spend more money on paddy and wheat is compared to pulses and oilseeds due to assured return from these two crops.

VII.4. Cost of cultivation of different crops on the sample farms

The maximum attention was paid to wheat and paddy by the sample beneficiary as well as non-beneficiary farmers. The per hectare cost of production of wheat and paddy was estimated at Rs. 33,244 and Rs. 40,583 on sample beneficiary farms respectively. In case of non-sample beneficiary farms, the per hectare cost of production of wheat and paddy was Rs. 38,831 and Rs. 37,937 respectively during reference year. It shows that cost of production per hectare of wheat and paddy was more or less same on both sample farms. Out of total input costs of all crops on sample beneficiary farms was Rs. 47,73,875 the maximum cost was incurred on the purchase of material inputs being 38.77 % followed by 31.80 %, 14.43 % and 15.00 % on machinery, labour and other charges respectively. It shows that the sample beneficiary farmers had given due weightage to the purchasing of seeds, fertilizers and pesticides.

The analysis also indicates that out of total per hectare costs of production of all the crops on the sample beneficiary farms in 2020-21 was worked out to be Rs. 33003 the share of PM Kisan Scheme was only 9.65%. This was due to the diversion of the funds to unproductive purposes.

VII.5. Pattern of Utilisation of Funds of the PM Kisan Scheme during 2020-21.

All the selected 120 beneficiaries have been regularly getting Rs.6,000 per annum from 2019-20 to 2020-21, under this scheme. The data reveals that out of Rs.7,20,000 of the PM Kisan Scheme during 2020-21, Rs.4,60,700 (63.99%) was used in agriculture while the rest Rs.2,59,200 (36.01%) was used in non-agriculture sectors. It is also witnessed that out of total amount being Rs.4,60,700 of agriculture sector the maximum amount of 40.82% was spent on ploughing followed by 22.69% and 21.01% on fertilizers and seeds respectively. While the pesticides, irrigation, machinery, labour and other charges accounted for 15.48% of the total agriculture fund under the PM Kisan Scheme. It is also noticed that out of total amount of Rs.2,59,300 was used in unproductive purposes. The maximum amount was spent being 39.30% on health followed by 27.02%, 20.25%, 9.53% and 3.90% on the social ceremonies purchase of non-agricultural assets, construction of house and others respectively during 2020-21. Thus, medicines and social ceremonies jointly accounted for 66.32% of total amount of Rs. 2,59,300 marked for unproductive purpose. The beneficiaries were also interested in purchasing non-agricultural assets. The maximum amount of PM Kisan Scheme was spent on wheat and paddy crops.

The pulses and oilseeds did not get due weightage under the PM Kisan Scheme. The analysis of the data of utilisation of the funds of the PM Kisan Scheme reflects that the timing of the instalments and spending pattern are very closely related to each other. The beneficiaries who received the instalments of the PM Kisan Scheme in the peak of the agricultural season spent mostly on agricultural purposes. The availability of the funds of the scheme in off-season agriculture is generally spent on non-agriculture sectors. No doubt the PM Kisan Scheme has been playing a significant role in enhancing the production and income of crops on the beneficiary farms which is proved by the following analysis of the data.

VII.6. Production and income of the beneficiary farms Vs. Non-Beneficiary farms

I) Per hectare yield

The sample beneficiary farmers and the non-sample beneficiary farmers had attached more attention to two crops only that were paddy and wheat. Therefore, the comparative analysis is confined to paddy and wheat crops only. Per hectare yield of paddy was 54.58 qtls on sample

beneficiary farms while it was 52.90 qtls on sample-non beneficiary farms, thereby showing 3.08% increase over the per hectare yield on non-sample farms. Per hectare yield of wheat was estimated at 43.05 qtls on sample beneficiary farms against 42.22 qtls per hectare yield on non-sample farms showing 1.93% increase over the per hectare yield on non-sample beneficiaries. It shows that per hectare yield of paddy and wheat was higher by 3.08% and 1.93% on sample beneficiary farms respectively than the per hectare yield of paddy and wheat on non-sample beneficiary farms during the same period.

II) Net Income

The farm income on beneficiary farms has been compared to farm income of non-beneficiary farms to know the impact of the PM Kisan Scheme. The per household net income was estimated at Rs. 48,334 of the beneficiary farms in the reference year against Rs. 43,573 per household income on non-beneficiary farms, thereby showing 9.85% increase over non-beneficiary farms. The per capita net farm income was worked out to be Rs. 7,178 on beneficiary farms against Rs.7,354 of the non-beneficiary farms. This shows that the per capita income of the beneficiary farms was lower than that of the non-sample beneficiary. The per hectare net farm income was worked out to be Rs. 4,00,098 on beneficiary farms against Rs. 40,082 on non-beneficiary farms in the reference year. It shows that the per hectare net farm income was higher only by 0.04% on the beneficiary farms over the non-beneficiary farms. This shows that the impact of the PM Kisan Scheme was positive but not that significant in the reference year. It shows that the impact of PM Kisan Scheme on the farm income of the beneficiary farms was very negligible due to the large amount being utilised in non-agricultural purposes. Even then, financial support of Rs. 6,000 per annum to the beneficiary farmers under the scheme has been encouraging farmers to purchase seeds, fertilizers, pesticides etc for getting optimum production of the crops. It is helpful in increasing the risk-taking capacity of the farmers. Overall, this scheme is a boon for the farmers.

VII.7. Policy Implications

The rationale behind the amount Rs.6,000 per landholding is not clear from any of the policy documents. However, from the basic theory of production, it can be inferred that a farmer is likely to incur severe loss or may even stop cultivating if the average variable costs fall below

the price they receive. Thus, PM-KISAN needs to cover at least the basic expenditure on cultivation to be effective. On the basis of the responses from the beneficiaries and after analysis of the primary data, certain suggestions emerged from the study. Whenever the policy makers undertake a review of the PM Kisan Samman Nidhi Yojana,, the AERC Allahabad would make an earnest request to the Policy-Makers to take into account the following suggestions and if feasible to incorporate changes, in order to make this PMKSNY more effective and productive.

1. Most of the sample beneficiary farmers were of the view that the amount under the PM Kisan Scheme should be increased at least to Rs. 12,000 per annum to meet out the increasing prices of the inputs.
2. The landless crop sharers and the tenants should also be included in the list of the PM Kisan Scheme
3. The cash transfers under this scheme should be transferred during the peak seasons of the agriculture. It will be helpful in checking the diversion of the funds to unproductive activities.
4. Few of the sample beneficiaries had also expressed their views that the seeds, fertilizers, pesticides etc. should be made available in kind under this scheme in the place of cash transfer.

The role of K.V.K was not found very effective in guiding the farmers about the adoption of the modern techniques in agriculture. Few of the sample beneficiaries were only benefitted from the guidance of K.V.K. The scientists of K.V.K. did not approach to remote villages of the selected districts during the study period. Extension, education, training, dissemination of new modern techniques etc are basic activities of K.V.K. which could not reach up to small and marginal farmers. On account of this, the sample beneficiaries could not apply latest modern techniques in their crops. Therefore K.V.K should expand their activities to the remote villages of the districts.

The PM Kisan Scheme and K.V.K. should be integrated with each other. The bogus and fraud beneficiaries should be deleted from the list of the beneficiaries under the PM Kisan Scheme.

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Abbreviations

1. Pradhan Mantri Kisan Samman Nidhi	PM-KISAN
2. Direct Benefit Transfer	DBT
3. Krushak Assistance for Livelihood and Income augmentation	KALIA
4. International Food Policy Research Institute- Indian Council of Agricultural Research	IFPRI-ICAR
5. quintals	Qtls
6. Households	hhd
7. per hectare	Per hec.
8. Households	HH
9. Gross Cropped Area	GCA

Appendix-1

The Impact of Pradhan Mantri Kisan Samman Nidhi Scheme on the Farm Income of Beneficiaries in Uttar Pradesh

Comments on the report by Agricultural Economic Research Centre, University of Delhi, Delhi – 110007

Editing related:

1. Need to mention the abbreviations used in the report uniformly across all the chapters, i.e. – some of the common words such as – households, gross cropped area, per hectare, per farm, per quintals etc.
2. The font size of the report is '15', in general. This may be at 'Times New Roman' with font size '12', and uniform line spacing with a uniformity across the report.
3. The formatting of tables should be uniform across the chapters – headlines, font size, alignments, source and notes etc.
4. Referencing order should be uniform across all the references used and reported, including all the research papers and reports in the 'reference' section in the adopted referencing format.

General observations:

1. There is some duplicity in writing the chapter-wise sections, such as there is no need to mention the objectives and methodology in detail again in the summary chapter. The redundancy in the report may be removed.
2. A precise, outcome based on the objectives and research findings may be mentioned in the summary and in the point-wise/small paragraphs form, giving more weightage to the discussion based on outcome on 'impact of the scheme, fund utilizations and opinions' in place of repetitive sections.
3. The overall cost figures such as 'total cost' etc may be avoided as this leads to non-comparability, better is to report only per unit figures to bring more comparability across variables to be compared.
4. A section on the farm category wise – impact of scheme, fund utilization etc. may bring more insights from the study and specific policy suggestions.
5. More refining of the sections is required based on the outcome tables.

Appendix -2

Action Taken

“The Impact of Pradhan Mantri Kisan Samman Nidhi Scheme on Farm Income of Beneficiaries in Uttar Pradesh ”

Actions taken on the comment received from Agricultural Economic Research Centre University of Delhi, Delhi-110007

Comment wise action taken on draft report

I am thankful to Director, AER Centre, University of Delhi, for giving fruitful suggestions in improving the quality of the report.

General Information

1. Date of dispatch of the Draft Report for comments : 28/03/2022
2. Date of receipt of comments : 06/05/2022
3. Date of dispatch of the final report : 04/06/2022

Sl. No.	Issue of Comments	Action Taken
1.	Need to mention the abbreviations used in the report uniformly across all the chapters, i.e. – some of the common words such as – households, gross cropped area, per hectare, per farm, per quintals etc.	Abbreviations in the report have been done.
2.	The font size of the report is ‘15’, in general. This may be at ‘Times New Roman’ with font size ‘12’, and uniform line spacing with uniformity across the report.	The report has been modified according to the suggestions
3.	The formatting of tables should be uniform across the chapters – headlines, font size, alignments, source and notes etc.	Suggestions incorporated to format the tables as suggested.
4.	Referencing order should be uniform across all the references used and reported, including all the research papers and reports in the ‘reference’ section in the adopted referencing format.	Suggestions incorporated as per the advice

General Observations		
	Issue of Comments	Action Taken
1.	There is some duplicity in writing the chapter-wise sections, such as there is no need to mention the objectives and methodology in detail again in the summary chapter. The redundancy in the report may be removed	The objectives and the research methodology have been removed from the summary chapter-VII
2	A precise, outcome based on the objectives and research findings may be mentioned in the summary and in the point-wise/small paragraphs form, giving more weightage to the discussion based on outcome on 'impact of the scheme, fund utilizations and opinions' in place of repetitive sections.	Outcome based on the objectives and findings have been properly mentioned in the summary chapter. Apart from this, key suggestions have also been incorporated
3.	The overall cost figures such as 'total cost' etc may be avoided as this leads to non-comparability, better is to report only per unit figures to bring more comparability across variables to be compared.	The data of the total cost has been removed from Table IV.2
4.	A section on the farm category wise – impact of scheme, fund utilization etc. may bring more insights from the study and specific policy suggestions.	The detail of utilization of land has been presented in Table V.3 out of total beneficiaries, being 120, 90% belonged to marginal and small category of farms. Hence, utilization of funds by different category farmers has not been considered. The specific suggestions have been described in full details in chapter IV.
5.	More refining of the sections is required based on the outcome tables.	Suggestion have been incorporated based on the outcomes of the table.

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