

Farmer's Security: A means to live a long life in agriculture

I. Introduction

Agriculture contributes to nearly 20% of India GDP. It provides livelihood for the major Indian population. Agriculture is dying, not as in the production of food but as a desirable Profession. The problems of Indian farmers are even bigger than what government anticipates. The challenges of today's world are bringing many pressures to bear on agriculture. This scenario heightens the critical role to make agriculture more competitive and sustainable. 42% of Indian farmers do not want to continue farming and instead wish to settle down in urban areas.

Farming is a uniquely challenging profession. Farmers have had to find creative solutions for farming problems to a different variety of ecological challenges. Because of this, they have become incredibly adaptable individuals over the years. On top of this, new challenges have arisen in recent years due to changes in climate conditions and the global economy.

The root cause of the problems faced by farmers in India is that agriculture is no more a profitable economic activity when compared to other enterprises because the income derived from these activities is not sufficient to meet the expenditure of the growers.

Agricultural growth is one of the most talked-about issues as a major portion of our population is still engaged with the agricultural industry. The main economic objective of agricultural development is to contribute to increasing per capita. Often their low level of education and lack of communication has resulted in a general lack of awareness regarding modern research and inventions in the agriculture sector. Many have no knowledge of recent agriculture developments. They still rely on the knowledge passed over their ancestors. So awareness about new developments is very much necessary. As agriculture provides major share in countries economy and need to give farmers security.

II. Objectives:

1. To understand the concept of Farmer's security.
2. To know the different problems faced by the farmers
3. To understand the different programs/schemes launched by Government related to farmer's security.
4. To review related research/case studies.

III. Definitions and terminologies:

Farmers security

Farmer security refers to social, economical, psychological and nutritional security of farmers which ranges from self-strength to efficiency building of farmers, which can be achieved by empowering farmers to shape one's life.

Security: Measures that are taken to protect a farm or a place

Farm security: Measures taken to protect farm with some unwanted disruption

Components of farmers security:

- Economic security
- Social security
- Psychological security
- Educational security
- Livelihood security
- Nutritional security

Economic security: The extent of stability of farmer family's income from farming sources in order to a standard of living now and in future.

Educational security: The capacity of the farmer to receive or benefit from a basic education or farm knowledge.

Livelihood Security: The ability of farmers to earn and spend their income on all basic and other development activities which are essential for decent living. Further, it refers to the ability of farmers to protect their capabilities, assets and activities which are essential for their livelihood.

Nutritional Security: It refers to the nutritional security is achieved when adequate food that is quantity, quality, safety, hygienic and socio-cultural acceptability is available for and satisfactorily used and utilized by small and marginal farmers at all times to live healthy and active life.

Social Security: The capacity of the farmer to maintain and participated in the social networks that enable them to pursue sustainable livelihood in farming

IV. Different problems faced by the farmers and different programs/schemes launched by Government related to farmer's security.

Vicious Circle of Farmer Security



- Lack of finance
- Government Schemes
- Cost of cultivation
- Infertile land
- Changing climatic conditions
- Shortage of farm labors
- Lack of awareness about schemes or programs or projects to the farmers
- Lack of knowledge
- Non availability of desire farm machineries

1. Poor irrigation facility

Water availability in India is more than sufficient to irrigate all cultivation areas; the problem is that we still have to find cheap and suitable solutions to utilize such enormous water supplies. Due to several reasons, farmers either don't receive the appropriate amount of water or don't get the supply on time; many farmers rely on rainwater for irrigation.

Although India is the second largest irrigated country of the world after China, only one-third of the cropped area is under irrigation. Irrigation is the most important agricultural input in a tropical monsoon country like India where rainfall is uncertain, unreliable and erratic India cannot achieve sustained progress in agriculture unless and until more than half of the cropped area is brought under assured irrigation.

- Unpredictable nature of monsoon.
- Water scarcity.
- Without water farmer do not have a means of watering their crops.
- Irrigation is a method of transporting water to crop in order to maximize the productivity.

- Many farmers are facing irrigation facility therefore government launched the scheme to solve the irrigation problem.



Pradhan Mantri Krishi Sinchayee Yojana (PMKSY):

Government of India is committed to accord high priority to water conservation and its management. To this effect Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) has been formulated with the vision of extending the coverage of irrigation 'Har Khet ko pani' and improving water use efficiency 'More crop per drop' in a focused manner with end-to-end solution on source creation, distribution, management, field application and extension activities. The Cabinet Committee on Economic Affairs chaired by Hon'ble Prime Minister has accorded approval of Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) in its meeting held on 1st July, 2015.

PMKSY has been formulated amalgamating ongoing schemes viz. Accelerated Irrigation Benefit Programme (AIBP) of the Ministry of Water Resources, River Development & Ganga Rejuvenation (MoWR,RD&GR), Integrated Watershed Management Programme (IWMP) of Department of Land Resources (DoLR) and the On Farm Water Management (OFWM) of Department of Agriculture and Cooperation (DAC). PMKSY has been approved for implementation across the country with an outlay of Rs. 50,000 Crore in five years. For 2015-16, an outlay of Rs.5300 crore has been made which includes Rs. 1800 crore for DAC; Rs. 1500 crore for DoLR; Rs. 2000 crore for MoWR(Rs. 1000 crore for AIBP; Rs. 1000 crores for PMKSY).

Objectives:

- Enhance the physical access of water on the farm (Har Khet ko pani)
- Integration of water source, distribution and its efficient use.
- Enhance the adoption of precision - irrigation and other water saving technologies (More crop per drop).
- Promote extension activities relating to water harvesting, water management and crop alignment for farmers and grass root level field functionaries.

Programme components:

- Accelerated Irrigation Benefit Programme (AIBP)
- PMKSY (Har Khet ko Pani)
- PMKSY (Per Drop More Crop)
- PMKSY (Watershed Development)

Benefits:

- ✓ To ensure access to some means of protective irrigation to all agricultural farms in the country, to produce 'per drop more crop', thus bringing much desired rural prosperity.
- ✓ Assured or protective irrigation encourages farmers to invest more in farming technology and inputs leading to productivity enhancement and increased farm income



2. Infertile land:

Soil problem is a very important issue in the farming sector. The soil fertility is destroying day after day due to the use of more chemical fertilizers. An insufficient amount of any necessary nutrient will lead to poor crop or pasture growth and limit production, reducing profit for growers.

- Ill-informed farming practices and indiscriminate use of fertilizers and pesticides.
- Farmers do not follow the recommended dosage of fertilizers.
- Therefore, Government launched the scheme to help farmers to improve productivity through judicious use of inputs.

Soil infertility implies lack of the qualities which enable it to provide nutrient elements and compounds in adequate amounts and in proper balance for the growth of specified plants. Nutrient-weak soil may be aggravated by poor soil mechanics, particularly poor binding properties which do not hold soil particles together in a porous, water-stable structure. Soil binding is the result of microorganisms exuding gummy substances during organic decomposition. Infertile soils lacking in decomposing organic matter such as manure, will lack nutrients and binding qualities as well.



Soil Health Card:

Country: India

- Prime Minister: Narendra Modi
- Launched: 19 February 2015
- Budget: ₹568 crore
- Status: Running
- Website: soilhealth.dac.gov.in

National Mission for Sustainable Agriculture (NMSA) will be implemented during 12th Plan with the objectives to make agriculture more productive, sustainable and climate resilient; to conserve natural resources; to adopt comprehensive soil health management practices; to optimize utilization of water resources; etc. Soil Health Management (SHM) is one of the most important interventions under NMSA.

SHM aims at promoting Integrated Nutrient Management (INM) through judicious use of chemical fertilisers including secondary and micro nutrients in conjunction with organic manures and bio-fertilisers for improving soil health and its productivity; strengthening of soil and fertiliser testing facilities to provide soil test based recommendations to farmers for improving soil fertility; ensuring quality control requirements of fertilisers, bio-fertilisers and organic fertilisers under Fertiliser Control Order, 1985; upgradation of skill and knowledge of soil testing laboratory staff, extension staff and farmers through training and demonstrations; promoting organic farming practices etc.



What is a Soil Health Card?

SHC is a printed report that a farmer will be handed over for each of his holdings. It will contain the status of his soil with respect to 12 parameters, namely N,P,K (Macro-nutrients); S (Secondary-nutrient); Zn, Fe, Cu, Mn, Bo (Micro - nutrients); and pH, EC, OC (Physical parameters). Based on this, the SHC will also indicate fertilizer recommendations and soil amendment required for the farm.

How can a farmer use a SHC?

The card will contain an advisory based on the soil nutrient status of a farmer's holding. It will show recommendations on dosage of different nutrients needed.

Further, it will advise the farmer on the fertilizers and their quantities he should apply, and also the soil amendments that he should undertake, so as to realize optimal yields.

Objective of scheme:

- ❑ promoting soil test based and balanced use of fertilizers to enable farmers to realise higher yields at lower cost
- ❑ The main objective is to aware growers about the appropriate amount of nutrients and fertilizers for concerned crop depending on the quality of soil

Benefits:

- ✓ The farmers will be notified about the soil type and they can plant crops accordingly.
- ✓ The authorities provide a report to the farmers once in 3 years after observing the soil regularly. This makes the farmers not to be concerned about the cultivation even if the soil changes due to natural factors.
- ✓ The farmers are also given advice by the experts to improve the productivity of the crops.
- ✓ The farmers will be informed about the needed nutrients in the soil.
- ✓ The farmers are made aware of the nature of the soil and the right fertilizers that have to be used to increase their productivity

3. Advisory services

- To improve and strengthen existing agriculture extension services by integrating Information Technology with mobile services.
- Sharing of knowledge among experts, farmers, students and research scholars are very important to the growth of the agriculture sector.
- If we encourage youth for farming and related occupation, this sector will definitely boom. They already have basic institutional education and knowledge; they can learn and grow quickly. For instance, almost all of them have smartphones; by using a modern agriculture app, they can perform well in farms.
- Besides, introducing modern technology and passing advanced equipment to small farmers will help boost efficiency, productivity, and quality.



Farmers portal:

Indian farmers are second to none in production and productivity despite of the fact that millions are marginal and small farmers. They adopt improved agriculture technology as efficiently as farmers in developed countries. It is felt that with provision of timely and adequate inputs such as fertilizers, seeds, pesticides and by making available affordable agricultural credit /crop insurance, Indian farmers are going to ensure food and nutritional security to the Nation. It is envisaged to make available relevant information and services to the farming community and private sector through the use of information and communication technologies, to supplement the existing delivery channels provided for by the department. Farmers' Portal is an endeavour in this direction to create one stop shop for meeting all informational needs relating to Agriculture, Animal Husbandry and Fisheries sectors production, sale/storage of an Indian farmer. With this Indian Farmer will not be required to sift through maze of websites created for specific purposes. Once in the Farmers' Portal, a farmer will be able to get all relevant information on specific subjects around his village/block /district or state. This information will be delivered in the form of text, SMS, email and audio/video in the language he or she understands. These levels can be easily reached through the Map of India placed on the Home page. Farmers will also be able to ask specific queries as well as give valuable feedback through the Feedback module specially developed for the purpose.



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4. INCOME GENERATION



A) Integrated Farming System Demonstration (IFSD)

- IFSD is the demonstration conducted by a farmer under the direct guidance and supervision of field extension worker with technical guidance from subject matter specialists (SMSs) of Krishi Vigyan Kendra, over a period of three years
- Integrated Farming System Demonstration (IFSD) is a unique extension method employed to show how the net income of a farmer would be increased if practiced continuously over a period (2-4 years).
- Properly combining suitable crop and livestock enterprises along with recycling of farm waste and biomass in addition to providing guidance in the efficient management of farm.

The specific objectives of IFSD programme are:

1. Sustainable improvement in productivity and income
2. Livelihood security of farm families
3. Establish IFS Model at the stations where KVK's are functioning for On-station training
4. support and guide Model Stake Holders for overall development of their farms through IFS principles specific to their situations for further replication
5. Support and organize need based, Commodity based associations in the selected IFSD villages
6. Support Agro – Service Centers for drudgery reduction and to overcome the problem of scarcity of farm.

B) Contract farming

Contract farming can be defined as agricultural production carried out according to an agreement between a buyer and farmers, which establishes conditions for the production and marketing of a farm product or products. Typically, the farmer agrees to provide agreed quantities of a specific agricultural product.

- Contract farming system provides **economic security** to the farmers because
 - Provides assured price for agricultural produce.
 - Growers are ensured stable and sustained market for their product.
 - Minimize the intermediaries in order to increase farmer's income.



C) Value addition and processing units

- ✓ Process of changing or transforming the produce from one state to more valuable form.
- ✓ Adequate income can be earned.
- ✓ Low post harvest losses on farm.
- ✓ Proper supply chain linkage between farmers and processing units.
- ✓ High level food wastage due to shortage of storage spaces .
- ✓ Huge quantities of underutilize crop residues and processing by products leading to loss of income and environmental sustainability.

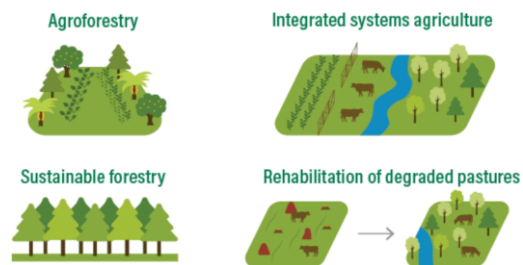
5. Change in climate conditions

- Climate change poses a real threat to farmers around the world.
- Agriculture is highly dependent on good weather, including high and low temperatures, rainfall, wind intensity, and many other variables.

Climate is the most important determinant of crop productivity, particularly in country like India, where about 2/3rd of the cultivated area is rainfed. Climate change, therefore, is of serious concern having large-scale impacts, directly and indirectly, on agriculture. It is manifested with increase in global temperature, increased intensity of rainfall, rising sea level, melting of glaciers, shifting of crop growing season and frequent occurrences of extreme events such as drought and flood.

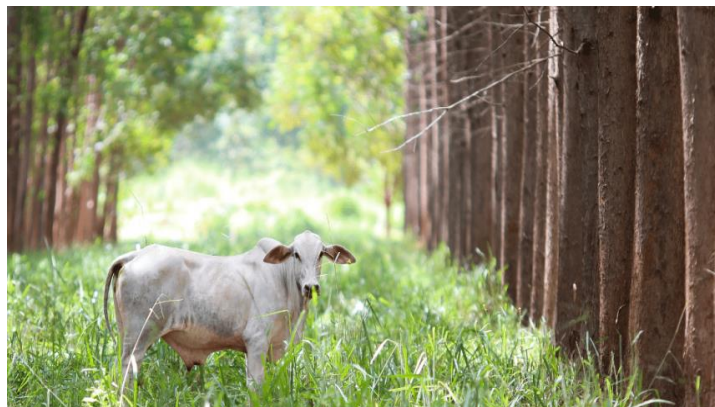


4 Agricultural Interventions That Can Power Climate Adaptation



A) Integrate Crop-Livestock-Forestry Systems

- Improve the local micro-climate.
- Reduce the impact of extreme weather events on crops, livestock and other products.
- Integrated systems can produce food, energy, fiber, timber and non-timber forest products in the same area, at the same time or in rotation.



B) Protected cultivation

Protected cultivation is enabling cultivators to produce several folds of great quality veggies and fruits. You can forget about climatic and biological constraints. It is all about skillfully adopting the needful practices with exactness

- ❖ It is a process of growing crops in a controlled environment. This means that the temperature, humidity, light and such other factors can be regulated as per requirement of the crop.
- ❖ It secures the farmers from changing climate
- ❖ Protected cultivation provides **economic and nutritional security** to the farmers because
- ❖ It assists healthier and a larger produce
- ❖ Controlled condition in protected cultivation can enriches the nutrition of the produce
- ❖ Can fetch higher price to the produce because of good quality

Benefits:

1. Production of genetically better and disease-free transplants
2. Produce fruit crops, vegetables and flowers all year round
3. Higher crop yield and enhanced productivity
4. Promotes quality and high value horticultural produce
5. Minimizes the use of pesticides
6. Minimum infestation by weeds and efficient use of water



6. Lack of Storage facilities

- In rural areas, storage facilities are either insufficient or completely absent.
- In such a situation, farmers usually have no other option than selling their produce immediately once it's ready, at market prices that are often very low.
- They are far away from a legitimate income.

A) Underground Storage Structures

- Underground storage structures are safer from threats from various external sources of damage, such as theft, rain or wind.
- The underground storage space can temporarily be utilized for some other purposes with minor adjustments.



Department of Agriculture & Farmers Welfare कृषि और किसान कल्याण विभाग

National Agriculture Infra Financing Facility

The scheme provides a medium - long term debt financing facility for investment in viable projects for post-harvest management Infrastructure and community farming assets through interest subvention and financial support.

Benefits:

- Improved marketing infrastructure to allow farmers to sell directly to a larger base of consumers and hence, increase value realization for the farmers. This will improve the overall income of farmers.
- With investments in logistics infrastructure, farmers will be able to sell in the market with reduced post-harvest losses and a smaller number of intermediaries. This further will make farmers independent and improve access to market.
- With modern packaging and cold storage system access, farmers will be able to further decide when to sell in the market and improve realization.
- Community farming assets for improved productivity and optimization of inputs will result in substantial savings to farmers

Main Features:

- Convergence with all schemes of central or state government.
- Project Management Unit to provide handholding support for projects including project preparation.
- Size of the financing facility – ₹ 1 lakh Crore.

- Credit Guarantee for loans up to ₹ 2 Crore
- Interest subvention of 3% p.a., limited to ₹ 2 crore per project in one location, though loan amount can be higher.

Post-Harvest Management Projects:

- Supply chain services including e-marketing platforms
- Warehouses
- Silos
- Packaging units
- Assaying units
- Sorting & Grading units
- Cold Stores and Cold Chain
- Logistics facilities
- Primary processing centers
- Ripening Chambers
- Waxing plants

कृषि एवं किसान कल्याण विभाग
MINISTRY OF
AGRICULTURE & FARMERS WELFARE
GOVERNMENT OF INDIA

PM Modi Launches
**Agriculture
Infrastructure
Fund**

To provide debt financing facility for post-harvest management Infrastructure & community farming assets

Corpus of ₹1 lakh crore for FPOs, SHGs, PACS*, Startups, Agri-entrepreneurs, for other farm processing-based activities

Interest subvention of 3% per annum up to ₹2 crore for a max. period of 7 years

Moratorium for repayment from 6 months up to 2 yrs

Scheme to be implemented from August 2020

#AatmaNirbharKrishi *Primary Agri Credit Societies Date: 8 August, 2020

B) Gramin Bhandaran Yojana

Scheme Name	Nabard Warehouse Scheme 2022 / Gramin Bhandaran Yojana
Launched by	Central Government of India
Beneficiaries	Farmers of Rural areas
Benefits of this scheme	Subsidy for the warehouse maintenance and construction
Application Status	Active
Scheme Launched Date	16/10/2020

- ❖ Gramin Bhandaran Yojana, all farmers would get a subsidy of 25% up to 2.25 crores. Related government projects can also benefit from this aid. SC or ST farmers in rural areas would be provided a 33% subsidy of 3 crores.
- ❖ Gramin Bhandaran Yojana is a capital investment subsidy scheme which works towards the construction and renovation of the godowns in the rural areas. This scheme can also be availed by the rural godowns which are positioned in various food parks.

Purpose of Gramin Bhandaran Yojana

The Gramin Bhandaran Yojana envisages a robust network of non-urban godowns to help build adequate scientific storage for farm produce in rural areas. Owing to enhanced storage capacity, farmers in villages are less likely to opt for distress sale of their harvest courtesy marketing credit and pledge financing available under the scheme. The purpose of the scheme is to cater to better storage facilities of farm produce, agricultural inputs, processed farm produce besides standardization of farm produce to boost its demand in the market and pave way for a system of warehouse receipts on a national level. The scheme is aimed at arresting the decreasing investment ratio in the agriculture sector in the country by extending subsidy to cooperative and private sectors.

7) Lack of Transportation and marketing

- Lack of cheap, efficient means of transportation is a big problem.
- Farmers cannot deliver their produce to the central market and helplessly sell it in the local market at low costs.
- Transport is a burning component of post harvest crop management.



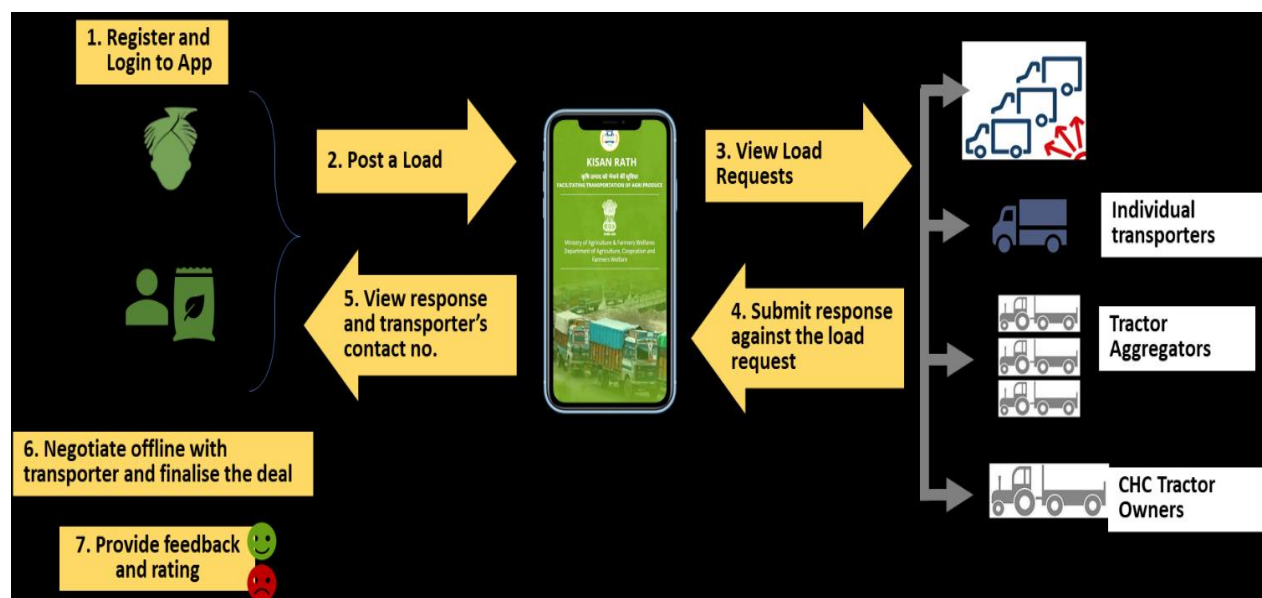
A) Kisan Rath Mobile App

Over 1.50 lakh farmers, traders download Kisan Rath app

The mobile app facilitates transportation of food grains and agri products.

ETGovernment • April 27, 2020, 09:34 IST

- To identify suitable transport facilities.
- Allow transportation of farm produce from farm gate to mandi and from one to another mandi
- App interconnects online more than 10,000 farmers, 50 farmer producer organizations and 1,000 verified agricultural traders.
- Ensure seamless supply linkages between farmers, FPOs, APMC mandis and intra-state and inter-state buyers
- Reduce wastage and contribute to better pricing of perishable commodities.



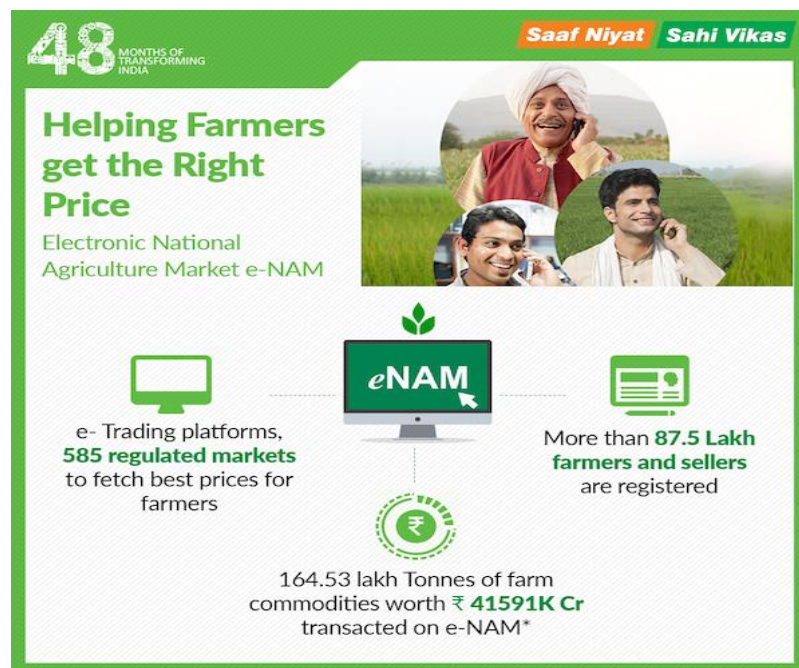
Kisan Rath mobile app facilitates farmers, FPOs and traders across India to search and contact the transport service providers for transporting the Agriculture & Horticulture produce. It connects them with the transport service providers, providing a wide range of trucks and tractor trolleys, and also allows posting the requirements of part-load as well as full-load. The app interfaces with major transport aggregators and also allows individual transporters to register their vehicles and provide services to farmers and traders. In the app, the registered Farmer, FPOs, buyer or trader posts a load which is sent to transport aggregators, individual transporters and tractor owners (under CHC scheme) registered on the app and they can respond with their contact no. and quotes. The requestor can view the responses to their posted loads and negotiate offline with the transporters to finalise the deal and can provide a rating for the transporter once the trip is completed. The app is available in both Android and iOS versions in select languages.

B) e-NAM

National Agriculture Market (NAM) is a pan-India electronic trading portal launched on 14th April, 2016 completely funded by Central Government and implemented by Small Farmers Agribusiness Consortium (SFAC).



- Transparent Online Trading
- Real-Time Price Discovery
- Better Price Realization for Producers
- Reduced Transaction Cost for Buyers
- Quality Certification, Warehousing, and Logistics
- More Efficient Supply Chain
- Payment and Delivery Guarantee
- Error Free Reporting of Transactions
- Enhanced Accessibility to the Market
- Stable Price and Availability to Consumers



VISION

To promote uniformity in agriculture marketing by streamlining of procedures across the integrated markets, removing information asymmetry between buyers and sellers and promoting real time price discovery based on actual demand and supply.

MISSION

Integration of APMCs across the country through a common online market platform to facilitate pan-India trade in agriculture commodities, providing better price discovery through transparent auction process based on quality of produce along with timely online payment.

C) Minimum support price

- The minimum support price (MSP) is an agricultural product price set by the Government of India to purchase directly from the farmer.
- A safety net given to a farmer to ensure guaranteed prices and assured markets.
- Aims to save the crops from price fluctuations due to various unwanted factors such as monsoon, lack of market integration and information asymmetry.
- The MSP is fixed twice a year on the recommendation of Commission for Agricultural Costs and Prices (CACP).

Minimum Support Prices for all Kharif crops for Marketing Season 2022-23 (₹ per quintal)

Crop	MSP 2014-15	MSP 2021-22	MSP 2022-23	Cost* of production 2022-23	Increase in MSP (Absolute)	Return over cost (in per cent)
Paddy (Common)	1360	1940	2040	1360	100	50
Paddy (Grade A)^	1400	1960	2060	-	100	-
Jowar (Hybrid)	1530	2738	2970	1977	232	50
Jowar (Maldandi)^	1550	2758	2990	-	232	-
Bajra	1250	2250	2350	1268	100	85
Ragi	1550	3377	3578	2385	201	50
Maize	1310	1870	1962	1308	92	50
Tur (Arhar)	4350	6300	6600	4131	300	60

Objectives:

- To support the farmers from distress sales at severely low prices and to procure food grains for public distribution.
- With the government guarantee, the farmer can always sell at the MSP, if he cannot procure a better price elsewhere
- Helps him to estimate the revenue, aiding the financial planning and also influencing borrowing decisions if any.\

8) Crop Insurance

Crop insurance is a type of protection policy that covers agricultural producers against unexpected loss of projected crop yields or profits from produce sales at market.

- Natural calamities may effect on the yield.
- To cover the risk: crop insurance is only mechanism available to safeguard.
- Government of India introduced various schemes of crop insurance.



Pradhan Mantri Fasal Bima Yojana (PMFBY)

PMFBY scheme was launched in India by Ministry of Agriculture & Farmers welfare, New Delhi from Kharif 2016 season onwards. National Insurance Company started participating in PMFBY from Rabi 2016 onwards and covered 8 States and 2 Union Territories during the past 5 seasons namely, Rabi 2016-17, Kharif & Rabi 2017 and Kharif & Rabi 2018 covering 70,27,637 farmers. Farmers share of premium is Rs. 453 crores and with subsidy from State/Central Govts RS.1909 Crores, gross Premium is Rs.2362 Crores for the 5 seasons together. Whilst the claims of Kharif 18 and Rabi 18 are under process, we have closed the first 3 seasons with a gross premium amount of Rs.1804 Crores collected from 35,22,616 farmers and claims to the tune of Rs.1703 crores were paid, by which 17,66,455 no of farmers benefited, which shows almost 50% of the farmers insured were benefitted.

Objectives:

1. To provide insurance coverage and financial support to the farmers.
2. To stabilize the income of farmers to ensure their continuance in farming.
3. To encourage farmers to adopt innovative and modern agricultural practices.
4. To ensure flow of credit to the agriculture sector.



Who can be covered?

All farmers who have been sanctioned Seasonal Agricultural Operations (SAO) loans (Crop Loans) from Financial Institutions (FIs), i.e. loanee farmers, for the notified crop(s) season would be covered compulsorily.

The Scheme is optional for non-loanee farmers.

- The insurance coverage will strictly be equivalent to sum insured/hectare, as defined in the Govt. notification or /and on National Crop Insurance Portal multiplied by sown area for notified crop.

How to enroll the farmers in the Scheme?

Both Loanee and Non-Loanee farmers are to be enrolled in the National Crop Insurance Portal (NCIP) belong to Ministry of Agriculture & Farmers welfare, New Delhi. Banks who are lending Seasonal Crop Loans to the farmers are responsible to upload the data in the NCIP

In case of Non-loanee farmers, Intermediaries, Common Service Centers (CSCs), farmers on their own and other Agencies are to upload the data in the NCIP

Premium must be paid by way of NEFT only and DD or Cheques are not accepted. Similarly offline applications for enrollment are not accepted as every application needs to be filled-in online.

Coverage of Crops

1. Food crops (Cereals, Millets and Pulses),
2. Oilseeds
3. Annual Commercial / Annual Horticultural crops.

In addition, for perennial crops, pilots for coverage can be taken for those perennial horticultural crops for which standard methodology for yield estimation is available.

Rate of Premium to be paid by the farmer to Insurance Company

Type of Crop	Kharif	Rabi
Food grains including Cereals, Pulses and Oilseeds	2%	1.5 %
Annual Horticulture and Commercial Crops	5%	

After the Bidding process is finalized, if the premium rate quoted by the Insurance Company is higher than the above rates, the difference will be paid to the Insurance Company by State & GOI at 50% each in the form of premium subsidy. If such rate is less than the above rates, no subsidy is payable to the Insurance Company.

Coverage of Risks and Exclusions under PMFBY Scheme:

- a. **Prevented Sowing/Planting/Germination Risk:** Insured area is prevented from sowing / planting / germination due to deficit rainfall or adverse seasonal/weather conditions. 25% of the sum insured will be paid and the Policy will be terminated.
- b. **Standing Crop (Sowing to Harvesting):** Comprehensive risk insurance is provided to cover yield losses due to non-preventable risks, viz. Drought, Dry spell, Flood, Inundation, widespread Pests and Disease attack, Landslides, Fire due to natural causes, Lightning, Storm, Hailstorm and Cyclone.
- c. **Post-Harvest Losses:** Coverage is available only upto a maximum period of two weeks from harvesting, for those crops which are required to be dried in cut and spread / small bundled condition in the field after harvesting against specific perils of Hailstorm, Cyclone, Cyclonic rains and Unseasonal rains.
- d. **Localized Calamities:** Loss/damage to notified insured crops resulting from occurrence of identified localized risks of Hailstorm, Landslide, Inundation, Cloud burst and Natural fire due to lightning affecting isolated farms in the notified area.
- e. **Add-on coverage for crop loss due to attack by wild animals:** The States may consider providing add- on coverage for crop loss due to attack by wild animals wherever the risk is perceived to be substantial and is identifiable.

General Exclusions: Losses arising out of war and nuclear risks, malicious damage and other preventable risks shall be excluded.

V. Research Studies

Study 1. Impact of soil health card scheme on production, productivity and soil health in Punjab by Grover *et al.* (2017)

Methodology: The primary data collected from the farmers. The reference period for the study was 2015-16. The list of farmers who got their soils tested was collected from Krishi Vigyan Kendra, Patiala and Ludhiana for the year 2015-16 to assess the adoption of recommended dose of fertilizers. Ludhiana and Patiala districts were selected based on the status of soil health card scheme in the state. A total of 60 soil test farmers and 60 control farmers were selected for the study. The data were collected from four clusters of villages from the two selected districts. The selected farmers were interviewed personally to collect the relevant data. The data on socio economic characters of the respondents along with awareness about the SHC scheme, adoption of recommended doses of fertilizers by the farmers and impact of SHC scheme in terms of increase in income from major crops were collected from the selected farmers.

Table 2. Gross income realized by the sample households by agricultural production in Punjab, 2015-16 **n=120**

Crops	Control farmers (n=60)				Soil-tested farmers (n=60)			
	% of farmers	Avg. qty sold (Qtls)	Avg. price (Rs/Qtl)	Gross income obtained (Rs)	% of farmers	Avg. qty sold (Qtls)	Avg. price (Rs/Qtl)	Gross income obtained (Rs)
Paddy	98.33	266.52	1450	386454	100.0	324.68	1450	470786
Maize	10.00	4.27	1292	5517	11.67	6.35	1308	8306
Sugarcane	8.33	184.55	285	52597	15.00	227.43	285	64818
Vegetables	-	-	-	-	1.67	1.23	1800	2214
Maize	10.00	4.27	1292	5517	11.67	6.35	1308	8306
Sugarcane	8.33	184.55	285	52597	15.00	227.43	285	64818
Vegetables	-	-	-	-	1.67	1.23	1800	2214

The results in Table 2. Revealed that on control farmers farms, average quantity of paddy sold was 266.52 quintals and gross income obtained was Rs.386454, from sugarcane Rs. 52597 and Rs.5517 from maize crop. On soil-tested farmers category, average quantity of paddy sold was 324.68 quintals with gross income obtained being Rs.470786 followed by sugarcane (Rs.64818), maize (Rs.8306) and vegetables (Rs.2214). Thus, it can be seen that paddy was major source of income for almost all the farmers on both the farm categories followed by sugarcane, basmati and maize for few of them.

Conclusion: There was a judicious use of fertilizers on soil- tested farms compared to control farms and also expressed that yield and net income was higher in paddy and basmati crops in soil-tested farms as compared to control farms.

Study 2. Impact of integrated farming system demonstration (ifsd) programme on livelihood and nutritional security of farmers of Mandya district by Kowsalya *et al.* (2017)

Methodology: The study was conducted in Mandya taluk of Mandya district of Karnataka state during 2016-2017. Mandya district is purposively selected since it has highest number of IFSD stakeholder population in southern Karnataka district.

The five panchayats were selected from Mandya taluk of Mandya district. From each of the sampled panchayats, two villages were randomly selected for the study. In each village, sixteen IFSD beneficiary farmers were randomly selected and non- beneficiaries of IFSD were selected from four villages of Mandya taluk. From each of the four villages ten non-beneficiary farmers were again randomly selected for the study. Thus the total sample constitutes 160 beneficiary and 40 non-beneficiary farmers. Ex-post facto research design was implemented

Table 9: Livelihood security of beneficiaries and non-beneficiaries of IFSD

Particular	Criteria	Beneficiaries (n ₁ =160)		Non-beneficiaries (n ₂ =40)	
		N	%	N	%

Livelihood Security	Low	31	19.38	31	77.50
	Medium	75	46.87	6	15.00
	High	54	33.75	3	7.50

Table 9 indicates the livelihood security of beneficiaries and non-beneficiaries of IFSD.

It is noticed that 46.87 per cent of beneficiaries had medium level of livelihood security followed by high (33.75 %) and low (19.38 %) level of livelihood security. Whereas 77.50 per cent of non-beneficiaries had low level of livelihood security followed by 15.00 per cent had medium and 7.50 per cent had high level of livelihood security.

The results showed that there is large differences in livelihood security among beneficiaries and non-beneficiaries. This might be due to the difference in their income level, assets, risk bearing ability and coping strategies. The findings of the study is supported by Jayashree Datta (2013).

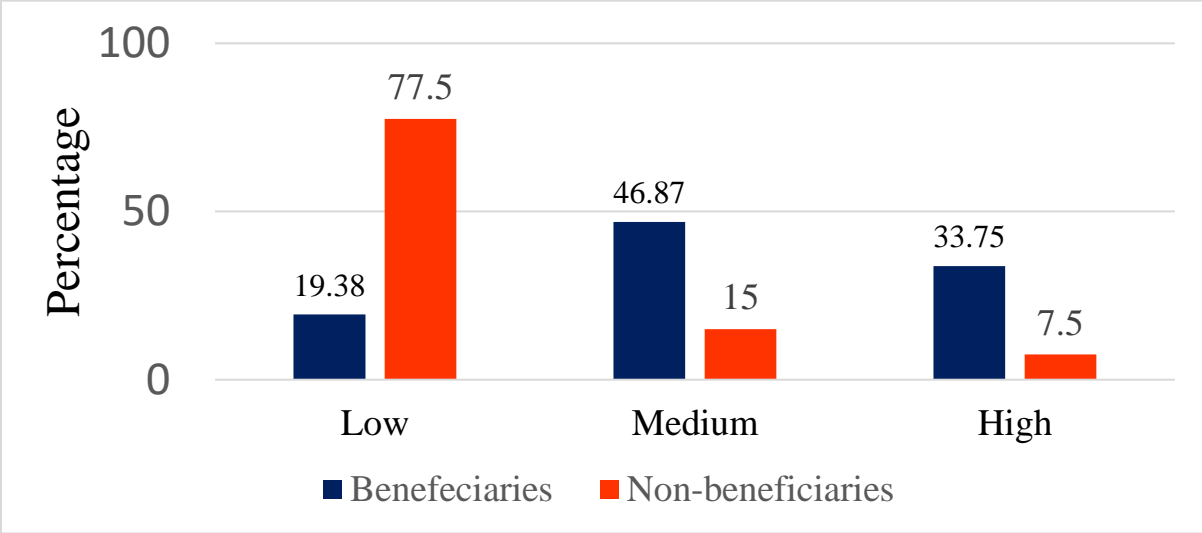


Fig. 3: Livelihood security of beneficiaries and non-beneficiaries of IFSD

Conclusion: The study revealed that, 46.87 per cent of beneficiaries had medium level of livelihood security followed by high (33.75 %) and low (19.38 %) level of livelihood security. Whereas three fourth (77.50%) of non-beneficiaries had low level of livelihood security followed

by 15.00 per cent had medium and 7.50 per cent had high level of livelihood security. The results showed that there were large differences in livelihood security among beneficiaries and non-beneficiaries.

Study 3. Comparative Analysis of Livelihood Security of the farmers practicing different Farming Systems in Mandya district of Karnataka by Shwetha et al. (2021)

Methodology: The investigation was conducted by using ex-post facto research design in Mandya district of Karnataka. The Mandya district was selected because of existence of diversified farming systems. From Mandya two taluks having different agro ecological situation was considered. From each taluk, six villages were selected. From each village, 10 respondents were selected. Hence, the total respondents were 120 respondents. ‘Paddy based farming system’ and ‘Sugarcane based farming systems’ were purposefully selected from K. R. Pete and Pandavapura taluks of Mandya district respectively. By considering available secondary data and in discussion with line department officials and other local leaders major farmingsystems in each taluk were identified and two- predominant farming systems were selected from each taluk *i.e.*, ‘paddy+dairy’, ‘paddy+dairy+horticulture’ farming systems from K. R. Pete taluk and ‘sugarcane+dairy’, ‘sugarcane+dairy+horticulture’ farming systems from Pandavapura taluk. These are the predominant farming systems in selected taluks. The present research was carried out in order to know which combination of farming system was viable and which farming system contributing more towards farmers’ livelihood security.

Table 2: Classification of the farmers based on livelihood security level under Sugarcane based farming system in Pandavapura taluk

Sl. No.	Farming system	Livelihood security level	Frequency	Percentage
1	Sugarcane+Dairy Mean=86.53 SD=18.37 (n3=30)	Poor (<77.34 score)	12	40.00
		Average (77.34-95.72 score)	10	33.34
		Better (>95.72 score)	08	26.66

2	Sugarcane+Dairy +Horticulture Mean=155.43 SD=18.49(n4=30)	Poor (<146.20 score)	06	20.00
		Average (146.20-164.65 score)	16	53.34
		Better (>164.65 score)	08	26.66

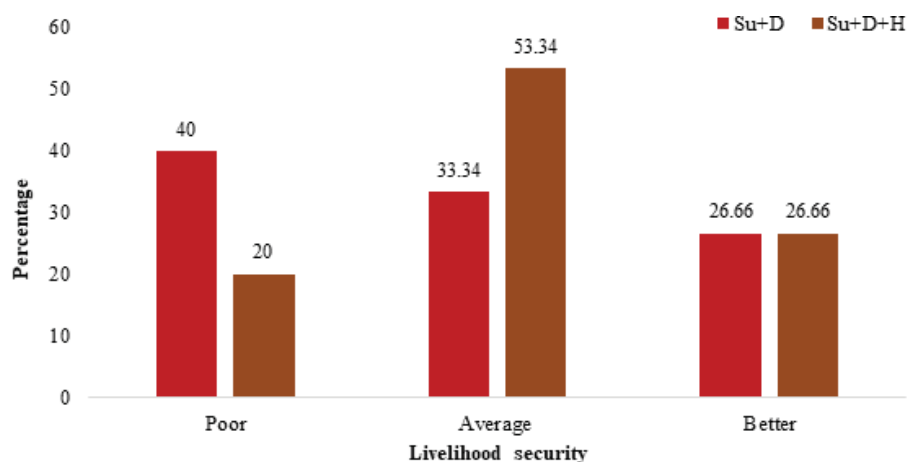


Fig. 2: Livelihood security of farmers practicing sugarcane+dairy and sugarcane+dairy+horticulture farming system

Table 2 and Fig 2 revealed that, in case of ‘sugarcane+dairy’ farming system, two fifth (40.00 %) of the farmers fall under poor level of livelihood security, which is followed by 33.34 percent and 26.66 percent of the farmers belonged to average and better level of livelihood security respectively. Since, sugarcane is an annual crop where farmers are not getting regular income and employment and have to wait for 18 to 20 months to get income. Further, the minimum support price providing by government is not remunerative for sugarcane growers. The delayed harvesting results in reduced sugar/TSS content lead to low yield and income this might be the reasons for poor level of livelihood security.

In case of ‘sugarcane+dairy+horticulture’ farming system, more than half (53.34 %) of the respondents fall under average level of livelihood security, followed by 26.66 percent and 20.00 percent of the respondents belonged to better and poor level of livelihood security respectively. This might be due to decrease in availability of irrigation water for farmers of Pandavapura, they started cultivating horticultural crops like tomato, carrot, beans etc. which enable them to get regular income and employment. The farmers are practicing dairy as one of

the components in their farm, which is also contributing towards farmer's livelihood security. Combination of these components may be the reason for average and better level of livelihood security.

Farmers practicing 'sugarcane + dairy + horticulture' have better mean score (155.43) compared to farmers practicing 'sugarcane + dairy' (86.53).

Conclusion:

The different farming systems practiced by farmers have provided effective recycling of produce of one component as input to the other component. The study indicated that the farmers under 'paddy + dairy' and 'paddy + dairy + horticulture' farming systems had poor level of livelihood security due to lack of remunerative price for paddy. Hence, it is necessary to provide minimum support price for paddy, provide technical guidance and conduct training programmes to motivate farmers to take up diversification in farm and to adopt scientific methods so that they can sustain their income and livelihood security. The farmers practicing 'sugarcane + dairy' farming system had poor livelihood security as compared to 'sugarcane + dairy + horticulture' farming system, where farmers had average livelihood security. So, 'sugarcane + dairy + horticulture' farming system need to be popularized by providing assured market for horticultural produce and providing minimum support price for sugarcane. It also provided flow of cash to the farmers round the year by way of disposal of milk, vegetables and sugarcane. The 'sugarcane + dairy + horticulture' farming system has contributed higher proportion to the total income in the existing farming systems

VI. Conclusion

Agriculture is the lifeline for rural economy. Even though several schemes are concentrating on the overall development of farmers, still there is a need for prioritization of social, economic, psychological and nutritional security of the farmers. In this connection proper interventions need to be strengthened for enhancing the farmers security in general and national development in particular. Hence, awareness should be created for better utilization of benefits from all the schemes to enhance the security of the farmers.

VII. Discussion

1. What is AIBP in PMKSY?

Central Government launched the Accelerated Irrigation Benefits Programme (AIBP) in the year 1996-97 to provide Central Assistance to major/medium irrigation projects in the country, with the objective to accelerate implementation of such projects which were beyond resource capability of the States or were in advanced stage of completion. Priority was given to those projects which were started in Pre-Fifth and Fifth Plan period and also to those which were benefiting Tribal and Drought Prone Areas. After launch of PMKSY in 2015-16, AIBP became a part of PMKSY. Since its inception, 297 Irrigation / Multi-Purpose Projects have been included for funding under AIBP. Out of these 143 projects have been completed and 5 projects were foreclosed

2. What is the criteria of PMFBY?

Coverage of Crops

1. Food crops (Cereals, Millets and Pulses),
2. Oilseeds
3. Annual Commercial / Annual Horticultural crops.

Rate of Premium to be paid by the farmer to Insurance Company

Type of Crop	Kharif	Rabi
Food grains including Cereals, Pulses and Oilseeds	2%	1.5 %
Annual Horticulture and Commercial Crops	5%	

All farmers who have been sanctioned Seasonal Agricultural Operations (SAO) loans (Crop Loans) from Financial Institutions (FIs), i.e. loanee farmers, for the notified crop(s) season would be covered compulsorily. The Scheme is optional for non-loanee farmers.

- The insurance coverage will strictly be equivalent to sum insured/hectare, as defined in the Govt. notification or /and on National Crop Insurance Portal multiplied by sown area for notified crop.
- Both Loanee and Non-Loanee farmers are to be enrolled in the National Crop Insurance Portal (NCIP) belong to Ministry of Agriculture & Farmers welfare, New Delhi. Banks who are lending Seasonal Crop Loans to the farmers are responsible to upload the data in the NCIP
- In case of Non-loanee farmers, Intermediaries, Common Service Centers (CSCs), farmers on their own and other Agencies are to upload the data in the NCIP
- Premium must be paid by way of NEFT only and DD or Cheques are not accepted. Similarly offline applications for enrollment are not accepted as every application needs to be filled-in online.

3. What is Livelihood Security? And farmer security and livelihood security are same?

Farmer security and livelihood security are synonymous related terms and similar meaning

- ✓ Livelihood Security refers to ability of farmers to earn and spend their income on all basic and other development activities which are essential for decent living. Further, it refers to the ability of farmers to protect their capabilities, assets and activities which are essential for their livelihood.
- ✓ Farmer security refers to social, economical, psychological and nutritional security of farmers which ranges from self-strength to efficiency building of farmers, which can be achieved by empowering farmers to shape one's life.

4. Labour issues in farming?

- ✓ Agricultural labor is that person who works on another land, does not participate in farm

management and its maintenance, and receives money or a portion of the harvest in consideration for his service. He neither has any rights regarding the land nor does he have to bear any risk regarding the farm. Briefly by agricultural labor, we mean ' such laborers who "earn their livelihood by working on agricultural farms."

- ✓ The scarcity of labor is a huge concern for farmers because it leads to the late establishment of crops, insufficient use of fertilizers, inadequate irrigation of crops, etc., which forces farmers to shift to non-farming activities

5. MGNREGA?

The Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), also known as Mahatma Gandhi National Rural Employment Guarantee Scheme (MNREGS) is Indian legislation enacted on August 25, 2005. The MGNREGA provides a legal guarantee for one hundred days of employment in every financial year to adult members of any rural household willing to do public work-related unskilled manual work at the statutory minimum wage. The Ministry of Rural Development (MRD), Govt of India is monitoring the entire implementation of this scheme in association with state governments

This act was introduced with an aim of improving the purchasing power of the rural people, primarily semi or un-skilled work to people living below poverty line in rural India. It attempts to bridge the gap between the rich and poor in the country. Roughly one-third of the stipulated work force must be women.

Adult members of rural households submit their name, age and address with photo to the Gram Panchayat. The Gram Panchayat registers households after making enquiry and issues a job card. The job card contains the details of adult member enrolled and his /her photo. Registered person can submit an application for work in writing (for at least fourteen days of continuous work) either to Panchayat or to Programme Officer.

The Panchayat/Programme officer will accept the valid application and issue dated receipt of application, letter providing work will be sent to the applicant and also displayed at Panchayat office. The employment will be provided within a radius of 5 km: if it is above 5 km extra wage will be paid.

Key facts about MNREGA

- MGNREGA guarantees hundred days of wage employment in a financial year, to a rural household whose adult members volunteer to do unskilled manual work.
- Individual beneficiary oriented works can be taken up on the cards of Scheduled Castes and Scheduled Tribes, small or marginal farmers or beneficiaries of land reforms or beneficiaries under the Indira Awaas Yojana of the Government of India.
- Within 15 days of submitting the application or from the day work is demanded, wage employment will be provided to the applicant.
- Right to get unemployment allowance in case employment is not provided within fifteen days of submitting the application or from the date when work is sought.
- Receipt of wages within fifteen days of work done.
- Variety of permissible works which can be taken up by the Gram Panchayaths.
- MGNREGA focuses on the economic and social empowerment of women.
- MGNREGA provides “Green” and “Decent” work.
- Social Audit of MGNREGA works is mandatory, which lends to accountability and transparency.
- MGNREGA works address the climate change vulnerability and protect the farmers from such risks and conserve natural resources.
- The Gram Sabha is the principal forum for wage seekers to raise their voices and make demands. It is the Gram Sabha and the Gram Panchayat which approves the shelf of works under MGNREGA and fix their priority.

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Venue : Dwarakinath Hall
Time : 10:30 AM
Date : 23-07-2022

Seminar-II

Farmer's Security: A means to live a long life in agriculture

Synopsis

India is a developing country; its majority of the population belong to the rural area. Agriculture is the primary source of livelihood for about 58 percent of India's population. Agriculture contributes to nearly 20 percent of Indian GDP. But still, they live their lives in poverty. Agriculture is dying, not as in the production of food but as a desirable profession. The challenges of today's world are bringing many pressures to bear on agriculture. This scenario heightens the critical role to make agriculture more competitive and sustainable. Hence, 42 percent of Indian farmers do not want to continue farming and instead wish to settle down in urban areas. And many have no knowledge of recent agriculture developments, they still rely on the knowledge passed over from their ancestors. Hence awareness about new developments is very much necessary. As agriculture provides major share in countries economy and need to give farmers security.

Objectives:

1. To understand the concept of farmer's security
2. To know the different problems faced by the farmers
3. To understand the different programs/schemes launched by Government related to farmer's security.
4. To review related research/case studies.

Farmer security

Farmer security refers to social, economical, psychological and nutritional security of farmers which ranges from self-strength to efficiency building of farmers, which can be achieved by empowering farmers to shape one's life.

Problems faced by farmers

The major problems faced by the farmers are poor irrigation facilities, infertile land, change in climate conditions, lack of storage facility, lack of market information, lack of transportation and post-harvest losses etc.

Programs/schemes launched by Government related to farmer security:

Pradhan Mantri Krishi Sinchai Yojana (PMKSY), Soil Health Card, Farmers Portal, Integrated Farming System Demonstration (IFSD), Contract farming, Protected cultivation, National Agriculture Infra Financing Facility, Gramin Bhandaran Yojana, Kisan Rath, National Agriculture Market (e-NAM), Minimum Support Price (MSP), Crop Insurance- Pradhan Mantri Fasal Bima Yojana (PMFBY).

Research studies

Grover *et al.* (2017) indicated that, there was a judicious use of fertilizers on soil- tested farms compared to control farms and also expressed that yield and net income was higher in paddy and basmati crops in soil-tested farms as compared to control farms.

Kowsalya (2017) revealed that, 46.87 per cent of beneficiaries had medium level of livelihood security followed by high (33.75 %) and low (19.38 %) level of livelihood security. Whereas three fourth (77.50%) of non-beneficiaries had low level of livelihood security followed by 15.00 per cent had medium and 7.50 per cent had high level of livelihood security. The results showed that there were large differences in livelihood security among beneficiaries and non-beneficiaries.

Shwetha *et al.* (2021) from their study revealed that ‘sugarcane + dairy + horticulture’ practicing farmers have better livelihood security than other farmers in Mandya district.

Conclusion

Agriculture is the lifeline for rural economy. Even though several schemes are concentrating on the overall development of farmers, still there is a need for prioritization of social, economic, psychological and nutritional security of the farmers. In this connection proper interventions need to be strengthened for enhancing the farmers security in general and national development in particular. Hence, awareness should be created for better utilization of benefits from all the schemes to enhance the security of the farmers.

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- GROVER, D. K., SINGH, J. M., AND SANJAY KUMAR, 2017, Impact of soil health card scheme on production, productivity and soil health in Punjab. *Agricultural Situation in India*, **76** (7):29-32.
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