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Impact of Agricultural Extension and Awareness Programs on Farmers' Access to Government Benefits

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Government agricultural programmes can improve farm income, production risk management, access to credit, input support and market opportunities, but the existence of a scheme does not automatically translate into effective access at farm level. This paper examines how agricultural extension and awareness programmes can reduce the information, procedural and institutional barriers that prevent eligible farmers from accessing government benefits. The analysis is framed around the National Service Scheme (NSS), Krishi Vigyan Kendras (KVKs), village-level extension activities, demonstrations, farmer meetings, digital advisories and facilitation support. Evidence from official Government of India and ICAR sources is synthesized for schemes and services including PM-KISAN, Pradhan Mantri Fasal Bima Yojana (PMFBY), Kisan Credit Card (KCC)-linked agricultural credit, e-NAM and Soil Health Card services. The paper identifies awareness, eligibility understanding, documentation, digital access, timing of information and follow-up assistance as major links between scheme design and actual utilization. NSS is particularly relevant because its stated objectives include community mobilization, problem identification and dissemination of information on agriculture and government schemes. The paper proposes an NSS-led extension model based on village-level needs assessment, scheme literacy camps, demonstrations, assisted digital services, referral to competent departments and post-enrolment follow-up. The study concludes that extension should be treated not merely as technology transfer but also as a last-mile public-service interface that helps farmers understand, apply for and use eligible government support.

Keywords: Agricultural Extension, Farmer Awareness, Government Schemes, NSS, KVK, PM-KISAN, PMFBY, KCC, e-NAM, Rural Development.

Introduction and Background

Agricultural development depends not only on production technologies but also on farmers' ability to obtain timely information, institutional services and public support. In India, a wide range of government interventions address income support, crop-risk management, agricultural credit, soil health, irrigation, market access and capacity development. Yet farmers differ substantially in literacy, digital connectivity, institutional contact, land records,

banking access and familiarity with application procedures. These differences can create a gap between scheme availability and scheme utilization. Agricultural extension can help close this gap. The Indian Council of Agricultural Research (ICAR) describes the Krishi Vigyan Kendra system as a frontline extension network for technology assessment, demonstration, capacity development, farm advisories, knowledge services and awareness creation. ICAR currently reports 731 KVKs, and its extension activities include farmer training, demonstrations, advisory services and community outreach. The KVK mandate therefore provides a useful institutional model for linking knowledge with practical action. The National Service Scheme provides an additional community-based channel. NSS was introduced in 1969 and emphasizes 'Education through Service' and the motto 'NOT ME BUT YOU'. Its official objectives include identifying community needs, involving communities in problem solving, mobilizing participation and developing practical solutions. NSS guidance also explicitly identifies dissemination of information about agriculture, watershed management and government schemes among activities that may be undertaken in adopted villages. The central issue addressed in this paper is therefore not whether government schemes exist, but how extension and awareness activities influence the farmer's journey from 'hearing about a scheme' to 'understanding eligibility', 'completing the required process', 'receiving the service or benefit' and 'using it effectively'.

Objectives of the Study

1. To examine the role of agricultural extension and awareness programmes in improving farmers' knowledge of government benefits.
2. To identify major information, procedural, digital and institutional barriers affecting access to agricultural schemes.
3. To assess the potential contribution of NSS volunteers, KVKs and local extension institutions as last-mile information and facilitation channels.
4. To map the relationship between awareness activities and the farmer's progression from scheme knowledge to application, receipt and effective utilization.
5. To propose an NSS-oriented extension framework for improving scheme literacy, referral, assisted access and follow-up in rural communities.

Conceptual Framework: From Awareness to Benefit Realization

For analytical purposes, access to a government benefit is treated as a multi-stage process rather than a single event. Extension interventions can operate at each stage. The first stage is awareness: the farmer knows that a scheme or service exists. The second is comprehension: the farmer understands the objective, eligibility, documents, deadlines, costs and expected benefit. The third is application or enrolment, where the farmer completes the relevant process. The fourth is receipt, which may involve approval, direct benefit transfer, insurance coverage, credit sanction, market-service access or another institutional outcome. The fifth is utilization and follow-up, where the farmer uses the benefit correctly and resolves grievances or updates records when required.

Access stage	Typical farmer question	Extension role	Possible NSS activity
1. Awareness	What schemes/services are available?	Information dissemination	Village meetings, posters, rallies, WhatsApp messages
2. Understanding	Am I eligible and what is required?	Clarification and counselling	Scheme literacy camp, FAQ session, local-language handouts
3. Application	Where and how do I apply?	Referral and assisted access	Help desk, CSC/department referral, document checklist
4. Receipt	Has my application/benefit been processed?	Follow-up and status awareness	Status-check guidance, contact with responsible office
5. Utilization	How should I use the support?	Technical backstopping	KVK demonstrations, farm advisories, peer learning
6. Grievance	What if there is a problem?	Institutional linkage	Referral to helpline, department, bank or scheme portal

Government Benefits Relevant to Agricultural Extension

The following schemes and services illustrate why extension and awareness are important. Their eligibility rules, benefits and application procedures differ; therefore, extension workers should communicate scheme-specific information and avoid treating all farmers as automatically eligible.

Scheme / service	Primary support	Why awareness matters	Extension/facilitation point
PM-KISAN	Income support to eligible landholding farmer families	Farmers need to understand eligibility, registration, eKYC and status-related requirements.	Registration/status guidance, eKYC awareness and referral for record issues
PMFBY	Crop insurance against specified crop losses and risks	Farmers need timely information about coverage, enrolment, premium, notified crops and loss-reporting procedures.	Pre-season awareness camps, insurance literacy and claim/loss-reporting guidance
KCC / agricultural credit	Timely institutional credit for cultivation and allied needs	Documentation, banking procedures and understanding of credit terms affect access.	Bank linkage, financial literacy and referral
e-NAM	Digital agricultural marketing platform and market linkage	Farmers need awareness of market processes, digital transactions and participating markets.	Market-information sessions and digital literacy
Soil Health Card	Soil testing and nutrient-management recommendations	Farmers need to understand soil-test results and translate recommendations into field practice.	Soil-sampling awareness, interpretation and demonstrations
PMKSY / micro-irrigation components	Improved irrigation efficiency and water management support	Capital costs, technical design and subsidy procedures can be barriers.	Demonstrations, technical guidance and scheme referral

Research Methodology

This paper follows a secondary-evidence and programme-analysis approach rather than presenting an independently collected household survey as original field data. The evidence base consists of official information from the National Service Scheme, ICAR agricultural extension sources and official government scheme portals. The analysis uses a structured framework to compare the information and facilitation requirements of selected agricultural benefits with the functions that extension and NSS can perform at village level. The analytical unit is the farmer's access pathway. The study considers four dimensions:

- (i) information access
- (ii) procedural access
- (iii) institutional access
- (iv) Post-access technical support.

Particular attention is given to the last-mile interface, because awareness campaigns can generate knowledge without necessarily producing successful enrolment or benefit realization. The approach is consistent with the official NSS model of village adoption, needs assessment, community interaction and follow-up. It also aligns with the KVK approach of technology assessment, demonstration, capacity development and farm advisories. The study therefore treats extension as a bridge between public programme design and farmer-level action.

Evidence on the Role of Extension and Awareness

Institutional reach through KVKs

ICAR identifies KVKs as key frontline extension institutions operating at district level. Their functions include on-farm testing, frontline demonstrations, farmer and extension-personnel training, advisory services and awareness creation. ICAR reports that KVKs have also undertaken large-scale extension activities and capacity-development programmes. This

institutional design is important because government-benefit access often requires both information and technical interpretation. The relevance to government benefits is direct: a farmer who learns about a subsidy, insurance product or credit facility may still need help interpreting eligibility conditions, identifying the responsible institution and connecting the benefit with a practical farm decision. Extension institutions can provide this bridge while referring administrative decisions to the competent department, bank, insurance company or portal.

Evidence from crop-insurance awareness

The official PMFBY evaluation material documents awareness activities at village, block, district and Gram Panchayat levels. It describes discussions, farmer training, farmer fairs and publicity as mechanisms for explaining crop-insurance benefits, enrolment procedures and facilitation points. The evaluation also reports a sample of 1,900 farmers across 19 states and examines the relationship between social participation, information sources and awareness. This provides direct programme-level evidence that awareness is treated as an implementation component, not merely as a communication add-on. The PMFBY portal further provides farmer-facing functions such as enrolment, premium calculation, application-status checking and a grievance helpline. These features illustrate the importance of combining awareness with assisted navigation: telling farmers that a service exists is less useful when they do not know how to use the relevant portal, what information is required or where to seek help.

Digital extension and the information gap

Digital channels can expand the scale of agricultural communication. ICAR reports the use of ICT, social media and regional-language advisories by KVKs. Recent ICAR campaigns on balanced fertilizer use have combined farmer meetings, training, demonstrations, expert talks and digital outreach. These examples show that digital communication can multiply reach, but they also reinforce the need for physical extension and local facilitation for farmers who face digital, literacy or connectivity constraints.

NSS as a Last-Mile Extension and Awareness Platform

The NSS framework is particularly suited to community-level awareness because its official objectives emphasize community understanding, problem identification, participation and practical solutions. NSS regular activities include village adoption and dissemination of information on agriculture and government schemes. Special camps can also address rural reconstruction, watershed management, soil conservation, improved agricultural practices and assistance in procuring bank loans. NSS volunteers should not replace trained agricultural officers, KVK scientists, banks or scheme authorities. Their comparative role is to create informed contact, identify questions, disseminate verified information, help farmers navigate publicly available processes and connect cases to the competent institution. This distinction is important for accuracy, accountability and prevention of misinformation.

NSS intervention	Expected immediate output	Potential access outcome
Village scheme-awareness camp	Farmers know scheme names, objectives and eligibility basics	Improved scheme recognition
Document and process checklist	Farmers understand common application requirements	Fewer incomplete applications
Assisted digital session	Farmers learn how to use official portals/services	Improved digital access and status tracking
Department/KVK/bank referral	Unresolved cases reach competent institution	Better institutional linkage
Demonstration and farmer meeting	Benefit is connected to practical farm use	Improved utilization and adoption
Post-enrolment follow-up	Farmers understand status, renewal or grievance channels	Greater continuity and problem resolution

Major Barriers to Farmers' Access to Government Benefits

Barrier	How it affects access
Information asymmetry	Farmers may hear about a scheme through informal channels without receiving complete or current eligibility and procedural information.
Documentation and record issues	Land records, identity verification, bank linkage and other administrative requirements can interrupt otherwise eligible applications.
Digital divide	Portal-based services can be difficult for farmers with limited digital literacy, device access, connectivity or language support.
Timing of information	Awareness received after an enrolment deadline, crop season or claim-reporting window may have limited practical value.
Institutional fragmentation	Different benefits involve different departments, banks, insurance providers, local bodies and portals, making navigation difficult.
Technical utilization gap	Receiving a benefit does not guarantee effective use; farmers may need technical guidance for irrigation equipment, soil recommendations, crop insurance procedures or market services.
Trust and misinformation	Repeated exposure to incomplete or inaccurate informal information can reduce confidence in official programmes.

Proposed NSS-Oriented Extension Action Plan

Based on the evidence reviewed, a practical NSS action plan should move beyond one-time awareness events and create a repeatable cycle of needs assessment, verified communication, assisted access and follow-up.

Phase	Key activity	Responsible linkage	Indicator
1. Diagnose	Map village-level information gaps and priority schemes	NSS unit + Gram Panchayat + KVK	Village scheme-gap register
2. Inform	Conduct local-language awareness meetings and distribute verified checklists	NSS + extension staff	Farmers reached / sessions held
3. Facilitate	Support farmers in understanding portals, documents and referral points	NSS + CSC/department/bank	Cases referred / applications assisted
4. Demonstrate	Link benefits with farm-level demonstrations and practical examples	KVK + line departments	Demonstrations / participants
5. Follow up	Track pending cases and direct unresolved cases to competent offices	NSS + Gram Panchayat	Pending cases resolved / referred
6. Evaluate	Measure awareness, application, receipt and utilization separately	College/NSS research team	Stage-wise access indicators

Suggested Indicators for Measuring Impact

Future NSS field studies should distinguish between awareness and actual access. A farmer who has heard of PM-KISAN, for example, should not automatically be counted as a beneficiary. Likewise, participation in an awareness camp should be measured separately from successful enrolment or receipt of a benefit.

Indicator	Measurement approach
Scheme awareness	Percentage of sampled farmers who can correctly identify the scheme and its purpose.
Eligibility knowledge	Percentage who can correctly identify key eligibility conditions.
Procedural knowledge	Percentage who know where/how to apply and what major documents/processes are required.
Application access	Percentage of eligible farmers who applied or were successfully referred.
Benefit realization	Percentage of eligible applicants who received the relevant service/benefit, where applicable.
Utilization	Percentage using the support/service for the intended agricultural purpose.
Grievance access	Percentage who know the official channel for status checking or grievance redressal.
Equity of reach	Comparison of access by gender, farm size, literacy, age, remoteness and digital access.

Discussion

The evidence indicates that awareness programmes have their strongest practical value when they are connected to a service pathway. A rally, lecture or poster may increase recognition, but the more meaningful outcome is whether the farmer can correctly determine eligibility, complete the required process and use the resulting service. Accordingly, extension effectiveness should be assessed through a chain of indicators rather than attendance alone. The KVK model contributes scientific and technical credibility, while NSS can contribute community contact, volunteer energy and repeated village-level engagement. The two functions are complementary. KVKs can provide technical expertise and demonstrations; NSS can help mobilize farmers, communicate verified information and identify cases requiring professional intervention. Gram Panchayats, banks, Common Service Centres, insurance providers and line departments can complete the administrative chain. The model is also relevant to digital agriculture. Digital portals can reduce transaction costs and improve status visibility, but digital-first delivery can unintentionally exclude farmers who need assisted access. A blended model combining face-to-face communication, printed local-language material, mobile messaging and assisted digital services is therefore more suitable for heterogeneous rural communities.

Recommendations

- (i) Develop annual village-level 'Government Agriculture Scheme Literacy' calendars through NSS units in coordination with KVKs and Gram Panchayats.
- (ii) Use only verified information from official portals and competent departments, with date-sensitive deadlines clearly displayed.
- (iii) Create simple local-language one-page checklists covering eligibility, documents, application channel, deadline and grievance route.
- (iv) Establish NSS help desks during special camps for information and referral, while leaving eligibility decisions and official approvals to competent authorities.
- (v) Combine scheme awareness with field demonstrations so that farmers understand the practical value and correct use of supported technologies or services.
- (vi) Track farmers by stage—aware, eligible, referred, applied, approved/covered, received and utilizing—rather than reporting only attendance.
- (vii) Prioritize women farmers, small and marginal farmers, elderly farmers and digitally excluded households for assisted information services.
- (viii) Maintain a referral register for unresolved cases and conduct follow-up visits until the case reaches the appropriate institution.
- (ix) Train NSS volunteers before campaigns on scheme verification, communication ethics, data privacy and the limits of volunteer assistance.
- (x) Institutionalize periodic evaluation using baseline and follow-up measurements to distinguish awareness gains from actual benefit access.

Conclusion

Agricultural extension has an important role in translating government programme design into farmer-level access. The evidence reviewed in this paper shows that public agricultural systems already recognize awareness, training, demonstration, advisory services and facilitation as important components of implementation. The KVK network provides a strong technical and knowledge base, while NSS offers a community-oriented platform capable of sustained village contact and mobilization. For NSS-based agricultural outreach, the key shift is from one-time publicity to a complete access cycle: identify the information gap, communicate verified scheme information, explain eligibility and procedures, facilitate referral or assisted digital access, and follow up on unresolved cases. This approach can make awareness programmes more measurable and more closely connected with actual public-service delivery. Future primary field research should test this framework through pre- and post-intervention surveys and should separately measure awareness, application, benefit receipt and utilization.

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