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Constraints experienced by beneficiary cotton growers under the crop pest surveillance and advisory project and suggestions recommended by them

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Abstract
This study was carried out to examine the Constraints experienced by beneficiary cotton growers under the Crop Pest Surveillance and Advisory Project and suggestions recommended by them. The research was conducted in Ardhapur, Kandhar, and Loha tehsils of Nanded district of Maharashtra. The major constraints reported by cotton growers included non-availability of feedback facility to massages provided through CROPSAP (81.33%), non-availability of plant protection measures on time (58.66%), lack of proper categorization of farmers based on their requirements (53.33%), Irregularity in providing weather advisories (49.33%), Complex information conveyed through SMS (48.00%), Unawareness about advantages of SMS advisories (40.00%), and Poor network connectivity (24.00%). Key suggestions of cotton growers included Ensuring availability of feedback facility (81.33%), Ensuring timely dissemination of plant protection measures related text on time (70.66%), Delivering advisories according to specific needs of farmers (68.00%), Ensuring regular visits of extension personnels (65.33%), providing accurate and timely weather advisory services (61.33%), Simplifying SMS content for easy understanding (60.00%), and Improving network connectivity in villages (29.33%).

Keywords: Constraints, suggestions, CROPSAP, cotton growers

Introduction
In Maharashtra, major Kharif crops include soybean, cotton, rice, pigeon pea, sorghum, and pearl millet, while sorghum, wheat, and chickpea dominate the Rabi season. Over the past few years, many farmers have shifted towards cotton and soybean due to their good yields and better market prices. However, pest and disease attacks remain a major hurdle, causing yield losses of around 20-30%. Changing rainfall patterns and weather conditions often create favourable situations for pest outbreaks, which, if not managed promptly, can cause severe economic damage.

A major incident occurred in September-October 2008, when a sudden outbreak of defoliators damaged soybean crops in Marathwada and Vidarbha. The pest spread rapidly, affecting nearly half of the total sown soybean area, with over 70% of affected fields suffering more than 50% yield loss. Since cotton and soybean are key crops in these regions, this disaster pushed many farmers into financial distress.

To address such threats, the Department of Agriculture launched an 'Awareness-cum-Surveillance Programme' in 2009-10 under the technical guidance of the National Integrated Pest Management Centre (NCIPM), New Delhi. This initiative later evolved into the 'Crop Pest Surveillance and Advisory Project' (CROPSAP) in 2010-11, focusing on cotton and soybean. The project involved collaboration with leading research institutes such as the Indian Institute of Soybean Research, Central Institute of Cotton Research, and several agricultural universities in Maharashtra. Over time, its scope expanded to include pigeon pea, chickpea, and rice, with support from other national research centres. Initially funded under the Rashtriya Krishi Vikas Yojana (RKVY), CROPSAP became part of the regular state plan in 2013-14.

The outcomes of this study would be useful for deeper understanding of the challenges encountered by beneficiary cotton growers under the 'Crop Pest Surveillance and Advisory Project' and to explore their suggestions for overcoming these challenges at the grassroots level. Additionally, the findings are expected to offer valuable insights for enhancing the effectiveness and efficiency of the technology involved. These insights will aid policymakers, researchers, development agencies, and extension personnel to make it more practical, accessible, and responsive to the real needs of the farming community.

The present study was undertaken with the following specific objectives

1. To identify the constraints experienced by CROPSAP beneficiary cotton growers.
2. To obtain the suggestions recommended by them to overcome the constraints.

2. Materials and Methods

The research was conducted in Nanded district of Maharashtra. Three tehsils Ardhapur, Kandhar, and Loha were purposively selected due to their significant number of CROPSAP beneficiaries. From these tehsils, 15 villages (five from each) were chosen. In each village, five beneficiary and five non-beneficiary cotton growers were selected, making a total sample of 150 respondents (75 beneficiaries and 75 non-beneficiaries). Data were collected using a structured interview schedule, and responses regarding constraints and suggestions were recorded as multiple responses.

3. Results and Discussion

3.1. Constraints experienced by CROPSAP beneficiary cotton growers

Multiple responses were taken to identify the constraints faced by the beneficiary cotton growers of CROPSAP, The constraints reported by cotton growers are shown in Table 1.

Table 1: Constraints experienced by beneficiary cotton growers of CROPSAP

Sr. no.	Constraints	Frequency	Percentage	Rank
1	Non- availability of feedback facility to massages provided through CROPSAP	61	81.33	I
2	Lack of proper categorization of farmers based on their requirements	40	53.33	III
3	Non-availability of plant protection measures on time	44	58.66	II
4	Complex information conveyed through SMS	36	48.00	V
5	Unawareness about advantages of SMS advisories	30	40.00	VI
6	Irregularity in providing weather advisories	37	49.33	IV
7	Poor network connectivity	18	24.00	VII

The highest proportion (81.33%) of cotton growers reported that there was non- availability of feedback facility to massages provided through CROPSAP which ranked first among all the constraints. The second ranked constraint was the non-availability of plant protection measures on time (58.66%), followed by lack of proper categorization of farmers based on their requirements (53.33%) ranked third. Other concerns included Irregularity in providing weather advisories (49.33%) ranked fourth, Complex information conveyed through SMS (48.00%) ranked fifth, Unawareness about advantages of SMS advisories (40.00%) ranked sixth, and poor network connectivity (24.00%) ranked seventh.

3.2. Suggestions recommended by CROPSAP beneficiary cotton growers

The suggestions given by beneficiary cotton growers of Crop Pest Surveillance and Advisory Project to overcome constraints presented in Table 2.

Table 2: Suggestion recommended by CROPSAP beneficiary cotton growers to overcome the constraints

Sr. no.	Suggestions	Frequency	Percentage	Rank
1	Ensure availability of feedback facility.	61	81.33	I
2	Deliver advisories according to specific needs of farmers	51	68.00	III
3	Ensure timely dissemination of plant protection measures related text on time.	53	70.66	II
4	Simplify SMS content for easy understanding	45	60.00	VI
5	Ensure regular visits of extension personnels	49	65.33	IV
6	Provide accurate and timely weather advisory services	46	61.33	V
7	Improve network connectivity in villages	22	29.33	VII

The majority (81.33%) cotton growers recommended that Ensure availability of feedback facility which ranked first among all the suggestions. Other suggestions included that Ensure timely dissemination of plant protection measures related text on time (70.66%) which ranked second, Deliver advisories according to specific needs of farmers (68.00%) ranked third, Ensure regular visits of extension personnels (65.33%) ranked fourth, provide accurate and timely weather advisory services (61.33%) ranked fifth, Simplify SMS content for easy understanding (60.00%) ranked sixth, and Improve network connectivity in villages (29.33%) ranked seventh.

4. Conclusions

The study revealed that CROPSAP beneficiary cotton growers experienced several constraints which involved majorly non-availability of feedback facility to messages provided through the project, followed by non-availability of plant protection measures on time, lack of proper categorization of farmers based on their requirements, irregularity in providing weather advisories, complex information conveyed through SMS, unawareness about the advantages of SMS advisories and poor network connectivity.

Recommended suggestions from cotton growers included majorly ensuring availability of a feedback facility, followed by ensuring timely dissemination of plant protection measures, delivering advisories according to specific farmer needs, ensuring regular visits of extension personnel, providing accurate and timely weather advisory services, simplifying SMS content for easy understanding and improving network connectivity in villages.

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