

Crop Pest Surveillance and Advisory Project (CROPSAP)¹

Teaching Note

This case study is based on initiative of the Department of Agriculture, Government of Maharashtra to assist the farming community through use of Information & Communication Technology (ICT). The case study is a demonstration of the potential of ICT for effective monitoring of the pest infestation through e-surveillance. Creation of data base of farmers and timely detection of pest infestation not only helped the state government to avoid heavy financial losses, it also helped the farmers generate better income from the crops. The case study focuses on developing an On-Line Pest Monitoring System for major pests. The case study emphasizes how Integrated Pest Management (IPM) and Integrated Crop Management (ICM) programmes get implemented through creation of data base of farmers. Exploiting the ICT and mobile technology for the benefit of rural farmers is the central theme of the case.

Theme of CROPSAP

An innovative Programme "Crop Pest Surveillance and Advisory (CROPSAP)" was launched in 2009-10 under Rashtriya Krishi Vikas Yojana (RKVY) by the Department of Agriculture, Government of Maharashtra. The prevailing system of pest monitoring practice was based on visual observations and failed to detect the pest attack in time. An estimated loss of Rs. 1392 crores due to pest outbreak on soybean crop in Vidarbha and Marathwada regions as a result of two successive dry spells of 15 days each in 2008-09 acted as a major motivation. The department was assisted by teams of experts deputed by the central government and many agricultural research agencies.

The CROPSAP project was conceived to develop a scientific approach to pest surveillance and monitoring of major pests infesting Soybean, Cotton, Tur and Gram, on real time basis. Additionally, the project was aimed at identifying hot-spots based on the pest status and issue relevant advisories. The project intended to cover 33 Districts, 89 Sub-divisions spread over some 30,000 villages. Total area under surveillance was 107.38 Lakh HA. The project is a result of a joint effort of a team of agro-meteorologists, entomologists, pathologists, statisticians and computer specialists. Enrollment of farmers for free SMS service about pest management has been the major highlight of the project. Use of IT tools, i.e. software, website and mobile, and print media for effective pest management has helped the department to effectively disseminate location specific advisories based on scientific observations to registered farmers.

CROPSAP had a significant impact on the crop yield and the income of farmers. The Soybean productivity increased by 18.9% during 2009 despite a dry spell in August, 2009 resulting in a gross monetary benefit of Rs.1047.50 crores with the areas above Economic

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Threshold Level(ETL) having declined from 14.64 lakh HA to 4.8 lakh HA. The project was financed under RKVY from 2009-10 to 2012-13 with a total outlay of Rs.49.55 crores. From the year 2013-14, State Government has decided to implement the project through State Plan.

SMS to farmers, advisories pasted on village panchayat boards, village meetings and media publicity made significant improvement in delivery time to end users. The scientific advice helped the farmers to avoid wasteful expenditure on pesticides. Interestingly, the number of farmers enrolled for SMS service has doubled, the advisories issued has increased by 4.63 times, SMS send has increased by 11.30 times and shift towards use of safer bio-pesticides has increased by 1.57 times since the inception of project in 2009-10.

The project has received due appreciation from many agencies and many more states such as Madhya Pradesh, Andhra Pradesh and Karnataka are in the process of implementing such an initiative. Maharashtra has also extended the project to Rice crop as well. The project is successfully under implementation for the last four years and State cabinet has decided to continue it for next five years.

Sample Discussion Questions

1. What is the potential of this project getting replicated all over the country and how will this help transform the lives of farmers?
2. What are the possibilities of the CROPSAP farmer data base being used for other purposes?
3. How do you view the significance of CROPSAP implementation?
4. Which other areas of rural governance can learn from CROPSAP in leveraging ICT for e-Governance solutions?
5. What are the challenges that CROPSAP is likely to face in future?
6. What are the possibilities of mobile technology being used for Agriculture Sector at the national level?
7. Who are the major beneficiaries of this implementation? Did this solution harm anybody's interest?
8. Which other areas can be integrated into CROPSAP with additional data input?
9. How will systems like AADHAAR help in solutions such as CROPSAP?
10. As an administrator, what are the key lessons that you have learned from this case?

Comments

The case study focuses on exploitation of ICT and Mobile Technology for connecting with farmers in rural India by imparting awareness and alerts on pest infestation in crops like soybean. In the wake of heavy losses to the state government and farmers' suicides in Vidarbha region, the solution proved to be very timely and valuable. A discussion on case study can expose the administrators to the potential of innovative use of technology not only to save money, but also to save human lives, eliminate crop losses and further the cause of sustainable development of agriculture sector. Such solutions are likely to be met with some complacency, but top level sponsorship and conviction are a must for implementing such solutions. Feedback and comments are most welcome to improve future editions and can be sent to darpg@nic.in.