



Master of Computer Applications (MCA)

Explore—Journal of Research

ISSN 2278 – 0297 (Print)

ISSN 2278 – 6414 (Online)

© Patna Women's College, Patna, India

<http://www.patnawomenscollege.in/journal>

A study on “e-Governance: Reforming Agriculture through Technology”

• Swadha Singh • Shristi Kumari • Alisha Prit
• Sushmita Chakraborty

Received : November 2016

Accepted : March 2017

Corresponding Author : Sushmita Chakraborty

Abstract : *This research is on the study of e-governance in the agriculture sector, how it is going to transfigure the lives of the farmers. Electronic Governance, in simplest terms, refers to those governance processes in which Information and Communication Technologies (ICTs) are playing an active role in delivering governance-related products and services. This study also includes how e-governance will provide information about the latest seed varieties, fertilizers, pesticides and rainfall prediction; information on various government schemes, such as, those on water resources management and subsidies on land development and soil conservation activities; information about local agriculture offices and officers, crop testing and training centres;*

information on milk processing, grain storage, livestock vaccination and crop diseases; information about market prices of various crops, government procurement prices, rates for loans, and available credit facilities. The project associated with e-governance is NeGP, and in this paper we would be discussing NeGP-A which is related to agriculture. The main objective is to provide an Interface to farmers and consumers and to facilitate linking up of agriculture produce marketing cooperative ITCs

Keywords: *e-governance, NeGP: National E-Governance Plan, NeGP-A: National E-Governance Plan in Agriculture ICT: Information and Communication Technologies.*

Swadha Singh

MCA-Vth Semester, Session: 2014-2017,
Patna Women's College, Patna University, Patna,
Bihar, India

Shristi Kumari

MCA-Vth Semester, Session: 2014-2017,
Patna Women's College, Patna University, Patna,
Bihar, India

Alisha Prit

MCA-Vth Semester, Session: 2014-2017,
Patna Women's College, Patna University, Patna,
Bihar, India

Sushmita Chakraborty

Asst. Professor, Asst. Coordinator, Department of MCA,
Patna Women's College, Bailey Road,
Patna – 800 001, Bihar, India
E-mail : sush123.chakraborty@gmail.com

Introduction :

*E-Governance refers to how managers and supervisors utilize IT and Internet to execute their functions of supervising, planning, organizing, coordinating, and staffing effectively. E-governance, meaning 'electronic governance' is using Information and Communication Technologies (ICTs) at various levels of the government and the public sector and beyond. Under the concept of e-governance in agriculture, a project named **National E-Governance Plan in Agriculture (NeGP-A)** is still in augmentation. (NeGP-A) introduced during last phase of the 11th Plan, to achieve rapid development of agriculture in India through the use of ICT, has been continued during 12th Plan. (www.insightsonindia.com/2013/07/16/download-yojana-magazines-2012-and-2013-pdf-free/, accessed on 14.09.16)*

What is NeGP-A?

NeGP-A is proposed to be implemented across the country and aims at offering Government to Citizen / Farmer (G2C or G2F), Government to Business (G2B) and Government to Government (G2G) agricultural services in an integrated manner through the Central Agriculture Portal (CAP) and State Agriculture Portals (SAPs). E-governance is the only way to connect farmers with government in an improved way. ICT tool helps the government to get exact information of the farmers.

Implementing e-Governance is a highly complex process requiring provisioning of hardware & software, networking, process re-engineering and change management. Based on records from the past and the experience from successful e-Governance applications, the approach and methodology adopted for NeGP—A contains the following elements:

- Common Support Infrastructure
- Governance
- Centralized Initiative, Decentralized Implementation:
- Public-Private Partnerships (PPP)
- Integrative Elements
- Programme Approach at the National and State levels
- Facilitatory role of DIT
- Ownership of Ministries

Objectives of NeGP-A

- Bringing farmer centricity & service orientation to the programs.
- Enhancing reach & impact of extension services.
- Improving access of farmers to information & services throughout crop cycle.
- Building upon, enhancing & integrating the existing ICT initiatives of Centre, and States.
- Enhancing efficiency & effectiveness of programs through process re-design.
- More effective management of schemes of DAC.
- Promoting a common framework across states (http://agritech.tnau.ac.in/guide_new_IT.pdf, accessed on 25.08.16)

Objectives of the study :

- To study to provide an Interface to farmers and consumers and to facilitate linking up of agriculture produce marketing cooperative ITCs.
- To study awareness level among farmers towards the E-market.
- To study to minimise the communication gap between farmers and the Government.

Methodologies of the study :

Area of study

- ADRI (Asian Development Research Institute), Patna
- Patna Secretariat
- Survey of farmers in Danapur

Tools and Techniques For The Data Collection

Questionnaire/Interview

Document Analysis

Method(s) of Data Analysis

- We shall function & compile the total research work on the basis of two basic tools of MS-Office i.e. MS-Word and MS-Excel. Subsequently we shall modify the content of our research and findings in the form of a research paper and make a PowerPoint Presentation using MS-PowerPoint.
- The analysis was done with a sample space of 100 farmers. We visited Phulwarisharif and Danapur and interacted with the farmers.

Methodology to create awareness among large numbers of disconnected farmers

- **Kisan Call Centers:** Is mainly to respond to the issues raised by farmers instantly in the local language on a continuous basis; its cost free services through toll free telephone so as benefit needy farmers. A countrywide common eleven digit Toll Free number 1800-180-1551 has been allotted for Kisan Call Centres (agritech.tnau.ac.in/kisan/kisan.html, accessed on 10.08.16)
- **Soil health card and scheme:** The soil health card studies and reviews the health of soil or,

rather, we can say a complete evaluation of the quality of soil right from its functional characteristics to water and nutrients content and other biological properties. It will also contain corrective measures that a farmer should adopt to obtain a better yield.

How does it help the farmers?

- With the issue of the card, the farmers will get a well-monitored report of the soil which is chosen for cultivation of crops.
- The monitoring will be done on a regular basis.
- The farmers will be guided by experts to come up with solutions to improve the quality of the soil.
- Regular monitoring will help the farmers to get a long-term soil health record and, accordingly, can study and evaluate the results of different soil management practices.
- This card can become most helpful and effective when filled out regularly by the same person over a period of time (www.soilhealth.dac.gov.in/, accessed on 09.08.16).

Kisan credit card: Kisan Credit Cards are offered to farmers in India in order to enable them to access affordable credit for farmers. This card allows farmers to obtain timely and adequate credit without any hassles, such as, the repeated credit screening processes undertaken by banks. Some of the highlights of the Kisan Credit Cards is that they provide flexibility in terms of repayment, which can be rescheduled in the event of unforeseen incidents like a bad crop season, with term extensions for a period of up to four years, and so on. A Kisan credit card is valid for up to five years and is dependent on the annual renewals. The farmers can access the credit through card withdrawals or through bank withdrawal slips, and also have a passbook to record their transactions (www.bankbazaar.com/kisancreditcard.html/, accessed on 10.08.16).

Krishi Vigyan Kendra: Krishi Vigyan Kendra Agwanpur, Barh (Patna) was established on 1st August, 1992. It is one of the leading institutions for frontline extension education mandated to organize vocational trainings in agriculture and allied vocations with

emerging advances in agricultural research on a regular basis. The center also conducts front line demonstration in consultation with the subject matter specialists for testing, refining and documenting technologies for developing region specific and sustainable land use system. The center is working to promote and coordinate agricultural allied activities in the farming community and to bring development among the underprivileged section in a systematic, productive, sustainable and self-regenerating manner ([www.bausabour.ac.in/ Krishivigyankendra.aspx](http://www.bausabour.ac.in/Krishivigyankendra.aspx), accessed on 10.08.16).

Rashtriya Krishi Vikas Yojana

It is a State Plan Scheme of Additional Central Assistance, launched in August 2007 as a part of the 11th Five Year Plan by the Government of India, launched under the aegis of the National Development Council, it seeks to achieve 4% annual growth in agriculture through development of Agriculture and its allied sectors (as defined by the Planning Commission (India)) during the period under the 11th Five Year Plan (2007–11).

Awareness among Farmers

This study gives an overview regarding the percentage of farmers using various schemes.

How farmers get information?

This graph depicts how the farmers gather information about various schemes and subsidies through various mediums like TV, SMS etc.

Distribution of SHC in one day

This study gives an overview regarding distribution of SHC on 10th Oct, 2016 in various districts of Bihar:

Awareness ratio of e-mandi

This study gives an overview of awareness ratio of e-mandi.

Suggestions :

- More awareness programmes should be conducted by the Government on a huge scale.
- Farmers should avail of the various facilities provided by our government.
- Farmers should participate in e-Choupal so that they can gain maximum benefit.

- More and more youths should show interest in the agriculture sector and choose it as their career option so that they can utilize their knowledge and skills to improve the agriculture sector.

KISAN MELA

An event organized every year by agricultural universities where agricultural information is available.

Features of Kisan Mela:

- Large agro and rural based exhibition.
- Technical seminars.
- Farmers workshops and interactive sessions.
- Exposure to unemployed agricultural graduates for job opportunities.
- Participation of a large number of progressive farmers (www.bausabour.ac.in/Kisan-Mela.aspx, accessed on 22.09.16).

MAJOR CHALLENGES

The following are the major challenges faced by the farmers :

- Poverty
- Inequality and Technical Illiteracy
- Seeds
- Manures, Fertilizers and Biocides
- Irrigation
- Lack of mechanisation
- Soil erosion
- Agricultural Marketing
- Scarcity of capital

FUTURE SCOPE

The schemes in NeGP-A being executed are as follows:

Pradhan Mantri Fasal Bima Yojana (PMFBY)

- It is an ambitious agriculture insurance scheme of the Narendra Modi Government. The central government provides insurance cover and financial assistance to the farmers in the times of difficulty (www.sarkariyojna.co.in/apply-online-farmer-pradhan-mantri-fasal-bima-yojana-pmfby accessed on 15.09.16).

Objectives of PMFBY

- To provide insurance coverage and financial support to the farmers in the event of failure of any of the notified crops as a result of natural calamities, pests & diseases.
- To stabilize the income of farmers to ensure their continuance in farming.
- To encourage farmers to adopt innovative and modern agricultural practices.
- To ensure flow of credit to the agriculture sector.

The Pradhan Mantri Fasal Bima Yojana was launched on 13 January 2016 and will come into effect from the 2016 Kharif season.

On 18 February 2016, PM Narendra Modi also issued the detailed guidelines for implementing the Fasal Bima Yojana at a farmers' convention that was held at Madhya Pradesh's Sherpur village.

Conclusion :

Through the detailed study of the topic we found

- Approx. 45% of the farmers are served with various schemes provided.
- Among all the schemes taken SHC scheme is most widely known and used.
- Newspaper is the major source of information for farmers.
- Necessary steps need to be taken to popularize e-mandi.

LIST OF TABLES

Table 1

	TOTAL	SMS	KCC	BANK	NEWS-PAPER	RADIO	TV
Awareness	100	20	15	15	25	20	5

Table 2

	Total	Aware	Unaware
Awareness	100	5	95

LIST OF FIGURES

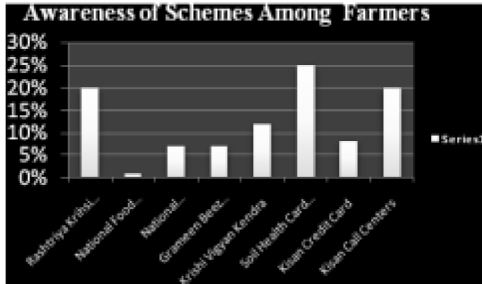


Fig. 1.

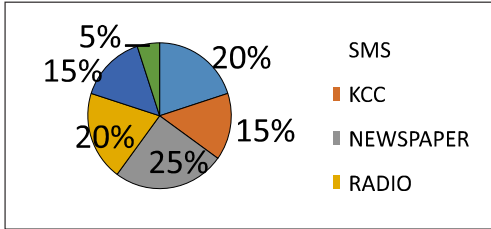


Fig. 2.

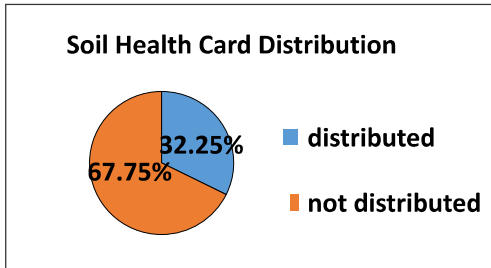


Fig. 3.

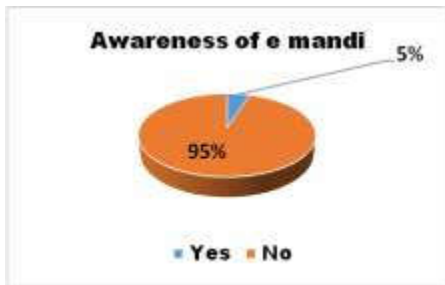


Fig. 4.

References :

www.patnakvk.org
 www.quora.com/What-are-the-problems-in-the-Agriculture-Sector-in-India-and-how-can-we-solve-them-in-hindi-language
 www.bausabour.ac.in/Kisan-Mela.aspx
 www.sarkariyojna.co.in/apply-online-farmer-pradhan-mantri-fasal-bima-yojana-pmfby
 www.quora.com/What-are-the-problems-in-the-Agriculture-Sector-in-India-and-how-can-we-solve-them-in-hindi-language
 www.sarkariyojna.co.in/apply-online-farmer-pradhan-mantri-fasal-bima-yojana-pmfby
 www.mapsofindia.com/my-india/government/soil-health-card-shc-for-indian-farmers
 www.bighaat.com/blogs/news/42151041-biggest-problems-faced-by-farmers-in-india
 www.yourarticlelibrary.com/agriculture/agricultural-subsidies-kinds-of-agricultural-subsidies-in-india/40242/
 www.projectguru.in/publications/top-5-agricultural-problems-in-india/
 www.mmp.cips.org.in/documents/Workshops/2015/19-21_Jan/19th/NeGP-A_Implementation.pdf
 www.fao.org/farmingsystems/
 www.informationr.net/ir/13-2/paper343.html
 www.bankbazaar.com/kisan-credit-card.html
 www.biharsoilhealth.com
 yourstory.com/2016/08/green-agrevolution-dehaat