ISSN (Online) 2456 -1304

International Journal of Science, Engineering and Management (IJSEM)
Vol 3, Issue 4, April 2018

Awareness of Agricultural E- Literacy amongst the Farmer of Pune District

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***Abstract*- Now a days Government of India launching various Agricultural Apps for farmers which are useful for providing information about good farming and crop grow. Agricultural websites like mahaagri.gov.in , mkisan.gov.in etc. are various websites which are useful for farmers that gives information about various policies run by government for farming. For this research paper Authors have studied randomly selected farmers of Pune District and collected data about E- Literacy amongst them.**

***Key words: -* Agricultural Apps, Smart Farming.**

I. INTRODUCTION

Smart farming technologies have enabled farmers to reduce costs, maximize yields and profits, and still be incredibly efficient in the process. Smart Farming represents the application of modern Information and Communication Technologies (ICT) into agriculture, leading to what can be called a Third Green Revolution. [1] Indian users comprise about 30% of the total volume of the global feature phone market, making it the second largest in the specified field. In 2015, India had 720 million mobile phone users, out of which 320 million were rural mobile phone users. This estimate also included 50 million Smartphone users with access to internet. According to 'The Rising Connected Consumer in Rural India', a study by the Boston Consulting Group, this share of rural India will jump to 48% by 2020 . Steps taken by the Indian government recently may make this happen sooner than predicted. Digital India, launched in 2015 by Indian Prime Minister Narendra Modi, aims towards the promotion of digital literacy and creation of digital infrastructure for empowering rural communities. Considering that 58% of rural households depend on agriculture as one of their most eminent source of livelihood, the role of Digital Agriculture needs to be considered within Digital India.[2] Spreading agricultural related information to farmers in the poorest communities are made easier with the help of cloud computing, integrated IT systems, online education and proliferation of mobile phones. One of the benefits of such connectivity and information flow is that it helps farmers make better land management decisions. For example, it can enable soil condition to be monitored in conjunction with weather information in order to better plan the planting and harvest season. Similarly, Geographical Information Systems can be used to provide pre-emptive information on pests and animal diseases so farmers can respond accordingly to the level of risk. Optimizing the use of fertilizer, seeds and water can also be done by utilizing mobile and cloud computing technologies. This helps farmers save money while reducing consumption.

Agricultural apps like SmartCrop, Mandi Trades, Kisaan Market serve as an online marketplace providing space for farmers to sell their produce after collecting information regarding market prices and for customers to compare and buy produce. State specific apps narrow down the user base and help to provide information regarding a specific area.[3]

India's Agricultural sector plays important role in Indian Economy, but Agricultural growth rate was comparatively slow with other countries.

Generally following are some reasons for above problems:

1. Lack of Water Resources
2. Irregular Rainfall
3. Traditional Technologies
4. Lack of High Skill Farmers
5. Unplanned Government Policies for Farmers
6. Increased in proportion of Non Agricultural land. Etc.

II. RESEARCH METHODOLOGY AND DATA COLLECTION

For this research, authors have collected data from Pune District with Random sampling technique. Sample size is 400. i.e 400 farmer's data studies as a sample for analysis. Questionnaires are distributed and data collected through farmers about awareness of Apps for smart farming.

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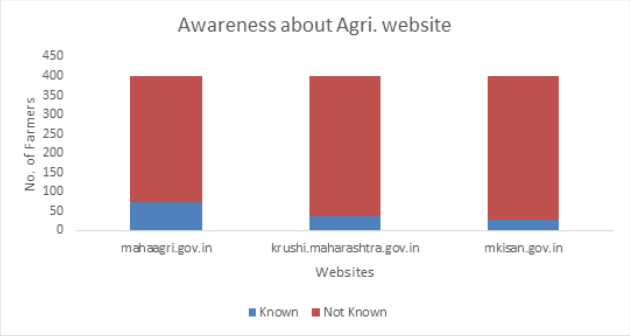
III. ANALYSIS

1. Awareness about Government Websites amongst the farmers

Agri. Websites	mahaagri.gov.in	krushi.maharashtra.gov.in	mkisan.gov.in
No. of farmers about website awareness	72	36	28
Percentage (%)	18	09	07



By observing above graph, there is very low awareness about the Government Agricultural Websites.

2. Awareness about Government Apps amongst the farmers in association with Education.

Education → / Awareness of Agri Apps.? ↓	Below S.S.C	Above S.S.C
Yes	a=40	c=28
No	b=264	d=68

Ho: Education and Awareness of Agri. Apps are independent.
H1: Education and Awareness of Agri. Apps are dependent.
Above hypothesis is set for verifying an impact of Education of farmers on usage of Apps.
For proving hypothesis chi square test is used.

$$\chi^2 = \frac{N(ad-bc)^2}{(a+c)(b+d)(a+b)(b+d)} \rightarrow \chi_1^2$$

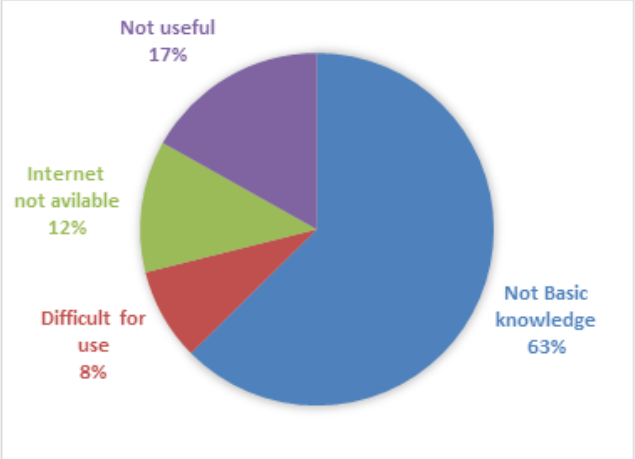
$$\chi^2 = 13.2517$$

$$\chi_1^2 \text{ at 5\% L.S. is } 3.841.$$

Calculated value of chi square is 13.25 which is greater than critical value 3.841. Hence We reject H0.
i.e Education and Awareness of Agricultural Apps. are dependent.

3. Reasons of unawareness about Apps amongst the farmers.

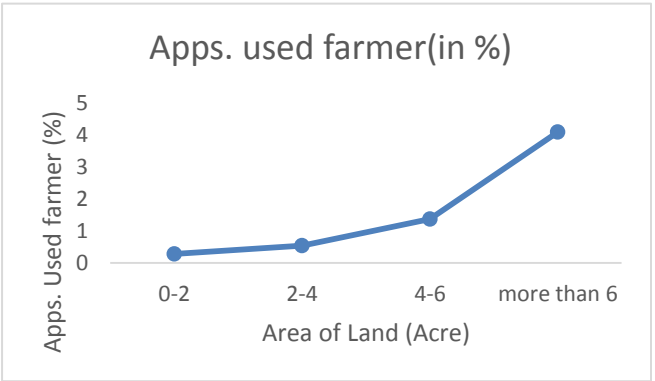
Reasons of unawareness about Apps.	Not Basic Knowledge	Difficult for use	Internet not available	Not useful
No. of Farmers	208	28	40	56



Above table shows most of the farmers does not have basic knowledge about the usage of apps.

4. Awareness about Government Apps amongst the farmers in association with Land area

Area of Land (In Acre)	No. of farmers	Apps. used farmer	Apps. used farmer
0-2	186	24	0.1290
2-4	122	20	0.1639
4-6	64	14	0.2187
more than 6	28	8	0.2857



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Above graph shows that as the land area increases, maximum farmers use Agricultural Apps

IV. CONCLUSION

There is very low awareness about the Government Agricultural Websites amongst the farmers. Educated farmers prefer to use Agri. Apps as compared to uneducated farmers. Farmers are not able to use Apps because they don't have basic knowledge about the usage of apps. Farmers with small land area, have low interest for use of Apps.

V. SUGGESTIONS

It would be beneficial, if Government can circulate the various Government Policies, Websites and Apps for Agriculture through Media. It would be necessary, if Government arrange some training sessions for farmers, so that E-literacy will spread amongst the farmers.

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