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Utilization of Phule Jal Mobile App Among the University and KVK Scientists of Maharashtra State

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ABSTRACT

The mobile phone has become most ubiquitous technological device in the human history. In India number of smart phone users has surpassed 204 million in recent past. Most popular mobile properties are accessed via mobile apps in present days. This study was conducted on Irrigation Mobile App developed by Mahatma Phule Krishi Vidyapeeth, Rahuri. The study was conducted during 2016-17 on Utilization of Irrigation Mobile Apps by University and KVK Scientists. The investigation was carried in 10 districts with variety of geographical characteristics of Maharashtra state having the jurisdiction of Mahatma Phule Agricultural University. From selected districts 12 KVKs, 4 RECs and 5 DECs were considered for this study. 70 trained University and KVK scientists were purposively selected as respondents for the present investigation. The findings of the investigation revealed that majority of (72.86%) of the university and KVK scientists belonged to medium utilization category, followed by low (14.29%) and high (12.85%) utilization categories, respectively. Evapotranspiration (ETr) calculation feature had "very frequently" used by the 24.28 per cent respondents when analysed feature wise extent of utilization of *Phule Jal* app "Frequently" used features of Phule Jal mobile app were Online mode (62.86%), less frequently used feature was "Offline mode" feature by 57.14% whereas 67.15% of the respondents were "Not at all" using the "Evapotranspiration calculation" feature.

Keywords: KVK Scientists, Phule Jal Mobile App, University, Utilization

INTRODUCTION

During the last couple of decades, the spread of wireless technologies in general and individual mobile usage in particular has been revolutionary. The explosive growth of wireless communication and mobile phone industry started in early 1990s with the transition from analog to digital mobile phone networks. With the introduction of 3G mobile phone networks and devices, the growth was not only sustained but also exponentially increased. This led to spreading of this technology beyond imagination. By the end of 2010, the number of global mobile phone subscribers has surpassed 5.1 billion and majority of the networks have been converted to 3G. These current facts and future prospects make it obvious that, the mobile phone became one of the most ubiquitous technological devices in the human history. The number of mobile users has globally surpassed the number of personal computers. There are about 2.08 billion smart phone users globally. In India number of smart phone users in 2014 were 123.33 million and was estimated 204.1 million in 2016. Many of the most popular mobile properties are mainly accessed via mobile apps in present days. Mobile Apps are software applications designed to run on smart phones, tabs and other mobile devices. There are various mobile apps which are being used for different

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purposes like entertainment, information sharing purpose, getting agricultural information purpose and much more. "Phule Jal" App has been developed by the Mahatma Phule Krishi Vidhyapeeth, Rahuri for proper irrigation scheduling to crops, only when needed and only in the amounts needed, i.e. determining when to irrigate and how much water to apply. It is expected that with proper irrigation scheduling, crop yields will not be limited by water stress from droughts and the waste of water along with energy used in pumping will be minimized. *Phule Jal* calculates reference evapotranspiration by the different standardized methods. Reference-evapotranspiration (ETr) is estimated of a reference surface of a full grown alfalfa calculated from measured weather data. The weather data used to calculate ETr include solar radiation, temperatures, humidity, wind speed, bright sunshine hours (BSSH) and evaporation data. The crop coefficient (Kc) is multiplied by the reference evapotranspiration rate to determine crop water use for that day. Looking into the important role of *Phule Jal* Mobile App an attempt has to make to investigate utilization of *Phule Jal* Mobile App by University and KVK Scientists.

METHODOLOGY

Investigation was conducted in 10 districts of Maharashtra state which comes under the jurisdiction of Mahatma Phule Agricultural University. Selected 10 districts have variety of geographical characteristics. From selected districts 12 KVKs, 4 RECs and 5 DECs were considered for this study. 70 trained University and KVK scientists were purposively selected as respondents. The information was collected from the 70 trained University and KVK scientists with the help of well designed structured interview schedule. The data were processed by using frequencies and the parameters like percentage, mean, and standard deviation according to requirement. Utilization of the *Phule Jal* Mobile App of University and KVK Scientists was measured on four point continuum as very frequently, frequently, less frequently and not at all by assigning the score of 4, 3, 2 and 1, respectively. Based on the obtained total scores, the respondents were classified into three categories namely, 'low', 'medium' and 'high' by using mean and standard deviation

RESULTS AND DISCUSSION

It is evident from the Table 1 that majority (72.86%) of the university and KVK scientists belonged to medium utilization category, followed by low (14.29%) and high (12.85%) utilization categories, respectively

It is observed from Table 2 that Evapotranspiration (ETr) calculation feature of *Phule Jal* app was "very frequently" used by the 24.28 per cent respondents, followed by Report viewing feature (10%) and Online mode (8.57%) along with Training Purpose (8.57%). The

Table 1: Distribution of the respondents according to their Utilization (N=70)

***Phule Jal* Utilization**	**Frequency**	**Percentage**
Low (up to 11)	10	14.29
Medium (12 to 16)	51	72.86
High (17 and above)	9	12.85
Total	**70**	**100**
Mean = 13.47	S.D. = 2.5	

Table 2: Feature wise utilization of *Phule Jal* App

Features	**Utilization Extent (N=70)**			
	Very Frequently	**Frequently**	**Less Frequently**	**Not at all**
Online Mode	6 (08.57)	44(62.86)	19 (27.15)	1 (1.42)
Offline Mode	0 (00.00)	12(17.14)	40(57.14)	18(25.72)
For Calculating Evapotranspiration (ETr)	17 (24.28)	43 (61.43)	7 (10)	3 (4.29)
For calculating ETr by Taluka	0 (00.00)	0 (00.00)	23 (32.85)	47 (67.15)
For viewing Reports	7 (10)	39 (55.71)	17 (24.29)	7 (10)
For Training others	6 (8.57)	13 (18.57)	7 (10)	44 (62.86)

"Frequently" used features of *Phule Jal* mobile app were Online mode (62.86%), evapotranspiration calculation (61.43%), report viewing (55.71%) and training purpose (18.57%), respectively. It was also observed that more than half (57.14%) of the respondents were less frequently using the "Offline mode" feature followed by "Evapotranspiration" (32.85%) and "Report Viewing" (24.29%) whereas, more than half (67.15%) of the respondents were "Not at all" using the "Evapotranspiration " feature followed by "Training purpose" (62.86%) and "Offline mode" (25.72%). The results from the studies by Verma and Sharma (2013); Jha *et al.* (2014) and Rahul (2016) also found differential level of extent of use of components.

CONCLUSION

It may be concluded that the majority of the university and KVK scientists belonged to medium utilization category and majority of the respondents had "very frequently" used Evapotranspiration (ETr) calculation, "Frequently" used features of Phule Jal mobile app were Online mode. So the University may organize training programmes to motivate for more practical use of this app and the publicity need to be made, also some features of no use or of less importance should be either remove or modified accordingly.

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