



Perception of Farmers towards Agromet Advisory Service

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ABSTRACT

Weather and climate determines the crop productivity as it influences growth and development of crops before and during the cropping season. Due to climate change and its variability with time, farmers incur crop losses for being unaware of the aberrant weather events. The present study was conducted to know the perception of farmers towards Agromet Advisory Service (AAS) in terms of effectiveness and usefulness from farmer's point of view. A group of 120 farmers following AAS regularly provided by DAMU Valsad were selected randomly. It is concluded that, AAS provided twice in a week was useful for farmers as it provided effective communication media for transfer of climate resilient technology to effectively plan agricultural operation. It provides basic, timely and accurately pre-information of different climate and weather conditions of different crops of that particular area.

Key Word: Advisory service, Agrometeorology, Feedback, Source of Information.

INTRODUCTION

Agriculture is a gamble with weather, which is most variable and unpredictable in space and time. Despite other technological advancement, climate and weather are the main factors determining a country's agricultural production. Crop losses are increasing every year due to unpredictable and variable weather conditions. Increased variability of weather condition is main constrain on farmers ability to make tactical and strategic agricultural practices decision. This is because farmers were not prepared to make decisions on proper crop management practices as they were unaware of the future weather conditions going to prevail in their area. However, it is not possible to completely eliminate all farm losses due to weather factor but it can be reduce to some extent by making adjustments through timely and accurate weather forecast information. Hence, early warning based on weather forecast can help farmers to develop crop management strategies to minimize the impact of adverse weather condition and maximize benefits of favorable weather condition.

Agromet Advisory Service (AAS) is a vital tool which provides valuable information for all

agriculture operation from land preparation to harvesting based on weather forecast. The main aim of agromet advisory is to minimize the impact of adverse weather conditions and to make use of crop-weather relationship to boost agricultural production. Such service can ensure decision making of farmers and improve their management of agricultural risk. AAS is effective communication media to transfer of technology (Gandhi *et al*, 2018). The usefulness of weather forecast further depends on their reliability and applicability at micro level. Data suggest that agromet advisories have the potential to yield benefits worth over US \$ 430 billion for India's 90 million agricultural households. (Rao *et al*, 2020).

Agromet division of Indian meteorological Department, Pune provides AAS twice in a week based on Medium Range Weather Forecast (MRWF) through Agro met Field Unit (AMFUs) and District Agro met Unit (DAMUs). District Agro met unit for Valsad district was set up at Gujarat Vidyapith KVK located at Ambheti - Valsad (Gujarat) during the year of 2018-19. Since then KVK is regularly (on every Tuesday and Friday) disseminating weather forecast and AAS to the farmers of the district through

various medium like, SMS, Whatsapp, Face book, Radio, Newspaper, telephonic communication, twitter, etc. This study was conducted to know the farmer's perception towards Agromet advisory service given by DAMU-KVK, Valsad.

MATERIALS AND METHODS

Keeping in view eight weather parameters such as rainfall, maximum temperature, minimum temperature, morning RH, afternoon RH, wind speed and wind direction, total 35 agromet advisories were provided to more than 16,000 farmers of about 108 villages of the district during *kharif* season through various media. From among the list of 900 farmers who received the advisory through whatsapp on regular basis, 120 whatsapp user farmers, 20 farmers from each of the six blocks i.e. Valsad, Vapi, Umargam, Dharampur, Kaparada and Pardi were selected at random. Thus, the total sample size for the study comprised of 120 whatsapp user farmers. The data were collected with structured interview schedule. Responses of farmers regarding perception of farmers, usefulness of advisory, suitable time to read advisory, media preference for advisory etc. were recorded and analyzed.

RESULTS AND DISCUSSION

Perception of farmers toward usefulness of AAS

It was observed (Table1) that 78 per cent respondent farmers perceived agro-met advisory bulletin as useful followed by 13 per cent perceived as highly use full. Only 9 per cent farmers opined that it was partially useful to them. This may be due to the fact that they did not get information pertaining to their enterprise. Lack of specific information was one of the reasons for finding the information as not so useful or partially useful. The efforts were also made to know how the farmers are interpreting and using the information provided under AAS bulletin for planning of various day to day farm operations. It was revealed that 28 per cent of the farmers expressed that time of sowing of crop

is the most crucial operation and have utilized the AAS information for adjusting the date of sowing in accordance with the forecast data whereas 25 per cent of the farmers admit that the AAS information had assist him to take decision regarding applying irrigation to the crop especially during long dry spell. This was followed by the operations such as post harvesting (15 %), harvesting (14 %), chemical application (11 %) and fertilizer application (7 %). Above findings derives support from Gurav *et al* (2010) who reported that 80.87 per cent and 77.39 percent of the sampled farmers were using the information in planning the sowing time of crops and water management of crop, respectively.

Perception of farmers toward frequency of advisory

The responses of the respondents were collected using three point continuum. From the Table1 it could be seen that the frequency twice in a week found to have highest preference given by the farmers followed by once in a week, once in two days and daily. Another thing expressed by them that they required sufficient time to analyze the content of the preceding advisories and plan the action accordingly in the field condition. The probable reason behind preferring biweekly advisory may be that more number of unwanted messages from different sources is flooding their inbox. This, in turn may obstruct the farmers to overlook the useful information being delivered.

Perception of farmers toward most suited sources for AAS

The sampled farmers were asked to quote the most suited sources of information for weather related advisories. It was found that, 53% respondents preferred to get it through SMS (Text message) followed by 24% desired to have it through whatsapp. Newspaper (12 %), television (8 %) and radio (3 %) were the other sources of information preferred by the farmers. Majority of the respondents had a favorable attitude towards informational retrieval from mobile agricultural services.

Perception of Farmers towards Agromet Advisory Service

Table 1. Utility and relative importance of aspects of the weather based agro advisory service.

| Sr. No. | Key aspect of the service | Level of aspect | No. of respondent (N=120) | Percentage (%) |
|---------|--------------------------------|---------------------------|---------------------------|----------------|
| 1 | Usefulness of Agromet advisory | Useful | 93 | 77.5 |
| | | Highly useful | 16 | 13.3 |
| | | Partially useful | 11 | 9.2 |
| 2 | Name of farm operation | Time of sowing | 34 | 28.3 |
| | | Irrigation application | 30 | 25 |
| | | Harvesting operation | 17 | 14.2 |
| | | Post harvesting operation | 18 | 15 |
| | | Chemical application | 13 | 10.8 |
| | | Fertilizer application | 8 | 6.7 |
| 3 | Frequency of advisory | Twice in a week | 61 | 50.8 |
| | | Once in a week | 38 | 31.7 |
| | | Daily | 6 | 5 |
| | | Once in a two days | 15 | 12.5 |
| 4 | Source of advisory | SMS (Text message) | 63 | 52.5 |
| | | Whatsapp | 29 | 24.2 |
| | | News paper | 14 | 11.7 |
| | | Television | 10 | 8.3 |
| | | Radio | 4 | 3.3 |
| 5 | Satisfactory level | Highly satisfied | 19 | 15.8 |
| | | Partially satisfied | 20 | 16.7 |
| | | Satisfied | 81 | 67.5 |
| 6 | Timing of message | Evening time | 43 | 35.8 |
| | | Afternoon time | 40 | 33.3 |
| | | Morning time | 14 | 11.7 |
| | | Night time | 12 | 10 |
| | | Noon time | 11 | 9.2 |

Satisfactory level for AAS

The data (Table1) highlighted the fact that 16%, 67% and 17 % of the respondent farmers were highly satisfied, satisfied and partially satisfied with the overall content of the message, language of the message and regularity of the message delivery system etc. respectively. Due to care was taken by the expert paneled while preparing the advisories in vernacular language. Equal weightage was given to all relevant subjects. Thus, message can be easily digestible to the end users practicing under diverse condition. Similar result reported by Gurav *et al*

(2010) in their research that 83.48 per cent of the respondents rated agro-met advisory bulletin as Very good to Satisfactory.

Suitable time to read the message

It was found that 35% farmer's preferred evening time of the same day on which message was delivered to them followed 33% preferred afternoon time to read the content of the messages, respectively. A small group of the respondents (12%) preferred to view advisory during morning, followed by night (10 %) and noon (9%). Evening

time is the leisure time after 8-9 hr of arduous work on the farm. Informal meet in the street or at choupal of the village is a common platform to share daily experiences. It presumed that group of farmers could discussed and analyzed the information provided under advisory among the group. These findings derive support from Dharanipriya *et al* (2019) who reported that timing of the message delivered to the farmers, afternoon hours had the highest utility value (0.509) followed by evening (-0.062) and morning hours (-0.447).

CONCLUSION

Broadcasting of Agro-met Advisory Bulletin (AAB) may be continued to play vital role planning the various farm operations. AAB may be broadcasted twice in a week at morning or evening hours for better implementation. Agro Advisory Services emerged as an effective communication medium for transfer of technology regarding climate change information.

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