



## RESEARCH PAPER

# Impact of weather based agro advisories on superior production and income of the farmers in Srikakulam district of A.P.

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**Abstract :** Agricultural production depends primarily on weather, which varies with space and time, hence, its prediction can help to trim down the farm losses through precise scheduling and running of agricultural operations. The whole losses due to weather factor is not feasible to lessen but it can be minimized to some extent by making adjustments through timely and precise information of weather forecast. Weather forecasting and weather based agro advisories facilitate in rising the economic profits of the farmers by recommend with appropriate suggestion according to the weather conditions. A study was, consequently undertaken on observation of agromet advisory bulletin and economic impact of agromet advisory services for rice during *Kharif* and *Rabi*, 2021-22 for assessing the impact of agromet advisory services on farmers as users of agromet advisory services (DAMU farmers) and non-users of agromet advisory services (non-DAMU farmers) were chosen from different villages of Srikakulam district of Andhra Pradesh. Results revealed that the farmers, who practiced the agromet advisories, are able to reduce the input cost and gain in the net profit as compared to the non- AAS farmers in rice. This profit was due to the crop supervision done by the farmers according to agromet advisory bulletins. Thus, the use of agromet advisory bulletin, based on present and forecasted weather is a valuable tool for enhancing the production and profits of the farmer.

**Key Words :** Weather based agro advisories, Superior production, Income, Farmers

**View Point Article :** Mounika, B., Amarajyoti, P., Chinnam Naidu, D. and Naveenkumar, G. (2023). Impact of weather based agro advisories on superior production and income of the farmers in Srikakulam district of A.P. *Internat. J. agric. Sci.*, **19** (1) : 26-28, DOI:10.15740/HAS/IJAS/19.1/26-28. Copyright@2023: Hind Agri-Horticultural Society.

**Article History :** Received : 14.06.2022; Revised : 06.10.2022; Accepted : 08.11.2022

## INTRODUCTION

Weather is the most significant factors influencing success or failure of agricultural production in any region. It effects on each phase of growth of crop. Any inconsistency in the weather throughout the crop season, such as delay in the monsoon, extreme rains, flood, droughts would influence the crop development and lastly

the quality and quantity of the yield. The losses in crop can be condensed by appropriate crop supervision by timely weather forecasts. Weather forecast also provides possibility for choice of crops best matched to the predictable climatic situation. The purpose of the weather forecasting is to suggest the farmers on the actual and expected weather and its impact on the variety of day-to-day farming operations like sowing, weeding, time of

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pesticides spray, irrigation scheduling, fertilizer application etc. and overall crop management. Weather forecast helps to boost agriculture production, decrease losses, risks, reduce costs of inputs, improve quality of yield, increase effectiveness in the use of water, labour and energy and lessen pollution with judicious use of agricultural chemicals. Rathore *et al.* (2001) discussed the weather forecasting method operational at National Centre for Medium Range Weather Forecast for issuing location specific weather forecast five days in advance. Damrath *et al.* (2001) reported that the statistical interpretation methods are used to increase the reliability of the precipitation forecast. The benefit by the farmers using agromet advisory bulletin and weather forecast for making farm level decisions by farmers from different village have been discussed in this paper.

## MATERIAL AND METHODS

The District Agromet Unit (DAMU) located at KVK, Amadalavalasa, Srikakulam district has been serving the farming community in Srikakulam district of Andhra Pradesh. Progressive farmers have been taking keen interest in the agro-advisories and are the foremost beneficiaries and spread of bulletin by sharing and add other farmers in the group. The major objective of this programme is to advise timely and need-based crop management practices. Weather forecast on rainfall, maximum and minimum temperature, wind speed, wind direction, cloud cover, maximum and minimum humidity are being received on every Tuesday and Friday from IMD, New Delhi. Once the forecast was received, the experts' opinion from different disciplines was obtained. Based on the advice, the agro advisories are being prepared on every Tuesday and Friday in telugu as well as in English. These advisories are sent to IMD for preparation of national bulletins and are uploaded on the IMD website ([www.imdagrimet.gov.in](http://www.imdagrimet.gov.in)) in both telugu and English. Bulletins are regularly disseminated to the farmers on real time basis through telephone/E-mail/SMS, majorly by Whatsapp. Agro-met advisory bulletins are also sent to local telugu newspapers for publication.

The bulletins are also sent to NGO, FPO, ATMA, State Agriculture and All India Radio through E-mails. The weather forecast based agro-advisory bulletin contains a summary of previous weeks' weather, deviation of weather from the normal value, weather forecast information for the next five days, crop management, which is based on weather forecast and giving warning to the farmers well in advance, regarding rainfall variation, its amount and other weather variables including pest/disease problems. Thus, farmers can decide on crop management options, application of nutrients and strategies to overcome other problems.

Weather forecast and weather based agromet advisories help in increasing the economic benefit to the farmers by suggesting them the suitable management practices according to the weather conditions. A study was, therefore, undertaken on adaptation of agromet advisory bulletin and economic impact of agromet advisory services for rice during *Kharif* 2020-21 and 2021-22. For assessing the impacts of agromet advisory services, users of agromet advisory services (DAMU farmers) and non-users of agromet advisory services (non- DAMU farmers) were selected for rice crop. The study was conducted in 38 mandals of Srikakulam district, at KVK, Amadalavalasa.

## RESULTS AND DISCUSSION

Results showed that the farmers who followed the agromet advisories (DAMU farmers) are able to reduce the input cost upto Rs.1950 and increases the net profit by Rs.3775 in rice (Table 1) as compared to the non-DAMU farmers, who did not follow the weather based information. DAMU farmers were able to reduce the input cost upto Rs. 1950/acre in rice. Increases in the net profit were Rs. 3775/ acre in rice compared to the non-DAMU farmers. More net returns of DAMU farmers over non- DAMU farmers can be due to low input cost, following weather based management practices and timely management of pests and diseases. This profit was due to the crop management done by the farmers such as timely land preparation and sowing,

**Table 1 : Economic impact (Rs./acre) of AAS on rice farmers during *Kharif* 2021-22**

Type of farmer	Land nursery preparation /sowing	Seed	Fertilizer/ manure	Insecticide/ herbicide	Irrigation	Harvesting and threshing	Yield	Net profit
DAMU farmer	2500	450	2800	3800	600	3000	53.4	55606
Non-DAMU farmer	3000	600	3200	4200	1100	3600	50.7	51831
Profit	500	150	400	400	500	600	2.7	3775

adoption of recommended seed rate and suitable varieties, timely weeding, harvesting and irrigation and pesticide applications, according to agromet advisory bulletins.

#### Conclusion:

The study showed that the application of agromet advisory bulletin, based on current and forecasted weather is a useful tool for enhancing the production and income. DAMU farmers received weather forecast based agro-advisories, including optimum use of inputs for different farm operations. Due to judicious and timely utilization of inputs, production cost for the DAMU

farmers reduced. The increased yield level and reduced cost of cultivation led to increased net returns.

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