

The impact of weather forecasting advisory services in decision taken in field operation

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ABSTRACT : Weather and climate condition influence the society and economy. In addition year to year variation to timing, intensity and duration of seasonal precipitation and extreme temperature has large impact on people and physical landscape. Seasonal climate forecast provide probabilistic monthly or seasonal climate prediction for the forthcoming year. Agricultural activities are very dependent on climatic condition. The failure of crop to produce good yield is very often due to bad climate. Capability of farmers to use climate forecast to anticipate the events is very limited. Farmers and farming community throughout the world survived and developed by mastering the ability to adopt widely varying weather and climate conditions. However, dramatic growth in human population is imposing enormous pressure on existing farming production system. Knowledge of seasonal climatic forecast allows farmers and other user of climate information to develop seasonal management strategies learning to potential improvement in the productivity. Benefit arises when the use of forecasts results in decisions that reduce the vulnerability of human populations to the adverse impacts of climate variability. The focus here is on impacts of climate variability on agricultural production systems and decisions related to their management. We can represent the opportunity to benefit as falling within the intersection of human vulnerability, climate predictability and decision capacity.

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Agriculture places heavy burden on the environment in the process of providing humanity with food and fibre, while climate is primary determining of agricultural productivity. Given the fundamental role of agriculture in human welfare, concern has been expressed by federal agencies and other regarding the potential effects of climate change on agricultural productivity. Interest in this issue has motivated a substantial body of research on climate change and agriculture over the past decades. Climate change is expected to influence crop and livestock production,

hydrologic balances, input supplies and other component of agricultural system.

There is great need of sustainable management in the agricultural sector of the world economics. Accurate and timely forecast of rainfall pattern and other weather variable continue still be a major challenge and preoccupation for the scientific community to sustain the agricultural development. Temporal and special change in weather condition still makes a significant impact on Indian agriculture in spite of the best possible efforts of research and development system. Beside catastrophic

events like drought, food and cyclone short and medium range in important weather parameter light rainfall, temperature, wind, cloud cover, humidity etc. affect crop yield by influencing the farmer decision about selection of cultivars use of inputs, crop management practices etc.

EXPERIMENTAL METHODOLOGY

The study was conducted in purposively selected Hisar from western zone and Kaithal districts from eastern zone of Haryana state, respectively. On the basis of close proximity to the centers issuing weather forecasting advisory services to western and eastern zone. It is also because of familiarity of researcher with the local condition, convenience and easy accessibility.

Two blocks viz., Hisar-1 from Hisar and Kaithal-1 from Kaithal districts were selected randomly. Constantly, Gangua and Dheeran was from Hisar-1 block and Kyorak and Balwanti from Kaithal-1 blocks were selected randomly for the study.

A random sample of 30 farmers from each village was taken. Thus 60 respondents from Hisar-1 block and 60 respondents from Kaithal-1 block were selected. In this way a total number of 120 farmers were selected for the present study.

EXPERIMENTAL FINDINGS AND DISCUSSION

It was found from the Table 1 that majority of the respondents (70.83%) were agreed whereas 16.67 per cent were undecided while only 12.50 per cent were

disagreed with the statement that is seed sowing process affected on the basis of weather forecasting information. About half (50.00%) of the respondents were agreed whereas 26.67 per cent were undecided while 23.34 per cent were disagreed that they made change in cultural operation due to weather forecasting information. In case of effect of weather forecast on irrigation schedule majority of the respondents (66.67%) were agreed whereas 20.00 per cent were undecided while only 13.34 per cent were disagreed.

It was observed from the table that majority of the respondents (56.67%) were agreed whereas 16.67 per cent were undecided while 26.67 per cent were disagreed with the statement that change in fertilizer application due to weather forecasting information. Majority of the respondent (56.67%) were agreed whereas 16.67 per cent were undecided while 26.67 were disagreed that the statement of change in fertilizer application due to weather forecasting information. It was revealed that 55.00 per cent of the respondents were agreed whereas 23.34 per cent were undecided while 21.67 per cent were disagreed with the statement change in spray schedule due to information given by agro-meteorology department.

It was found that 53.84 per cent of the respondents were agreed whereas 26.7 per cent were undecided while only 20.00 per cent were disagreed with the statement change in weed management due to weather forecasting information. It was observed from the that majority of the respondents (65.00%) were agreed whereas 21.67 per cent were undecided while 13.37 per cent were disagreed with the statement that harvesting process is

Table 1 : Impact of weather forecasting advisory services in decision taken in field operation (n=120)

Sr. No.	Statements	Agree		Undecided		Disagree		Mean
		N	%	N	%	N	%	
1.	Is seed sowing process affected on the basis of weather forecasting information.	85	70.83	20	16.67	15	12.50	2.60
2.	Change in cultural operations due to weather forecasting information.	60	50.00	32	26.67	28	23.34	2.25
3.	Weather forecasting information can make change in irrigation schedule.	80	66.67	24	20.00	16	13.34	2.54
4.	Change in fertilizer application due to weather forecasting information.	68	56.67	20	16.67	32	26.67	2.44
5.	Change in spray schedule due to information given by Agri. Meteorology department	66	55.00	26	21.67	28	23.34	2.31
6.	Change in weed management due to weather forecasting information.	64	53.34	32	26.67	24	20.00	2.38
7.	Harvesting process is also affected by weather forecasting information.	78	65.00	26	21.67	16	13.34	2.54
8.	Weather forecasting information is greatly affecting the storage and transportation process.	63	52.50	22	18.24	33	27.50	2.33
9.	Loss or profit in crop production due to weather forecasting.	72	60.00	31	25.83	17	14.16	2.50
10.	How much extent weather forecasting information is effective to change in farm practices	84	70.00	20	16.67	16	13.34	2.79

also affected by weather forecasting information. It was revealed from the Table 1 that only 52.00 per cent of the respondents were agreed whereas 27.50 per cent were disagreed while 18.24 per cent respondents were undecided with the statement that weather forecasting information is greatly affecting the storage and transportation process. As regarding about losses and profit in crop production due to weather forecasting information majority of the respondent (60.00%) were agreed whereas 25.83 were undecided while 14.16 per cent were disagreed with this fact.

Conclusion :

Weather forecasting can be more effective if they can be understood by majority of the farmers. So government must initiate such campaign which provides importance of weather forecasting information to the farmers. Farmers believe more on tradition weather forecast than scientific weather forecasting. There must be should be some programme to aware all the farmers the importance of scientific weather forecast. Very few farmers had used weather forecasting information at the time of flood and drought. Most of the farmers were not used weather forecasting information through advisory services at the time of sowing irrigation and pesticide spray. It was also observed that weather forecast agro advisory can reduce the farm operation losses if farmers had an interest in weather forecast advisory services. Weather forecasting agro- advisory service should start some programme to aware about the importance of weather forecasting at the time of sowing, irrigation and harvesting.

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