Dynamic feedback analysis of Agromet Bulletin of Gramin Krishi Mausam Seva (GKMS) in Dhalai District

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Challenges:

Weather is one of the most vital factors affecting agricultural production. Different climatic abnormalities and extreme weather conditions like erratic rainfall, late onset of monsoon, abrupt changes in day and night temperature during crop season, and a sudden outbreak of pests and diseases are the big challenges for sustaining agricultural production. Agriculture plays a more vital part in the economic growth of the Country. For the improvement of agriculture, this sector requires proper planning and relevant information in a timely manner. Information regarding crop growth stages and weekly weather information at the time of crop season is most important for the proper management of crops. All the farm operations are related to weather information, which will decrease or increase the costs of inputs and various field operations costs. Farmers are not well aware of weather forecasting and their utilization on a daily based. The impact of climate change and associated weather hazards like drought, cyclones, thunderstorms, and hailstorms are key drivers which influence farmers' decision-making process. Further frequent occurrences of extreme events severely impacted agricultural production predominantly over north eastern India.

Initiatives:

To sustain the farmer's production and improve the farmer's economic conditions during 2019, the District Agro-Met unit was established in Krishi Vigyan Kendra (KVK) Dhalai. Dhalai which includes 8 blocks (Ambassa, Chhamanu, Dumburnagar, Durga Chowmahani, Ganganagar, Manu, Raishybari, Salema). District farmers will aware of next upcoming 5

days weather conditions twice in a week along with advisories regarding crops, animals, birds, fisheries, plantation crops and for soil conservation strategies also. In 2020-2021 this unit cover 2976 farmers and in total 5206 farmers are now aware about the weather forecasting. Farmers are receiving weather information and crop related information by mkishan portal, text messages and also by social media like whatsapp group, face book. During 2020-2021, 96 nos. of district bulletin and 768 nos. of bulletin for blocks were prepared by the unit.

Awareness programme on District Agromet Unit at Block Level and package of practices:

The farmers feedback survey was conducted during the month of November, 2020 to April, 2021 in Dhalai District of Tripura by District Agro-Met, KrishiVigyan Kendra Dhalai. The location of the area is 23.85^0 N and 91.91^0E and the average rainfall of the district is 2500mm.Two villages from two blocks were selected for collection of feedback. Total 50 nos. AAS of farmers were randomly selected from two villages, 25 nos. of farmers from each village. Srirampur village of Durgachowmahni block was selected for gummy stem diseases blight of water melon survey and Dabbari village of Salemais selected for early and late blight diseases of potato. Similarly this study was also done for the 50 nos. of Non-AAS farmers for comparative study for impact analysis between AAS farmers and Non-AAS farmes of this two villages. The weather based Agro Advisory bulletin were received from DSS-Portal, IMD, Agrimet Division and were disseminated through whatsapp group, text messages, mkishan portal and Meghdoot app.

Weather sensitive crop growth stages of water melon.

Sl. No.	Growth Stages	Important weather parameter	Effect of Weather parameter
1.	Vegetative growth	Cloud cover, foggy situation, Humidity, Rainfall	Favours gummy stem blight disease and reduce the population of termite

2.	Flowering stage	Cloud cover, foggy situation, Humidity, Rainfall	Favours gummy stem blight disease
3.	Fruiting stage	Cloud cover, foggy situation, Humidity, Rainfall	Favours gummy stem blight disease
4.	Maturity or Harvesting	Cloud cover, foggy situation, Humidity, Rainfall	No effect

Key Result:

Name- Biresh Debbarma
Fathers name- Brajendra Debbarma
Village- Srirampur
Block- Durga Chowmahani
Aadhar Number-
Contact Number-8837240078

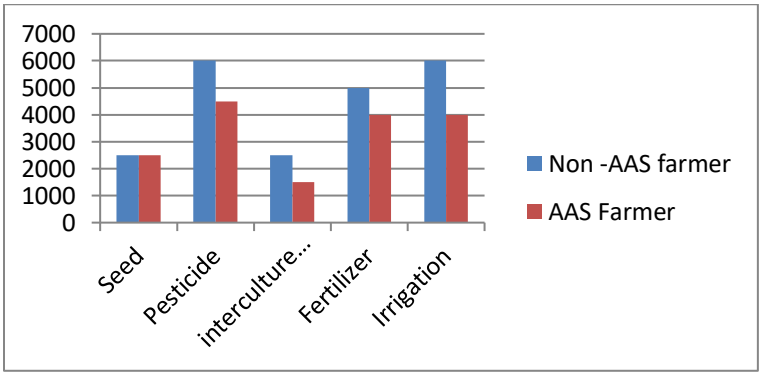

Fig.1-Comparative study of different inputs used in water melon field among the Non-AAS and AAS farmers

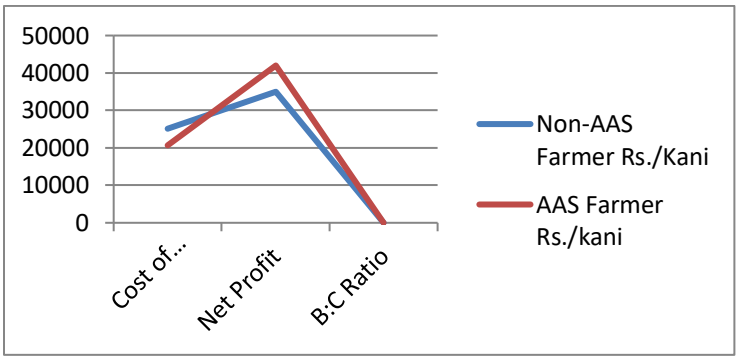

Fig.2- Comparative study of cost, return and B:C ratio of potato crop among the Non-AAS and AAS farmers.

Impact:

The watermelon crop was found very much sensitive to weather parameters at mainly vegetative stage. High humidity with high temperature plays a very much important role in vthe egetative stage because this kind of weather condition is very much favorable is also very much favorable for gummy stem blight disease of water melon.

The cost of various inputs incurred in the Watermelon crop (Fig.1) and (Fig 2) revealed that Non-AAS farmers' cost of cultivation was Rs. 22000/ and Rs.16500/- was AAS farmers. It was also revealed that more yield under AAS farmers and a high benefit-cost ratio compare to Non-AAS farmers. The benefit-cost ratio of Non- AAS farmers were 2.27 and AAS farmer was 3.51.