Model of agro advisory for 54 selected weather window of Tamil Nadu for rice
T.N. Balasubramanian

Dear student. We continue the lesson that we have learned yesterday, our last class. I was emphasizing in the last class that they selected whether windows are coming under automated Weather Agro Advisory Mode. Human intervention is very, very little. So for that only 54 selected weather windows have been identified for Tamil Nadu from 324 combinations done through permutation and combination approach. So what they did the next is for each weather window one to 54 for 109 crops they have identified the weather sensitive stages and also they have identified weather sensitive crops and weather sensitive farm operations and accordingly for each weather window they have prepared agro advisories in advance and the totally for 109 crops and this exercise is done for 54 weather windows. So you estimate the data accommodations.

So we want to validate this. We wanted to validate and validation was done through already on the medium-range weather forecast is going on. So through that these developed agro advisory was validated. Then after that we want to put them in the server. So a trial run was made with a rice crop.

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So here you could see that this is the stage of the rice crop, nursery. Here in the weather window; weather window means like a weather window one, there is no rainfall. After weather window turn carries 0.1 to 30 mm rainfall. Then in that window we have not consider other, that is maximum temperature, minimum temperature and your wind speed, mean RH were consider, so we consider only this one and agro advisory was prepared. For nursery, what it says, rainfall received in the past six days, this is a past, this is the future weather forecast. Earlier, we have discussed past weather also must have be considered. Past week we had rainfall, present week, no rainfall is anticipated. So rainfall received in past six

days may be used to puddle the soil for nursery bed preparation to save irrigation water and achieve higher rainfall. This is very, very important.

See, in the presence of the rainfall you save your groundwater, you save your energy, so by that the economically this technology is highly varied and you are going to reduce the cost of cultivation and thereby you increase the profit also. This is one of the recommendations for nursery stage. I have given for -- we have developed for different stages. Another one is a future rainfall is anticipated. Past week no rainfall, presently rainfall is anticipated 0.1 to 30 mm then recommendations on that. The anticipated rainfall may be used for preparing rice nursery.

See, anticipated rainfall, if rainfall does not come rice nursery could not be made. Then in this case is what is your option? Don't worry. We produce medium-range weather forecast at the 70% probability, so it may occur definitely -- the event may occur definitely, so don't worry about all those things, don't make any question on that. We have some variability that would be solved through some other scientific advantage. So here rainfall is there and rainfall there, the nursery stage different options are given. Options, different options are given. AA means Agro Advisory 1, Agro Advisory 2, like that it is given like that.

Then Stage 2, what is happen. Do you see the rainfall there? The past, present also there then what has to be done, drainage and all those things. Then nursery rice Stage 3, 3 to 4 leaf stage ceiling. So maximum temperature is greater than 35.1 degree centigrade with RH greater than 40% and other elements not considered then in the -- occurs both the present and past then the prevailing anticipated weather with high temperature and high relative humidity may result in thrips and jassid. We were seeing the (inaudible 00:04:58) may come. So take proper actions or prevention is better than cure.

Like that we have prepared for different stages are four, or five or six. So we have nine stages of rice. So this is the very very important one that we had, and what we did was we put these information, already I told that, the 54 weather windows were put in the server. Then again the agro advisory prepared for each crop were also put in the computer. Then what we did is, we had a trial run for a particular block, how it would be done. So in the concerned block there is one automatic weather station. It senses the weather that prevail over the block and sends the information to the Agro Climatic Research Center of a Tamil Nadu where the daily data are being stored. Once the six days data become accumulated by using regional climate model they prepare the medium-range weather forecast for next five days.

So when the next forecast comes mean the server or computer correctly picks what is the weather forecast. This weather forecast where it comes to our weather window maybe 14 or maybe 54. So that weather window has been selected based on the weather forecast generated by the computer and once the weather window is selected if you want to give rice you put – punch rice or cotton then in this stage it rightly gives the your agro advisory for the concerned crop or the concerned weather window systems.

In the meantime the Department of People – agriculture, Department of Agricultural People, they also communicate the crop stage and pests and disease load for each crop their location and send to the server directly without any communication, directly it comes to the server. The server considers this present stage, the weather forecast and it takes appropriate agro advisory and communicates to the farmers through SMS with the no time loss. So this was tested very well and we like to extend to all 385 blocks of Tamil Nadu through automated mode.

With these I like to close this class. It is an interesting type. It is a prototype. It is a advanced type. You can say what is the way forward for this weather advisories or weather forecast in agriculture and your agro advisories in this class. We usually do it through human intervention. Now this is the way forward. Everything is automated. Everything is prepared in advanced. So farmers has developed a confidence and the things will move very nicely. There is definitely 100% risk reduction under this mode. Thank you very much.