

can be sent to the farmers informing them about any calamity and any precautions that are needed to be taken.

With the help of predicted weather data, predictions for crop requirements can be made. Given below is an example of an app that shows information to the farmers regarding crop requirements with the help of predicted data.

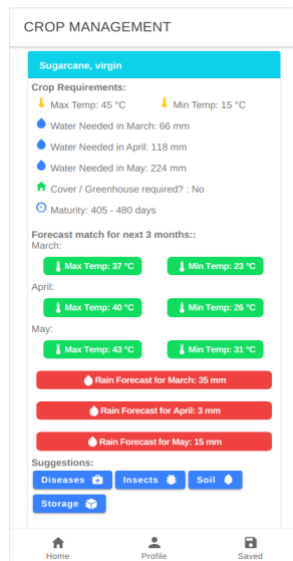


Fig 11. Agrolly app showing crop data in comparison with weather prediction.

The app shown in the figure above is developed by Agrolly LLC and is currently under testing in India, it calculates crop water requirements based on the methods provided by Food and Agriculture Organization and based on the weather predictions generated using time series model, gives farmers insights about various problems they might face in a way that is easily understood by farmers.

VIII. CONCLUSION

We found that the ETS method with model ANN presented a better result with the RSME and MAE lower than 0.2847 and 0.09337713. Therefore, we used the same models for predicting values for all the other cities. However, the ETS models are needed to be tested for regions to see if we could get results better than this.

In this study we only took into consideration, the maximum daily temperature values for the past years. These predictions can be improved by taking into consideration the various other factors like rainfall, humidity, minimum temperatures, etc. Furthermore, other models for predictions using time-series analysis needs to be studied before determining the best model for predicting maximum temperatures in the state of Maharashtra, India.

While development of these models is an ongoing and never-ending process, innovative ways that help spread of this information are also needed to be developed.

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*For the seasonal time series graphs presented in this paper, the predicted values may be offset by a factor ranging between 0.9 to 1.6