ABSTRACT **- India is a country largely dominated by the agricultural sector, and hence it is our duty to utilize our knowledge of easy and accurate analysis in time efficient manner to boost the agriculture to newer heights. Also, lately there have been innumerable changes in our environmental conditions and hence, the rate of crop failure has increased over time. This is resulting into the increased number of suicides of farmers. Thus, the focus of this paper is to implement a system that would help the farmers of our country to maximize their yields along with maximized profits. The system proposes to predict the accurate crop prediction based on the past and live data that is analyzed using supervised machine learning algorithm, SVM. Both the live data as well as the big data is stored and retrieved from cloud. Also, the system proposes to make use of soil moisture sensors along with the weather conditions to automate the process of irrigation, which is one of the most time-consuming activities in farming. All the notifications from the system and the queries of the farmer are interacted using an android application.**