"Data analysis and prediction for agricultural production"

1. Introduction- Agriculture forms the basis for food security and hence it is important. In India, majority of the population i.e., above 55% is dependent on agriculture as per the recent information. Agriculture is the field that enables the farmers to grow ideal crops in accordance with the environmental balance. In India, wheat and rice are the major grown crops along with sugarcane, potatoes, oil seeds etc. Farmers also grow non-food items like rubber, cotton, jute etc. More than 70% of the household in the rural area depend on agriculture. This domain provides employment to more than 60% of the total population and has a contribution to GDP also (about 17%) . In the farm output, India ranks second considering the world wide scenario. This is the widest economic sector and has an important role regarding the framework of socio-economic fabric of India. Farming depends on various factors like climate and economic factors like temperature, irrigation, cultivation, soil, rain fall, pesticide and fertilizers. Historical information regarding crop yield provides major input for companies engaged in this domain. These companies make use of agriculture products as raw materials, animal feed, paper production and so on. The estimation of production of crop helps these companies in planning supply chain decision like production scheduling. The industries such as fertilizers, seed, agrochemicals and agricultural machinery plan production and activities like marketing based on the estimates of crop yield [2]. Farmers experience was the only way for prediction of crop yield in the past days. Technology penetration into agriculture field has led to automation of the activities like yield estimation, crop health monitoring etc.

2. Objectives- Contributing to optimal crop growth, development and yield.

3. Literature survey- The impact of climate change are most evident in crop productivity because this parameter represents the component of greatest concern to producers, as well as consumers.

4. System overview

Numeric data is easier to handle hence production data is converted in numeric value.

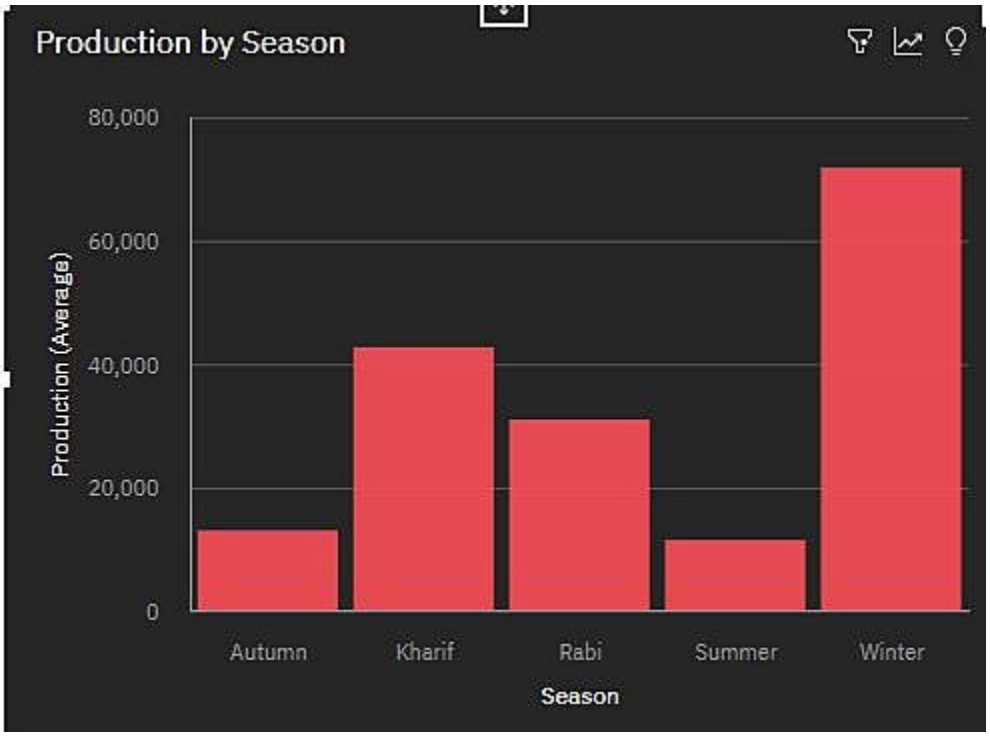

Fig.1 Crop production with Season

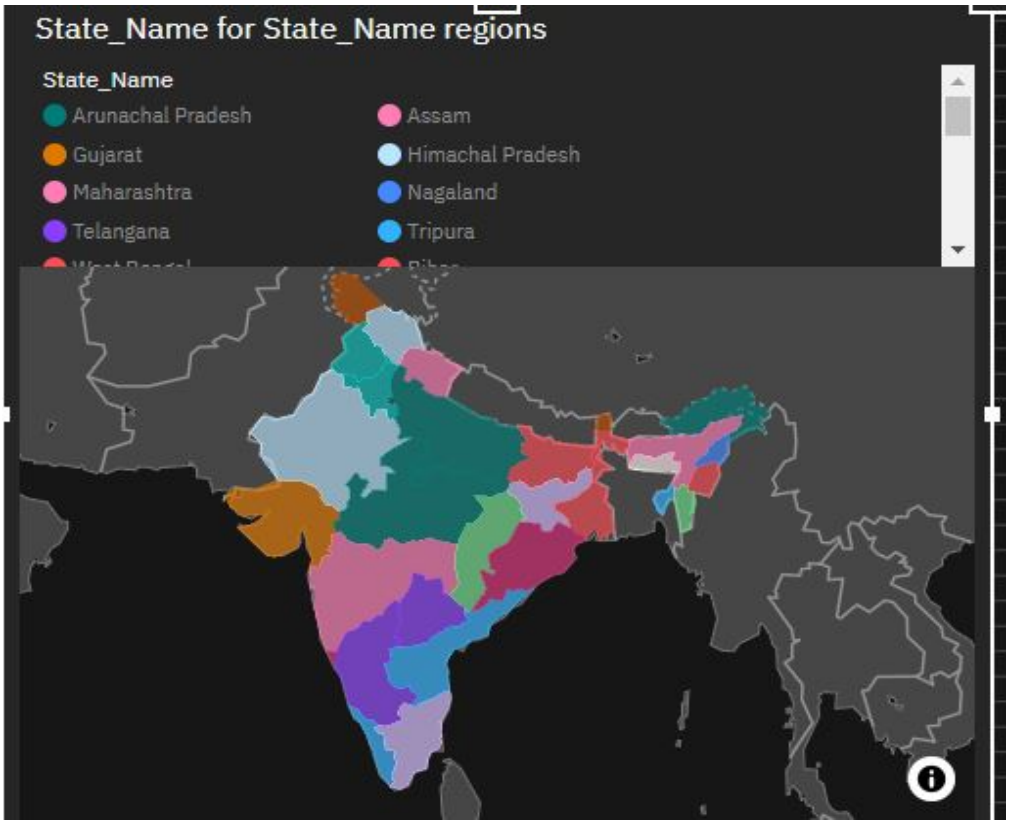

Fig. 2 Crop production states wise

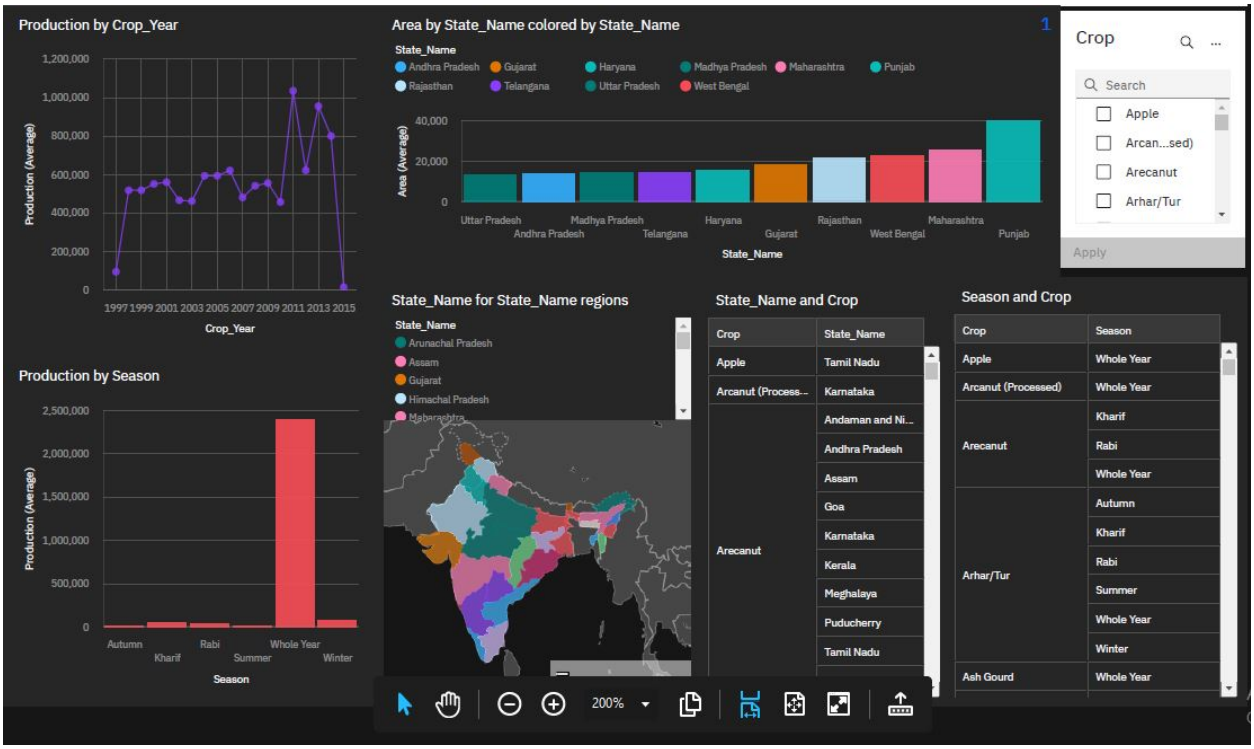

Fig. 3 Report of crop production scenario in india

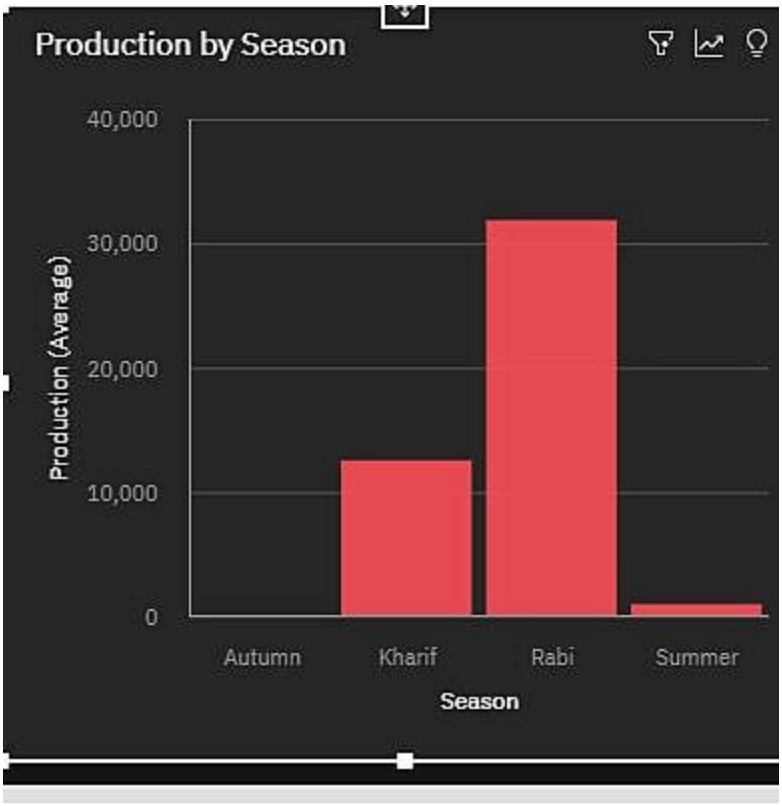

Fig. 4 Favourable season for production of Jowara

5. Future scope-

- Predict appropriate crop and maximum yield according to season.
- Create an web application.
- Collection of data, Analysis of it and modification of the algorithm.
- IOT application in agriculture, automation in production line and man free agriculture which is the future of the world ,this is the first step of it.

6. Conclusion-

Conclusion Weather aberrations can cause physical damage to crops.With help of this project we can predict in certain environmental conduction which crop should be taken.From the graph of % of production we can determine period of particular crop in given weather condition. This data will continue to enhance farmer efficiency by further enabling them to monitor each plot of land and determine the precise input needed for their crops.