

India's Agricultural Crop

Production Analysis (1997-2021)

1.Introduction

1.1 Overview

As per the 2014 FAO world agriculture statistics India is the world's largest producer of many fresh fruits like banana, mango, guava, papaya, lemon and vegetables like chickpea, okra and milk, major spices like chili pepper, ginger, fibrous crops such as jute, staples such as millets and castor oil seed. India is the second largest producer of wheat and rice, the world's major food staples

India is ranked under the world's five largest producers of over 80% of agricultural produce items, including many cash crops such as coffee and cotton, in 2010. India is one of the world's five largest producers of livestock and poultry meat, with one of the fastest growth rates, as of 2011.

One report from 2008 claimed that India's population is growing faster than its ability to produce rice and wheat. While other recent studies claim that India can easily feed its growing population, plus produce wheat and rice for global exports, if it can reduce food staple spoilage/wastage, improve its infrastructure and raise its farm productivity like those achieved by other developing countries such as Brazil and China.

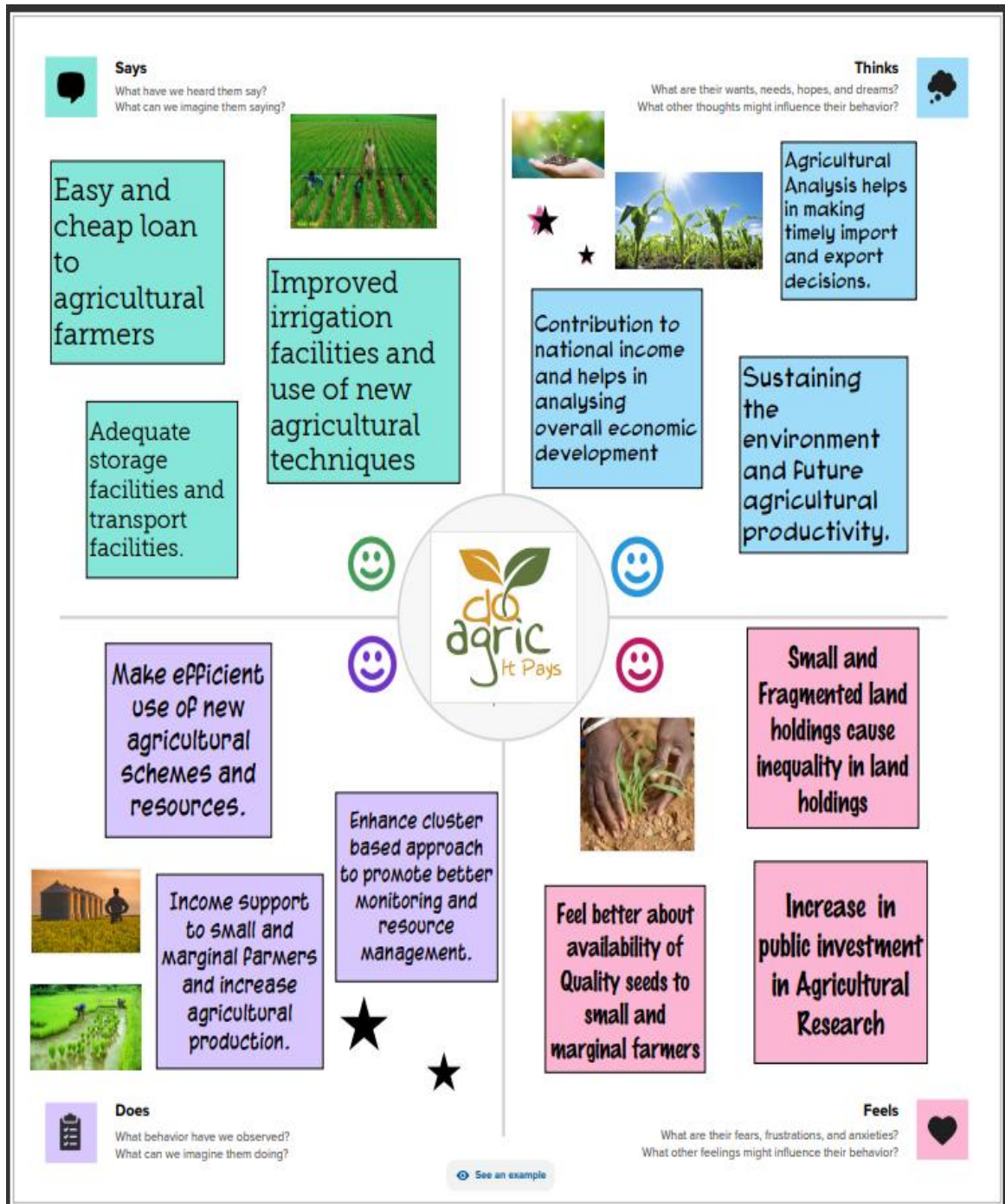
India has shown a steady average nationwide annual increase in the mass-produced per hectare for some agricultural items, over the last 60 years. These gains have come mainly from India's green revolution, improving road and power generation infrastructure, knowledge of gains and reforms. Additionally, post harvest losses due to poor infrastructure and unorganised retail, caused India to experience some of the highest food losses in the world. Thus agricultural crop production analysis is important for increasing the crop production nowadays.

1.2 Purpose

Agriculture analysis is a very important aspect to crop growing. To increase quality and yields, it is crucial to understand the current nutrient levels of the soil to be able to ascertain which areas require improvement. Our LaquaTwin range of portable meters can provide in-field analysis in your pocket. Analyze pH to check for soil acidity and alkalinity, Conductivity to determine optimised fertilizer usage as well as Sodium, Potassium, Nitrate and Calcium levels.

2. Problem definition & Design Thinking

2.1 Empathy Map



2.2 Ideation & Brainstorming Map

Brainstorm & idea prioritization

Use this template to your own brainstorming sessions so your team can unleash their imagination and start shaping concepts even if you're not sitting in the same room.

- Brainstorming session
- Idea selection
- Idea implementation

Before you collaborate

1. Make list of questions you're trying to solve with this session. Think about what you need to solve together.

2. Choose

Define your problem statement

What problem are you trying to solve? Frame your problem as a clear, specific statement. This will be the focus of your brainstorm.

3. Choose

Brainstorm

Write down every idea that comes to mind. Don't edit any of your problem statements.

4. Choose

Group ideas

Take time sharing your ideas with others. Group ideas into related clusters as groups. One of many ways to group ideas is by using a common theme. A cluster is larger than an idea, but smaller than a group. You can use a cluster to group ideas that are related.

5. Choose

Prioritize

Now that you have a list of ideas, it's time to choose which ones to implement. There are many ways to do this. One way is to use a dot-voting system. Each person gets a set of dots to use to vote on the ideas they like best. The ideas with the most dots are the ones to implement.

6. Choose

After you collaborate

You can report the results of your session to your team or to your stakeholders. You can also use the ideas you generated to create a prototype or to develop a business plan.

7. Choose

Brainstorming session

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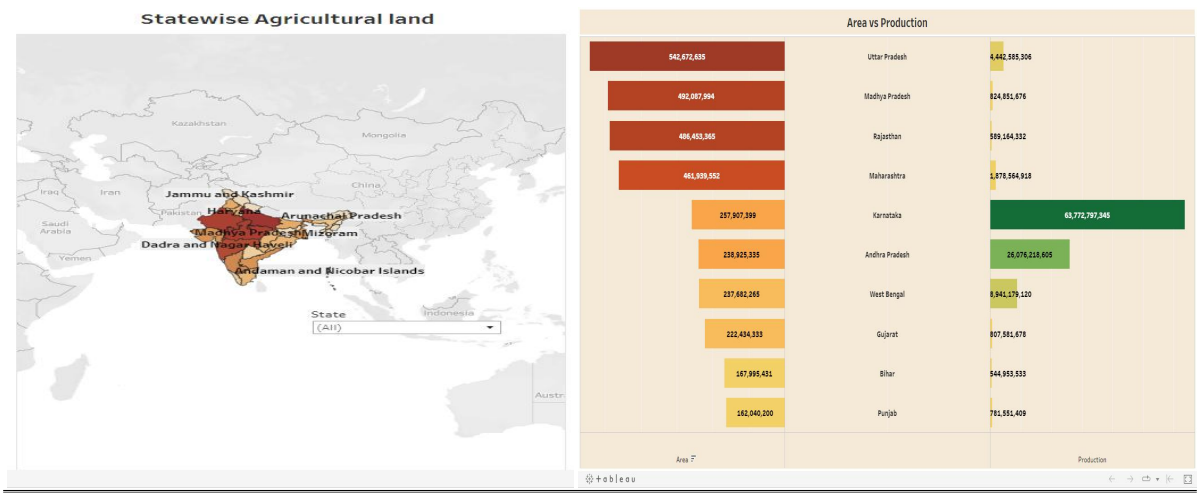
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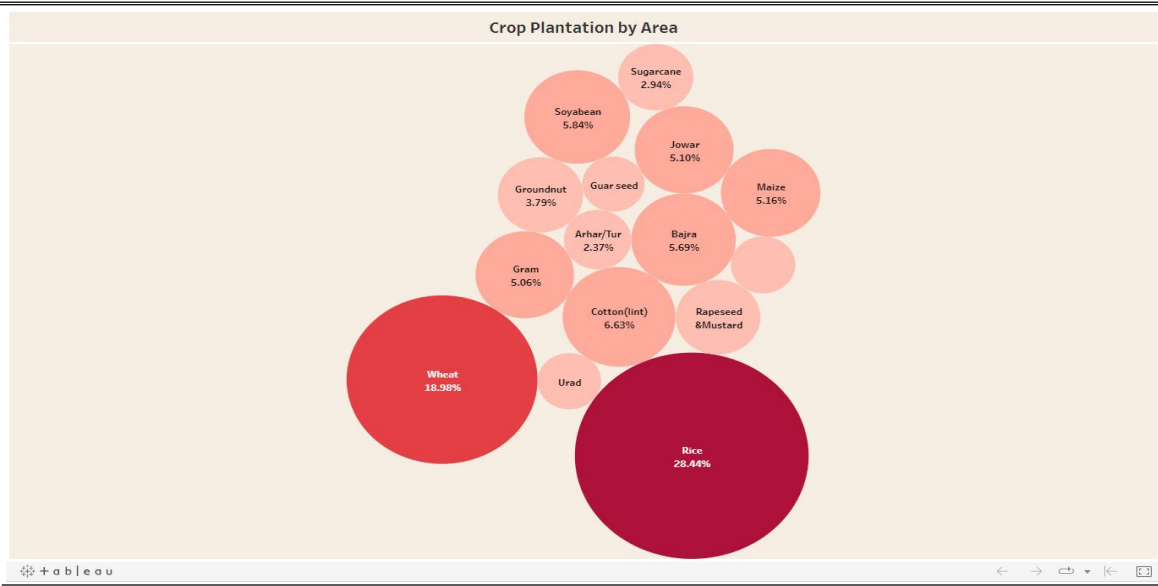
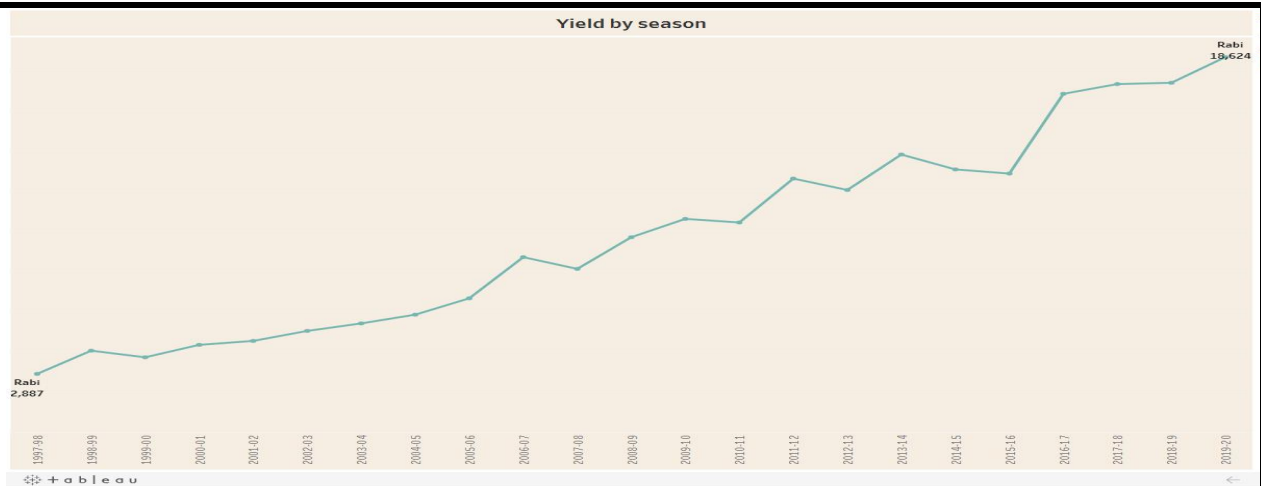
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3. Results





4. Advantages & Disadvantages

Advantages

- Measurement makes you look at the crop or field in detail and actually helps you to see things that otherwise you would miss at a quick glance.
- Assessing a crop with many thousands of components is very difficult and difficult to do objectively. Measurement forces objectivity. Without structured measurement, we tend to look at large or brightly coloured things and give them greater significance than small things.
- Measurement leads to numerical descriptions of the crop. It helps you determine not only that you have a problem but also that you have a problem that is big enough to fix or small enough to ignore.

Disadvantages

- Accurately estimating crop yields is never easy and is even more of a challenge
- Lack of professional and technical personnel
Because the application of information technology to design agriculture is relatively late and the application time is relatively short, there is a shortage of professional information technology talents in agricultural economic management.

5. Applications

As the competition in agriculture has been increasing day by day, business companies in the agricultural sector have started to implement predictive analytics in their operational area. It helps to identify upcoming issues and take steps to mitigate those risk factors in business.

6. Conclusion

The Indian economy is an agro-economy and depends highly on the agricultural sector. Despite just supporting the Indian Economy, the agricultural sector also supports the industrial sector and international trade in imports and exports.

7.Future Scope

There will be more of vertical and urban farming and there will also be efforts in long term to find new areas for production like barren deserts and seawater. Hydroponic farming, which is a soil-less, water-based farming operation, that may even be done in a tiny space is going to pick up the pace.