



**OFFICERS IAS ACADEMY®**  
IAS ACADEMY BY IAS OFFICERS

**PRELIMS HARVEST™**

**AGRICULTURE**

**OFFICERS  
IAS ACADEMY**



# AGRICULTURE

**ISO 9001:2015  
CERTIFIED ACADEMY**

**OFFICERS IAS ACADEMY**  
(IAS Academy by IAS Officers)

---

935, 6th Avenue, Aishwarya Colony, Anna Nagar, Chennai, Tamil Nadu 600040  
Contact: +91-9840816701, 044-40483555, +91-9677174226

## MESSAGE FROM THE DIRECTOR

### Dear Aspirant,

This book is dedicated to YOU, the untiring civil service aspirant who has the drive and commitment to persevere towards clearing this exam which is considered as one of the toughest exams in the world.

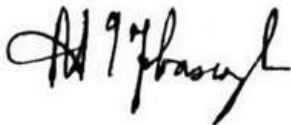
We congratulate you on choosing this book for “**Agriculture**”. Our attempt here is to simplify important concepts without losing the key points. Hence, we hope you will find this book useful in your civil services journey.

### About this book

This book is a distillation of the expertise of the faculty at Officers IAS academy, explained in simple and easy to understand language. What you get to study in this book has been painstakingly collated by our faculty through their years of teaching and mentoring thousands of aspirants.

A strong zeal from you to clear this exam combined with our coaching and textbook will, I am sure help you scale great heights.

I wish you the very best in the most important endeavour of your life.



R. A. Israel Jebasingh

(IAS, 2004 Batch All India Rank 59)

Director of Officers IAS Academy

## HOW TO USE THIS BOOK?

### **Hello Aspirant!**

There is a subtle difference between putting in effort and putting in the right & focussed effort. That difference could mean whether you get into the civil services or not!

Aspirants know that the first step to become a Civil Servant is to crack the Preliminary Exam (Prelims) conducted by the UPSC. At first glance, any UPSC Prelims question paper might give the impression that many of the questions asked were 'random', 'remote', 'unexpected', 'out of syllabus', 'from obscure areas' etc.,

But, upon careful consideration one can see that there are some hidden patterns present in the way how some of them were framed. We in the R&D of Officers IAS Academy, understand this.

Our R&D team consists of about 25 members, all of whom have appeared in multiple UPSC Mains & Interviews. This team of veterans spent a year, meticulously combing through the question papers of the past 26 years of UPSC preliminary exams to identify patterns, repetitions & outliers.

The team carefully isolated all such patterns, high-value topics from every subject and has prepared a 'hitlist'. Based on these insights we have prepared books, which we rightfully call as 'Prelims Harvest' books.

Please note: We do not advocate the use of these books as 'Standard' sources. However, instead of reading endless number of books for the UPSC preparation, aspirants can focus on the standard books (NCERTs, etc.,) for the foundational knowledge and then devote the rest of their time in studying the Officers IAS Academy's Prelims Harvest books.

So, please use the Prelims Harvest Books in conjunction with the primary sources (NCERTs, etc.,) and get the best value for your time invested in your UPSC preparation.

Thank you!

**R&D Team,**

Officers IAS Academy, Chennai.

# Contents

---

<b>Crops</b> .....	<b>1</b>
<b>Coffee</b> .....	<b>1</b>
<b>Tea</b> .....	<b>5</b>
<b>Rice</b> .....	<b>8</b>
<b>Wheat</b> .....	<b>12</b>
<b>Cotton</b> .....	<b>14</b>
<b>Jute</b> .....	<b>18</b>
<b>Sugarcane</b> .....	<b>21</b>
<b>Tobacco</b> .....	<b>25</b>
<b>Ragi</b> .....	<b>28</b>
<b>Barley</b> .....	<b>28</b>
<b>Millets</b> .....	<b>29</b>
<b>Groundnut</b> .....	<b>32</b>
<b>Oilseeds</b> .....	<b>33</b>
<b>Onion</b> .....	<b>35</b>
<b>Niger seeds (Guizotia abyssinica)</b> .....	<b>37</b>
<b>Important producers of crops</b> .....	<b>37</b>
<b>Gram</b> .....	<b>37</b>
<b>Black pepper</b> .....	<b>40</b>
<b>Pineapple</b> .....	<b>41</b>
<b>Flax</b> .....	<b>41</b>
<b>Arjun and Sonalika</b> .....	<b>42</b>
<b>India's ranking</b> .....	<b>42</b>
<b>India's rank in fruit production</b> .....	<b>42</b>
<b>Horticultural sector in India</b> .....	<b>44</b>

India's rank in Tobacco export .....	45
India's rank in Sugar production .....	46
India's position in Livestock population .....	47
<b>Kharif crop</b> .....	<b>49</b>
Maize .....	49
<b>Sericulture</b> .....	<b>52</b>
Silk .....	52
<b>Crops used as pulse, fodder and green manure</b> .....	<b>57</b>
Cow pea .....	57
Green gram .....	57
Pigeon pea .....	57
<b>Predominant rain- fed crops</b> .....	<b>57</b>
Groundnut .....	57
Millet- Pearl millet .....	58
<b>Regions well known for its production</b> .....	<b>59</b>
Kinnaur .....	59
Mewat .....	59
Coromandel .....	59
Mandya and Chikmagalur .....	59
<b>STATISTICS</b> .....	<b>60</b>
Share of crops in gross cropped area .....	60
Net Sown Area .....	60
Decreasing order of Production .....	61
Which crop's international trade is low in the context of total production? .....	62
Highest acreage under Jowar .....	62
Largest area of cultivable wastelands .....	62
Items which have contributed to the largest Agricultural exports? .....	63
Kharif and Rabi crops production comparison .....	65

Majority share in pulses production .....	65
<b>Agricultural practices/initiatives .....</b>	<b>66</b>
Organic farming- eco-friendly agricultural practice .....	66
Sikkim- India's first fully organic state .....	69
Soil Conservation Practices .....	69
Effects of salinization on irrigated land .....	72
Mixed farming- rearing of animals and cultivation of crops together .....	73
Contour bunding is used in which area and for what purpose? .....	76
Integrated watershed development programme (benefits) .....	78
Vegetative propagation of plants .....	78
Seed village concept .....	80
Impact of excessive use of nitrogenous fertilisers .....	81
Agri-markets are regulated under Agricultural Produce Market Committee enacted by states .....	83
Agreement on the Application of sanitary and Phyto-sanitary measures ----	85
Globally Important Agricultural Heritage Systems .....	86
Soil health card scheme.....	90
National Agriculture Market .....	91
Water conservation practices.....	91
Conservation Agriculture .....	92
Fertigation.....	93
Bio-char Farming .....	93
Difference between Permaculture and Chemical Farming.....	94
Terminator Seed Technology .....	94
Minimum Support prices/ Fair remunerative prices.....	94
Fair remunerative prices.....	95
National Food Security Mission.....	95
Micro-irrigation.....	96

<b>Advantages of Drip Irrigation</b> -----	<b>96</b>
<b>Use of Neem-coated Urea in Agriculture</b> -----	<b>97</b>
<b>Pradhan Mantri Fasal Bima Yojana</b> -----	<b>97</b>
<b>APEDA</b> -----	<b>98</b>
<b>Small Farmers Large Field (SFLF)</b> -----	<b>98</b>
<b>OTHERS</b> -----	<b>99</b>
<b>Genetic engineering</b> -----	<b>99</b>
<b>High density of population in Nile Valley and Islands of Java</b> -----	<b>102</b>
<b>Dalbergia species</b> -----	<b>102</b>
<b>Bhoodan Movement</b> -----	<b>102</b>
<b>Neem Oil</b> -----	<b>102</b>
<b>Ministries related</b> -----	<b>103</b>
<b>Technological progress/change</b> -----	<b>103</b>
<b>Genome sequencing</b> -----	<b>104</b>
<b>In India, rural incomes are generally lower than urban incomes</b> -----	<b>105</b>
<b>Sea buckthorn</b> -----	<b>105</b>
<b>The Standard Mark of Bureau of Indian Standards (BIS) is mandatory for automotive tyres and tubes</b> -----	<b>105</b>
<b>AGMARK is issued by?</b> -----	<b>106</b>
<b>Plant Varieties are not patented in India</b> -----	<b>106</b>
<b>The Food Corporation of India</b> -----	<b>106</b>
<b>Fertiliser</b> -----	<b>109</b>
<b>Public investment</b> -----	<b>109</b>
<b>Agriculture credit</b> -----	<b>110</b>
<b>District Central Cooperative Banks</b> -----	<b>110</b>



## Crops

### Coffee



#### The beginning

- Coffee was introduced to India during the late seventeenth century.
- The story goes that an Indian pilgrim to Mecca – known as Baba Budan – smuggled seven beans back to India from Yemen in 1670 (it was illegal to take coffee seeds out of Arabia at the time) and planted them in the Chandragiri hills of Karnataka.
- The Dutch (who occupied much of India throughout the 17<sup>th</sup> century) helped spread the cultivation of coffee across the country.
- With the arrival of the British in the mid-nineteenth century, commercial coffee farming fully flourished.

#### Conditions ideal for growth

- **Climate** - The hot and humid climate
- **Temperature** - between 15°C and 28 °C.
- **Rainfall** - 150 to 250 cm
- Dry weather is necessary at the time of ripening of the berries.
- Grown on hill slopes at elevations from 600 to 1,600 metres above sea level.
- Well drained, loams containing a good deal of humus and minerals like iron and calcium are ideal for coffee cultivation.

**Conditions adverse for growth**

- Frost and snowfall.
- High temperature above 30°C and strong sunshine. Hence, grown in shade.
- Prolonged drought.
- Stagnant water (grown on hill slopes at elevations from 600 to 1,600 metres).

**Important types**

1. Arabica (49% of area)
2. Robusta (51% of area)

Factors	Arabica	Robusta
Soils	Deep, fertile, rich in organic matter, well drained and slightly acidic (Ph6.0-6.5)	Same as Arabica
Slopes	Gentle to moderate slopes	Gentle slopes to fairly level fields
Elevation	1000-1500m	500-1000m
Aspect	North, East and North- East aspects	Same as Arabica
Temperature	15 0 C – 25 0 C ; cool, equable	200 C – 300 C; hot, humid
Relative humidity	70-80%	80-90%
Annual rainfall	1600-2500 mm	1000-2000 mm
Blossom showers	March- April (25-40mm)	February – March (25-40 mm)
Backing showers	April-May (50-75 mm) well distributed	March-April (50-75 mm) well distributed
Harvest	November to January	December to February

**GI tags for coffee**

- Coffee board of India has obtained GI tags for unique regional coffee varieties.
- This helps in promoting their market value and reach across the world.

- Of this, 3 varieties are from Karnataka.
- 1 each from Kerala and Andhra Pradesh.
  - Coorg Arabica Coffee,
  - Wayanad Robusta Coffee,
  - Chikmagalur Arabica Coffee,
  - Araku Valley Arabica Coffee,
  - Bababudangiri Arabica Coffee.

### Propagation of Coffee

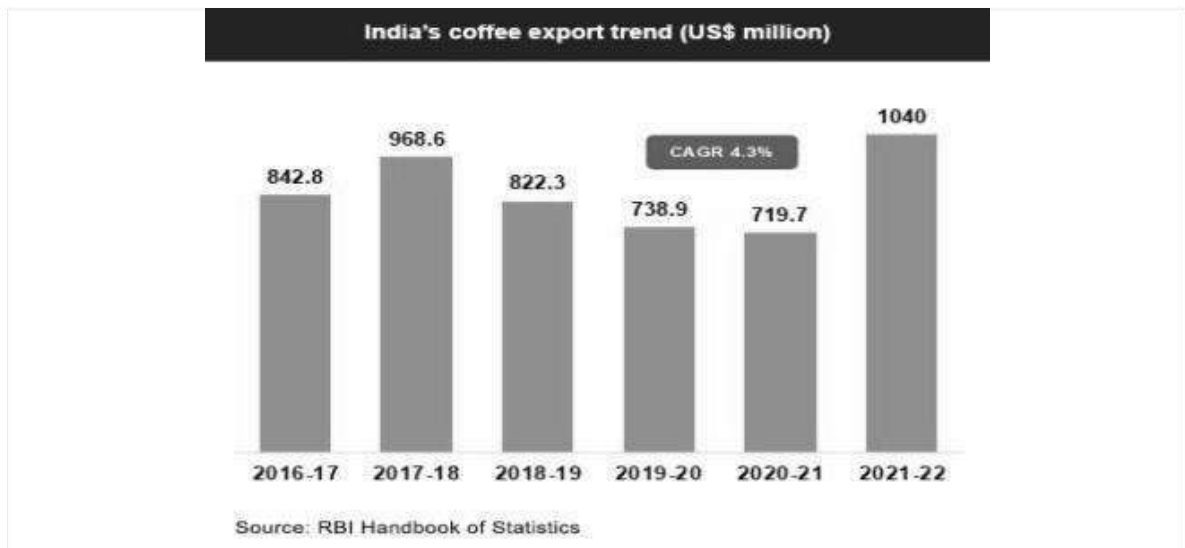
- Coffee is propagated through,
  - Seeds,
  - Budding,
  - Grafting,
  - Cutting and
  - Tissue culture.

### Area of cultivation

Region Name	States or Regions Covered
North-Eastern Region	This region comprises Assam and Northeastern states such as Mizoram, Manipur, Meghalaya, Nagaland, Arunachal Pradesh and Tripura.
Eastern Region	This region comprises only Odisha and it is a non-traditional coffee growing region.
Southern Region	This region comprises Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. This is the major coffee growing zone in India accounting for more than 95% of total coffee production.

### Export trends

- According to the Food and Agriculture Organization (FAO) statistics, India is the **eighth largest exporter of coffee** by volume.
- India sees 42% rise in exports in the FY 2021-22 over the previous year.
- **Karnataka** (70%) the largest coffee producing state.
- Followed by Kerala, Tamil Nadu, Andhra Pradesh, Orissa and North Eastern region.



### Coffee Board of India

- The **Coffee Board of India**, statutory organisation constituted under Coffee Act VII of 1942 under the administrative control of the **Ministry of Commerce and Industry**, Government of India.
- The Board comprises 33 Members including the Chairperson.
- **Headquarters: Bengaluru.**
- Functions of the board are,
  - To help improve quality and presence of Indian coffee through various research, education endeavours and to provide financial assistance.
  - To regulate the coffee sector.
  - To promote sales and consumption in the domestic and international markets.

### Diseases

- Leaf rust, caused - fungus *Hemileia vastatrix*, (damage the plantations of Arabica)
- Coffee berry disease - fungus *Colletotrichum coffeanum*, (which also attacks the Arabica).
- Robusta appears to be resistant, or only slightly susceptible, to these scourges.
- Berry borer (*Stephanoderes hamjei*), which damages the seeds of both Arabica and Robusta.



### Challenges in the sector

- Coffee plantations in Karnataka, Kerala and Tamil Nadu have suffered high losses due to heavy rains between July and September this year.
- Already weighed down by the high cost of inputs and production as well as labour shortage, the industry is now also affected by changes in climate patterns.

### Tea

- Tea is a beverage made from the *Camellia sinensis* plant.
- It is the world's most consumed drink, after water.



### Origin

- Commercial cultivation of tea started in India from the British era.
- In May 1838 the first Indian tea from Assam was sent to England for public sale.

### Conditions for Growth

- **Climate-** Tea is a tropical and sub-tropical plant and grows well in hot and humid climates.
- **Temperature-** The ideal temperature for growth is 20°-30°C.
- **Rainfall-** It requires 150-300 cm annual rainfall.
- **Soil-** Laterite is suitable for tea cultivation with slightly acidic (without calcium) and porous sub-soil which permits a free percolation of water.

### Conditions adverse for growth

- Temperature above 35°C and below 10°C is harmful.

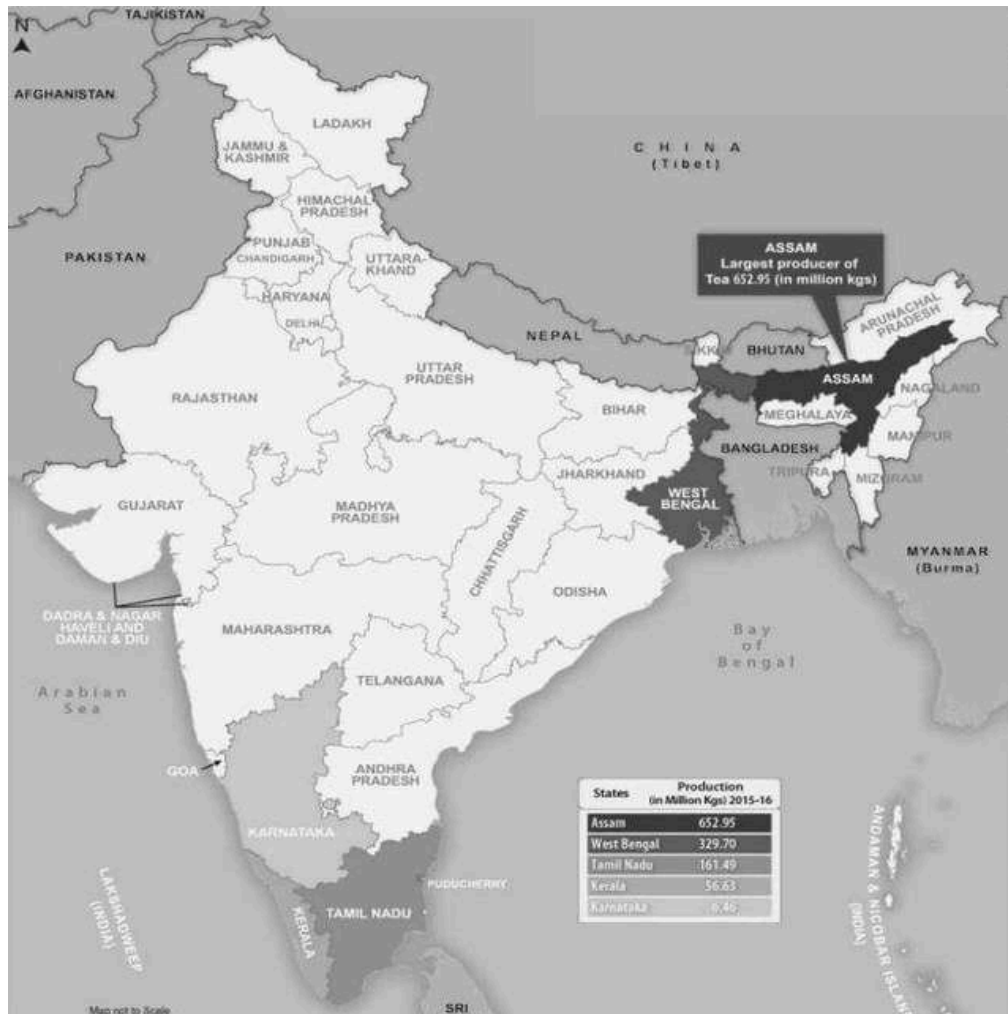
**Propagation of Tea**

- Tea plants are propagated from,
  - Seeds- Planted at a depth of 1.5–2.5 cm.
  - Root cuttings- Planted straight or slightly slanted so the leaf does not touch the soil. It's then transplanted to the field about 12 months later once they are rooted.

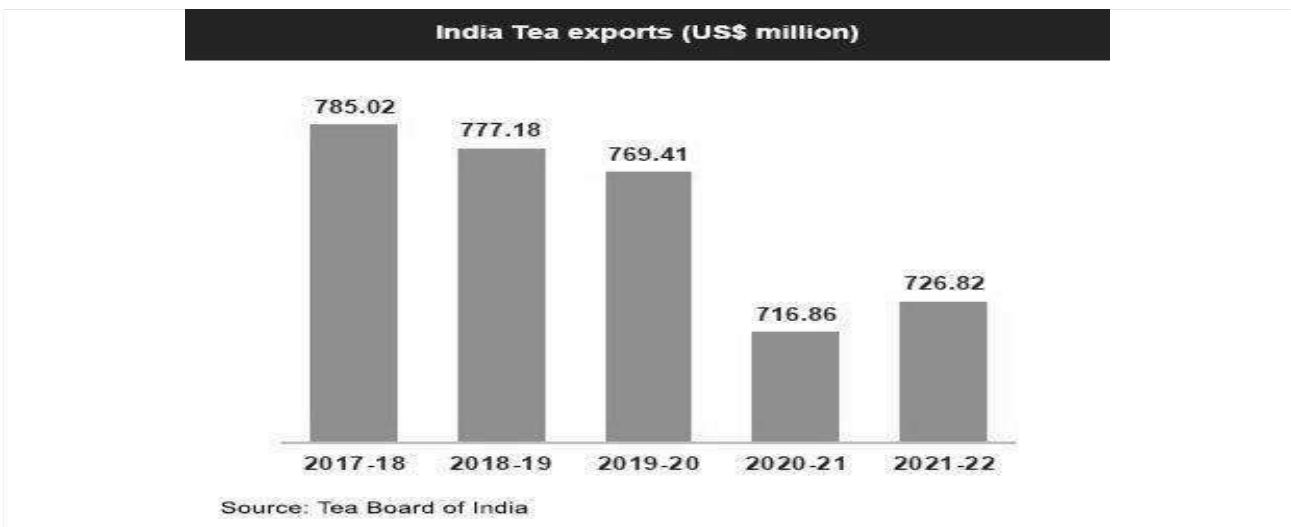
**Production in India**

- India is the second largest producer of tea in the world.
- About **83%** of the country's annual tea production comes from **Northern India.**

<b>Region</b>	<b>States Covered</b>
North- Eastern Region	<b>Assam</b> <ul style="list-style-type: none"><li>• It contributes around 55%</li><li>• Tea growing regions-<ul style="list-style-type: none"><li>○ Assam Valley,</li><li>○ Cachar.</li></ul></li></ul>
Eastern Region	<b>West Bengal</b> <ul style="list-style-type: none"><li>• It contributes around 26%</li><li>• Tea growing regions-<ul style="list-style-type: none"><li>○ Dooars,</li><li>○ Terai,</li><li>○ Darjeeling.</li></ul></li></ul>
Southern Region	<ul style="list-style-type: none"><li>• The region contributes around 17% of tea production in total.</li><li>• The states include,<ul style="list-style-type: none"><li>○ <b>Tamil Nadu,</b></li><li>○ <b>Kerala,</b></li><li>○ <b>Karnataka.</b></li></ul></li></ul>



### Export trends



### **Tea Board of India**

- Tea Board of India was set up in the year of 1954, for the development of tea industry in India.
- It's a statutory body.
- It was constituted under section 4 of the Tea Act 1953 on 1st April 1954.
- It functions under the Ministry of Commerce.
- The administrative head office is located in Kolkata, West Bengal.
- The board also has other overseas offices located at London in the United Kingdom, Moscow in Russia and Dubai in the United Arab Emirates.
- It's entrusted to undertake the various promotional measures to boost up export of Indian tea.

### **Functions**

- It's a regulatory body, exerts control over the producers, manufacturers, exporters.
- Responsibility of the board are,
  - Increasing production and productivity,
  - Improving the quality of tea,
  - Market promotion,
  - Welfare measures for plantation workers and
  - Supporting Research and Development.

### **Government initiatives**

- Promotion for packaged Tea of Indian origin, a scheme started by the Tea Board of India.
- Launched in November 2021, for the period of 2021-26.
- Objective- to enhance the productivity and quality of the production in India

### **Rice**

- Rice is the most popular staple meal consumed by more than half of the world's population, primarily in Asia and Africa.
- Primarily, grown in rain-fed areas with hot and humid climates

### **Conditions ideal for growth**

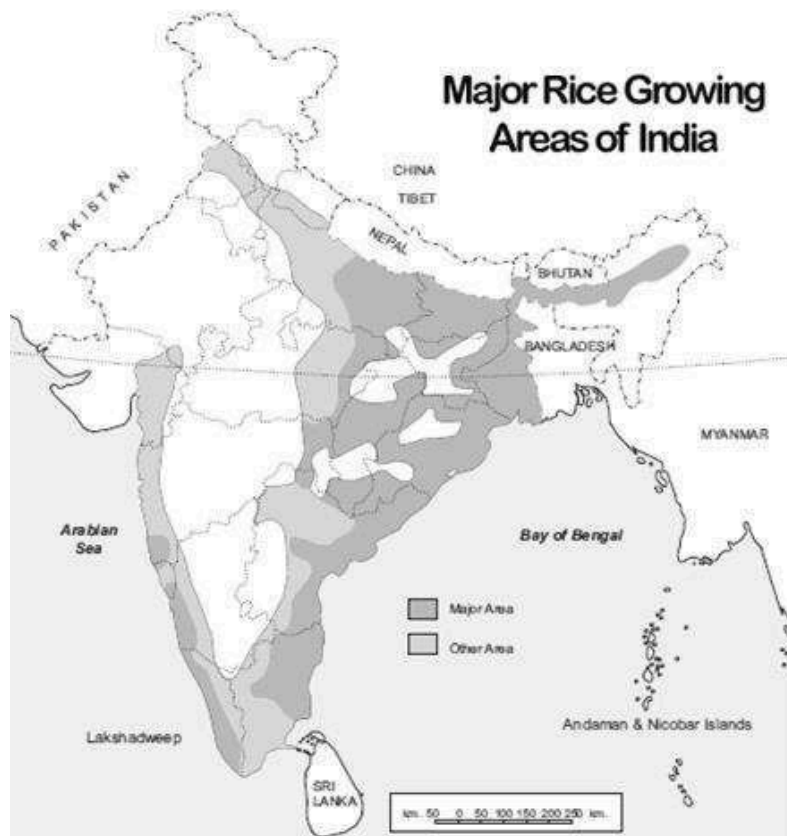
- Rice needs high humidity, prolonged sunshine and an assured supply of water.
- **Soil-** Good water retention capacity with high amounts of clay and organic matter are ideal for rice cultivation.



- **Temperature-** Average temperature throughout the period of growth ranges from 21-37°C. And, can tolerate up to 40-42°C.
- **Rainfall-** High humidity with annual rainfall above 100 cm.

### Rice production in India

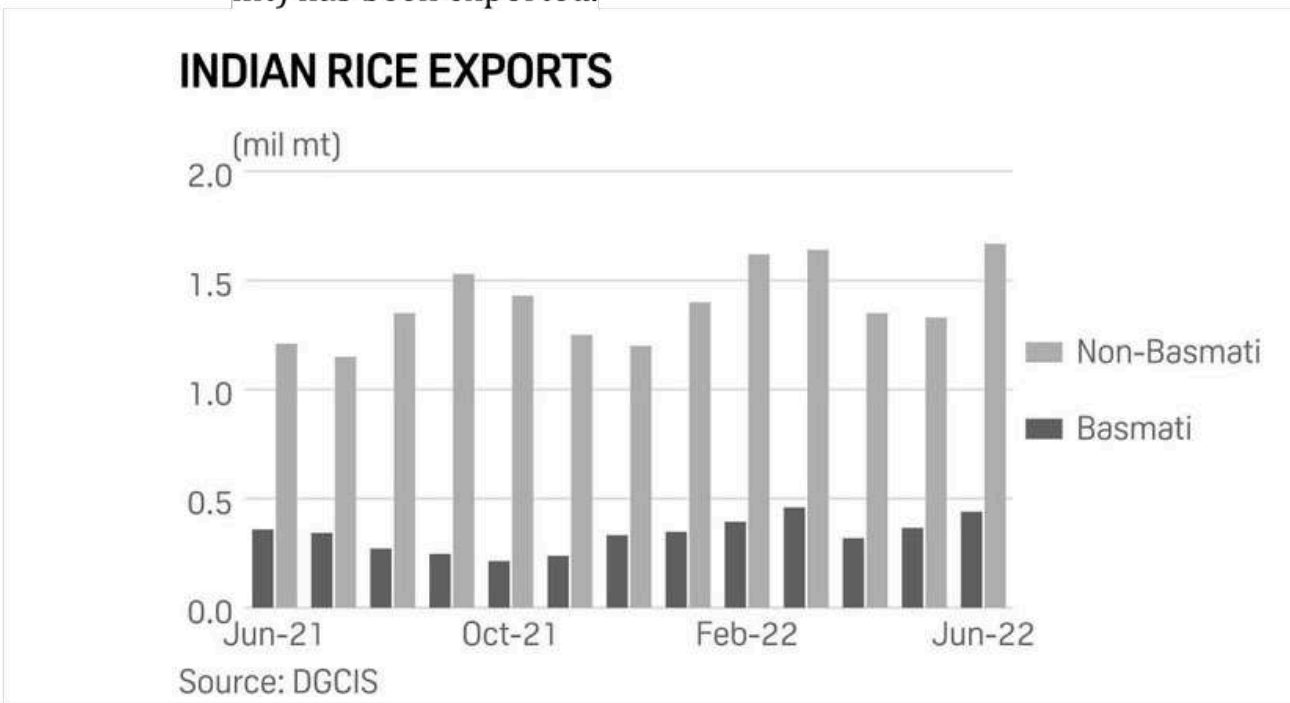
- At the end of fiscal year 2022, India had over 46 million hectares of land area for cultivation of rice.
- This area had been fluctuating over the past three years.



- Rice cultivation in India extends from 8 to 35°N latitude and from sea level to as high as 3000 metres.
- It's a **Kharif Crop**.
- It is grown in the plains of north and north-eastern India, coastal areas and the deltaic regions.
  - East coast of India produces more rice than the west coast. Because of the suitable soil and climatic conditions.
  - **West Bengal, Orissa, Andhra Pradesh, Tamil Nadu, Assam** states are producing more than half of the Rice in delta regions.

**Export**

- India has been the **world's largest rice exporter** in the last decade.
- It accounts for around 40% of global rice trade.
- India exports to more than 150 countries.
- Export earnings stood at \$ 9.6 billion in 2021-22.
  - In the current fiscal (April-Sept), \$ 5.4 billion worth of rice (11 mt) has been exported.



**Rice varieties**

- Three varieties of rice are cultivated in Assam, West Bengal and Odisha namely,
  - Aus, Aman and Boro.
- Rice usually requires an area of approximately 2500 m above mean sea level.
- But, Kerala has achieved by cultivating rice by growing below sea level in Kuttanad. This is known as Pokkali paddy.
  - Pokkali is a unique saline tolerant rice variety.
  - It's cultivated in an organic way in the water-logged coastal regions of Alappuzha, Thrissur and Ernakulam districts.
  - The organically-grown Pokkali is famed for its peculiar taste and its high protein content.

**Environmental impact of rice cultivation**

- Release of GHG is significant in the paddy fields.
- Paddy fields are the most important anthropogenic source of nitrous oxide and methane.
- The paddy fields require standing water which blocks oxygen in the soil thereby leading to the emission of Methane.
- Around 20% of methane comes from paddy fields which is approximately 25 times more than CO<sub>2</sub>.

**Alternatives**

- Rice- fish farming.
- **Direct seeding of rice-**
  - It is a crop establishment system wherein rice seeds are sown directly into the field, as opposed to the traditional method of growing seedlings in a nursery, then transplanting into flooded fields.
- **Adopting zero- tillage mechanism-**
  - It is the process where the crop seed will be sown through drillers without prior land preparation and disturbing the soil where previous crop stubbles are present.
  - Zero tillage not only reduces the cost of cultivation, but also reduces the soil erosion, crop duration and irrigation requirement and weed effect.
  - Adopting zero-tillage before cultivation has been considered as a means of enhancing carbon sequestration in soils.
  - It's also called No Tillage or Nil Tillage.
- **System of Rice Intensification**
  - It's a method of cultivating rice to increase the yield along with reducing the need for water.
  - It was first developed in Madagascar during 1980 and has been practising in several countries since then, including India.
  - In Andhra Pradesh, it was experimented in all the 22 districts during 2003 Kharif with encouraging results.
- **Happy Seeder**
  - It is a tractor-operated machine developed by the Punjab Agriculture University in collaboration with Australian Centre for International Agricultural Research (ACIAR).
  - It's intended for in-situ management of paddy stubble (straw).

- It is a no-till planter, which sows seeds in rows directly without any prior seedbed preparation.
- Efficient water, fertilizer and soil management.
- Increased farmer awareness and education.

## **Wheat**

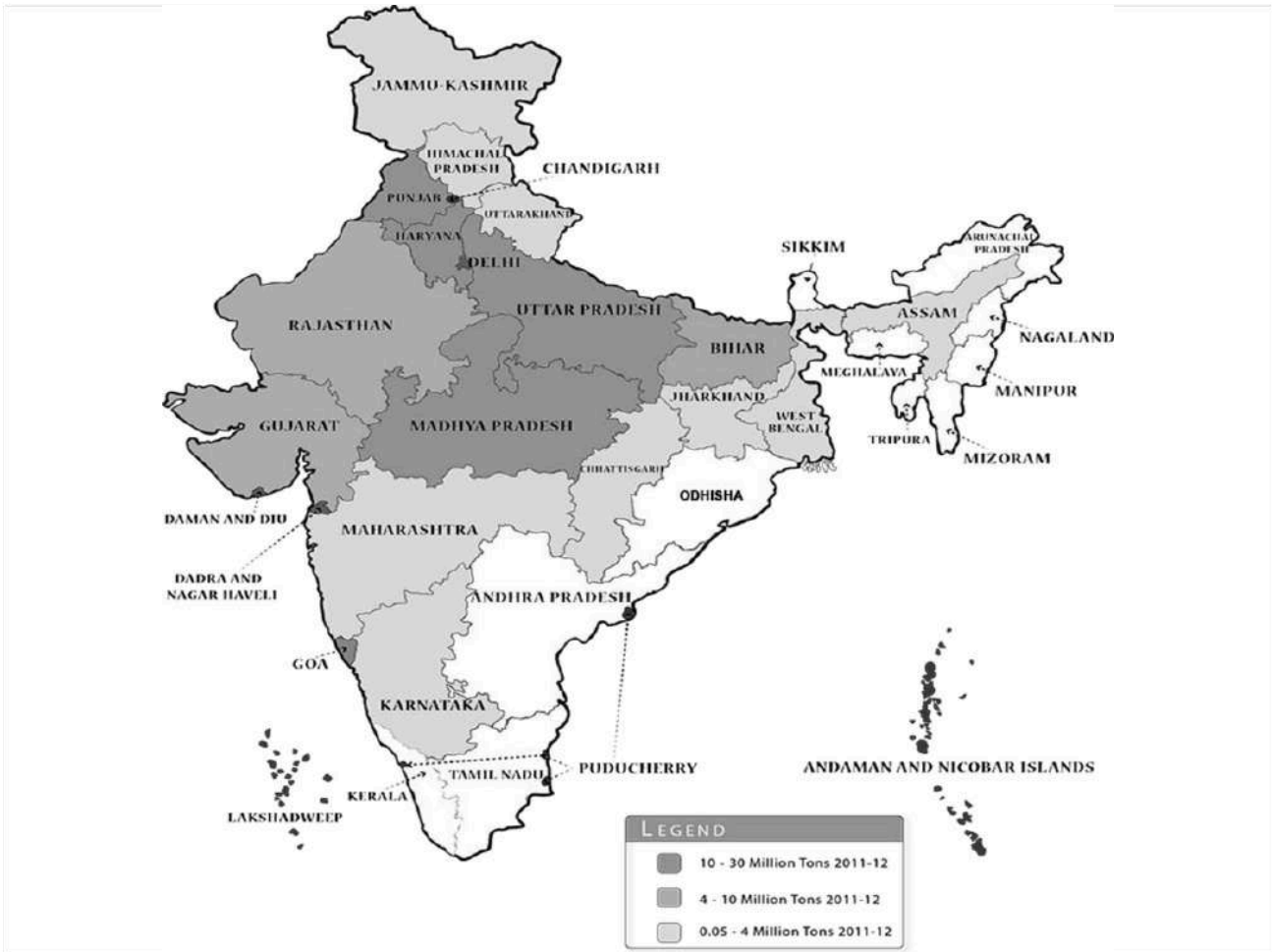
- Wheat is a grass widely cultivated for its seed, a cereal grain that is a worldwide staple food.
- It's the second most important cereal crop in India after rice.

### **Conditions ideal for growth**

- Wheat is mainly a winter crop, which requires a cool growing season and bright sunshine at the time of ripening.
- **Soil-** Well drained fertile loamy and clayey loamy, with moderate water holding capacity.
  - Ganga- Satluj plains,
  - Black soil region of the Deccan.
- **Temperature-** Between 10-15°C (Sowing time) and 21-26°C (Ripening & Harvesting) with bright sunlight.
- **Rainfall:** Around 75-100 cm.

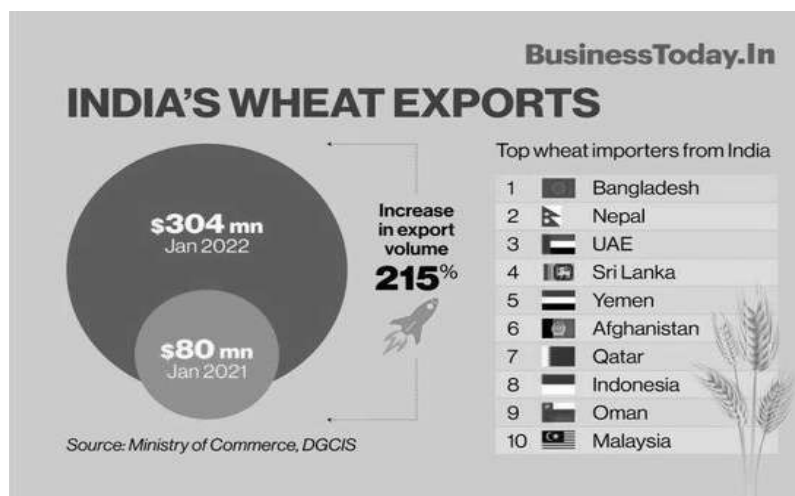
### **Wheat production in India**

- At the end of fiscal year 2022, India had approximately 30.5 million hectares of land area for cultivation of wheat.
- Success of the Green Revolution contributed to the growth of Rabi crops, especially wheat.
- Some of the Government initiatives to support wheat cultivation are,
  - Macro Management Mode of Agriculture,
  - National Food Security Mission,
  - Rashtriya Krishi Vikas Yojana.
- The top wheat producing states in India are,
  - 1. Uttar Pradesh**
  - 2. Punjab**
  - 3. Haryana**
  - 4. Madhya Pradesh**
  - 5. Rajasthan**
  - 6. Bihar**
  - 7. Gujarat.**



### Export Trends

- India is the **second largest producer** of Wheat in the world after China.
- It accounts for about 12% share in total world Wheat production.





## **Cotton**



- India is the original home of the cotton plant.
- It's an important fibre crop.
- India is considered to be the only country to grow all 4 species of cotton in the world.

### **Conditions ideal for growth**

- **Climate-** Cotton is a tropical or subtropical crop grown in semi-arid areas (Deccan Plateau).
- It requires at least 210 frost-free days.
- **Rainfall-** 50 to 100 cm is preferred.
- **Temperature-** 25-35°C as it requires high temperature and bright sunshine
- **Soil-** Black cotton soil is preferred (well-drained soil capable of retaining moisture).
- High rainfall during its sprouting and dry and sunny conditions during the ripening and opening of flowers is the favourable condition for a good yield.

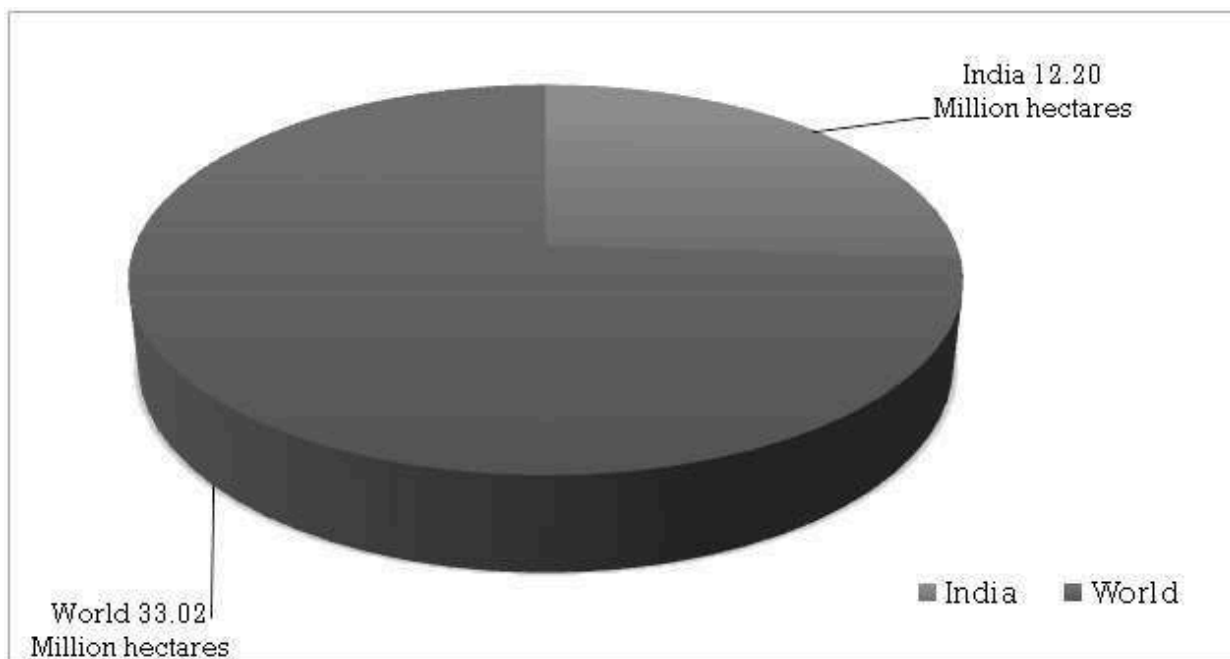
### **Conditions adverse for growth**

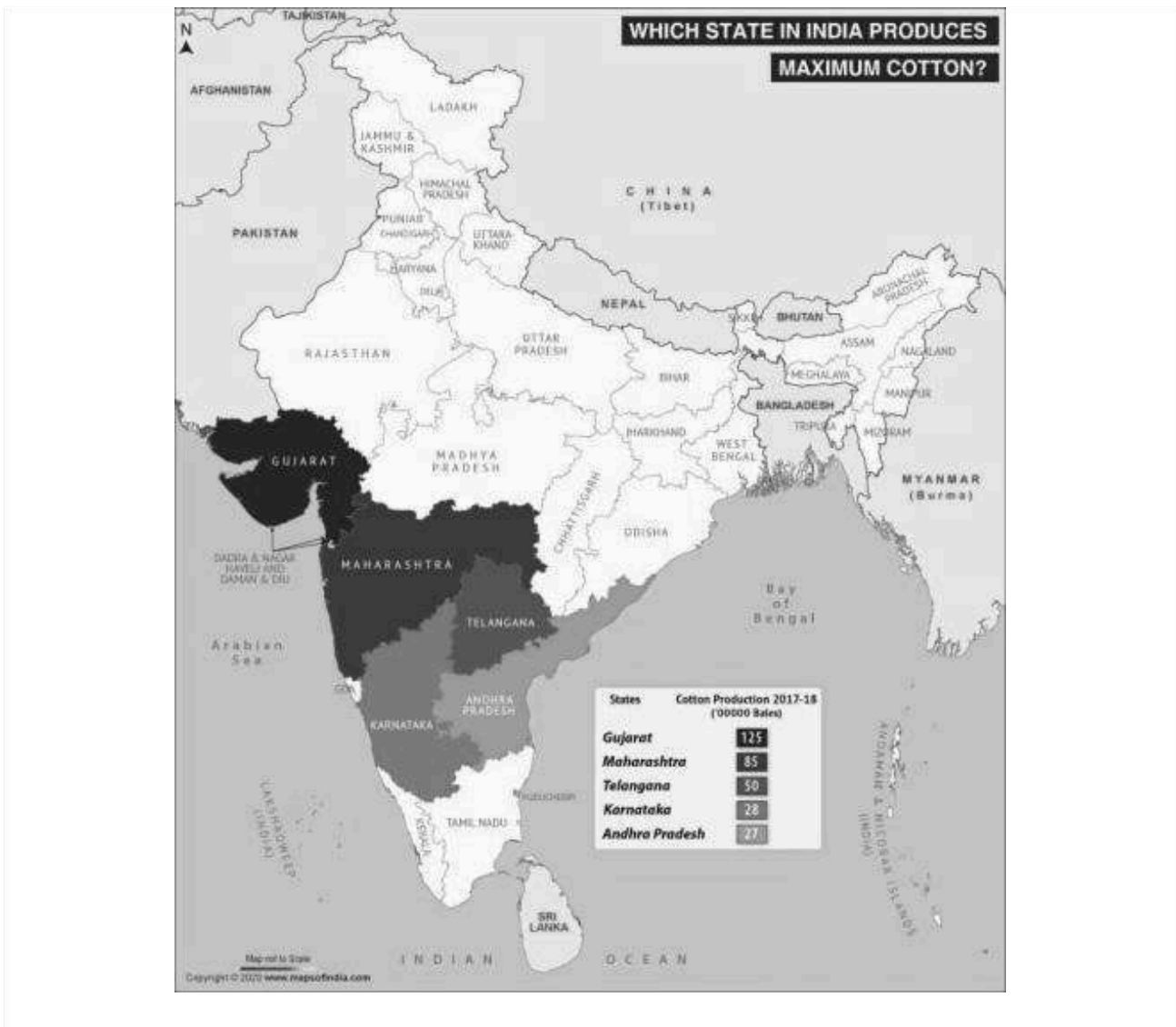
- Moist weather during the ripening time is very harmful for pest attacks, thereby degrading the quality of cotton plants.

### **Cotton production in India**

- The major cotton producing states, which contributes around 65% cotton production are,
  - Gujarat,
  - Maharashtra,

- Telangana and
- Andhra Pradesh.
- It is collectively known as the **Cotton Basket of India**.
- India is the largest producer of cotton in the world accounting for about 22% of the world cotton production.
- Cotton Season in India is October to September.
- It's a Kharif crop.
- India has the largest area under cotton cultivation, which is about 37% of the world area under cotton cultivation between 10.5 million hectares to 12.20 million hectares.
- Now traditional cotton has been replaced by Bt- cotton.





**Government initiatives**

- Amended Technology Upgradation Fund Scheme (ATUFS).
  - It is a credit-linked subsidy scheme for the textile sector.
  - It aims at technological upgradation of the textile sector by means of subsidies.
- Under the Market Access Initiative (MAI) Scheme, the government offers rebates on state and central taxes and levies that are integrated into production, as well as aid to exporters.
- The Government of India has launched Mega Investment Textiles Parks (MITRA) during the Union Budget for 2021-22, under which seven textile parks will be established over a period of three years.



### Cotton Corporation of India

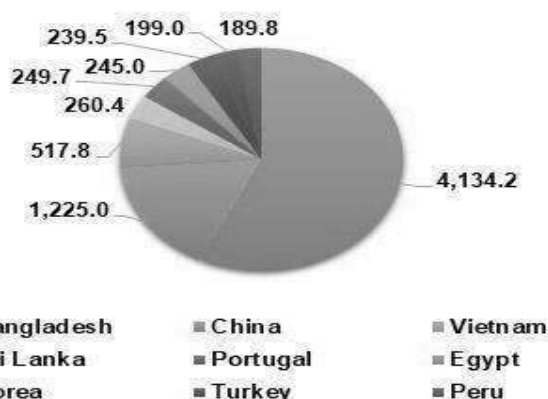
- Cotton Corporation of India (CCI) was established in 1970 by the Ministry of Textiles, as a PSU under the Companies Act of 1956.
- Its headquarters is located at CBD Belapur, Navi Mumbai, Maharashtra.

### Roles and Functions

- Imports and purchase of raw cotton for providing adequate price support to cultivators.
- To undertake price support operations, whenever the market price falls below the MSP.
- To fulfil the raw material requirement of the domestic industries during lean season.
- It also undertakes commercial purchase operations.

### Export trend

Country-wise Cotton exports (2021-22\*) (US\$ million)



Source: Ministry of Commerce & Industry; \*April 2021-February 2022,  
\*\*October 2021-April 2022

### Four species of cotton cultivated in India

- India is the **only country in the world to grow all 4 species of cotton** with the available favourable conditions.
  - Gossypium Hirsutum (American Upland cotton)
  - Gossypium Barbadense (Egyptian cotton)
  - Gossypium Arboreum (Asian cotton)
  - Gossypium Herbaceum (Asian cotton)
- The cotton seeds are used as fodder for cattle.

### **Bt-Cotton**

- It's a transgenic crop.
- Genetically modified by the insertion of one or more genes from *Bacillus thuringiensis*, a common soil bacterium.

### **The Need**

- To protect the crop from disease caused by Pests, mainly the Boll worm.

### **Impacts of Bt- cotton:**

- Bt- cotton was mainly brought into existence to neutralise the ill effects of Pink Bollworm.
- But, it's showing resistance to certain other insects like whiteflies as well is a cause of concern.
- Excessive insecticide usage.

### **Some other Environmental Impacts of Cotton Cultivation:**

- Cotton cultivation made a whole sea disappear- Aral Sea.
- Dust from cotton cultivation causes health problems.
- Virtual water consumption for cotton clothing.
  - Virtual water refers to the water contained in fiber, food (any agricultural product), and non-food commodities such as energy.
- Virtual water usage is highest in China, India and Pakistan.
- Cotton is considered to be the most heavily sprayed crop with chemical fertilisers in the world.
- This causes groundwater pollution and soil degradation and other environmental impacts.

### **Jute**

- Known as the 'Golden Fibre' Jute is an important natural fibre crop in India next to cotton.
- Raw jute plays an important role in the country's economy.
- Jute is an annual crop taking about **120 days** (April/May-July/August) to grow.



### **Conditions ideal for growth**

- **Climate-** Jute is a crop of humid tropical climates
- **Rainfall-**It thrives well in areas with well distributed rainfall of 250 cm.
- **Temperature-** Maximum and Minimum Temperature of 34°C and 15°C
- **Soil-** Can be grown on all kinds of soils from clay to sandy loam, but loamy alluvials are best suited.

### **Conditions adverse for growth**

- Temperatures below 15°C and above 43°C during growth are not suitable.
- Water logging is not suitable for its cultivation.
- Laterite and gravel soils are not suitable for cultivation.

### **Governing body**

#### **National Jute Board**

- The National Jute Board (NJB) is the apex body for promotion of Indian Jute. Set up under National Jute Board Act, 2008.
- **Headquarters- Kolkata.**
- Objective of the board is to,
  - Provide better marketing of jute products.
  - Envisage to implement programmes that facilitate growth of the sector.

#### **Jute Product Development & Export Promotion Council (JPDEPC)**

- JPDEPC is an Industry-led body, created under the Companies Act of 1956.
- Objectives of the body remains,
  - Act as a registration authority for exporters,

- Arrange trade fairs, analyse the buyer-seller market,
- To advocate and push the initiatives which take the export of jute and its products to a sustainable higher level.

### **Diseases**

- Some of the diseases of Jute are,
  - Stem rot of jute
  - Anthracnose of jute
  - Black band of jute
  - Soft rot of jute

### **Jute producing states in India**

- Jute cultivation is mainly concentrated in eastern and north eastern India.
- Jute is an important crop of barak Valley. Because,
  - Barak Valley has a temperature that varies 25° to 30°C.
  - It has a humid environment with rainfall varying from 100 to 200cm.
  - The presence of the Barak river, adds to the availability of loamy soil.
- India is the largest producer of jute and the second-largest exporter in the world.
- The annual production of jute in India is around 1.968 million tonnes.





**FOR FULL BOOK,**

**KINDLY CONTACT : +91 96771 74226**



**OFFICERS IAS ACADEMY**

**No: 935, 6th Avenue, Anna nagar, Chennai - 600040**

**Contact : +91 9677174226 | 044 - 40483555**

**[www.officersiasacademy.com](http://www.officersiasacademy.com)**