

Preface

This is our 20th edition of Yojana Gist and 11th edition of Kurukshetra Gist, released for the month of November, 2016. It is increasingly finding a place in the questions of both UPSC Prelims and Mains and therefore, we've come up with this initiative to equip you with knowledge that'll help you in your preparation for the CSE.

Every Issue deals with a single topic comprehensively sharing views from a wide spectrum ranging from academicians to policy makers to scholars. The magazine is essential to build an in-depth understanding of various socio-economic issues.

From the exam point of view, however, not all articles are important. Some go into scholarly depths and others discuss agendas that are not relevant for your preparation. Added to this is the difficulty of going through a large volume of information, facts and analysis to finally extract their essence that may be useful for the exam.

We are not discouraging from reading the magazine itself. So, do not take this as a document which you take read, remember and reproduce in the examination. Its only purpose is to equip you with the right understanding. But, if you do not have enough time to go through the magazines, you can rely on the content provided here for it sums up the most essential points from all the articles.

You need not put hours and hours in reading and making its notes in pages. We believe, a smart study, rather than hard study, can improve your preparation levels.

Think, learn, practice and keep improving! That is the key to success 😊

Pulses and oilseeds in India

In May 2015, PM urged the farmers to work hard in mission mode for achieving self-sufficiency in pulses by 2022.

- There is serious concern over widespread protein malnutrition which can be eradicated by regular and adequate supply of pulses to poor families.
- For edible oils, there is a need to fix up a target for cut off imports so that farmers can be better paid for oilseeds crops.

Steps were taken to make both these crops more remunerative to farmers mainly by increasing minimum support price and extending support of inputs to farmers.

India enjoys self-sufficiency in foodgrain production and sustainable food security despite burgeoning population and various climatic reasons.

But there is no room for complacency because India is still facing severe challenges in pulses and oilseeds sector.

Poor productivity and low gross production compel India to resort to frequent imports for meeting the domestic demand of pulses and oilseeds.

The widening gap between demand and supply often leads to skyrocketing of prices in domestic market.



PULSES

Production

India is the largest producer of pulses in the world with approximately 25% of the total 80 million tonnes of production.

It also enjoys the distinction of being the largest consumer with nearly 28% of consumption in India.

Recently, India was also entitled as number one importer due to frequent and large imports.

Demand and Supply

According to Vision 2050 of ICAR, the present production of pulses is around 19 million tonnes which falls short by 2 million tonnes of the domestic demand which is 21 million tonnes.

Thus to narrow down the supply demand gap, India imports 2-3 million tonnes per year entailing a significant expenditure in terms of foreign exchange.

Area under pulses cultivation

The pulses are grown in area of about 24-25 million hectares of land with productivity of 780 kg a hectare. This is less than the global average.

For a healthy India in 2050, 39 million tonnes of pulses will be required which means there should be annual growth rate of 2.14%.

To meet this target, the productivity has to be enhanced to 1200 kg a hectare and about 3-5 million hectares additional area has to be brought under pulses across country.

Main growing areas of pulses in India are Madhya Pradesh, Uttar Pradesh, Gujarat, Maharashtra, Karnataka and Rajasthan.

Factors responsible for low yield of pulses

- Delayed sowings/plantings
- Low seed rate resulting in poor crop stands
- Poor weed management during growth
- Inefficient irrigation and rainwater management
- Large scale monoculture and non-inclusion of pulses in cropping systems
- Lack of consideration of previous cropping in the same field
- Inadequate plant protection
- Non-availability of seeds of HYVs at affordable price and at the appropriate time
- Lack of more efficient N using genotypes
- Imbalanced use of fertilisers
- Poor management for secondary and micronutrient, mainly S, Zn, Mn, Fe and B

Challenges to pulse production

- Presently, more than 92% of area under pulses production is confined to unirrigated areas where farming chiefly depends on monsoon rains.
- Drought or drought like conditions coupled with heat stress may reduce seed yield by 50%, especially in arid and semi-arid regions.
- Most of the pulses are grown in low fertility and problematic soils struggling with salinity and alkalinity.
- Poor drainage and water logging during rainy seasons may cause heavy losses to pulses.
- Generally, pulses are grown by resource poor farmers and treated as a secondary crop with finest productivity to staple cereals and other cash crops. As a consequence, pulses are generally deprived of essential inputs, due care and latest technologies.
- Availability of quality seed of improved varieties is one of the major constraints in increasing productivity of pulses.
- Besides, till recently, farmers were not getting attractive prices for pulses which was a major cause of discouragement for pulses farming.
- The accessibility of small holding farmers to quality seed of improved pulse varieties is constrained by both inadequate demand creation and limited supply.

Pulses for all

The government has launched many new initiatives and strengthened various programmes to give a fillip to production of pulses

- **National Food Security Mission-** to maintain a sustainable food security in the country which provides support to pulses, cereals, millets and selected commercial crops. With reference to pulses, a decision was taken to exclusively dedicate 50% allocations for development of pulses alone.
 - This will benefit north-eastern states and hilly states like Himachal Pradesh, Jammu and Kashmir and Uttarakhand.
 - The support provided by NFSM will definitely boost pulse production in these areas and across India.
- A **special attraction of 200 crores** has been made exclusively for increasing area under pulses during various cropping seasons.
 - Cultivation of pulses is being promoted as an intercrop with cereals, oilseeds and cash crops with introduction of suitable varieties and package of practices.
 - Scientists have demonstrated successful cultivation of pigeon pea on bunds of rice fields. Similarly, pulse crop is being encouraged in rice fallow areas under 'Bringing Green Revolution in Eastern India' scheme.
 - Rice fallows in Gangetic plains offer a huge potential for expansion of the area of rabi pulses such as chickpeas and lentils.
 - Pulses can be grown profitably as inter-crop with rapeseed-mustard, sunflower, linseed and potato.
 - Green gram and black gram have given high yields and profits when grown with planted sugarcane.
- Government has **strengthened frontline demonstration programme** in pulses by allocating funds and facilitating better support.

Price

- Government has substantially increased MSP of pulses and enhanced imports to meet rising domestic demand.
- Government has also developed a more transparent and beneficial purchase policy for pulses.
- Government has given clear directives that procurement is to be done under **Price Support Scheme**, if market price is below MSP and under **Price Stabilisation Fund**, if prices are above MSP.
- It has been observed that prices of these commodities skyrocket whenever supplies fail to meet the domestic demands.
- This unique fund provides interest free advance working capital assistance to states and control agencies for undertaking market interventions to control market prices.

- If market prices rise due to shortage of pulses in the market, government will release sufficient quantities in the market to regulate the volatile situation.

Importance of pulses

Pulses are premier crops cultivated in Indian sub-continent. Pulses play a pivotal role in enhancing livelihood security, nutritional security, food security, soil health, farm profit and environmental sustainability.

Indian population is predominantly vegetarian. Pulses and its products are a rich source of essential nutrients like protein, minerals and vitamins. Pulses can easily meet the protein requirement of vegetarian diet. As diet of Indians is deficient in respect of quality and quantity of protein, mixing of pulses grains with other cereals enhances the nutritive value of the food.

Pulses are also a cost effective alternate to ameliorate energy-protein/nutrient elements deficiency in the country.

Pulses for children

- 45% of children below the age of three years are undernourished in India. A large number also suffer from protein deficiency.
- To address malnutrition in children, food grains of pulses must be bio-fortified with quality protein and micronutrients.
- Many research institutes have developed iron and zinc rich lentil varieties through molecular breeding. These varieties/technologies should reach the farmers immediately for alleviating malnourishment in women and children.

Inclusion of pulse crops in cropping system

Cultivation of pulse crops is a must once in a year for every farmer for maintaining soil fertility, betterment of their livelihood, increased farm income and enhancing nutritional security.

Small and marginal farmers can also increase soil fertility of their farmland by growing short duration pulse crops and applying crop residue in the soil.

Thus soil biomass can also be enhanced which is the main source of energy and food for several beneficial microorganism involve in oxidation and reduction process in soil.

Soil protection and pulses

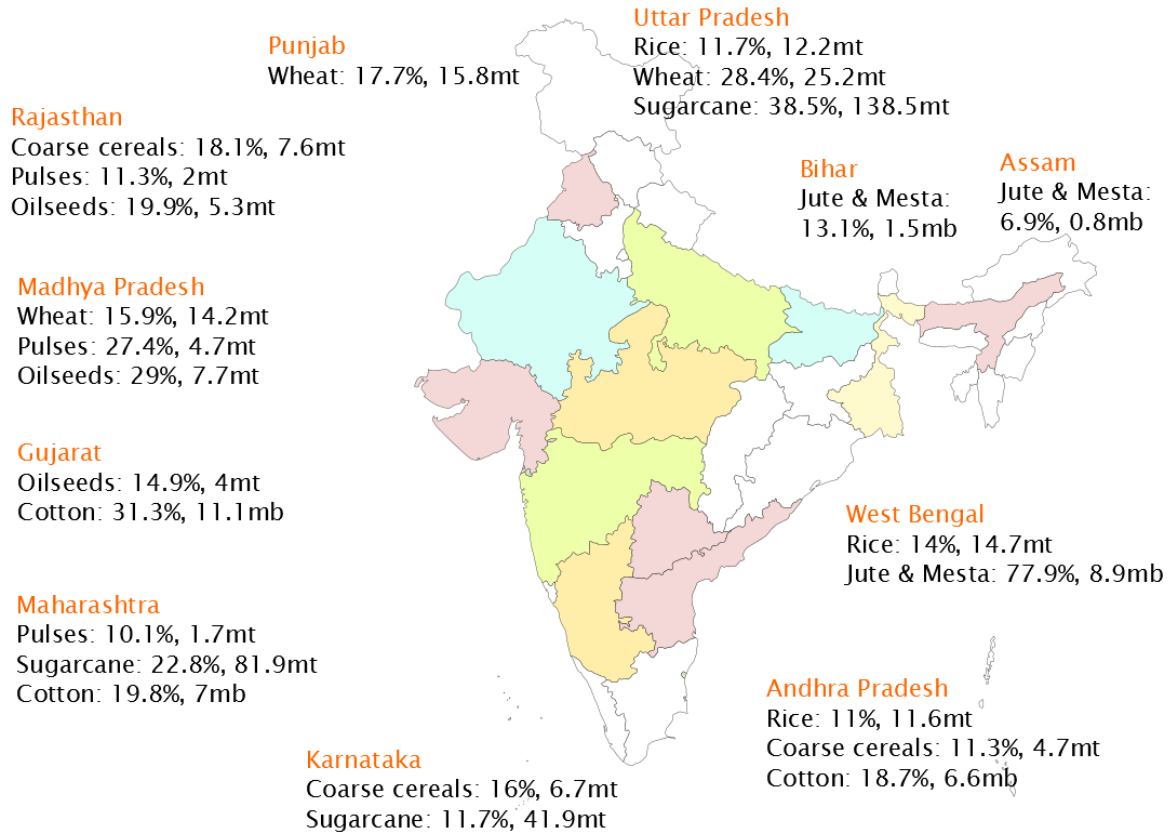
Due to soil rejuvenation qualities such as release of soil bound phosphorus, build up soil fertility through atmospheric nitrogen fixation, recycling of soil nutrients and addition of organic matter and other nutrients make pulses an ideal crops of sustainable agriculture in the tropical and sub-tropical regions of India.

Besides, pulses have the capability to protect the soil from wind and water erosion in arid and semi-arid tropics.

The roots of pulse plant have rhizobium nodules that work for nitrogen fixation in the soil.

Pulses in India

Major crops, main states



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Data from Directorate of Economics and Statistics, Department of Agriculture Cooperation and Farmers' Welfare, Ministry of Agriculture, Government of India. Data for 2014-15. Production quantities in million tons (jute & mesta, and cotton in million bales). State's production of a major crop expressed as per cent of country total. Visualisation by Rahul Goswami, 2016.



India's production and import of pulses in recent past

Major pulses	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16*
Production (million tonne)	18.2	17.1	18.3	19.8	17.3	
Imports (million tonne)	2.8	3.5	4.0	3.5	4.64	5.50*
Imports as % of domestic supply	13.4	17.1	18.1	15.2	21.2	

Source: Ministry of Agriculture and Farmers' Welfare, GoI and other sources

*Expected

India's production and import of major pulses

	Imports		% change in imports.
	2013-14	2014-15	
Peas	13.30	19.41	45.93
Chickpea	06.97	04.18	-40
Tur	04.65	05.75	23.65
Lentils	07.08	08.16	15.25
Total	36.54	45.84	25.45



OIL AND OILSEEDS

Edible oils occupy a unique place in Indian society, culture, dietary patterns and economy of a country.

India is one of the largest vegetable oil economies in the world next to USA, China, Brazil and Argentina. India is also third largest cultivator of oilseeds in the world and paradoxically meets into more than 50% requirement through imports.

Due to diverse agro-climatic conditions and geographical locations, farmers are able to grow all the nine annual oilseeds viz. groundnut, rapeseed, soybean, sunflower, sesame, safflower, niger, castor and linseed.

In India, oilseeds are second most important crop after cereals sharing 14% of the country's gross cropped area and accounting for nearly 3% of GDP.

India needs a three fold increase in the oilseeds production in the next 35 years.

Like pulses, oilseeds face severe challenges in terms of climatic stresses and unfavourable farming conditions.

Oilseeds cultivation is mainly undertaken on marginal land by resource poor farmers who are generally reluctant to provide necessary inputs for increasing the productivity.

Nearly 82% of the oilseeds area fall under rainfed farming where climatic vagaries cause severe damage to crops.

Studies have indicated emergence of biotic threats (diseases) which have the potential to disrupt the production patterns and regional crop preferences in a significant manner.

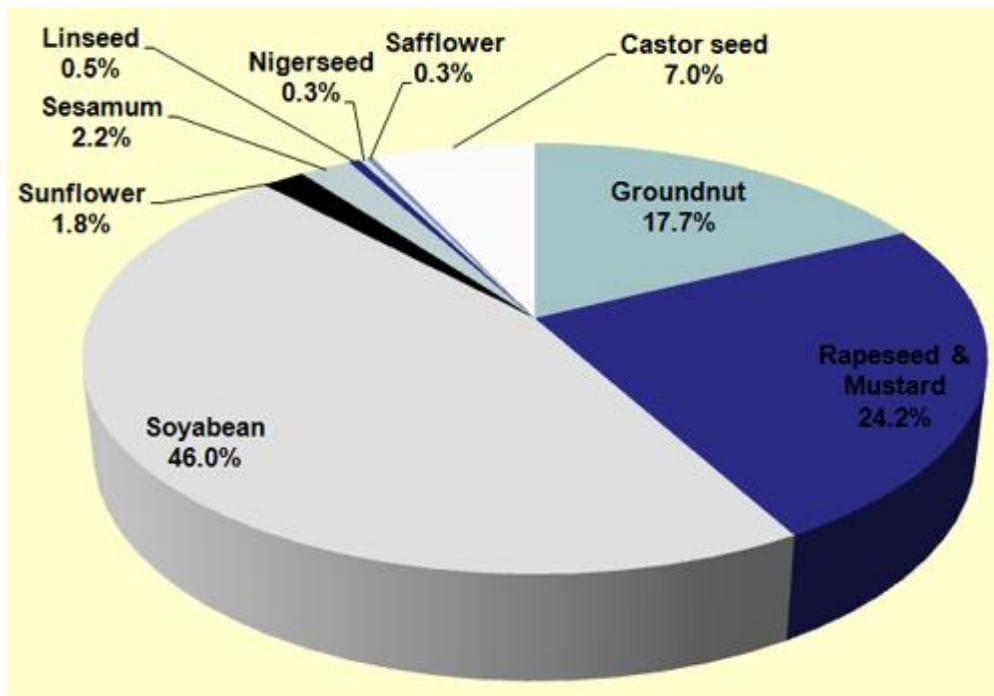
Mission on Oilseeds

- Government has strengthened National Mission on Oilseeds and Oilpalm.
- The mission aims to increase seed replacement ratio with focus on varietal replacement by including high yielding and high quality varieties.
- Efforts have been intensified to diversify area from low yielding cereal crops to oilseeds crops and intercropping of oilseeds with cereals/pulses/sugarcane is also promoted.
- Scientists have advised rise of fallow land after paddy/potato harvest for oilseeds farming to increase the area under the oilseeds crops.
- In India, oil palm is a new crop but holds great promise due to its highest vegetable oil yielding capacity. Besides, oil palm is a perennial crop.
- Tree borne oilseeds like sal, mahua, kokum, olive, karanja, jatropha are also being supported under the mission.

Measures to improve oilseeds production

- Promote oilseeds cultivation in areas where there is assured irrigation.
- Widen the scope of research, technology, diffusion and institutional intervention to re-energise the oil sector.
- Increase public research spending in oilseeds crops for development of biotic and abiotic tolerant varieties.
- Develop newer high yielding varieties of groundnut and mustard
- Provide incentives to private sector participation in processing and value addition in oilseeds crops.
- Ensure availability of inputs such as fertilisers and pesticides and credit and extension services.
- Implement market reforms and policies, such as contract farming and public-private partnership in production and processing, to ensure a competitive market for oilseeds and edible oil along with adequate protective measures to avoid unfair competition from the international markets.

Contribution of different oilseed crop in total production under oilseeds (2012-13)



Conclusion

By adoption of improved agro-techniques viz. selection of improved and appropriate varieties, optimum time of sowing, optimum plant population, modified tillage, resource conservation techniques, balanced nutrient management, integrated and timely weed management, proper irrigation management and following improved cropping systems, the productivity of pulses and oilseeds in different agro-ecologies of the country will get a boost.

Global Competitiveness Index

What: India ranked 39th in the Global Competitiveness Index for 2016-17, up by 16 places.

Released by: World Economic Forum (WEF)

Competitiveness improved in

- Goods market efficiency
- Business sophistication
- Innovation

More improvement needed in

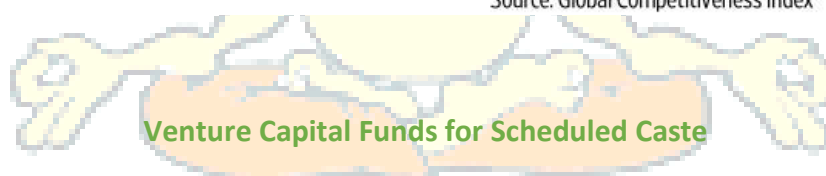
- Citing labour market deficiencies
- Large, public enterprises that reduce economic efficiency, especially in the utilities sector and the financial market
- Lack of infrastructure

MARKED ADVANCEMENT

YEAR	INDIA'S GLOBAL COMPETITIVENESS RANKING	TOTAL COUNTRIES
2016-17	39 ▲	138
2015-16	55 ▲	140
2014-15	71 ▼	144
2013-14	60 ▼	148
2012-13	59	144

India's performance	RANK		
	2015-16	2016-17	
Basic requirements	80	63	▲
Institutions	60	42	▲
Infrastructure	81	68	▲
Macroeconomic environment	91	75	▲
Health and primary education	84	85	▼
Efficiency enhancers	58	46	▲
Higher education and training	90	81	▲
Goods market efficiency	91	60	▲
Labour market efficiency	103	84	▲
Financial market development	53	38	▲
Technological readiness	120	110	▲
Market size	3	3	◀▶
Innovation and sophistication factors	46	30	▲
Business sophistication	52	35	▲
Innovation	42	29	▲

Source: Global Competitiveness Index



In a bid to boost entrepreneurship among backward communities, the Ministry of Social Justice and Empowerment had launched the Venture Capital Fund Scheme for Scheduled Caste (SC) Entrepreneurs in 2014–2015

The objective of the Venture Capital Fund Scheme for Scheduled Caste Entrepreneurs is to promote entrepreneurship among India's scheduled caste population by identifying the ones who are oriented towards innovation and growth technologies. The initiative also gives leverage to provide concessional finance to the entrepreneurs, who will create wealth and value for society and at the same time will promote profitable businesses. The assets so

created will also create forward/ backward linkage. It will create a chain effect in the locality.

The initiative also intends to increase financial inclusion for the entrepreneurs and to motivate them for further growth of SC communities. This initiative has gained a lot of popularity as it enhances direct and indirect employment generation for the SC population in India.

HIMANSH

A high altitude glaciological research station in Himalaya called Himansh (meaning a slice of ice)

To study and quantify the Himalayan glacier responses towards climate change, National Centre for Antarctic and Ocean Research (NCAOR), Goa, under the Ministry of Earth Sciences has established a high altitude research station in Himalaya called HIMANSH.

It is situated above 13,500 ft at a remote region in Spiti, Himachal Pradesh.

Project SAKSHAM

The Project SAKSHAM is a New Indirect Tax Network (Systems Integration) of the Central Board of Excise and Customs (CBEC).

It seeks to bolster the information technology network for the new Goods and Services Tax (GST) regime that the Union Government intends to roll out from 1st April 2017.

The Project SAKSHAM will help in

- Integration of CBEC IT systems with the Goods and Services Tax Network (GSTN).
- Extension of Indian Customs Single Window Interface for Facilitating Trade (SWIFT)
- Other taxpayer-friendly initiatives under Digital India and Ease of Doing Business of CBEC