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STATUS OF COMMERCIAL CROP CULTIVATION IN INDIA AND ANDHRA PRADESH- WITH REFERENCE TO COTTON, CHILLIES AND TOBACCO CULTIVATION

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ABSTRACT:

The main objectives of the paper is to analyse the status of area, production and productivity of commercial crops in India and Andhra Pradesh. The paper is based on both primary and secondary sources of information. Secondary data on area, production, and productivity of various crops is gathered from the Chief Planning Officer's handbook of statistics, Guntur as well as the records of other departments involved. The paper concluded that the area under commercial crops cultivation and quantity of commercial crops production in major growing states in India are Maharasthtra, Gujarat, Telangana, Andhra Pradesh, Karnataka and Haryana. The average productivity of commercial crops in India is 476 Kg/ha, Gujarat is stands for first place in Productivity of commercial crops (819 kg/ha) followed by Punjab (750 kg/ha), Rajasthan (551 kg/ha), Andhra Pradesh (538 kg/ha), Madhya Pradesh (527 kg/ha), Odisha (471 kg/ha), Tamil Nadu (448 kg/ha), Telangana (426 kg/ha), Haryana (413 kg/ha) produces the maximum yield of commercial crops cultivation states in India.

KEYWORDS: *Cotton, Chillies, Turmarec, Bollgaurd, Commercial Crops.*

INTRODUCTION

Agriculture has a ten thousand-year history in India. In 2022, agriculture and related industries such as forestry and logging accounted for 14.2% of GDP and employed 52 percent of the total workforce. Despite a continuous decrease in its proportion of GDP, agriculture is India's most important economic sector and plays an important part in the country's overall socioeconomic development. Slow agricultural development is a source of worry for policymakers, since agriculture provides a livelihood for two-thirds of India's rural population. Current agricultural methods are neither economically nor ecologically beneficial. As a result, India's agricultural production has decreased considerably. Agriculture has performed well in the post-independence era as compared to the pre-independence period. The overall performance of agriculture and allied sector had got up to the mark during the

period 2001-2011. The low growth in GDP from agriculture during 2001-2011 coupled with higher instability would have lead to more vulnerability and distress among the farming community.

The overwhelming majority of India's population lives in villages, and approximately 68 percent of this population relies on agriculture for a living; this demonstrates that agriculture has played a significant role in the country's overall economic growth. Agriculture, being a major sector of the economy, plays a critical role in producing revenue, employment, and sustenance for our population and this position has a significant impact on people's living circumstances. Agriculture dominates the economy to the point that a large part of India's working population is involved in agricultural production and activities. However, as economic growth progressed, many more farm-related professions started to be included under agriculture. Agriculture now encompasses, in addition to crop production, forests, fisheries, animal husbandry, beekeeping, and other activities. This is the extension of coverage of the world agriculture on horizontal level. Vertically too agriculture covers something more than mere operations on a farm. Marketing, processing and distribution of agriculture products are now an accepted part of agriculture business. Some other off farms activities, like supply of farm inputs such as seeds, fertilizers, credit, insurance, veterinary services etc, are also considered part of agricultural business. Existence of small farms in overpopulated and underdeveloped economies is a common phenomenon.

OBJECTIVES

The main objectives of the paper is to analyse the status of area, production and productivity of commercial crops in India and Andhra Pradesh. And to analyse the economics of dry Chillies cultivation in Guntur district of Andhra Preades.

METHODOLOGY

The paper is based on both primary and secondary sources of information. Secondary data on area, production, and productivity of various crops is gathered from the Chief Planning Officer's handbook of statistics, Guntur as well as the records of other departments involved.

RESULTS AND DISCUSSIONS

In this session status of commercial crops has been analyzed below, major Commercial crops Growing States in India.

The area under commercial crops cultivation and quantity of commercial crops production in major growing states are presented in Table -1. The major commercial crops, cultivating states in India are Maharasthtra, Gujarat, Telangana, Andhra Pradesh, Karnataka and Haryana. Table-1.1 shows the state wise average values of cultivation area and production and productivity of commercial crops for the period 2014 to 2018. These average results indicate that Maharashtra occupied the first place in terms of area (42.07 lakh ha) followed by Gujarat (26.23 lakh ha), Telangana (18.97 lakh ha), Haryna (6.69 lakh ha), Andhra Pradesh (6.44lakh ha), Madhya Pradesh (6.03 lakh ha), Rajasthan (5.84), Karnataka (5.46 lakh ha) and Punjab (4.02 lakh ha). The production of commercial crops in India is 348.62 lakh bales, state wise production of commercial crops also observed that Gujarat occupied the first place in term of production (126.37 lakh bales), followed by Maharashtra (65.46 lakh bales), Telangana (43.54 lakh bales), Andhra Pradesh (20.38 lakh bales), Rajasthan (18.93 lakh bales), Madhya Pradesh (18.69 lakh bales), Haryana (16.26 lakh bales), Punjab (12.83 lakh bales) Karnataka (12.24 lakh bales), Tamil Nadu (4.88 lakh bales) and Odisha (4.02 lakh bales). The average productivity of commercial crops in India is 476 Kg/ha, Gujarat is stands for first place in Productivity of commercial crops (819 kg/ha) followed by Punjab (750 kg/ha), Rajasthan (551 kg/ha), Andhra Pradesh (538 kg/ha), Madhya Pradesh (527 kg/ha), Odisha (471 kg/ha), Tamil Nadu (448 kg/ha), Telangana (426 kg/ha), Haryana (413 kg/ha) produces the maximum yield of commercial crops cultivation states in India.

WORLD COTTON SCENARIO

Cotton is a globally significant fibre crop that is grown in tropical and sub-tropical areas of more than 70 nations across the globe. 24 nations account for about 94 percent of global cotton output and 87 percent of global cotton exports out of the 70 or so countries that currently produce cotton. Of these 24, the ten leading ones are China, USA, India, Pakistan, Uzbekistan, Turkey, Australia, Brazil, Syria and Egypt, which together account for as much as 83 percent of the world's cotton production. Cotton is sown on 33 million hectares, or 2 to 2.5% of global arable land.

Table-1
Area production and productivity of Commercial Crops –State wise

State		2014-15	2015-16	2016-17	2017-18
Andhra Pradesh	**A**	8.21	6.66	4.72	6.44
	P	28.41	18.88	16.64	20.38
	Y	588	482	563	538
Telangana	A	17.13	17.73	14.09	18.97
	P	38.00	36.61	34344	43.54
	Y	377	351	416	426
Gujarat	**A**	27.73	27.22	23.82	26.23
	P	105.00	94.00	85.75	126.37
	Y	644	587	612	819
Karnataka	**A**	8.75	6.42	5.10	5.46
	P	23.11	20.00	10.10	12.24
	Y	449	530	337	381
Madhya Pradesh	A	5.47	5.63	5.99	6.03
	P	17.50	18.00	20.51	18.69
	Y	544	544	582	527
Maharashtra	**A**	41.90	42.07	38.00	42.07
	P	70.00	75.00	106.19	65.46
	Y	284	303	475	265
Odisha	A	1.27	1.25	1.36	1.45
	P	4.00	3.00	3.82	4.02
	Y	535	408	478	471
Haryana	A	6.48	6.15	5.70	6.69
	P	23.00	9.93	20.41	16.26
	Y	603	274	609	413
Punjab	A	4.20	3.39	2.85	4.02
	P	16.00	7.50	10.31	12.83
	Y	648	376	615	750
Rajasthan	A	4.87	4.48	4.71	5.84
	P	15.27	12.14	14.02	18.93
	Y	533	461	506	551
Tamil Nadu	A	1.87	1.42	1.42	1.82
	P	6.86	3.69	3.59	4.88
	Y	624	442	430	448
All India	A	128.19	122.92	108.28	124.48
	P	348.05	300.05	325.77	348.62
	Y	462	415	511	476

Source: Agricultural Statistics of India, 2019-2020
A: Area in lakh ha, P: Production in lakh bales of 170kgs, Y: Yield in kg/ha

The status of India among world nations regarding cotton crop area, lint production and productivity are displayed in table-1.2. World cotton production is at 118.9 million bales of 170 kgs each in 2017-18. With 35.70 percent of global cotton area and 24 percent of world cotton output, India continues to be the biggest area under cotton and the second largest producer of cotton after China.

The data evidently shows that China ranks first among cotton producers in the world, which produces 40.98 Million Bales of 170 kgs each followed by India producing 39.09 Million Bales of 170 kgs each stand at second rank and USA stands at third rank by producing 16.52 Million Bales (of 170 kgs each). Australia, with its mere 0.44 M.hect of land under cotton cultivation by producing 5.30 Million Bales of 170 lbs, ranks first in its productivity marking 2047 kgs of lint per hectare. China ranking first in terms of production and stands at sixth place regarding productivity with 1422 kgs of lint per hectare. Even though India holds the largest area under cotton, its productivity is very low at 568 kgs of lint per hectare.

AREA, PRODUCTION AND PRODUCTIVITY OF COTTON INDIA:

To analyze the status of cotton cultivation in India during the last five decades data regarding area, production and productivity is presented in table-1.2. The data explains that the area under cotton cultivation in India during 1950 was 5.88 million hectares, producing 34 lakh bales of 170 kgs, with a yield gain of 99 kgs per hectare. Since then (1950-51) the area under cotton cultivation has grown and has reached to 7.67 million hectares. Further the area under cotton cultivation has reached to 91.58 lakh hectares in 2006-07. This increase in area leads to increase in production levels. It is observed that the production of cotton in 1950-51 was only 34 lakh bales of 170 kgs which it increased to 136 lakh bales in 2002-03 and reached to 179 lakh bales in 2005-06. During 2011-12 a record area of 12.18 million hectares was sown under cotton, which is due to the major increase in the area of Andhra Pradesh, Maharashtra and Gujarat states. Cotton output rose from 136 lakh bales in 2002-03 to 375 lakh bales in 2013-14 at the national level. Bt-cotton is recognized as a key component contributing to such increased output owing to efficient control of bollworms, together with better seeds and farming methods. The yield per hectare has increased substantially and reached a level of 554 kg/ha record mark in cotton season 2007-08 and then in 2013-14 the yield of cotton is 552 kg lint per hectare in India.

This quantum leap in cotton production since 2002-03 has been triggered by improved seeds and particularly the ever-increasing adoption of improved Bt cotton (Bollguard-I) in the ten cotton-growing states. Thus, at a national level, Bt cotton has played a major role in higher cotton production, which increased from 158 lakh bales in 2001-02 to 241 lakh bales in 2005-06, and 280 lakh bales in 2006-07. Subsequently, cotton production declined to 290 lakh bales in 2008-09 and again showing upward trends to 305 lakh bales in 2009-10 crop seasons. Thereafter, year by year there is a consistent growth observed in cotton production till now, which reached to 375 lahh bales of 170 kgs of lint in 2013-14 (Table-1.2). This quantum leap in cotton production since 2002-03 has been triggered by improved seeds and particularly the ever-increasing hectarage on improved Bt cotton (Bollgaurd-I in 2002 and Bollgaurd- II in 2006) in the ten cotton-growing states. And thereafter the production has been decreased from 375 lakh bales to 353 lakh bales during the last six years.

Regarding yield per hectare it was only 99 kgs per hectare during 1950-51. Even though productivity increased to 267 kgs/hect in 1990-91, there has been observed stagnant trend till the introduction Bt cotton in the crop year 2002-03. Further the yield has not increased to a considerable extent in the initial year of Bt cotton. From the second year of Bt cotton introduction, i.e., from 2003-04, it has gained a significant improvement in the yield per hectare. The main reasons for this yield laps are introduction of Bollgaurd-II hybrid seeds and the momentum in adoption rate. The average yield of cotton in India is one of the lowest in the world once, with around 302 kg/ha prior to commercial cultivation of Bt-cotton during the 2002-03 season, which increased significantly thereafter and reached to 552 kgs/hect in 2013-14. That there is a steady and continuous increase in the yields of

cotton, which is 302 in 2002-03, 399 in 2003-04 and 470 in 2004-05. Further it reached to 554 kgs/hect in 2007-08 and continuous to sustain above 500 on and average till 2012-13. From the analysis it is observed that there is yield stagnation in cotton cultivation in India at 520.30 lint per hectare over the past seven years from 2007-08 to 2013-14. And the period from 2013 to 2019-20 rears the yield per hectare has been declined from 552 Kg per hectare to 462 kg per hectare. However, in India enhancement in yield levels has taken place after the introduction of Bt cotton.

Table-2
Area, production and productivity of cotton in India

Year	Area in Million lakh hectares	Production in lakh bales of 170 kgs (lint)	Yield kgs per hectare
1950-51	5.88	34	99
1960-61	7.61	60	134
1970-71	7.61	57	127
1980-81	7.82	78	169
1990-91	7.44	117	267
2000-01	8.58	140	278
2001-02	8.73	158	308
2002-03	7.67	136	302
2003-04	7.63	179	399
2004-05	8.79	243	470
2005-06	8.68	241	472
2006-07	9.14	280	521
2007-08	9.41	307	554
2008-09	9.41	290	524
2009-10	10.31	305	503
2010-11	11.14	339	517
2011-12	12.18	353	493
2012-13	11.98	365	518
2013-14	11.60	375	552
2014-15	12.84	386	513
2015-16	12.29	332	459
2016-17	10.83	345	542
2017-18	12.59	370	500
2018-19	12.16	333	449
2019-20	13.48	353	462

Source: Cotton Advisory Board

Chillies

Chilli is one of the most widely grown commercial spices. It is known as the "wonder spice" since it is the most frequently used universal spice. Different varieties are grown for different purposes, including as vegetables, pickles, spices, and sauces. Chilies are an essential component in many different cuisines throughout the globe because they provide pungency, flavour, and colour to the meals. The colour and pungency levels of Indian chilli are regarded to be world renowned for two key commercial characteristics. India produces, consume, and exports the most chilies in the world. Chilli output in India is the highest in the world, followed by China, Thailand, Ethiopia, and Indonesia. The colour and pungency levels of Indian chilli are regarded to be world renowned commercial characteristics. Chilli from India is mostly sold to Asian nations such as China, Sri Lanka, Malaysia, Bangladesh, Singapore, Thailand, and the United Arab Emirates. Andhra Pradesh and Telangana are the two most important chilli-producing states in India, Telangana, Madhya Pradesh, Karnataka and West Bengal. (Table-1.3)Andhra Pradesh, Telangana, Tamil Nadu, Karnataka, and Madhya Pradesh are the main chilli-producing states in India. As of September 26, 2018, approximately 116,578 hectares of red chilli were recorded in Andhra Pradesh. Chilli area coverage has been recorded at 65,259 hectares, 15,584 hectares, and 12,816 hectares in the Guntur, Kurnool, and Krishna areas, respectively.

Indian Turmaric Scenario

Turmeric is grown over 195.10 thousand hectares in India, with a total output of 992.90 thousand tonnes (2013-14). Between 1995-96 and 2013-14, the acreage and output of turmeric in India grew at 2.60 and 5.60 percent per year, respectively. The major turmeric, cultivating states in India are Andhra Pradesh, Maharashtra, Orissa, Tamil Nadu and West Bengal. These average findings show that Andhra Pradesh produces the most turmeric and also has the biggest turmeric-growing area. Orissa and Tamil Nadu are two other important turmeric-growing states in India.

Table-3
Major chillies cultivating states in India

	State	Area (000 ha)	Production (000 tonnes)	Productivity (Kg/ha)
1	Andhra Pradesh	158.43	501.41	3165
2	Karnataka	157.59	194.76	1236
3	Madhya Pradesh	87.84	217.55	2477
4	Telangana	82.52	369.02	4472
5	Orissa	71.70	10575	966
6	West Bengal	65.55	69.28	1613
7	TamilNadu	45.95	14.00	305
8	Assam	19.85	18.98	957
9	Rajasthan	8.48	14.36	1693
10	Gujarat	11.34	21.44	1892
11	Punjab	8.77	16.66	1899

Source: Spice board, India-2020

Andhra Pradesh is called the "turmeric bowl of India" as it topped both in 59475 hectares area and production 364044 tonnes. Tamil Nadu follows Andhra Pradesh with respect to area and production of 169311 tonnes during 20018-19 (Spices Board). Due to low price realisation for turmeric, Tamil Nadu has seen a significant drop in overall output as land has been shifted to other crops such as sugarcane. The states of Andhra Pradesh, Tamil Nadu, and Karnataka produce the bulk of India's total production. Meanwhile, while the output is lesser, the area under turmeric in Orissa (13%) is substantial. Andhra Pradesh leads in both area and output, with 71954 hectares and 446112 metric tonnes, respectively (Department of Horticulture, Government of Andhra Pradesh), boosting productivity and lowering cultivation costs.

AREA, PRODUCTION AND PRODUCTIVITY OF TOBACCO IN INDIA

Tobacco is one of the world's most commercially important agricultural crops. It is a drought-tolerant, hardy, and short-lived crop that may be produced on soils where other crops are not profitable. Tobacco is produced on 0.45 million hectares (0.27 percent of the net cultivated area) in India, generating 750 million kg of tobacco leaf. After China and Brazil, India is the world's second-largest producer and exporter. Flue-cured Virginia (FCV) tobacco is produced on an area of 0.20 million hectares, whereas non-FCV tobacco is produced on an area of 0.25 million hectares. In the global context, Indian tobacco accounts for 10% of the land area and 9% of overall output.

Tobacco production in India is unique in that distinct varieties of flue-cured Virginia (FCV) and non-FCV tobacco are grown in a variety of agro-ecological settings throughout the nation. Tobacco is grown in over 15 states throughout the nation, having a considerable impact on the economics and prosperity of the agricultural community. Tobacco varieties farmed in the nation include FCV, Bidi, Hookah, Chewing, Cigar-wrapper, Cheroot, Burley, Oriental, HDBRG, Lanka, Pikka, Natu, Motihari, Jati, and others. The main exportable tobacco varieties are FCV, Burley, and Oriental.

Tobacco provides income to 36 million people in India, including 6 million farmers and 20 million farm labourers who engage in tobacco production, as well as 10 million people who work in tobacco processing, manufacturing, and exporting. Bidi rolling alone employs 4.4 million people, while tendu leaf collecting employs 2.2 million tribals. The principal beneficiaries are small and marginal farmers, rural women, tribal youth, and the most vulnerable members of society. Tobacco earns 4,400 crores in foreign currency earnings each year, accounting for 4% of total agricultural exports, and 14,000 crores in excise revenue, accounting for more than 10% of total excise money collected from all sources.

In terms of cheap production costs, an average farm and export price, India has an advantage over the top tobacco-producing nations. As a result, Indian tobacco is regarded as a good investment. After Brazil, India is the world's second-largest tobacco exporter. FCV accounts for 80-85 percent of our exports, and the country contributes 6% by volume and 0.7 percent by value to the world tobacco trade. Tobacco and tobacco products exports increased by 76 percent in volume and 209 percent in value during the previous five years. The United Kingdom, Germany, Belgium, the former Soviet Union, South Korea, and South Africa are the top purchasers of Indian FCV tobacco, accounting for more than 60% of our exports. At the present, India's export competitors include Brazil, Zimbabwe, Turkey, China, and Indonesia. Cigarette exports from India account for less than 1% of worldwide cigarette exports.

The area production and productivity of tobacco cultivation in India is presented in the table-4. Gujarat state (167 thousand ha) is occupied first place in terms of Area under cultivation of tobacco, followed by Karnataka (90 thousand ha), Andhra Pradesh (78 thousand ha), Uttar Pradesh (27 thousand ha), West Bengal (15.68 thousand ha), Bihar (10.05 thousand ha) and Telangana (7 thousand ha). The production of tobacco is also observed that the Gujarat occupied first place in terms of production (375 thousand tones), Andhra Pradesh (177 thousand tones), Uttar Pradesh (119 thousand tones), Karnataka (65 thousand tones), West Bengal (26.65 thousand tones), Telangana (19 thousand tones) and Bihar (17.69 thousand tones). The average productivity of India is 2016 kg/ha. In terms of

Productivity is found to be high in Uttar Pradesh which is (4407 kg/ha) followed by Telangana (2714 Kg/ha) Andhra Pradesh (2269 Kg/ha), Gujarat (2246 kg/ha), Bihar (1761 kg/ha), West Bengal (1700 kg/ha) and Karnataka (722 kg/ha).

Table- 4
Area production and productivity of Tobacco in India

	State	Area (000 ha)	Production (000 tonnes)	Productivity (Kg/ha)
1	Gujarat	167	375	2246
2	Andhra Pradesh	78	177	2269
3	Uttar Pradesh	27	119	4407
4	Karnataka	90	65	722
5	West Bengal	15.68	26.65	1700
6	Telangana	7.00	19	2714
7	Bihar	10.05	17.69	1761
8	Other	4.90	6.17	1259
	All India	399.63	805.51	2016

Source: Agricultural Statistics of India, 2019-2020

CONCLUSION

Tobacco is one of the world's most commercially important agricultural crops. It is a drought-tolerant, hardy, and short-lived crop that may be produced on soils where other crops are not profitable. Tobacco is produced on 0.45 million hectares (0.27 percent of the net cultivated area) in India, generating 750 million kg of tobacco leaf. After China and Brazil, India is the world's second-largest producer and exporter. Flue-cured Virginia (FCV) tobacco is produced on an area of 0.20 million hectares, whereas non-FCV tobacco is produced on an area of 0.25 million hectares. In the global context, Indian tobacco accounts for 10% of the land area and 9% of overall output.

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