

Dry Land Production of Agricultural Goods and Economic Growth in Tamil Nadu

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Abstract

Dry land systems are ecosystems characterized by a lack of water. Dry land farming and dry land agriculture are often used synonymously. However, the raising of livestock on native vegetation can be considered dry land agriculture. In contrast, dry land farming requires conversion of a natural ecosystem to an agro ecosystem, usually by tillage, and then growing introduced crops. The main objective for this study is the area, production and productivity of Dry Land crops Chulam in Tamil Nadu. This study intends to use secondary source of information. The secondary data have been used for the study purpose only; have been referred for the collection of data from 2000-01 to 2014-15. For the present study, the statistical tools were employed to assess the growth performance of Dry land crops Chulam in Tamil Nadu.

Key Words: Dry Land Crops, Chulam, Area, Production, Productivity

Introduction:

Agriculture is a critical sector in the Indian economy. Achieving a 8.2 percent of growth in the overall GSDP may not deliver much in terms of poverty reduction unless agricultural growth accelerates. At the same time, 'growth with inclusiveness' can be achieved only when agricultural growth accelerates and is also distributed amongst the people and regions. Agriculture has to be kept at the centre of any reform agenda or planning process, in order to make a significant dent on poverty and malnutrition and to ensure long-term food security of the people.

Tamil Nadu has about 5.96 percent of Nation's population, occupies 4 percent of the land area and has 3 percent of the water resources of the Nation. In the State, agriculture

provides livelihood to about 40 percent of the population. Hence, the State's economy swirls around agriculture and allied sectors. Therefore, any disturbance in the growth of the agriculture sector will influence the State's overall growth rate, ultimately leading to deceleration in its economic growth. Realizing agriculture sector's importance, the Government of Tamil Nadu is taking all out efforts to usher in Second Green Revolution so as to enhance the farmers' income by 2-3 times from the present level through appropriate land use, farm level planning through Farm Crop Management System (FCMS), moisture harvesting, crop diversification, supporting secondary agriculture, value addition and facilitated marketing.

Dry Land:**Dry land Agriculture**

Dryland Agriculture refers to growing of crops entirely under rainfed conditions. Based on the amount of rainfall received, dryland agriculture can be grouped into three categories:

- **Dry Farming:** Cultivation of crops in areas where rainfall is less than 750 mm per annum
- **Dry land Farming:** Cultivation of crops in areas receiving rainfall above 750 mm
- **Rain fed Farming:** Cultivation of crops in regions receiving more than 1,150 mm.

Soil moisture dynamics in Dry land

During rainy period, a portion of the rain received goes as runoff and remaining part enters the soil. It generally percolates to the lower layers and sometimes, goes beyond the root zone of crops. After the rain, the surface soil gradually dries out either due to evaporation or transpiration or due to both.

Definition Dry land:

Dry land systems are ecosystems characterized by a lack of water. They include cultivated lands, scrublands, shrub lands, grasslands, savannas, semi-deserts and true deserts. The lack of water constrains the production of crops, forage, wood, and other ecosystem services.

Cholam:

Jowar is the Indian name for sorghum, a cereal grain native to Africa. Marked its entry to the Asian continent in the first millennium when it was brought to India for the first time and then it got popular among the other countries in Asia as well. The cereal grain is said to have originated around the 8000 years ago. Sorghum is the fifth most important cereal crop in the world after wheat, rice, maize and barley. The nutritional value of sorghum is same as of that of corn. Next to wheat, the biggest cultivated land in India is utilized to produce Jowar. The plants are cultivated in warm climates worldwide. The popularity of the crop is clear from the fact that it is cultivated in 99 countries in the world, major production share contributed by the African countries. Nigeria and India were on the 2nd and 3rd position in the major producer countries' list. Regarding the consumption pattern, the world's total consumption hover around 58 million metric tons, Nigeria being at the top of the list. More than 55% of the total production is consumed as a food for human being and around 33% is used as fodder.

Cholam Mixes

Millets are a great source of starch, making it a high-energy food. It is also an excellent source of protein and fiber. It is said that the amino acids in the pearl millet are more easily digestible than the ones found in wheat. Millet Soup is suitable for all ages. Millet Soup trend constipation. Stomach related diseases and improves Men's sperm production. Diabetic patients and in women it could be a good idea for all periods and imaginary problems.

Health Benefits

- a. Maintaining cellular health of large intestine
- b. Increase Your Heart Health
- c. Cholesterol Levels in Check
- d. Protection Against Diabetes
- e. Increase Digestive Health
- f. Reduce Cancer Risk
- g. Lower blood pressure
- h. Development and repair of body cells and tissues

- i. Reduces type 2 diabetes especially for women
- j. Prevent gallstones formation

Improves cardiovascular health: Consumption of jowar is beneficial in preventing common cardiovascular disease like atherosclerosis that often leads to stroke.

Reduces your risk of cancer: Reduce your risk to certain types of cancer such as colon cancer, abdominal cancer, digestive tract cancer, as well as breast cancer and abdominal cancer.

Aids in weight loss: Jowar have proven beneficial in weight loss. They contain fiber that prevent hunger and leave you feeling full longer

Reduce tooth decay: Consumption of jowar results in lesser tooth decay and gum disease as it contain significant amount of selenium and magnesium. Also help to maintain strong bone.

Cholam Economic Growth of Tamil Nadu:

The main reasons for drastic reduction of area under millets over the years are: people's preference for rice or wheat, less returns to farmers, absence of added economic value based food items, changing lifestyle of the people, mismatch between minimum support price and cost of cultivation, less area under irrigation and cultivation of local varieties. Millets occupy 11 percent of the gross area sown and the major millets cultivated are Cholam, Cumbu, Maize and Ragi. Normal area under millets is 7.07 L.MT and production is 15.57 L.MT. Technical interventions such as adoption of millet based cropping system, use of hybrids, precision farming and implementation of schemes such as procurement and distribution of millet seeds, ISOPOM-Maize, NADP and Seed Village scheme brought in substantial improvement in productivity and production. Millets witnessed significant increase in production from 13.62 L.MT to 24.31 L.MT and productivity enhanced from 1950 kg/ ha to 3022 kg/ha. During the Eleventh Five Year Plan period. Maize, being a highly remunerative crop also paved the way for shift in cropping pattern and increase in area under millets. Area under maize registered an increase from 1.97 to 3.44 L.ha. Production increased from 7.59 to 17.81 L.MT and yield increased from 3888 to 5176 kg/ha. During the Eleventh Five Year Plan period.

Review of Literature:

Saravandurai and prakasam (2018) the present study focused on the Dry land farming and dry land agriculture are often use synonymously. However, the raising of livestock on native vegetation can be considered dry land agriculture. In contrast, dry land farming requires conversion of a natural ecosystem to an agro ecosystem, usually by tillage, and then growing introduced crops. The main objective of this study was to analysis area, production and productivity of dry land crops in the Mecheri block. This study intends to use a secondary source of information. The secondary data had been used for the study purpose. The data was referred for in various issues of SHB from 2000-01 to 2017-2018. In the overall performance of growth in the area, production and productivity of dry land crops mecheri block were observed that the area under cereals Cholan, Cumbu, Ragi and pulses Cowpeas, Horse gram, Green gram, Black gram, Field beans and Yellow lentil and Oilseeds in Groundnut and Gingili increased production and productivity same increased. Over the period of time at reference (2000-01 to 207-18).

Ningaraju and Arundas (2017) this study evaluated the limited resources of land and water in hand, their optimum use is a must to for increased production of food grains to the demands of increasing population. The productivity in any area can be substantially raised by growing the crops suitable to the area with the help of newly developed agricultural techniques. Rain fed crops would continue to dominate in the agriculture of Mysore district.

Amarender Raddy et al (2012) examined the demand and supply of Pearl Millet grain and fodder for the year 2011 and 2020 in Western India. The paper estimated the projected Pearl Millet grain and Stover production for 2020 based on historical growth rates from 1996 -2009. On the demand side food demand was projected based on population projections based 2020 by maintain 2004 – 05 per capita consumption based on NSSO 61st round. Currently there was shortage in Pearl Millet grain production in Western India which was indicated by higher prices by 2020 it will become surplus to the extent of 5 per cent if it maintains the recent past production growth trend which was very high 4.22 per cent per annum however Gujarat state had deficit in grain even by 2020. While in the case of dry fodder the projected deficit was estimated to be 10 per cent by 2012.

Satyanarayana et al (2009) stated that the storage of rain waters in the district should uniformly and evenly be spread across all the districts. They suggested the following points

to enhance the productivity of dry land crops. For recharging the with periodically the farmers they should access to the best pesticides. The small and the marginal farmers may be provided essential inputs at subsidized prices as it would enable them to attain higher levels of both production and productivity levels of dry land crops in the districts.

Thangaraja (2005) attempted to study 90 farmers in the Reddiarchatram block of Dindigul district of Tamil Nadu with an objective to assess the practice wise adoption behavior of Mazie and Sorghum growers in the dry tracts. The results on the practice wise adoption of dry land technologies indicate that majority of the farmers had adopted the technologies fully as per the recommendation. The technologies fully adopted was summer ploughing using optimum seed rate for Maize, growing recommended in sorghum correct stage of harvest in Maize and sorghum etc. other practices was either partially adopted or not adopted by the farmers.

Pratap (1998) analyzed the demand for commercial energy based inputs like fertilizers and diesel which would increase the shift in cropping pattern from Coarse Cereals or Commercial Crops. Farmers in pursuit of profit maximization take decisions considering productivity levels and input - output prices. Current input prices favour the use of commercial energy as crucial input in crop production in India any reduction in commercial energy use in agriculture may adversely affect crop productivity and production.

Objectives:

- ❖ To study the area, production and productivity dry land crop Cholan in Tamil Nadu.

Methodology

This study intends to use secondary source of information. The secondary data have been used for the study purpose only. In order to analyze the area, production, and yield or productivity of Dry land Crop in Cholan were collected from various publications, official records and web sources such as Hand Book of Statistics on the Indian Economy, Office of the Assistant Director of Statistics, have been referred for the collection of data from 2000-01 to 2014-15. For the present study, the statistical tools were employed to assess the growth performance of Cholan in Tamil Nadu.

Results and Discussions

The result of growth estimation of total area, production and productivity of Cholan in Tamil Nadu during reference period is discussed below. In order to identify the significant role and the Economic status of Dry land Crop in Cholan the Indian economy.

Table 1. Cholan in Area, Production and Productivity in Principles Crops 2000 –2001 to 2014 – 2015 in Tamil Nadu.

Year	Area (Hect)	Production (Tonnes)	Productivity (in Kg./Hec.
2000 – 2001	331349	306020	923
2001 – 2002	317233	274840	866
2002 – 2003	319607	210793	660
2003 – 2004	401607	245933	612
2004 – 2005	376739	252063	669
2005 – 2006	316274	231449	732
2006 – 2007	294376	293940	999
2007 – 2008	283526	247836	874
2008 – 2009	258876	213436	824
2009 – 2010	238476	221960	931
2010 – 2011	243465	246981	1041
2011 – 2012	197696	252522	1277
2012 – 2013	210893	174966	830
2013 – 2014	347131	513313	1479
2014 – 2015	415103	868940	2093

Source: Statistical Hand Book of Tamil Nadu

Table 1. Examines the area under cultivation of dry land crops in Tamil Nadu 2000 – 01 to 2014 -15. The one major cereals crops cultivated in this Tamil Nadu cereals cholam. Among the cereals crops area under cultivation of Cholan was 331349 acres during the period 2000 – 01 and 2014 – 2015 and it was increased to 415103 acres. During the study period the area under Cholan cultivation was 294376 acres during the period 2006-07 and 212 – 2013 and it was decreased to 210893 acres.

Production of acres cholam in Tamil Nadu for the period of 2000 -01 to 2014 – 2015 was presented in table 1 during 2000- 01 the production of cholam 306020 tonnes in 2014-15 years the table reveal that the production of cholam was recorded in increased for the years 2014-15 868940 tones. The cholam production has decreased to 174966 tones during 2012 - 13 and it showed declined trends from 2001-02 onwards except 213 14. Among the one cereals crops in the study the production of cholam.

Examines the trend of yield kilograms per acre of dry land crops in Tamil Nadu. The yield of Cholam was observed to be decreased for the period of reference in the case of cholam the yield was 923 kilograms for per acre for the year 2000-01 and it was increased to 2093 kilograms per acre during 2014 -15. There cholam observed it was decreased in during the period of 612 kilograms acres in 2003-04.

Conclusion:

In overall performance of growth in area, production and productivity in Tamil Nadu has been satisfactory during year 15 years 2000-01 to 2014-15. Further it could be concluded that Growth in area, production and productivity of dry land crops cholam in Tamil Nadu has been Positive signs during year reference period.

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