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Estimation of Growth Rate of Area, Production and Productivity of Cashew Nut in Bastar District of Chhattisgarh State

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Abstract

The study aims to examine the growth rate of area, production and productivity of cashew nut in Bastar district and Bastar plateau (C.G. state**).** Cashew nut (*Anacardium occidental* L) is a tropical tree crop of much importance .The cashew tree is a low spreading evergreen. The mature tree has a prominent tap root system with extensive network of lateral roots. It starts flowering in 3 to 5 years. Cashew is grown in India, Brazil, Vietnam, Tanzania, Mozambique, Indonesia Sri Lanka and other tropical Asian countries like Philippines, Thailand and African countries like Kenya and Nigeria. At present, it is grown in more than 28 countries in the world. India occupies first place in terms of area as well as production of Cashew nut. In India, cashew is grown in mainly Maharashtra, Goa, Karnataka and Kerala along with the west-coast and Tamil Nadu, Andhra Pradesh, Orissa and West Bengal along the east-coast. In Chhattisgarh, it is being cultivated in *Bastar, Dantewada. Kanker, Raigarh, Sarguja* and Jashpur district occupying an area of 8000 ha with a production of 3.0 thousand metric tons and productivity of 460 kg/ha (raw nut) .The study is based on secondary data. The required data has been collected from different sources for the year 2004-05 to 2012-13.

Keywords: Growth Rate of Area, Production and Productivity

Introduction

Cashew nut (*Anacardium occidental* L) is a tropical tree crop of much importance .The cashew tree is a low spreading evergreen. The mature tree has a prominent tap root system with extensive network of lateral roots. It starts flowering in 3 to 5 years. The flowers are small white light green at the time of opening and turn to pink after few days. Flowers are either bi-sexual or male .Both types of flowers occur in the same inflorescence .The cashew is kidney shaped drupaceous nut, greenish grey in colour .A single nut is 3 to 5 cms in length and 2 to .5 cms in width having about 3 to 20 gms weight. Cashew is grown in India, Brazil, Vietnam, Tanzania, Mozambique, Indonesia Sri Lanka and other tropical Asian countries like Philippines, Thailand and African countries like Kenya and Nigeria.At present,it is grown in more than 28 countries in the world. India occupies first place in terms of area as well as production of Cashew nut. Presently, it is grown in India in an area of 8093 lakh hectare with production of 6.95 lakh MT of raw nut with an average productivity of 780kg/ha(Hubballi,2009).Most of the area under cashew is in east-coast and west-coast region of the country. .It is also grown to a limited extent in non-traditional area such as Bastar region of Chhattisgarh and Kolar (Plains) region of Karnataka, Gujarat, Jharkhand and NEH region.

In Chhattisgarh, it is being cultivated in *Bastar, Dantewada. Kanker, Raigarh, Sarguja* and Jashpur district occupying an area of 8000 ha with a production of 3.0 thousand metric tons and productivity of 460 kg/ha (raw nut) in spite of this about 40 thousand hectare non-traditional area can be brought under cashew cultivation (Hubballi, 2009) .Looking to the economic importance of cashew nut in the state has been undertaken

Objective

To estimate the compound growth rate of area, Production and Productivity of Cashew nut in Bastar district, Bastar plateau and Chhattisgarh state.

Materials and Methods

The study is based on secondary data .The required secondary data has been collected from state Horticulture Department and various

other sources of information which includes research bulletins and annual reports for estimating the growth rate in area, production and productivity of cashew nut in Chhattisgarh state, Bastar Plateau and Bastar District for year 2004-05 to 2013-14. There are 27 districts in Chhattisgarh state and in case of Bastar plateau 6 District namely ,Bastar, Kondagaon, Sukama, Dantewada, Bijapur, Narayanpur and Kanker are included for the present study.

Compound Growth Rate

Annual compound growth rates in area, production and productivity of cashew nut will be worked out for the state of Chhattisgarh as well as in Bastar district by fitting an exponential function of the following form will be used.

$Y = A B^{t}$

log y = log A + t log B

Y = Area/production/productivity

A = Constant

B = Regression co-efficient.

t = Time in year

Compound growth rate = (Anti-log of B-1)100

Results and Discussions

It can be seen from the table 1 that the growth rate of area and production of cashew nut in Bastar district of was found positively significant, area being observed 46.90% in case of production 21.23% it was registered even productivity of cashew nut in Bastasr District was found negative significant .

Table 1 Compound Growth Rate of Area, Production, and Productivity of Cashew Nut In Bastar District, Plateau and Chhattisgarh State

S. No	Dist/Plateau/ State	Year 2004-05 To 2013-14		
		Growth rate in percent	R value	P value
	Bastar			
a.	Area	46.09 **	0.663081	0.004131
b.	Production	21.23 **	0.325968	0.084743
c.	Productivity	-10.69 *	0.147359	0.273460
	Bastar Plateau			
a.	Area	46.42 **	0.792007	0.000561
b.	Production	4.36 *	0.098723	0.376613
c.	Productivity	-18.67 **	0.576270	0.010884
	Chhattisgarh state			
a.	Area	26.23 **	0.844482	0.000170
b.	Production	-0.66	0.001801	0.907335
c.	Productivity	-7.05 *	0.084408	0.415447

Note: ** Significant at 1% level of significance

* Significant at 5% level of significance

In case of Bastar plateau it has been observed area increases at the rate of 46.42 per cent positive significant, production was observed positive increase at the rate of 4.36 percent. In case of productivity it registered negative significant. However, in Chhattisgarh state the growth rate of area has been found 26.23 percent significant, but production was observed negative growth at the rate -0.66 percent and productivity was also registered negative significant – 7.05 percent.

Conclusion

It may be concluded that production was increase due contribution of area under cashew nut. It is suggested that productivity can be increase through proper adoption of technology and follow up proper package of practices as well as management.

References

1. Debdutt Behura and Dibakar Naik (1997) A study on the Area, Production, Productivity Growth of Cashew in India with special reference to its Export and Price. *Indian Journal of Agricultural Economics*, Conference Issue.52 (3):624
2. Mathew,Thomas and Reena (1980) Cashew in India bYesterday,Today and Tomorrow .Indian Cashew Journal ,16(1):9-16.
3. Senthil, A.,Mahesh,M.P.(2013) Analysis of Cashew nut Production in India, *Asia Pacific Journal of Marketing & Management Review,* Vol.2 (3), March 2013 Online available at indianresearchjournals.com 106