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## A study on analysis of some selected horticultural vegetable crops production in Goalpara district, Assam

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### Abstract

The present study is an analytical study of some selected horticultural Vegetable crop production in Goalpara district since 2003-04 to 2012-13. The main objective of the study is to analysis of horticultural vegetable crops production in Goalpara District, since 2003-04 to 2012-13. The required data has been collected from secondary source and correlation coefficient analysis of area and production has been done in SPSS software with simple bar graph for analysis of data. The study concluded that cabbage recorded highest production among horticultural crops with 107200 tonnes since 2003-04 to 2012-13. Tomato and Cauliflower recorded second and third highest production with 95135 tonnes and 805446 tonnes during the study period respectively

**Keywords:** Horticultural crop, production and Goalpara District

### Introduction

Horticulture is described as the branch of agriculture, which deals with garden crops, generally fruits, vegetables and ornamentals (Janick, 1972) [4]. The field of horticulture is traditionally divided into food crops (pomology and olericulture) and ornamentals (landscape horticulture and floriculture); pomology deals with fruits and nuts, while floriculture deals with herbaceous plants including carrots (edible roots), asparagus (edible stem), lettuce (edible leaf), cauliflower (edible flower) and pea (edible seed); floriculture deals with the production of flowers and ornamental plants, generally cauliflower, potted plants and greenery, while landscape horticulture is a broad category that includes plants for the landscape, but particularly nursery crops such as shrubs, trees and vines (Hartmann and Kester, 1972) [2]. Several authors agree on the fact that cultivation of horticultural crops is a potential alternative source of national income as well as income for subsistent farmers (Kainja, 2000, Kubwalo, 2006, Kachule, 2006, 2009, Gotor, 2011, Daud and Mwenda, 2008, Khonje, 2013) [7, 9, 5, 3, 1, 8]. In addition to national economic contribution, horticultural commodities such as fruits and vegetables have the potential to contribute to household nutrition, food security and household income (Khonje, 2013) [8]. The fruits and vegetables have contribution to nutrition, income and national economy but horticulture has received little technical and financial support from the government and the private sector as compared to tobacco, tea and sugar industries (Gotor, 2011; Kachule *et al.*, 1998; Kachule and Franzel, 2009) [3, 6, 5].

### Objective

The objective of the present study is to regional analysis of horticultural vegetable crop production in Goalpara District, since 2003-04 to 2012-13.

### Database and Methodology

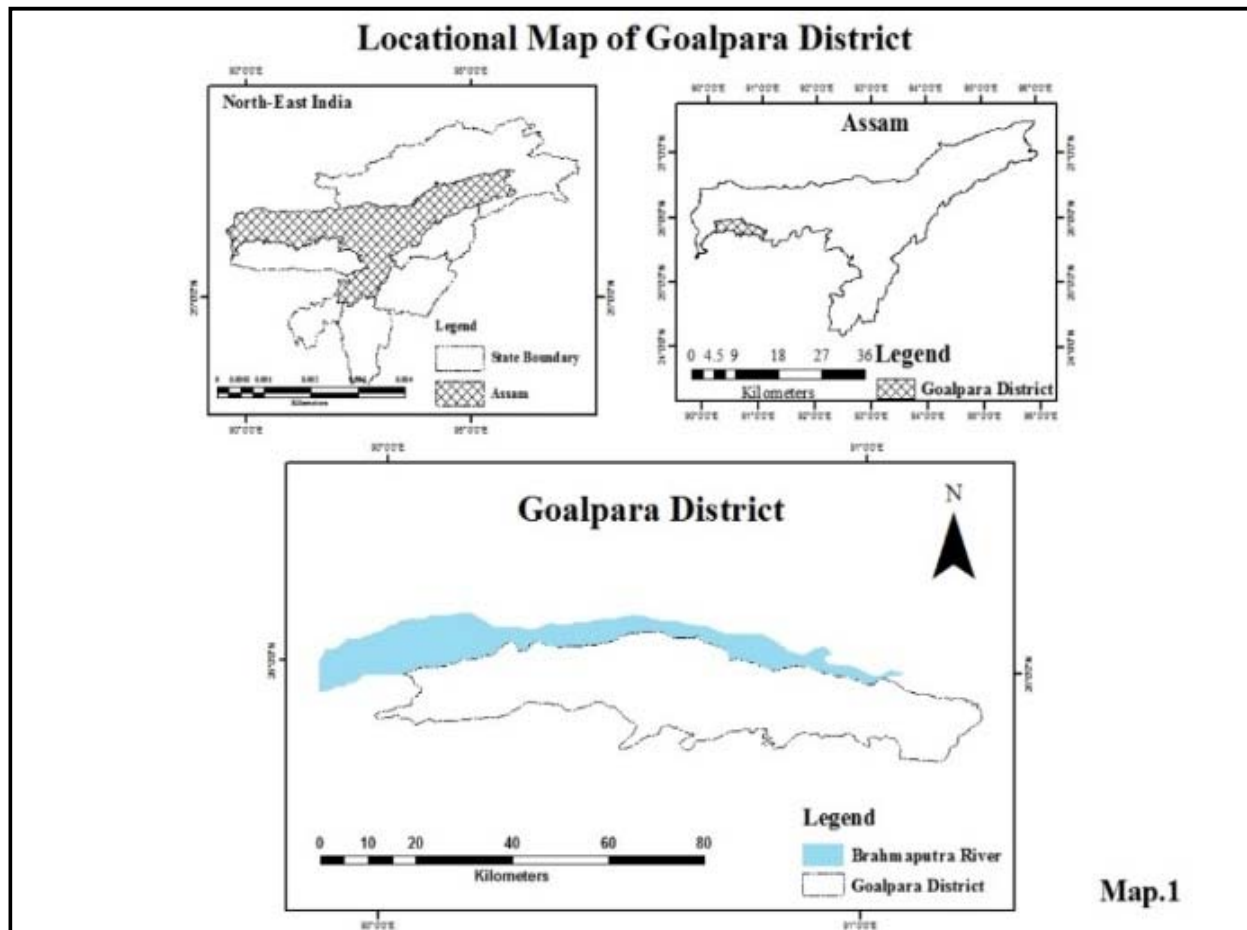
Required data for present study is based on secondary source and collected from the Directorate of Economics and Statistics, Assam. Simple comparative and Karl Pearson correlation and co-efficient statistical methods has been used to analysis the data with bar diagrams.

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**Study Area**

The study area of Goalpara district is an elongated area of foothills and plains along the Assam-Meghalaya border on the south bank of the river Brahmaputra. The district is bounded by the river Brahmaputra on the north and to the south by the Garo hills districts of Meghalaya, to the east by the Kamrup district of Assam and in the west Hat-Singimari sub-Division of Dhubri district of Assam. Geographically,

the area is confined within the 26°08' N to 25°55' N latitude and 91°15' E to 90° E. Longitude, covering a total area of 1824 km<sup>2</sup>. Goalpara District is comprise of five revenue circle namely Lakhipur, Balijana, Rangjuli, Dudhnoi and Matia circle and eight blocks i.e. Jaleswar, Lakhipur, Kharmuja, Balijana, Krishnai, Matia, Kushdhawa and Dudhnoi with total population 755133 persons in 2011 (Map 1).



**Table 1:** Some Selective Horticultural Vegetable Crops with their area and Production in Goalpara District, 2003-04 to 2012-13

Year	Cabbage		Cauliflower		Okra		Tomato		Brinjal		Onion		Sweet Potato		Papaya	
	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
2003-04	516	8140	407	6159	316	3572	384	8137	459	5976	250	496	270	882	160	2468
2004-05	527	8358	418	6332	319	3608	391	8349	462	6023	226	448	350	1142	160	2470
2005-06	636	10522	508	7416	325	3720	418	8997	514	6708	230	456	340	1108	170	2625
2006-07	637	10539	509	7432	326	8280	419	9019	515	6722	284	563	350	1142	200	3087
2007-08	637	10539	509	7432	326	3731	419	9019	515	6722	292	579	355	1158	173	2671
2008-09	668	11172	530	7804	341	3971	442	9558	531	15826	300	613	380	1240	175	3381
2009-10	690	11428	545	9077	349	3702	463	10420	557	7334	320	641	410	1338	250	4183
2010-11	704	11886	552	8040	252	4198	479	10228	556	6948	350	704	450	1468	260	4450
2011-12	722	12082	567	8355	360	4198	490	10616	568	7535	350	757	450	2546	280	7572
2012-13	744	12534	582	12499	368	4743	502	10792	580	7826	365	1194	468	2746	300	8144

**Source:** Directorate of Economics and Statistics, Assam  
 1= Area in Hect, 2= Production in Tonnes

**Table 2:** Correlation Coefficient of Area and Production of some selected Horticultural Vegetable Crops in Goalpara District, Assam

		A1	P1	A2	P2	A3	P3	A4	P4	A5	P5	A6	P6	A7	P7	A8	P8
A1	Pearson Correlation	1	.999**	.998**	.787**	.265	.150	.949**	.951**	.993**	.286	.876**	.742*	.894**	.733*	.841**	.771**
	Sig. (2-tailed)		.000	.000	.007	.459	.678	.000	.000	.000	.423	.001	.014	.000	.016	.002	.009
	N		10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
P1	Pearson Correlation		1	.998**	.776**	.239	.158	.942**	.940**	.988**	.299	.871**	.732*	.889**	.718*	.827**	.755*
	Sig. (2-tailed)			.000	.008	.505	.662	.000	.000	.000	.401	.001	.016	.001	.019	.003	.012
	N			10	10	10	10	10	10	10	10	10	10	10	10	10	10
A2	Pearson Correlation			1	.769**	.271	.172	.927**	.932**	.986**	.296	.852**	.712*	.873**	.703*	.810**	.738*
	Sig. (2-tailed)				.009	.449	.634	.000	.000	.000	.406	.002	.021	.001	.023	.005	.015
	N				10	10	10	10	10	10	10	10	10	10	10	10	10
P2	Pearson Correlation				1	.484	.098	.821**	.814**	.811**	.132	.750**	.947**	.765**	.804**	.812**	.820**
	Sig. (2-tailed)					.156	.788	.004	.004	.004	.717	.012	.000	.010	.005	.004	.004
	N					10	10	10	10	10	10	10	10	10	10	10	10
A3	Pearson Correlation					1	.037	.243	.299	.284	.236	.162	.398	.161	.502	.236	.466
	Sig. (2-tailed)						.919	.499	.402	.427	.511	.654	.255	.656	.139	.511	.174
	N						10	10	10	10	10	10	10	10	10	10	10
P3	Pearson Correlation						1	.037	.020	.111	.073	.122	.109	.030	.042	.128	.057
	Sig. (2-tailed)							.920	.956	.759	.841	.738	.764	.934	.908	.724	.875
	N							10	10	10	10	10	10	10	10	10	10
A4	Pearson Correlation							1	.987**	.970**	.204	.935**	.830**	.959**	.846**	.946**	.891**
	Sig. (2-tailed)								.000	.000	.572	.000	.003	.000	.002	.000	.001
	N								10	10	10	10	10	10	10	10	10
P4	Pearson Correlation								1	.978**	.212	.916**	.786**	.942**	.802**	.934**	.855**
	Sig. (2-tailed)									.000	.556	.000	.007	.000	.005	.000	.002
	N									10	10	10	10	10	10	10	10
A5	Pearson Correlation									1	.243	.900**	.766**	.911**	.759*	.886**	.805**
	Sig. (2-tailed)										.499	.000	.010	.000	.011	.001	.005
	N										10	10	10	10	10	10	10
P5	Pearson Correlation										1	.199	.118	.166	.043	-.059	.058
	Sig. (2-tailed)											.582	.746	.647	.907	.872	.873
	N											10	10	10	10	10	10
A6	Pearson Correlation											1	.826**	.878**	.768**	.908**	.832**
	Sig. (2-tailed)												.003	.001	.009	.000	.003
	N												10	10	10	10	10
P6	Pearson Correlation												1	.776**	.880**	.843**	.894**
	Sig. (2-tailed)													.008	.001	.002	.000
	N													10	10	10	10
A7	Pearson Correlation													1	.818**	.905**	.837**
	Sig. (2-tailed)														.004	.000	.002
	N														10	10	10
P7	Pearson Correlation														1	.864**	.987**
	Sig. (2-tailed)															.001	.000
	N															10	10
A8	Pearson Correlation															1	.919**
	Sig. (2-tailed)																.000
	N																10
P8	Pearson Correlation																1
	Sig. (2-tailed)																
	N																
**.		Correlation is significant at the 0.01 level (2-tailed).															
*.		Correlation is significant at the 0.05 level (2-tailed).															
A1=		Cabbage Area, P1= Cabbage Production															
A2 =		Cauliflower Area, P2 = Cauliflower Production															
A3 =		Okra Area, P3 = Okra Production															
A4 =		Tomato Area, P4 = Tomato Production															
A5 =		Brinjal Area, P5 = Brinjal Production															
A6 =		Onion Area, P6 = Onion Production															
A7 =		Sweet Potato Area, P7 = Sweet Potato Production															
A8=		Papaya Area, P8 = Papaya Lemon Production															

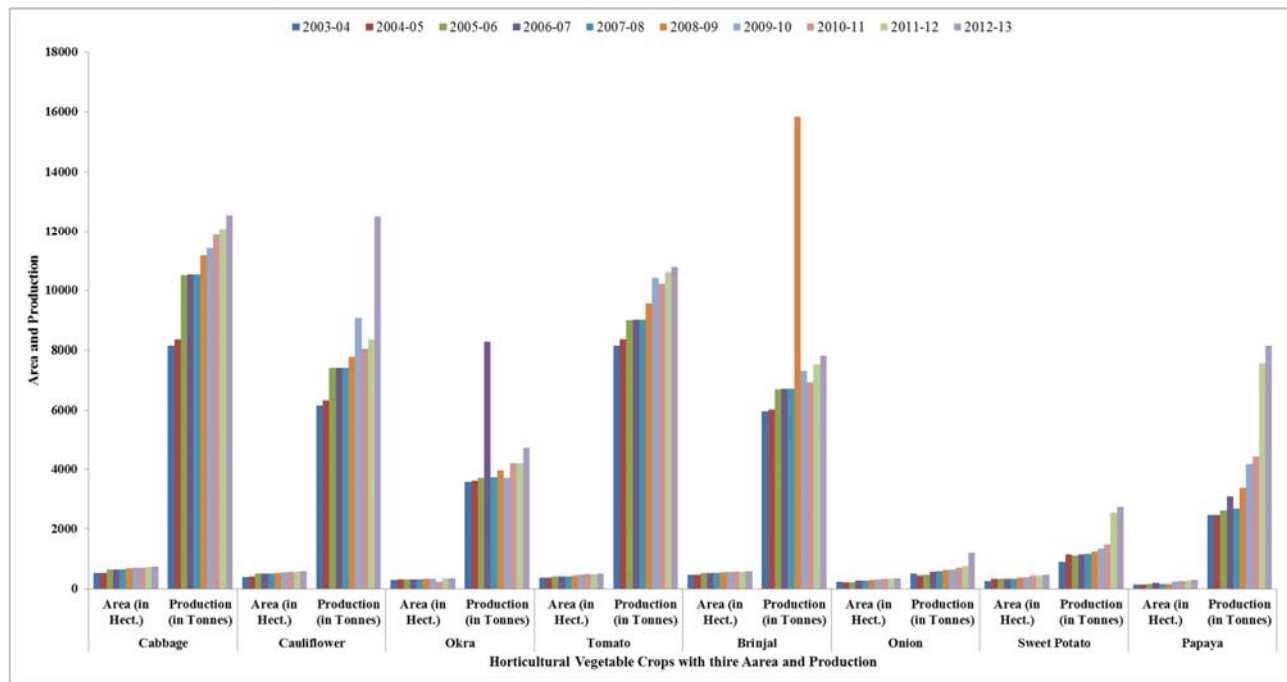


Fig 1: Some Selective Horticultural Vegetable Crops with their Area and Production in Goalpara District, 2003-04 to 2012-13

### Discussion

Table No.1 reveals that cabbage had highest production among the horticultural vegetable crops since 2003-04 to 2012-13. Its production had been gradually increasing since 2003-04. In 2012-13, it had highest production recorded 12534 tonnes with area 744 hect. Second highest producer of horticultural vegetable was tomato. Tomato recorded highest production in 2012-13 with 10792 tonnes and area 502 hect. Third largest producer among the horticultural vegetable crops was Cauliflower with 12499 tonnes and area 582 hect. Rest of crops had recorded highest production namely okra and brinjal had highest production in 2006-07 and 2008-09 with 8280 tonnes and 15826 tonnes respectively and onion, sweet potato and papaya had highest production recorded in 2012-13 with 1194 tonnes, 2746 tonnes and 8144 tonnes respectively. All the horticultural vegetable crops had gradually increasing their production with area.

Table No. 2 shows the correlation and coefficient of area and production of eight horticultural vegetable crops. Highest positive significant correlation is seen between cabbage area and production. Lowest positive correlation is seen between okra production and tomato production. Only negative correlation is showing between brinjal area and papaya production.

### Conclusion

The study reveals that all the selected horticultural vegetable crops have been increasing their production with area during the study period. Cabbage, tomato and Cauliflower were the leading producer with their production; they ranked first, second and third respectively. Except okra and brinjal, all the crops had recorded highest production in 2012-13.

### References

1. Daudi AT, Mwenda ARE. The role of the DARS in vegetable research and development in Malawi. AVRDC Pub. No. 08-705. 2008, 116.

2. Hartmann HT, Kester DE. Plant Propagation: Principles and Practices. Chapman and Hall, London. 1972, 283.
3. Gotor E. Integrated Agricultural Research in Malawi. Bioversity International. CGIAR, 2011.
4. Janick J. An Introduction to the Scientific and Technological Aspects of Modern Horticulture, Horticultural Science, Ronald Press, New York. 1972, 524.
5. Kachule R, Franzel S. The status of fruit production, processing and marketing in Malawi, Working Paper 87, Nairobi: World Agroforestry Centre, 2009.
6. Kachule RN, Nakhumwa TO, Tchale H. Promotion of Horticulture: National Horticulture Development Strategy for Malawi, 1998, 1.
7. Kainja S. Forestry outlook study for Malawi, In Forestry Outlook Studies in Africa, (FOSA) Food and Agriculture Organization (FAO) Country Report, 2000-2001.
8. Khonje AA. Research trends in horticultural crops in Malawi. Journal of Crop and Weed. 2013; 9(2):13-25.
9. Kubwalo M. Factors affecting the development of non-traditional export: a case study of the cut flower industry in Malawi. Research Project, Submitted for M Com Degree. University of the Western Cape, 2006.