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Research Article

APPRAISAL OF DISTRIBUTION NETWORK OF VEGETABLE SEED COMPANIES IN HASSAN DISTRICT: BENCHMARKING THE BEST DISTRIBUTION PRACTICES

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Abstract- The objective of this study is to analyze the distribution network of different vegetable seed companies for tomato seed business and benchmark the best distribution network. Hassan district of Karnataka was selected for the study. Based on sales volume, four major players dealing in tomato seed business in the study were selected for the study. Four distributors (Purposively), 15 dealers and 15 nurserymen were selected randomly. Sixteen parameters chosen to analyse those are; number of product display, problem solving, transportation facility, work force, payment habits, time period of dealing, promptness in delivery, appropriating schemes, account settlement, co-ordinal nature, product quality, push pull index, dealers width, dealers depth, distributors width and distributors depth. Each seed company was ranked on 1 to 5 scales. Statistical tool like weighted mean was used in the analysis of data. Overall performance of each of the company was calculated based on the weigheted score of indusial company with help of a grid. Study indicated that Hassan district prefers oval shaped, red coloured and high firmness fruits. The Clause seeds company hybrid "Alankara" was the highest preferred tomato in the study area. Overall performance of Clause seeds company was prime and followed by Syngenta, Semenis seeds and Bioseeds.

Keywords- Push-pull index, Dealers width and depth, Distributors width and depth.

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Introduction

Seed is one of the most essential input component of productive agriculture. In the last four decades India has made tremendous advances in the seed sector. The development of seed industry has occurred in equivalent with growth in agricultural productivity. The Indian seed industry occupies fifth position in the world seed market and accounting for 4.4 per cent of the global seed market after the U.S. (27 %), China (20 %), France (8 %) and Brazil (6 %) and other different countries contributes 39 per cent. India is producing self-sufficient In terms of global trade, India is almost self-reliant in flower, fruits and vegetables and field crop seeds. India has also taken up the production of a number of exotic vegetables, which are used in multi cuisines and for domestic as well as export markets. The Indian seed market has grown at 12 per cent rate where the growth rate of the global seed market is 5 per cent, while the Indian vegetable seed market is growing at a rate of 10-15 per cent per year. Indian domestic seed market size of about Rs. 15,000 crore and which made a huge potential to become a global supplier of hybrid seeds, specially in vegetables, field crops and flowers [1].

In India, vegetables are grown across all the states under varied-agro climatic and soil conditions in plains as well as hilly regions. There are about 70 different varieties of leafy, fruity and starchy tuber verities of vegetables have been cultivating in India. The major vegetables grown in India are onion, potato, tomato, cucurbits, cole crops and leafy vegetables. India is the world's largest producer of cauliflower, second largest producer of onions and among the first 10 producers of cabbage, green peas, potatoes and tomatoes [2].

Karnataka occupies an important role in the horticulture production in the country. Vegetable crops occupy an area of 445.6 ('000ha) with a production 8250.3 ('000 MT). The total income produced from the horticulture sector accounts for over 40 per cent of the total income derived from the combined agriculture sector [3].

Objective of the Study

To study the performance of the vegetable seed market in Karnataka.

Materials and Methods

The descriptive research was conducted for analyzing the performance of vegetable seed vegetable seed companies and for benchmarking the existing distribution network in the study area. The study area selected for the study was Hassan district of Karnataka during the period of 2015-16.The distribution network of vegetable seed companies and benchmarking the existing distribution network, a convenient sampling method was used to identify the respondents including distributors, dealers, nurserymen and company representatives. Benchmarking of the distribution network of different seed companies was done on the basis of sixteen parameters. These parameters were; number of product display, problem solving, transportation facility, work force, payment habits, time period of dealing, promptness in delivery, appropriating schemes, account settlement, co-ordinal nature, product quality, push pull index, dealers width, dealers depth, distributors width and distributors depth. Weighted mean was calculated for parameters of the distribution system and was used for knowing the overall performance of each company with the help of a grid. Based on company personnel, distributor and dealer's suggestions the weights were assigned to these sixteen parameters according to their importance. Scores awarded to each parameter were multiplied with the individual weightage and the sum was calculated for respective companies. The company with the highest total score was termed as the

benchmark and which was considered as the best distribution system in study area.

$$\text{Dealers width} = \frac{\text{Number of dealers of a particular company}}{\text{Total number of dealers}}$$

$$\text{Dealers depth} = \frac{\text{Company's sales volume through dealers (in kg)}}{\text{Total sales volume of all dealers (in kg)}}$$

$$\text{Distribution depth} = \frac{\text{Companies sales volume through distributors (in kg)}}{\text{Total sales volume of all distributors (in kg)}}$$

$$\text{Distribution width} = \frac{\text{Number of distributors of a particular company}}{\text{Total number of distributors}}$$

$$\text{Push-pull index} = \frac{\text{Average push volume (in kg)}}{\text{Average pull volume (in kg)}}$$

Results and Discussion

The objective of this study was to analyse market performance in the study area. Certain indicators were devised for the study ranging from product quality to distribution depth and width. Market performance is a process of comparing the cost, time or quality of what one organization does against another organization. This study helps to business improvement among the vegetable seed companies. It is a continuous effort to improve company's manufacturing process, distribution process, advertisement process, consumer satisfaction process and so on. Normally, benchmarking is required by a company to have market leadership in the industry and competitive advantages over others due to its enhanced performance. Better performance is directly linked to financial performance in terms of net profit of the company. The distribution depth of a company indicates the sales volume of a particular company among distributors of other companies. More distribution depth signifies a market leader. Thus, depth of distribution system indicates the penetration of a particular company in a particular market among distributors.

The distribution width of a company indicates the reach of a particular company among distributors. More distribution width signifies a better distribution network.

Dealer's depth shows the penetration of a company among dealers and dealer's width of a company indicates the reach of a particular company among dealers. More dealers' width signifies the number of dealers selling a company's product out of the total products sold by the dealers.

Push-pull index is an important measure to judge the loyalty of farmers. Pushing more of the company products indicates dealer's loyalty towards the company. So the companies consider the value of push-pull index for determining the loyalty of its dealers and nurserymen, the profiteering business that distributor may yield for the company and it shows that higher the margin will leads to higher the push volume. On the other side, market pull signify that, the product is having good reach amongst the farmers and is widely popular in the district, so the farmers pulling the company product.

Time period of dealing, cordial nature and problem solving of Clause seeds was leading, followed by Seminis seeds. In the case of promptness in delivery, appropriating schemes, account settlement, product quality, dealer's width, product display, transportation facility, payment habits, appropriating schemes, distribution width of Clause seeds and Synegnta performed equally upmost. Push-pull index of Clause seeds was highest, whereas push-pull index of Bio seeds was least and it shows more loyal to its dealers and nurseryman but not reach to farmers. Similarly, in the case of promptness in delivery, appropriating schemes and cordial nature performance of Bio seed was least [Table-1]. Likewise, in the case of problem solving, transportation facility, time period of dealing, product quality of Seminis seeds performance was least. Clause seeds company deals with the dealers and nurserymen on weekly basis to discuss about the product requirement and they do account settlement on yearly basis, which enabled dealers and nurserymen to clear the account after entire season sales. It also helped in promptness in delivery as well. Maximum numbers of Clause seeds company employees were located in Hassan district which made them to attend to every problem in the district and provided good coordination with dealers and nurserymen. The product quality and distribution depth of Clause seeds was foremost because the hybrid "Alankara" had good keeping quality and was suitable for export. The Clause seeds company employees had good contact with the vendors in the markets so they bid higher prices for the tomatoes of the company. As a result, Alankara had high acceptance level in the market and for this reason the pull volume, dealer's width and distribution width of Clause seeds was high. Hence, the overall performance of Clause seeds was prime, followed by Syngenta, Seminis seeds and Bio seeds.

Table-1 *Overall performance scores of tomato seed in Hassan district*

Sl. No	Parameters	Weightage	Companies			
			Clause	Syngenta	Seminis	Bio seeds
1	Product display	5	3	3	2	2
2	Problem solving	5	5	4	2	3
3	Transportation facility	5	3	3	2	3
4	Work force	5	2	3	2	3
5	Payment habits	5	4	4	3	3
6	Time period of dealing	5	5	4	2	3
7	Promptness in delivery	5	5	5	3	2
8	Appropriating schemes	5	4	4	3	2
9	Account settlement	5	5	5	3	3
10	Coordinal nature	5	4	3	3	2
11	Product quality	7	5	5	2	3
12	Push-pull index	7	4	3	3	1
13	Dealers width	7	5	5	4	4
14	Dealers depth	7	2	2	2	2
15	Distribution width	7	3	3	2	2
16	Distribution depth	15	3	2	2	2
Total		**100**	378	346	246	244
Rank			**I**	**II**	**III**	**IV**

Conclusion

It was evident from the study that the tomato seed distribution network of Clause seeds company was the best in the study area and it is rising as benchmark on overall score. The study helped to understand the market preferred tomatoes in the district and it signifies that oval shaped, red colored and with high firmness tomatoes are majorly preferred. Because of higher firmness the demand of Hassan district tomatoes in the processing industry was high and these tomatoes will be sending to Mumbai market. The Clause vegetable seed company hybrid "Alankara" was able meet these requirements of the tomato market and this made them to pull the market. The study also shows that dealers and nurserymen in the district prefers yearly account settlement rather than weekly or monthly bases. The Clause and Syngenta company hired agriculture graduates as sales executive and which helped them to accessing the market, better dealers and distributors width. The overall performance of tomato seed distribution of Clause seeds was prime and followed by Syngenta, Seminies seeds and Bioseeds.

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Author Contributions

Stephan Raj, Ph.D scholar Department of Agribusiness Management. University of Agricultural Sciences Dharwad. This research article is prepared from the Ph.D thesis work.
Dr. A.D. Naik, Associate Professor, Department of Agribusniess Management. University of Agricultural Sciences Dharwad. Major advisor of the research work and assisted in research objectives and methodology.

Abbreviations: U.S- United States, Kg-Kilograms

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References

[1] Koundinya A.V.V. and Kumar P.P. (2014) *Int. J. Plant, Aminal and Enivironmental Sci.,* 4(4), 62-68.
[2] Deepthi (2013) An analysis of vegetable seed marketing in Hassan district. *M. Sc. (Agri.) Thesis*, *Univ. Agric. Sci.,* Banagalore, Karnataka (India).
[3] Horticultural Crop Statistics of Karnataka at a Glance, 2013-14.
[4] Singh A. and Gautam A. (2010) *Mngt. Insight J.,* 4(2), 25-29.
[5] Sujatha M. Chengappa P. G. and Ravi P.C. (1989) *Indian J. Agric. Mktg.,* 3 (1), 1-4.