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A study on grower's preferences for papaya seed companies in Durg district, Chhattisgarh

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Abstract

A field experiment was conducted at the College of Agriculture, Raipur Indira Gandhi Krishi Vishwavidyalaya, Raipur (Chhattisgarh). During month of August 2022 with the view to study the "A study on growers' preferences for papaya seed companies in Durg district, Chhattisgarh". For study of papaya growers Convenience sampling technique was adopted for the selection of respondents. Total of 80 number of papaya growers and 10 papaya seed dealers and retailers were surveyed who gave valuable information. An appropriate number of papaya growers (80) were selected from sampled blocks of the Durg district for the purpose of study. Out of them, five villages were considered from each of the selected blocks. There were 10 papaya seed dealers and retailers were functioning in vicinity area of Durg district. To undertaken the market structure and sale promotion adopted by various companies, 9-12 papaya seed companies were undertaken for the study. Based on the previous research studies, review of literature, discussion with scientists and consultation with experts in the field, the probable variables influencing directly or indirectly on the adoption and marketing behavior of papaya growers were identified. These were gender, age, class, education, annual income, occupation, land holding, family size and promotional tool. The study was based on primary data. Primary data was collected through interview schedule in an informal environment. Interview schedule incorporate the variables listed for the study was prepared and pre-tested in non-sampling area, before administering to respondents. It could be concluded from the present investigation that the status and growers' preferences association studies of all objective stand could be better performance and first in position papaya seed companies Tai wan (Red Lady) 786. However, papaya seed companies Tai wan (Red Baby) and VNR (Vinayak) comes in next in position.

Keywords: Seed dealers, retailers, papaya growers, respondents, promotional tool

1. Introduction

Papaya (*Carica papaya*) is a tropical fruit having commercial importance because of its high nutritive and medicinal value. It belongs to family Caricaceae. Papaya cultivation had its origin in South Mexico and Costa Rica. Papaya contains high levels of antioxidants vitamin A, vitamin C, and vitamin E. Papaya fruit is very popular with the farmers in general because it requires less area per plant. Papaya is a very wholesome, refreshing and delicious fruit. Papaya garden provides a good source of income and play important role in human nutrition. Green fruits are diuretic and mildly laxative and are used as vegetable. It has a high nutritive and medicinal value.

India is second largest producer of fruits in the world next only to china and Papaya ranks 4th in production among fruit crops. It accounts for 2.12 per cent of the total area and 6.15 per cent of the production of fruit. In India, the total area and production of fruits are 10803 thousand hectare and 196288 thousand metric tonnes in 2020-21. The total area under papaya cultivation is 144 thousand hectare with a production of 5951 thousand metric tonnes in 2020-21 (Source– National Horticulture Board 2020-21). In fiscal year 2021, the volume of papaya production in India is estimated to have amounted to 5.95 million metric tons. This was a slight increase from the previous fiscal year. Indian papaya was primarily produced in Andhra Pradesh, Gujarat and Karnataka. The south Asian country was the largest producer of this fruit in the world. ((Source -staista.com) AP is the largest producer of papaya with the share of 28.19% (National Horticulture Board 2017-18).

In Chhattisgarh, the total area and production of papaya are 14281 thousand hectare and 371233 metric tonnes respectively. The production of papaya fruits in Chhattisgarh ranks third. The major papaya growing districts are Bilaspur, Balrampur, Durg, Mahasamund etc.

Papaya production plays an important role in Chhattisgarh state. Papaya was cultivated in an area of 1303 thousand hectares and production were 51260 metric tonnes in Durg District. It has third in rank with 9.12% share in Chhattisgarh state during 2020-21 (Anonymous 2020-21)^[1].

2. Materials and Methods

The field experiment was conducted at the College of Agriculture, Raipur Indira Gandhi Krishi Vishwavidyalaya, Raipur (Chhattisgarh). The Research District lies between 20°54' and 21°32' north latitude & 81°10' and 81°36' east longitude. The general slope of the district is towards the north-east in which direction the major streams of the district flow. 1. Shivnath 2. Kharun. This district has high quality rich deposits of limestone. The quarrying of limestone is ongoing at Nandini, Semariya, Khundani, Pithaura, Sahgaon, Deurjhaal, Ahiwara, Achholi, Matragota, Ghotwani and Medesara. Limestone thus derived is utilized mainly by ACC for cement production and BSP for steel production.

Chhattisgarh state have consists 33 districts. Among them Durg district contributed 9.12 per cent area in papaya cultivation during 2020-21 and third position in area and production of papaya. So, Durg district was selected for study. Papaya was cultivated in 1304 hectare area and production was 51299 MT in Durg district during 2020-21. Durg district is comprised of 3 blocks viz; Durg (38.2% of total area) Dhamdha (38.6% of total area) and Patan. (23.3% of total area). Among them Durg and Dhamdha blocks were sampled on the basis of the maximum area and production of papaya. An appropriate number of papaya growers (80) were selected from sampled blocks of the Durg district for the purpose of study. Out of them, five villages were considered from each of the selected blocks. There were 10 papaya seed dealers and retailers were functioning in vicinity area of Durg district. Based on the previous research studies, review of literature, discussion with scientists and consultation with experts in the field, the probable variables influencing directly or indirectly on the adoption and marketing behavior of papaya growers were identified. These were gender, age, class, education, annual income, occupation, land holding, family size and promotional tool.

3. Results and Discussion

Data pertaining to status of Papaya Seed Market in the study area influenced by various investigations has been given in table 1, 2, 3, 4 & 5 and fig 1, 2 & 3.

Papaya seed varieties grown study shows that, a list of papaya growers who were cultivating papaya varieties last three years in each selected villages were obtained from concerned village level workers 08 respondents were selected randomly from each village. The papaya seed varieties preferred Tai wan (Red Lady 786) covered the maximum grown that was 61 respondents and after that followed by VNR (Vinayak) (06 respondents), Pusa Nanha (04 respondents) and Tai wan (Red Baby) (03 respondents) respectively. Thus, it could be concluded that variety Tai wan (Red Lady 786) was mostly preferred farmers. While VNR (Vinayak) papaya seed was preferred by farmers to get maximum production of papaya under biotic and abiotic environmental condition.

The market share of papaya seed in Durg district, in that Tai wan (Red Lady 786) variety covered the highest market share that was 76.25 per cent, after that VNR (Vinayak) has market share 7.50 per cent and followed by Pusa Nanha was 5.00 per cent. Other companies were also having very low market

share for papaya seed companies. From these results it can be concluded that, Tai wan (Red Lady 786) holds maximum market share of papaya seed companies. The finding of present study is in accordance with those of Sahu (2011)^[14]. An Analysis of Market Potential and Market share of Hybrid Paddy seeds and Strategies to improve Market share. The total paddy seed market in study area research variety covered major portion accounting 66.35% and the balance 33.64% was shared by hybrid variety of paddy. Also, similar results were reported by Yadav (2014)^[18] studied that Farmers are mostly rely on the opinion of dealer for the choosing the brand/varieties of cotton seed. Top five companies on the basis of market share in study area. Familiarity of any brand/varieties of seed among farmers is due the performance of crop in term of yield, less or negligible disease and pest infestation in previous year crop and currently planted crop.

The market share capital and current market status of papaya seed in Durg district according to company market share were observed first position 84.32 per cent out of 100 per cent in Tai wan (Red Lady 786) and their second position were observed that VNR (Vinayak) 6.80 per cent followed by Tai wan (Red Baby) 3.65 per cent and East West Seed (Lunar F1) 3.19 per cent, respectively. To study the status of papaya seed market in the study area which was in these two blocks it was found in Durg districts most of the retailers in a pre-sale agreement with the companies stocked a particular preferred variety only with them and they did not sell other varieties of seed for their companies. Although it was difficult to obtain the preferences in terms of market share but it was estimated based on cumulative assessment given by the responses from all the retailers. Also similar results were reported by Yadav (2014)^[18] studied that Farmers are mostly rely on the opinion of dealer for the choosing the brand/varieties of cotton seed. Top five companies on the basis of market share in study area. Dealers are best mean of creating the awareness among farmers of agricultural inputs like seeds, agrochemicals, fertilizers etc. demand of variety of seeds is most important factor is considered by dealers for selling of seeds to farmers.

The preference of papaya seed purchases by farmers according to Garrett Ranking reveals that higher timely availability of seed, tolerance against pest and diseases, fruit size /kg, good production, keeping quality, germination, seed price and seed viability was the most influencing factor for positioning of papaya seed variety by the farmers was observed. The Tai wan (Red Lady 786) were observed in I (first) ranked with mean score found (71.00), followed by Tai wan (Red Baby) were observed in II (second) ranked with mean score found (66.00), III (third) ranked observed in Pusa Delicious with mean score found (61.00) and Pusa Nanha were observed in IV (fourth) ranked with observed that mean score (59.00), respectively. Thus, it can be concluded that the important characteristics of seed, which influencing to preference of farmers to papaya seed purchase were timely availability of seed, higher production, good germination, tolerance against pest and diseases and keeping quality to the farmers observed in Tai wan (Red Lady 786).

Most preferred papaya seed companies by the 05 nurseries according to Garrett Ranking, reveals that a papaya seed company was most preferred by the nurseries on basis pre requisite for meeting the quality seedlings demand and nursery management is a potential tool to execute the activity in a successful way. Nurseries preferences of papaya seedling was higher score observed in The Tai wan (Red Lady) in I

(first) ranked with mean score found 786 (49.00), followed by Tai wan (Red baby) were observed in II (second) ranked with mean score found (45.00), III (third) ranked observed in VNR (Vinayak) with mean score found (25.00) and Chakra (Dudhsagar) were observed in IV (fourth) ranked with

observed that mean score (25.00), respectively. From this study it was cleared that the papaya seed companies Tai wan (Red Lady) followed by Tai wan (Red baby) and VNR (Vinayak) to most prefer by the nurseries.

Table 1: The status of papaya seed varieties grown in study area

S. No.	Village	Papaya seed varieties and no. of papaya growers								
		Tai wan (Red Lady 786)	Tai wan (Red Baby)	VNR (Vinayak)	Chakra (Dudhsagar)	East West Seed (Lunar F1)	Govt. (Pusa Nanha)	Govt. (Pusa Delicious)	Govt. (Co-15)	Other
1	Ganiyari	6 (9.84)						1 (100.00)		1 (100.00)
2	Kumhari	5 (8.20)		3 (50.00)						
3	Borai	7 (11.48)				1 (50.00)				
4	Akoli	6 (9.84)	1 (33.33)				1 (25.00)			
5	Nagpura	6 (9.84)		2 (33.33)						
6	Aokla	7 (11.48)	1 (33.33)							
7	Ahiwara	7 (11.48)					1 (25.00)			
8	Temri	5 (8.20)	1 (33.33)	1 (16.67)		1 (50.00)				
9	Murmunda	6 (9.84)					1 (25.00)		1 (100.00)	
10	Pendri	6 (9.84)			1 (100.00)		1 (25.00)			
Total respondents		61 (100.00)	03 (100.00)	06 (100.00)	01 (100.00)	02 (100.00)	04 (100.00)	01 (100.00)	01 (100.00)	01 (100.00)

Table 2: Company wise preferences of papaya growers in the study area

S. No	Name of Companies	Total no. of Respondents	Preferred papaya growers (Percentage) (n=80)
1	Tai wan (Red Lady 786)	61	76.25
2	Tai wan (Red Baby)	3	3.75
3	VNR (Vinayak)	6	7.50
4	Chakra (Dudhsagar)	1	1.25
5	East West Seed (Lunar F1)	2	2.50
6	Pusa Nanha	4	5.00
7	Pusa Delicious	1	1.25
8	Co-15	1	1.25
9	Other	1	1.25
	Total	80	100.00

Table 3: Current market status of papaya seed in Durg District according to company market share

S. No	Name of Companies	Papaya seed consumption in Durg district (kg)	Papaya seed price (10 gram/Rs.)	Total Expenditure (Rs. in Lakhs.)	Percentage (n=36729100)
1	Tai wan (Red Lady 786)	81.50	3800	309.70	84.32
2	Tai wan (Red Baby)	4.20	3190	13.40	3.65
3	VNR (Vinayak)	8.32	3000	24.96	6.80
4	Chakra (Dudhsagar)	1.40	1800	2.52	0.69
5	East West Seed (Lunar F1)	3.12	3750	11.70	3.19
6	Pusa Nanha	6.45	120	0.77	0.21
7	Pusa Delicious	1.60	120	0.19	0.05
8	Co-15	1.65	180	0.30	0.08
9	Other	1.50	2500	3.75	1.02
	Total	109.74	18460.00	367.29.00	100.00

Table 4: Grower's preferences of Seed Company according to the characteristics of seed

S. No.	Companies name	Mean Ranks (0-10)								Mean score	Ranking
		Timely availability of seed	Tolerance against pest and diseases	Fruit size/kg	Good production	Keeping Quality	Germination	Seed price	Seed viability		
1	Tai wan (Red Lady 786)	9	8	10	9	10	9	7	9	71	I
2	Tai wan (Red Baby)	8	7	9	9	9		7	9	66	II
3	VNR (Vinayak)	8	6	6	6	5	6	7	6	50	VI
4	Chakra (Dudhsagar)	5	5	6	7	6	6	6	6	47	VII
5	East West Seed (Lunar F1)	5	6	7	7	6	6	5	6	48	V
6	Govt. (Pusa Nanha)	7	8	7	8	7	7	8	7	59	IV
7	Govt. (Pusa Delicious)	7	8	8	7	8	8	8	7	61	III
8	Govt. (Co-15)	6	7	8	8	7	8	7	7	58	V

Table 5: Most preferred papaya seed companies by the nurseries (1-10)

S. No.	Name of Companies	AKF Nursery	PVR Nursery	Mala Nursery	Shree Ji Nursery	Mukta Nursery	Mean score	Rank
1	Tai wan (Red Lady 786)	10	10	10	10	9	49	I
2	Tai wan (Red baby)	9	9	8	9	10	45	II
3	VNR (Vinayak)	4	5	4	6	6	25	III
4	Chakra (Dudhsagar)	5	6	4	4	6	25	IV
5	East West Seed (Lunar F1)	6	5	5	4	3	23	V
6	Others	5	6	3	4	3	21	VI

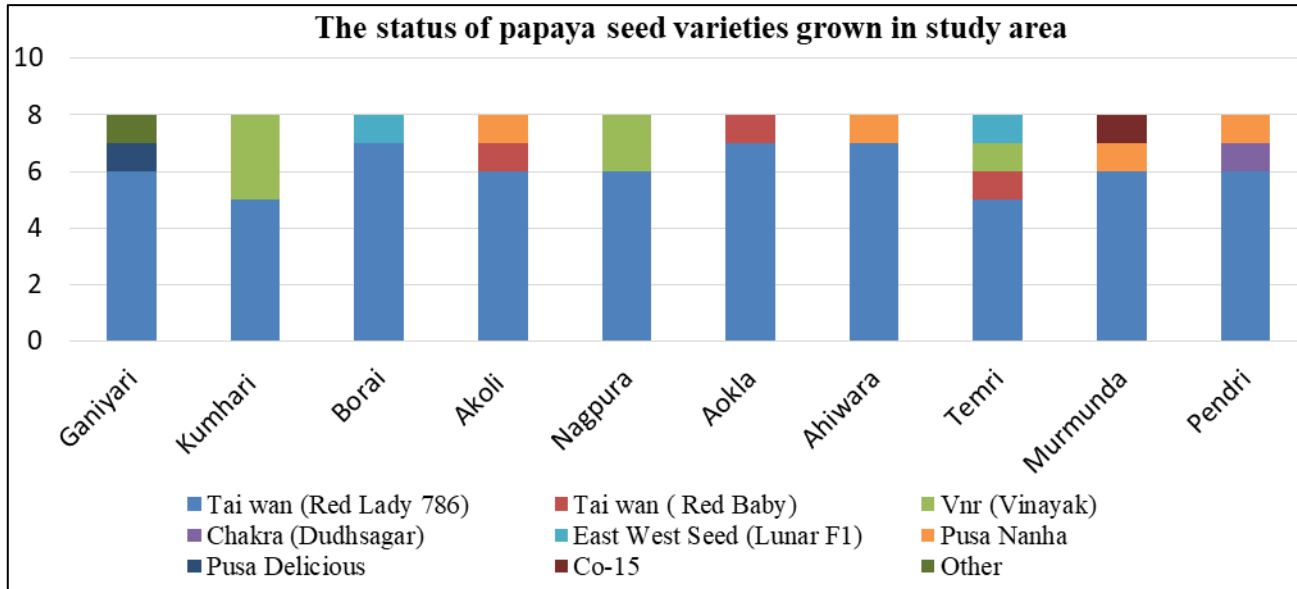


Fig 1: The status of papaya seed varieties grown in study area

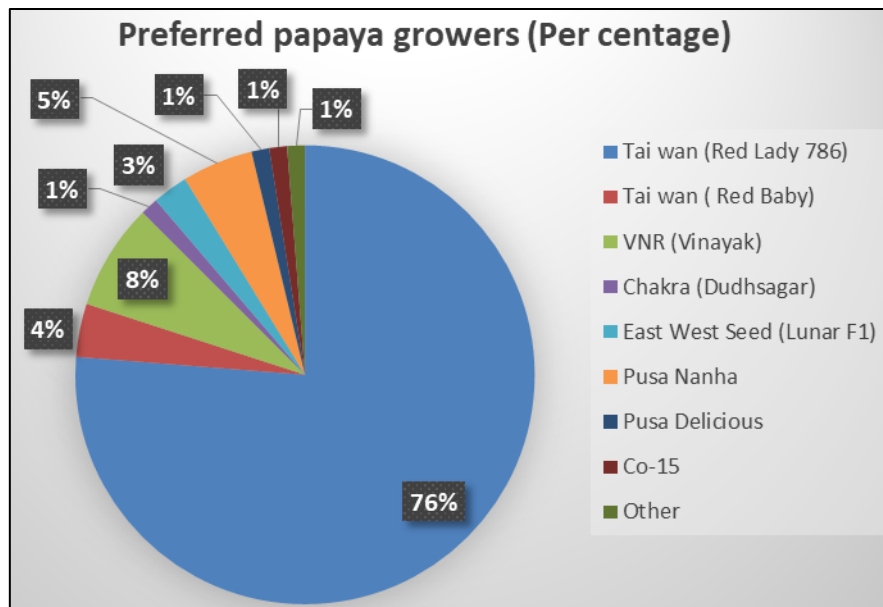


Fig 2: Current market share of papaya seed companies under study area

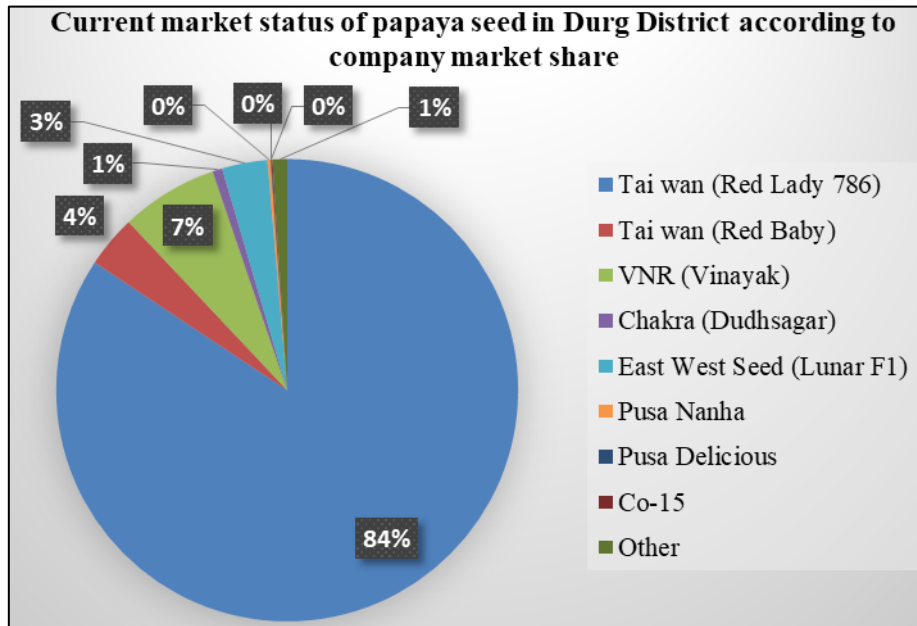


Fig 3: Current market status of papaya seed in Durg District according to company market share

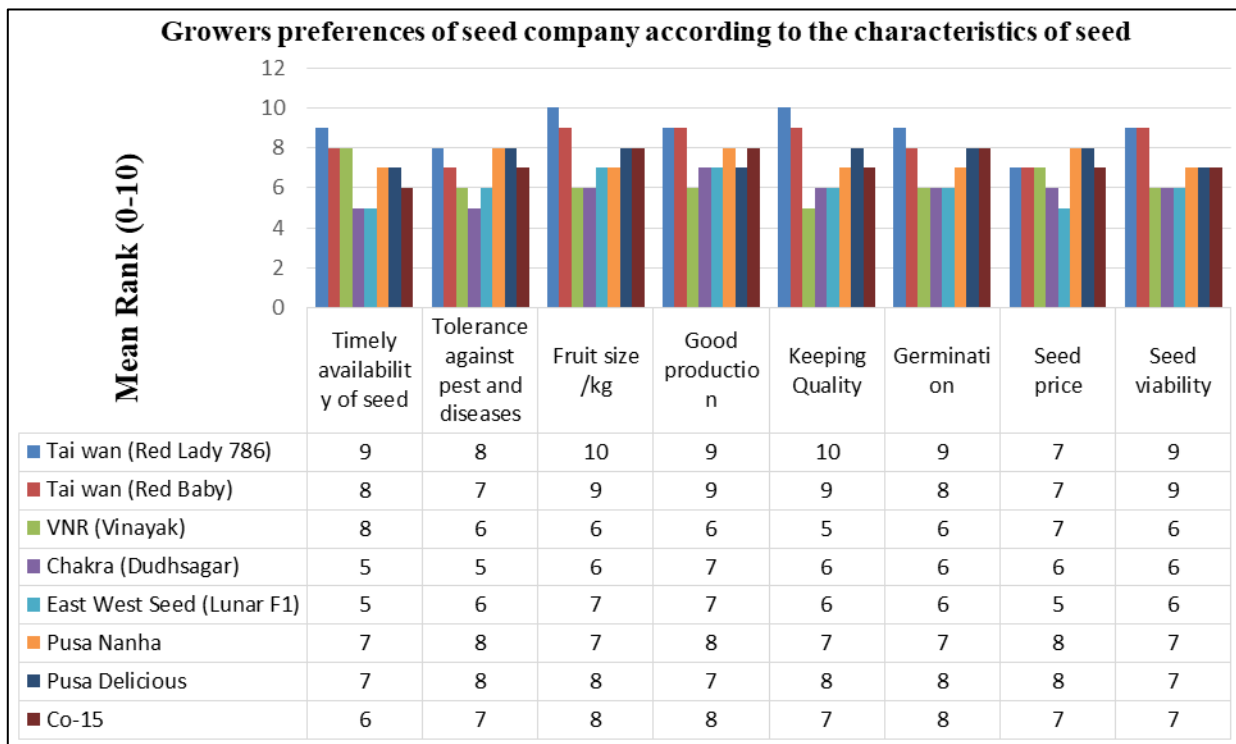


Fig 4(a): Grower's preferences of seed company according to the characteristics of seed

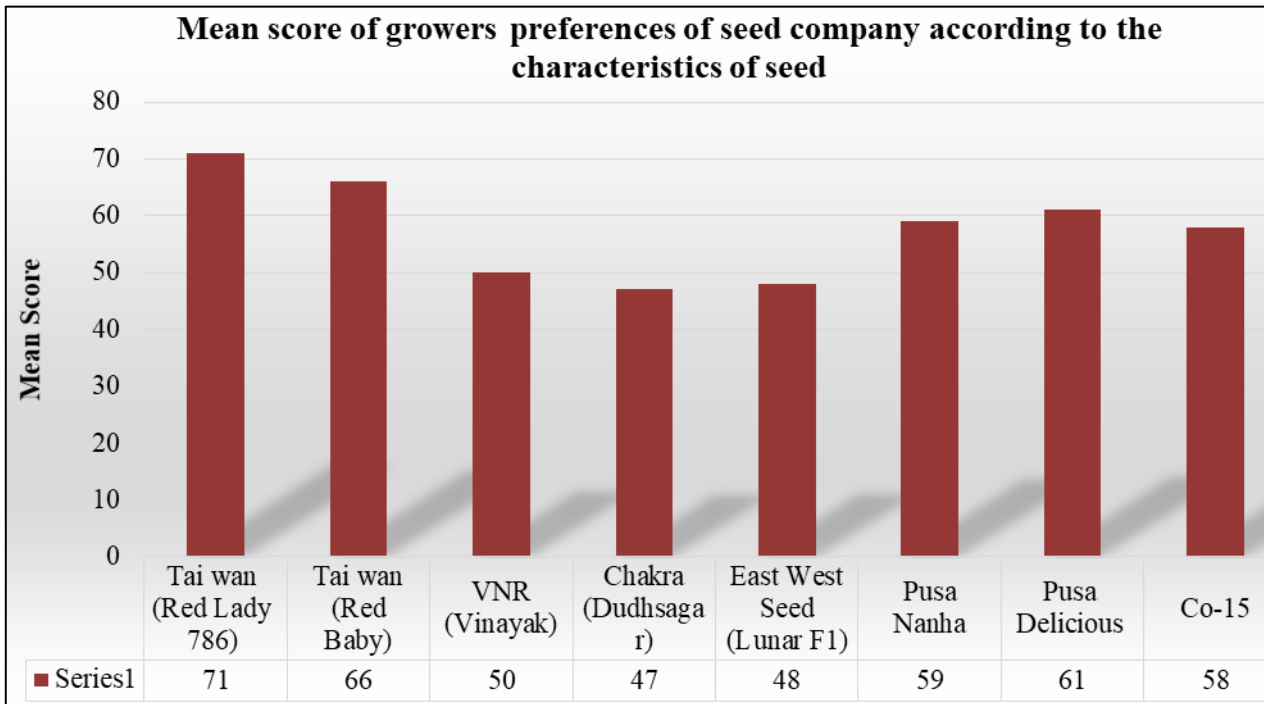


Fig 4(b): Mean score of grower’s preferences of Seed Company according to the characteristics of seed

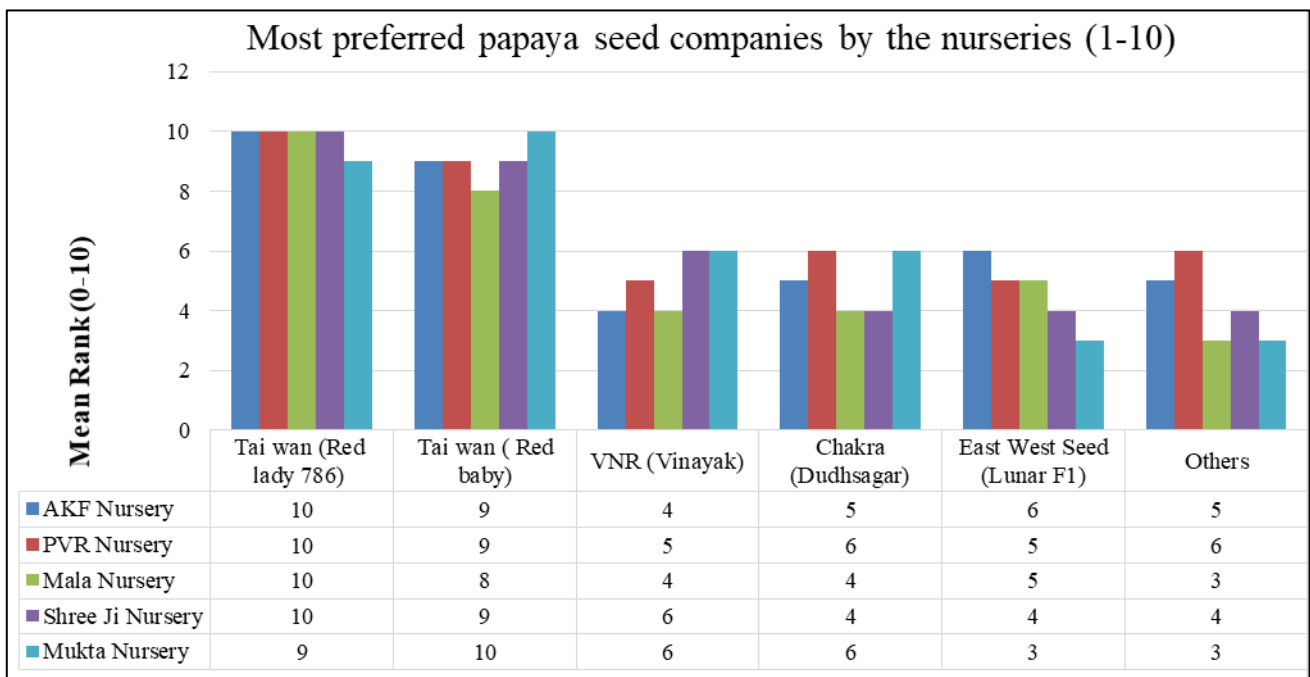


Fig 5(a): Most preferred papaya seed companies by the nurseries (1-10)

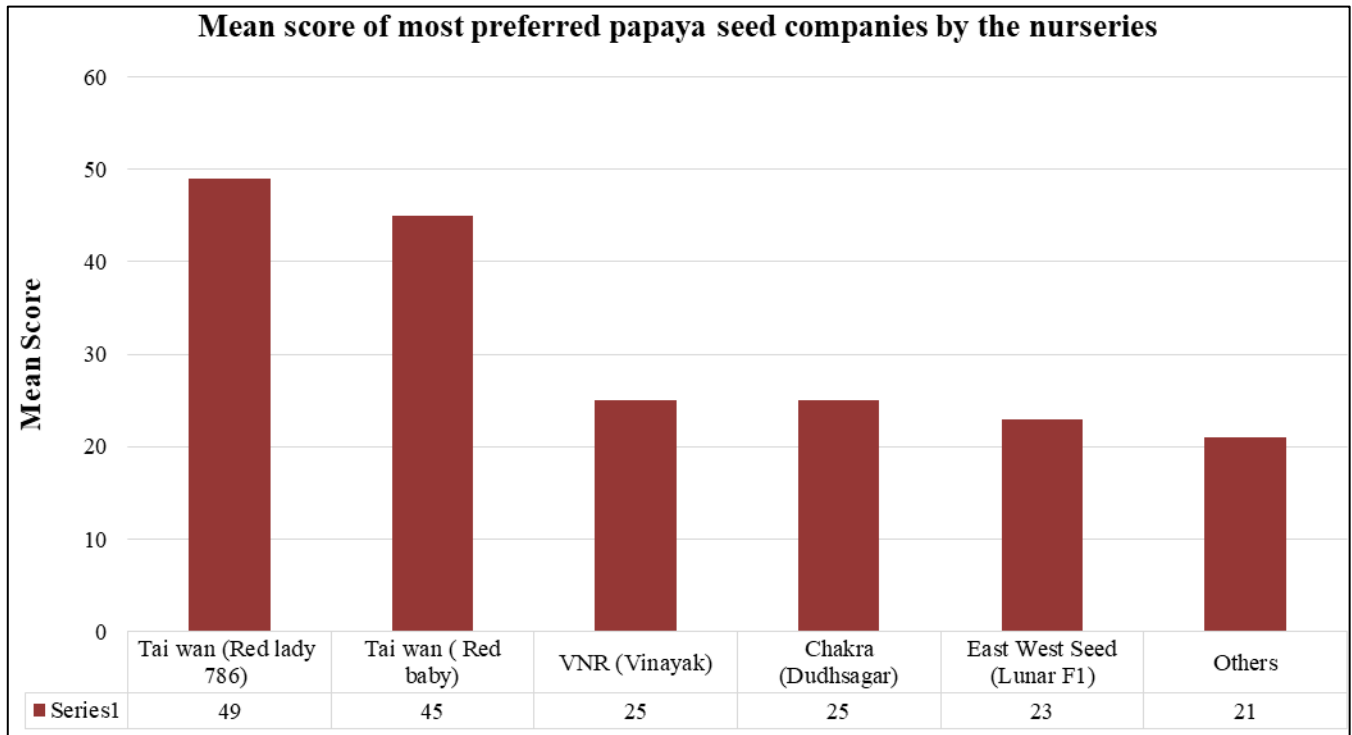


Fig 5(b): Mean score of most preferred papaya seed companies by the nurseries

4. Conclusion

The papaya seed varieties preferred Tai wan (Red Lady) 786 covered the maximum grown was 61 respondents.

Majority of grower’s preferences of papaya seed company The Tai wan (Red Lady) 786 followed by Tai wan (Red Baby).

Majority nurseries preferences of papaya seedling variety in The Tai wan (Red Lady) in first position followed by the Tai wan (Red Baby) in second position.

It could be concluded from the present investigation that “A study on growers’ preferences for papaya seed companies in Durg district, Chhattisgarh” from the examine the status and growers’ preferences association studies of all objective stand could be better performance and first in position papaya seed companies Tai wan (Red Lady) 786. However, papaya seed companies Tai wan (Red Baby) and VNR (Vinayak) comes in next in position.

5. References

1. Anonymous. Agri portal, Directorate of Horticulture, Statistics. Govt. of Chhattisgarh; c2020-21.
2. Anand, Dadmal PP. A study on farmers buying behavior and dealers analysis of Bt. Cotton seed in Chandrapur district of Maharashtra state. (MBA-IAB, AAU, Anand); c2014.
3. Basanayak RT, Manjunath L, Salunke R, Agasimani S, Jahagirdar KA. Study on the profile of papaya growers in Bidar and Gulbarga districts of Karnataka, Adv. Res. Jr. Soc. Sci. 2012;3(2):125-128.
4. Bhardwaj RL, Nandal U. Papaya cultivation brought socio-economic and nutritional security in Sirohi tribal’s of Rajasthan. Asian Jr. Dairy & Food Res. 2015;34(1):44-48.
5. Biswas S, Kumar S, Rai AK, Nayak MM. An economic analysis of production of papaya in Bilaspur district of Chhattisgarh. International Journal of Chemical Studies. 2019;7(3):2786-2788.
6. Hemambara HS, Yogesh MS. Production and marketing

7. Kumari AR, Laxmikant. Socio-economic profile and training need of beekeepers in Samastipur district of Bihar. Agric. Update. 2016;2:1-6.
8. Kumar N, Choudhary VK, Kumar D. Estimate the Compound Growth Rate of Area, Production, and Productivity of Papaya in Bilaspur District of Chhattisgarh. Int J Curr. Microbiol. App. Sci. 2021;10(02):2892-2898.
9. Kadam RP, Umate SM, Pawar GS, Waghmare OR. Assessments of training need of sweet orange growers in Marathwada region. Agric. Update. 2014;9(3):354-359.
10. Naveen. Study on Entrepreneurial Behavior of Pomegranate Growers in Chitradurga District of Karnataka, M. Sc. (Agri.) Thesis, Univ. Agric. Sci., Bangalore, Karnataka (India); c2012.
11. Radhakrishnan A, Meti SK, Goudappa SB. Information Management Behavior of Papaya Growers of Karnataka: A Comparative Study. Indian Res. Jr Extn. Edu. 2014;14(2):31-35.
12. Sagar SB, Parmar HC, Darji VB. Economics of production of papaya in middle Gujarat region of Gujarat, India. G. Jr. B.A.H.S. 2012;1(2):10-17.
13. Singh N, Bhimraj KS. Marketing of papaya from supply chain management perspective: A case study of tribal belt of South Gujarat. National Academy of Agricultural Research Management; c2014. p. 54-63.
14. Sahu D. An Analysis of Market Potential and Market share of Hybrid Paddy seeds and Strategies to improve Market share in Jabalpur District of M.P (M. Sc. (Agri) Thesis, Jawaharlal Nehru Krishi Vishwa Vidyalaya, Jabalpur (M.P); c2011. Retrieved from <https://krishikosh.egranth.ac.in/displaybitstream?handle=1/5810018762>
15. Shahriar, Mustafiz, Nakayasu, Akira, Itabashi, Mamoru. Marketing of Vegetable Seeds: Practice and Behavioral Inclinations of Vegetable Seed Sellers and Farmers in

- Selected Areas of Bangladesh. Agriculture. 2021;11:364. 10.3390/agriculture11040364.
16. Singh N, Bhimraj KS. Marketing of papaya from supply chain management perspective: A case study of tribal belt of South Gujarat. National Academy of Agricultural Research Management;c2014. p. 54-63.
 17. Timsina KP, Jourdain D, Shivakoti GP. Supply Situation of Vegetable Seeds in Nepal: An Analysis from Policy Perspective. Nepalese Horticulture. 2018;10:26-36.
 18. Yadav KK. Market Analysis of Cotton Seed Industry in Balasinor Taluka of Mahisagar District and Thasra Taluka of Kheda District of Gujarat. (MBA-IAB, AAU, Anand); c2014.