

Perception of Pomegranate Growers Benefitted under National Horticulture Mission (NHM) in Karnataka

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ABSTRACT

The present study was taken up during the year 2023-24 to know the perception of pomegranate growers under National Horticulture Mission in Karnataka particularly in Chikkaballapura and Chitradurga districts. The results of the study revealed that, half (50.00 per cent) beneficiary-respondents belonged to Chikkaballapura district had better perception level, in case of Chitradurga district 46.70 per cent of the beneficiaries belong to the better perception level category. The overall beneficiaries were found to have better perception level of about 26.67 per cent respectively. In Chikkaballapura district non-beneficiary respondents had good (30.00 per cent) perception level, whereas in case of Chitradurga district about 1/5th of (21.67%) of the non-beneficiaries belong to the good perception level category and the overall non-beneficiaries were found to have 51.67 per cent good perception level category. The results showed that the majority of beneficiary pomegranate growers under NHM in both Chikkaballapura and Chitradurga districts have a good perception of the NHM scheme. The overall perception of non-beneficiary pomegranate growers regarding the NHM was largely had positive impact. The findings highlighted the importance of improving perception and outreach efforts for to increase their participation and get benefit from NHM and improve their perception level for better scheme implementation and spread of positive impact of the NHM.

Keywords : Perception level, National Horticulture Mission (NHM), Pomegranate growers, Implementation

AGRICULTURE sector plays an important role in India's economy, serving as the largest and most significant economic industry and the primary source of income for the majority of the population. It remains the backbone of employment and sustenance for many Indians even today. According to the 2011 Census, approximately 54.6 per cent of the country's population was engaged in agriculture and it's allied activities. Recognizing the importance of agriculture as major income generating sector, the Government of India has implemented numerous programmes and initiatives to support and develop the sector. These initiatives and programmes aim not only to enhance agricultural productivity and also to increase farmers' incomes. India's total geographical

area is 328.7 million hectares, of which 197.3 million hectares constitute the gross cropped area, with a cropping intensity of 141.6 per cent. Over the years, the contribution of agriculture to the Indian economy has been progressively rising. In terms of horticultural crops, states such as Karnataka, Maharashtra, Andhra Pradesh, Kerala and West Bengal hold prominent positions in terms of area and production. Karnataka accounts for 8.4 per cent of area under horticultural crops and contributes only 6.8 per cent to total production, ranking 18th in productivity in India.

The National Horticulture Mission (NHM) was launched in 2005-06 by the Department of Agriculture and Cooperation under the Ministry of Agriculture,

Government of India. This scheme aims for the holistic development of the horticulture sector by establishing forward and backward linkages between all stakeholders, including farmers and private entrepreneurs. The mission covers all states and three Union Territories (Andaman and Nicobar Islands, Lakshadweep and Puducherry) except for the eight North-Eastern states, including Sikkim and the states of Jammu & Kashmir, Himachal Pradesh and Uttarakhand. These regions are covered under a separate programme, the Horticulture Mission for North East and Himalayan States (HMNEH). During the Tenth Five-Year Plan, NHM was fully funded by the Government of India. In the Eleventh Plan, the funding structure was revised to 85 per cent central assistance and a 15 per cent contribution from state Governments. Currently, out of the 483 districts in the 18 states and three Union Territories, NHM is operational in 384 districts. In 2014-15, the Mission for Integrated Development of Horticulture (MIDH) was established as the nodal agency in the country for the comprehensive development of horticulture sector in the country, with NHM becoming a sub-scheme under MIDH. The National Horticulture Mission (NHM) started to harness the full potential of horticulture across states by enhancing the production of fruits, vegetables, flowers, spices, medicinal plants and other horticultural products.

The NHM scheme was implemented in Karnataka on June 30, 2005, in two phases. Initially, 15 districts were included in the first phase during 2004-05. These districts were Bengaluru (Urban), Bengaluru (Rural), Tumkur, Kolar, Chitradurga, Hassan, Mysore, Kodagu, Udupi, Dakshina Kannada, Belgaum, Bijapur, Bagalkot, Gulbarga and Koppal. Subsequently, in 2015-16, the scheme was extended to the remaining 15 districts *viz.*, Chikkaballapur, Ramanagara, Mandya, Chamarajnar, Chikka magaluru, Shivamogga, Davangere, Haveri, Uttara Kannada, Dharwad, Gadag, Bellary, Bidar, Raichur and Yadgir covering all 30 districts in Karnataka. NHM initiatives have focused on 16 key horticultural crops, including mango, grapes, pomegranate, banana, pineapple, cashew, cocoa, pepper, ginger,

aromatic plants and flowers. The mission supports horticultural farmers in post-harvest management, processing and marketing. Among fruit crops, pomegranate has shown remarkable progress. In 2017-18, pomegranate cultivation spanned 25,967 hectares, yielding 268,228 metric tonnes. By 2021-22, the area increased to 27,693 hectares, with a production of 302,451 metric tonnes, contributing 3.60 per cent to Karnataka's fruit crop output. This upward trend has made the pomegranate as important perennial fruit crop in Karnataka.

In Karnataka, pomegranate cultivation spans 28.09 thousand hectares, with a production accounts to 328.92 thousand metric tonnes with an average fruit yield of 11.71 metric tonnes per hectare, slightly same and above average of 11.70 metric tonnes. Major pomegranate producing districts are Chitradurga, Tumkur, Koppal, Bagalkot, Bijapur, Raichur, Belgaum, Bellary and Dharwad. Despite these increase in area and production, the studies highlight significant potential improve in yield. Challenges in achieving optimal production include gaps in grower knowledge, technological adoption and market access. The implementation of NHM in Karnataka, to analyze their perception level about the scheme by pomegranate growers for better implementation of the scheme. Understanding these factors and addressing challenges for further improving. This present study aimed and analyzed the perception levels pomegranate growers in Karnataka.

METHODOLOGY

The present study was purposively carried out in Chitradurga and Chikkaballapura district of Karnataka State. As NHM is wide spread in all the districts of Karnataka state, Chitradurga was selected as NHM was started first in that region and Chikkaballapura district was selected based on its wide spread activities in this region because NHM was started in second phase in this district. These two districts were purposively selected for the study as the number of beneficiary pomegranate growers were more in these districts. The ex-post facto design was used. The selection of respondents was by following

simple random sampling technique has been employed for the selection of respondents of pomegranate growers from Chitradurga and Chikkaballapura. From each district 60 beneficiaries and 30 non - beneficiaries were selected. which constituted the total sample size of 180 pomegranate grower respondents. The data were collected from the respondents through personal interview metho dusing pre-tested and well-structured schedule. The perception of the beneficiary respondents were categorized in to three category *viz.*, poor, good and better based on mean and SD. The statistical tools used for the investigation were Frequency, Percentage, Mean, Standard Deviation and Rankwere used for the study.

RESULTS AND DISCUSSION

Overall Perception Level of Beneficiary Pomegranate Growers of NHM

The Table 1 presented the overall perception level of beneficiary pomegranate growers under the National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts provided the insights into how beneficiaries rated their experiences with the NHM interventions. In Chikkaballapura district, respondents had reported one fourth (26.67%) of them as ‘Poor’ perception level. This suggested that, about a one fourth of the beneficiaries felt that the NHM interventions have not significantly impacted their perception of the scheme. On the other hand, half of beneficiaries (50.00%) belonged tothe ‘Good’ category, indicated a positive but moderate perception of the scheme effectiveness. Finally, 23.33 per cent

of beneficiaries fall into the ‘Better’ perception category, suggested that, a smaller portion of the beneficiaries felt exceptionally positive about the NHM interventions and their outcomes. In Chitradurga - district, the distribution was similar. 30.00 per cent of beneficiaries had a ‘Poor’ perception level, while 46.67 per cent of beneficiaries fall under the ‘Good’ category. Additionally, 23.33 per cent of beneficiaries rated their perception as ‘Better’. These results indicated that, similar to Chikkaballapura, the majority of Chitradurga district beneficiaries have a positive but not overwhelmingly high perception about NHM scheme, with only a small proportion reported poor perceptions.

When considered the overall data for both districts, 28.33 per cent of beneficiaries have a ‘Poor’ perception, which was still a notable portion but not the majority. The majority (48.33%) of beneficiaries reported a ‘Good’ perception, indicated that, the NHM interventions were positively expressed by the most farmers. Only 23.33 per cent of beneficiaries fall under the ‘Better’ category, reflecting a smaller portion who were highly satisfied with the scheme’s impact. The results showed that, the majority of pomegranate growers under NHM in both Chikkaballapura and Chitradurga districts have a good perception of the NHM programme. However, there remains a portion of beneficiaries with poor perception, while NHM had a positive impact, there might still be areas where further improvements were needed to enhance its effectiveness and increase beneficiary satisfaction. Findings were in line with Naveenkumar *et al.* (2018).

TABLE 1
Overall Perception level of beneficiary pomegranate growers of NHM

(n=120)

Perception level	Category	Chikkaballapra Beneficiary (n ₁ =60)		Chitradura Beneficiary (n ₂ =60)		Overall Total Beneficiary (n=120)	
		f	%	f	%	f	%
Mean = 14.9S D = 2.66	Poor (<13.57)	16	26.67	18	30.00	34	28.34
	Good (13.57- 16.23)	30	50.00	28	46.67	58	48.33
	Better (>16.23)	14	23.33	14	23.33	28	23.33

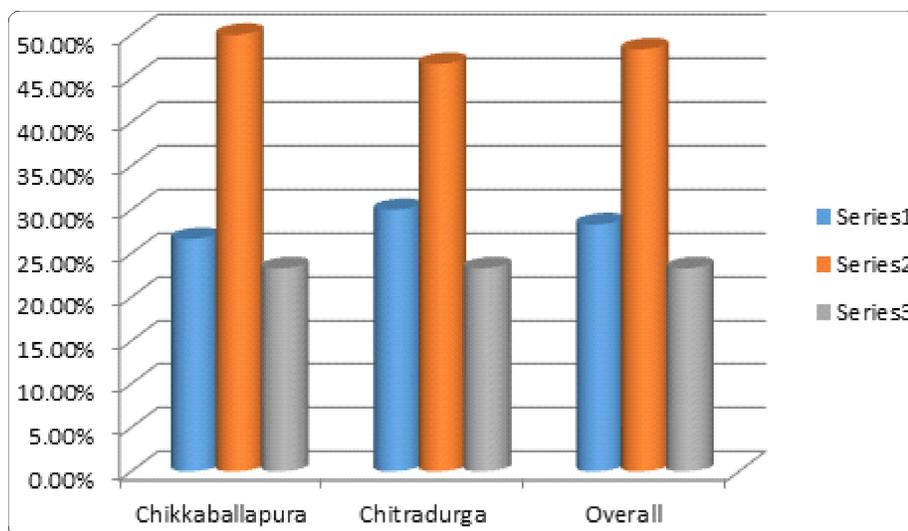


Fig. 1 : Overall Perception level of Beneficiary Pomegranate growers of NHM

Overall Perception Level of Non-beneficiary Pomegranate Growers of NHM

The Table 2 represents on the overall perception level of non-beneficiary pomegranate growers under the National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts reflects the varied perceptions of those who have not participated in the NHM programme. In Chikkaballapura district 13.33 per cent of non-beneficiaries reported as ‘Poor’ perception level. This indicated that a relatively small proportion of non-beneficiaries had a low perception about the potential benefits of NHM, possibly due to limited awareness or unable to understanding of the programme. In contrast 30.00 per cent of non-beneficiaries had a ‘Good’

perception level, suggested that the majority feel moderately positive about the programme despite not participating. Only 6.67 per cent of non-beneficiaries fall under the ‘Better’ category, indicated that a smaller segment holds a very positive view about NHM, perhaps due to indirect exposure or positive word of mouth that spread among pomegranate growers. In Chitradurga district, the distribution was somewhat similar with 11.67 per cent of non-beneficiaries falling under the ‘Poor’ perception category, indicated a relatively low but still present level of dissatisfaction or indifference. A larger portion 21.67 per cent of non-beneficiaries, fall under the ‘Good’ perception category, while 16.67 per cent of non-beneficiaries reported as ‘Better’ perception, suggesting a more favorable

TABLE 2
Overall Perception level of non-beneficiary pomegranate growers of NHM

(n=60)

Perception level	Category	Chikkaballapura Non-Beneficiary (n1=30)		Chitradurga Non-Beneficiary (n2=30)		Overall Total Non-Beneficiary (n=60)	
		f	%	f	%	f	%
Mean =10.5 SD =3.21	Poor (<8.90)	8	13.33	7	11.67	15	25.00
	Good (8.90 -12.11)	18	30.00	13	21.67	31	51.67
	Better (>12.11)	4	6.67	10	16.67	14	23.33

view towards NHM than in Chikkaballapura district. When looked at the overall data for both the districts 25.00 per cent of non-beneficiaries have a 'Poor' perception, which was still a significant proportion but less than one third. The majority (51.67%) of non-beneficiaries reported a 'Good' perception, indicated that while they have not directly benefited from NHM, they still hold a moderately favorable view of its potential. A smaller group of (23.33%) non-beneficiaries had a 'Better' perception, reflecting a more positive outlook on the NHM programme despite not being directly involved.

The overall perception of non-beneficiary pomegranate growers regarding the NHM was largely positive impact. However, inspite of that a notable proportion with a 'Poor' perception, inferred that some non-beneficiaries might feel excluded

or uninformed about the benefits of the programme. The findings highlighted the importance of improving perception and outreach efforts for non-beneficiaries to increase their participation in NHM scheme and further better implementation and of its impact. Findings were in line with Gopika and Lalitha, (2018).

Perception Regarding Objectives and Selection of Beneficiaries under NHM

The Table 3 provided insights into the statement-wise perception levels of pomegranate growers regarding the objectives and beneficiary selection criteria under the National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts. For the statement NHM Programme had solely or completely implemented by the Government of India and Karnataka, in both Chikkaballapura and Chitradurga district, the beneficiaries had a relatively

TABLE 3

Statement wise Perception regarding objectives and selection of beneficiaries under NHM

(n=180)

Statements	Chikkaballapura				Chitradurga			
	Beneficiary (n ₁ =60)		Non-beneficiary (n ₂ =30)		Beneficiary (n ₃ =60)		Non-beneficiary (n ₄ =30)	
	Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
NHM Programme is solely or completely implemented by the Government of India and Karnataka	0.683	3	0.467	3	0.683	1	0.533	3
NHM Programme gives emphasis onto promote Organic farming, Beekeeping, IPM, Protected cultivation	0.651	4	0.500	1	0.650	3	0.531	4
The scheme helps to improve production and productivity	0.733	2	0.400	5	0.567	4	0.500	6
To get benefit of scheme the beneficiary must possess permanent water source	0.650	5	0.267	7	0.517	5	0.566	2
The beneficiaries must be the owner of land to avail the benefit of the scheme	0.783	1	0.433	4	0.667	2	0.567	1
The applicant must have knowledge of horticulture crops cultivation to get the benefits of scheme	0.533	6	0.266	8	0.467	7	0.400	8
Interest in cultivation of plantation crops is a pre-requisite to avail the benefits of the scheme	0.433	8	0.300	6	0.417	8	0.467	7
The applicant must be financially sound to get identified as beneficiary of scheme	0.517	7	0.497	2	0.500	6	0.530	5

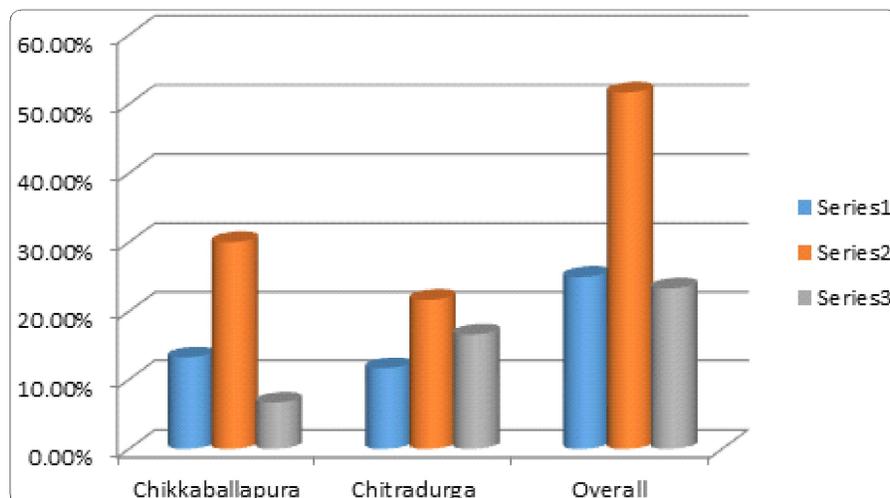


Fig. 2 : Overall Perception level of non-beneficiary Pomegranate growers of NHM

positive perception of the NHM's implementation by the Central and State Governments. The mean score for this statement in Chikkaballapura district beneficiaries was 0.683 (Ranked 3) and in Chitradurga district beneficiaries, it was 0.683 (Ranked 1). Non-beneficiaries, however, it was showed a lower mean score, while Chikkaballapura district non-beneficiaries scored 0.467 (Ranked 3) and Chitradurga non-beneficiaries scored 0.533 (Ranked 3), suggested a weaker perception of the implementation process. The statement NHM scheme gives emphasis on promoting organic farming, beekeeping, IPM, protected cultivation, this statement had a positive perception in both the districts, with Chikkaballapura district beneficiaries scored 0.651 (Ranked 4) and Chitradurga district beneficiaries scored 0.650 (Ranked 3). However, non-beneficiaries in both districts showed a relatively weaker perception of NHM's emphasis on these practices, with Chikkaballapura non-beneficiaries scored 0.500 (Ranked 1) and Chitradurga district non-beneficiaries scored 0.531 (Ranked 4). For the statement, the scheme helps to improve production and productivity, the beneficiaries in Chikkaballapura and Chitradurga districts showed positive perceptions, the Chikkaballapura beneficiaries scored 0.733 (Ranked 2) and Chitradurga district beneficiaries scored 0.567 (Ranked 4). Non-beneficiaries in both

the districts, however, demonstrated weaker perceptions, with Chikkaballapura district non-beneficiaries scored 0.400 (Ranked 5) and Chitradurga district non-beneficiaries scored 0.500 (Ranked 6). This suggested that non-beneficiaries were less convinced about the direct impact of the NHM on production and productivity. Regarding the statement, to get benefit from the scheme, the beneficiary must possess a permanent water source, the Chikkaballapura district beneficiaries showed a moderate level of agreement with this criterion (mean score 0.650, Ranked 5), while non-beneficiaries scored much lower (mean score 0.267, Ranked 7). Chitradurga district, beneficiaries had a similar view (mean score 0.517, Ranked 5), while non-beneficiaries place less importance on this criterion (mean score 0.566, Ranked 2). This indicated that while water availability was considered important for accessing benefits, it is not universally perceived as a strict precondition.

For the statement, the beneficiaries must be the owner of land to avail the benefit of the scheme, the criterion received the highest perception score among all groups. Beneficiaries in Chikkaballapura district rated it the highest with a mean score of 0.783 (Ranked 1), followed by Chitradurga district beneficiaries (mean score 0.667, Ranked 2). Non-beneficiaries in both the districts

show moderate perception, with Chikkaballapura district non-beneficiaries scored 0.433 (Ranked 4) and Chitradurga district non-beneficiaries scored 0.567 (Ranked 1). This indicated a strong belief among both the beneficiaries and non-beneficiaries that land ownership was a crucial factor in the selection process for the NHM. The statement, the applicant must have knowledge of horticulture crop cultivation to get the benefits of the scheme, the perception of this criterion was weaker compared to the others, especially among non-beneficiaries. In Chikkaballapura district, beneficiaries scored 0.533 (Ranked 6), while non-beneficiaries scored significantly lower at 0.266 (Ranked 8). A similar pattern was observed in Chitradurga district, with beneficiaries scored 0.467 (Ranked 7) and non-beneficiaries scored 0.400 (Ranked 8). This suggested that knowledge of horticultural practices was considered less critical by the respondents compared to land ownership or access to water sources. For the statement, Interest in cultivation of plantation crops was a pre-requisite to avail the benefits of the scheme, the lowest mean scores in both the districts were given to this statement. The Chikkaballapura district beneficiaries scored 0.433 (Ranked 8), while non-beneficiaries scored 0.300 (ranked 6). In Chitradurga district, the perception was similarly low, with beneficiaries scored 0.417 (Ranked 8) and non-beneficiaries scored 0.467 (Ranked 7). This indicated that while interest in plantation crops were a factor, it was not considered a critical pre-requisite by most pomegranate growers in both districts.

For the statement, the applicant must be financially sound to get identified as a beneficiary of the scheme, the criterion also received moderate perception scores. The Chikkaballapura district beneficiaries scored 0.517 (Ranked 7), while non-beneficiaries scored 0.497 (Ranked 2). In Chitradurga district, beneficiaries scored 0.500 (Ranked 6), while non-beneficiaries scored 0.530 (Ranked 5).

This suggested that while financial stability was seen as a factor for selection, it was not perceived as the most important criterion by either beneficiaries or non-beneficiaries. The study interpreted the perception of NHM's objectives and beneficiary selection criteria among pomegranate growers revealed that the scheme's success might depend on improving perception and participation, particularly with non-beneficiaries to ensure more inclusive participation and better alignment with the selection criteria. Findings are in line with Sonu (2018).

Perception Regarding Services Provided for the Beneficiaries

The Table 4 presented insights into the statement-wise perception levels of pomegranate growers regarding the services provided for the beneficiaries under the National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts. For the statement, Services provided for the successful establishment of the garden, awareness of crop management by organizing seminars, training, maintenance of garden and field visits to successful/progressive farmers, beneficiaries in both the districts had a relatively favorable perception of these services. In Chikkaballapura district, beneficiaries ranked this service second with a mean score of 0.712 (Ranked 2). Non-beneficiaries, however, rated this service much lower, with a score of 0.400 (Ranked 2). Similarly, Chitradurga district, beneficiaries rated second with a score of 0.567, while non-beneficiaries scored it even lower at 0.467 (Ranked 1). This indicated that beneficiaries appreciate the support in establishing gardens, maintaining crops and receiving field visits, but non-beneficiaries seem to feel less informed or involved in these aspects. For the statement, Services provided for beneficiaries under the modified NHM scheme, such as area expansion, nursery raising, high-density plantation and horticultural mechanization, in both the districts, this service was rated highly by the beneficiaries. Chikkaballapura district beneficiaries with a mean score of 0.717 (Ranked 1), showed a strong recognition of the NHM's contributions in these

TABLE 4
Statement wise Perception regarding services provided for the beneficiaries under NHM.

(n=180)

Statements	Chikkaballapura				Chitradurga			
	Beneficiary (n ₁ =60)		Non- beneficiary (n ₂ =30)		Beneficiary (n ₃ =60)		Non- beneficiary (n ₄ =30)	
	Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
Name the services provided under scheme in successful establishment of layout of the garden, awareness of crop management by organizing seminar, training, maintenance of garden, field visits to successful /progressive farmers.	0.712	2	0.400	3	0.567	2	0.467	1
In the modified NHM scheme which are the services provided for the beneficiaries like area expansion, nurseries rising, high density plantation and Horticultural mechanization	0.717	1	0.467	1	0.500	3	0.433	2
Horticulture extension officers are entrusted to look after the services of arranging assistance to beneficiaries	0.700	3	0.410	2	0.600	1	0.431	3

areas. In contrast, non-beneficiaries rated it much lower, with Chikkaballapura district non-beneficiaries scoring 0.467 (Ranked 1) and Chitradurga district non-beneficiaries scoring 0.433 (Ranked 2). This suggested that beneficiaries benefit significantly from these services, which were crucial for improving farm productivity and sustainability. Non-beneficiaries however, might either lack access or less aware of these specific interventions resulting in lower ratings.

Regarding the statement, Horticulture extension officers are entrusted to look after the services of arranging assistance to beneficiaries, both beneficiaries and non-beneficiaries in Chikkaballapura and Chitradurga districts had a moderate perception of the horticulture extension officers' role. Beneficiaries rated this service with a score of 0.700 (Ranked 3) in Chikkaballapura and 0.600 in Chitradurga district. Non-beneficiaries rated this service lower, with Chikkaballapura non-beneficiaries scored 0.410 (Ranked 2) and Chitradurga non-beneficiaries scored 0.431

(Ranked 3). This suggested that while extension officers were seen as a valuable resource by beneficiaries for assistance and guidance, non-beneficiaries might not have as much interaction or trust in these officers, leading to a lower perceived value of the service. The results interpreted that, the perception of the services provided by NHM indicated that beneficiaries were more satisfied with the support they receive, whereas non-beneficiaries may feel disconnected from the services or lack sufficient information about the available resources. Addressing these gaps could enhance the effectiveness of NHM interventions and foster greater participation in future horticulture development programmes. These findings are in match with Nagesh (2019).

Perception Regarding Technical Support Provided under the Scheme

The Table 5, depicted insights into the statement-wise perception levels of pomegranate growers regarding

TABLE 5
Statement wise Perception regarding technical support provided to beneficiaries under NHM
(n=180)

Statements	Chitradurga				Chikkaballapura			
	Beneficiary (n ₁ =60)		Non- beneficiary (n ₂ =30)		Beneficiary (n ₃ =60)		Non- beneficiary (n ₄ =30)	
	Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
The various trainings are organized under this scheme	0.667	4	0.433	3	0.633	2	0.467	3
Demonstrations are also conducted to benefit the beneficiaries	0.617	5	0.367	4	0.433	5	0.462	4
The required technical support will be provided to the beneficiaries	0.717	2	0.300	5	0.550	4	0.333	5
Field inspection of the applicant farmer by the horticultural extension officer is a pre-requisite for identifying as beneficiary of the programme	1.000	1	0.467	2	1.000	1	0.531	2
For getting suggestions and problems to be solved the beneficiary has to approach AHO/ADH/SADH/DH etc.,	0.711	3	0.500	1	0.631	3	0.533	1

technical support provided under the scheme National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts. For the statement, Various trainings were organized under the scheme, the Chikkaballapura district, beneficiaries ranked this service fourth with a mean score of 0.667 (Ranked 4), while non-beneficiaries scored it lower, at 0.433 (Ranked 3). In Chitradurga district, the beneficiaries ranked the training programmes second with a score of 0.633 (Ranked 2), while non-beneficiaries ranked it slightly lower at 0.467 (Ranked 3). This indicated that the training programs under NHM were considered valuable by the beneficiaries, but non-beneficiaries had a lower perception, possibly due to less access or awareness of these training opportunities. For the statement, Demonstrations were conducted to benefit the beneficiaries, the beneficiaries of both the districts gave a relatively low score to this service, with Chikkaballapura district scored 0.617 (Ranked 5) and Chitradurga district scored 0.433 (Ranked 5).

Non-beneficiaries however, rated this service even lower, the Chikkaballapura district non-beneficiaries scored 0.367 (Ranked 4) and Chitradurga district non-beneficiaries scored 0.462 (Ranked 4). This suggested that while demonstrations were an essential part of the scheme, they were not as highly regarded by either group, potentially due to the limited availability or perceived impact of such demonstrations. For the statement, the required technical support will be provided to the beneficiaries, the Chikkaballapura district beneficiaries rated this service with a score of 0.717 (Ranked 2), while non-beneficiaries rated it much lower, with a score of 0.300 (Ranked 5).

In Chitradurga district, beneficiaries scored it 0.550 (Ranked 4), while non-beneficiaries again gave it a low score of 0.333 (Ranked 5). These results highlighted that while beneficiaries perceived that they would receive the necessary technical support, non-beneficiaries seem less confident in the availability or adequacy of technical assistance. Regarding the statement, field inspection of the

applicant farmer by the horticultural extension officer is a pre-requisite for identifying as a beneficiary of the programme, the service received the highest score in both the districts, with Chikkaballapura beneficiaries ranked it first (score : 1.000) and Chitradurga district beneficiaries also ranked it first (score : 1.000).

Non-beneficiaries in Chikkaballapura district with a score of 0.467 (Ranked 2), while in Chitradurga district, they with a score of 0.531 (Ranked 2). This indicated a strong recognition of the importance of field inspections by horticultural extension officers, which was a key component for ensuring that the benefits of the NHM scheme were directed toward eligible farmers. For the statement, for getting suggestions and problems solved, the beneficiary has to approach AHO/ADH/SADH/DH, the Chikkaballapura district beneficiaries rated this service third with a score of 0.711 (Ranked 3),

while non-beneficiaries rated it much lower at 0.500 (Ranked 1). Chitradurga beneficiaries also rated it third with a score of 0.631 (Ranked 3), while non-beneficiaries gave it a score of 0.533 (Ranked 1). This suggested that while beneficiaries value the support from agricultural officers (AHO/ADH/SADH/DH), non-beneficiaries had a less favorable perception of this service, perhaps due to limited access to these resources.

The relatively low perceptions of the technical support available to non-beneficiaries highlighted a potential gap in accessibility or awareness and addressing this could help increase the impact of the NHM scheme. Overall, enhancing the visibility and availability of training, demonstrations and technical support services for both beneficiaries and non-beneficiaries could foster greater involvement and improve the overall success of the scheme. These findings are in line with Darsana, (2018).

TABLE 6
Statement wise Perception regarding the benefits availed by beneficiaries under NHM

(n=180)

Statements	Chikkaballapura				Chitradurga			
	Beneficiary (n ₁ =60)		Non-beneficiary (n ₂ =30)		Beneficiary (n ₃ =60)		Non-beneficiary (n ₄ =30)	
	Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
The beneficiaries will get the benefit of the scheme for cultivating one acre and more of plantation	0.617	1	0.367	2	0.617	1	0.400	3
The beneficiaries under this scheme will be supplied with planting materials	0.000	5	0.000	5	0.000	5	0.000	5
NHM scheme support the beneficiaries since establishment of plantation to production and marketing	0.450	4	0.267	4	0.333	4	0.300	4
The mobile processing facilities are provided under NHM scheme	0.000	6	0.000	6	0.000	6	0.000	6
Promotion of perennial fruit crops under NHM scheme in Karnataka	0.583	2	0.333	3	0.500	2	0.433	1
Promotion of non-perennial fruit crops under NHM scheme in Karnataka	0.533	3	0.400	1	0.367	3	0.410	2

Perception Regarding the Benefits of the Scheme

The Table 6, presented insights into the statement-wise perception levels of pomegranate growers regarding the benefits of the scheme National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts. For the statement, the beneficiaries will get the benefit of the scheme for cultivating one acre or more of plantation, both Chikkaballapura and Chitradurga districts beneficiaries ranked this statement the highest with a mean score of 0.617 (Ranked 1), indicated that they perceive land eligibility (cultivating one acre or more) as a primary benefit. However, non-beneficiaries in Chikkaballapura district rated this statement lower, with a score of 0.367 (Ranked 2), while Chitradurga district non-beneficiaries with a score of 0.400 (Ranked 3). This suggested that while land eligibility was seen as a significant benefit by beneficiaries, non-beneficiaries had a less favorable perception of the criteria for receiving the less benefits, possibly due to challenges related to land ownership or plantation size. For the statement, the beneficiaries under this scheme will be supplied with planting materials, both Chikkaballapura and Chitradurga beneficiaries and non-beneficiaries scored this statement with a mean score of nil, ranking it lowest (Ranked 5).

This indicated that there was a strong perception that the scheme did not provide planting materials or that the availability of such materials was either not well-publicized or not adequately delivered to the beneficiaries. This was a significant concern, as the lack of planting materials could affect the overall success of plantation activities. For the statement, NHM scheme supports the beneficiaries from the establishment of plantation to production and marketing, in Chikkaballapura district, beneficiaries gave this statement a score of 0.450 (Ranked 4), while non-beneficiaries rated it lower at 0.267 (Ranked 4). Chitradurga district beneficiaries scored it 0.333 (Ranked 4), while non-beneficiaries gave it 0.300 (Ranked 4). These relatively low ratings inferred that although there was some recognition

of the support provided through the NHM scheme, the scope and extent of this support particularly in terms of assisting with marketing and production were seen as limited by both groups.

For the statement, the mobile processing facilities were provided under the NHM scheme, both districts recorded a score of nil for this statement, placing it at the bottom (Ranked 6). This indicated a unanimous perception that mobile processing facilities were either not provided or were not an effective part of the scheme, which might be a critical gap in supporting the processing of pomegranate and related value-added activities. Regarding for the statement, Promotion of perennial fruit crops under the NHM scheme in Karnataka, Chikkaballapura district beneficiaries with a mean score of 0.583 (Ranked 2), while non-beneficiaries ranked it third with a score of 0.333 (Ranked 3). In Chitradurga district, beneficiaries gave it a score of 0.500 (Ranked 2), while non-beneficiaries with a score of 0.433 (Ranked 1). This suggested that both the groups seen the promotion of perennial fruit crops as a benefit, but beneficiaries had a stronger view of its importance compared to non-beneficiaries, possibly because the programme was more beneficial for those already participated in the scheme. For the statement Promotion of non-perennial fruit crops under the NHM scheme in Karnataka, the Chikkaballapura district beneficiaries with a score for of 0.533 (Ranked 3), while non-beneficiaries with a score of 0.400 (Ranked 1). The Chitradurga district, beneficiaries gave it a score of 0.367 (Ranked 3), while non-beneficiaries with a score of 0.410 (Ranked 2). This showed a mixed perception regarding the promotion of non-perennial fruit crops. While non-beneficiaries seem to perceive it as a potential benefit, beneficiaries were less optimistic about the inclusion of non-perennial crops under the NHM. Despite some recognition of support provided in the form of marketing, production and the promotion of perennial crops, both beneficiaries and non-beneficiaries appear to be less satisfied with the practical aspects of the scheme that directly affect their ability to

benefit fully, especially in terms of production support and the provision of necessary resources like planting materials. Addressing these concerns by improving the accessibility of planting materials and providing more concrete processing facilities could significantly enhance the perception of the scheme and its overall impact on the pomegranate growers in these districts. These results are in line with Lokesh Babu (2019).

Perception Regarding Subsidy Provided Under the NHM Scheme

The Table 7 provided insights into the statement-wise perception levels of pomegranate growers regarding subsidy provided under the scheme National Horticulture Mission (NHM) in Chikkaballapura and Chitradurga districts. For the statement, beneficiary will get subsidy only after the successful establishment of garden, Chikkaballapura district beneficiaries rated this statement highly with a mean score of 0.867 (Ranked 2), indicated that they perceived the subsidy as an important support mechanism, which was tied to the

successful establishment of their garden. However, non-beneficiaries in Chikkaballapura district rated this statement much lower at 0.433 (Ranked 3). In Chitradurga district, the beneficiaries scored it at 0.750 (Ranked 2), while non-beneficiaries gave it a score of 0.500 (Ranked 3). This suggested that while beneficiaries consider the condition for receiving subsidies (after establishment) to be reasonable, non-beneficiaries might view it as a barrier or condition they find difficult to meet.

The overall rankings highlighted that beneficiaries value the subsidy after garden establishment, but the requirement might be a deterrent for non-beneficiaries who were not yet participated in the scheme. For the statement, subsidy amount of the beneficiaries would be matched for their credit availed from nationalized or regional banks, the statement received the lowest ratings across all groups, with Chikkaballapura district beneficiaries scoring it 0.217 (Ranked 4), Chitradurga beneficiaries scored it 0.217 (Ranked 4) and non-beneficiaries from both the districts scored it similarly low at 0.200

TABLE 7
Statement wise Perception regarding subsidy provided to beneficiaries under NHM

(n=180)

Statements	Chikkaballapura				Chitradurga			
	Beneficiary (n ₁ =60)		Non-beneficiary (n ₂ =30)		Beneficiary (n ₃ =60)		Non-beneficiary (n ₄ =30)	
	Mean score	Rank	Mean score	Rank	Mean score	Rank	Mean score	Rank
Beneficiary will get subsidy only after the successful establishment of garden	0.867	2	0.433	3	0.750	2	0.500	3
Subsidy amount of the beneficiaries will be matched for their credit availed from nationalized or regional banks	0.217	4	0.200	4	0.217	4	0.433	4
Whether the beneficiaries are eligible to get subsidy for different purposes like Bee- keeping, IPM, Organic cultivation, Construction of farm pond and packaging house	0.850	3	0.533	2	0.683	3	0.633	1
Whether subsidy amount provided to beneficiaries or not	1.000	1	0.567	1	1.000	1	0.567	2

(Ranked 4) in Chikkaballapura district and 0.217 (Ranked 4) in Chitradurga district. This indicated a general perception that the subsidy matching process with credit from nationalized or regional banks was either unclear or not very beneficial, which might discourage beneficiaries from seeking such financial assistance or make it appear more difficult to avail the subsidies. For the statement, whether the beneficiaries are eligible to get subsidy for different purposes like beekeeping, IPM, organic cultivation, construction of farm pond and packaging house, the beneficiaries of Chikkaballapura district rated this statement highly, with a score of 0.850 (Ranked 3), while non-beneficiaries gave it a score of 0.533 (Ranked 2). In Chitradurga district, beneficiaries rated it 0.683 (Ranked 3) and non-beneficiaries rated it 0.633 (Ranked 1). The high rankings from both the districts' beneficiaries suggested that they appreciate the wide range of subsidy eligibility, including for beekeeping, IPM and organic cultivation.

However, non-beneficiaries seem slightly more optimistic about this aspect, inferred that they might see these subsidies as potential benefits if they were to join the scheme. Regarding the statement, whether subsidy amount provided to beneficiaries or not, both districts rated this statement as very favorable. Chikkaballapura district beneficiaries gave it a score of 1.000 (Ranked 1), while non-beneficiaries scored it 0.567 (Ranked 1). Similarly, in Chitradurga district, the beneficiaries rated it 1.000 (Ranked 1), with non-beneficiaries giving it 0.567 (Ranked 2). This unanimous top ranking indicated that beneficiaries believe the subsidies were provided effectively and even non-beneficiaries acknowledged the availability of subsidies, though they might not yet have access to them. The perception of subsidy availability (whether or not subsidies are provided) was rated highly, suggested that the beneficiaries felt the scheme was fulfilling its promise. However, non-beneficiaries seem to view the subsidy system as somewhat distant, as they had not yet been able to

take advantage of it. The high rank for eligibility for various subsidies suggested that non-beneficiaries were hopeful that joining the scheme will allow them access to diverse forms of support. The results showed that, while the overall perception of the subsidy system was positive, especially regarding the subsidy post-garden establishment and its applicability to a range of agricultural practices, the subsidy matching with bank credit remains a challenge. Efforts to streamline or improve this process and clearer communication about the eligibility criteria, might be helped improve the perception of the scheme and encourage wider participation.

The present study was concluded to know the perception level of pomegranate growers under National Horticulture Mission (NHM). The results found that, NHM has had a positive impact on beneficiary pomegranate growers of Chikkaballapura and Chitradurga districts. And a notable proportion with a poor perception suggested that, some non-beneficiaries might feel excluded or uninformed about the benefits of the NHM scheme. The findings highlighted the importance of improving awareness and outreach efforts for non-beneficiaries to increase their participation in NHM scheme and improve their perceptions and to increase of its impact.

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