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Impact of Gothan and Godhan Nyay Scheme on the Income of SHGs and Livestock Rearers of Chhattisgarh, India

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: 10.9734/AJAEES/2023/v41i81982

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/100245>

Original Research Article

Received: 20/03/2023

Accepted: 23/05/2023

Published: 01/06/2023

ABSTRACT

Self-Help groups (SHGs) are informal associations of people who choose to come together to find ways to improve their living conditions and livelihoods, all voluntarily coming together to save small sums of money, on a regular basis. Gothan and Godhan Nyay Yojna of Chhattisgarh are the schemes based on providing profits to the women SHGs and livestock rearers through vermicompost business and selling cow dung respectively. The study aims to examine the performance of Gothan and Godhan Nyay Yojna through the objective of identify the socio-economic status of Self Help Group members and Livestock rearers and analyze the impact of Gothan and Godhan Nyay Yojna on the income of SHGs and livestock rearers. The present study was carried out in Bilaspur, Janjgir-Champa and Raigarh districts of Chhattisgarh with a sample

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size of 120 members from 12 SHGs and 240 livestock rearers registered under selected areas Gothan. Impact of income of the scheme on Model Gothan SHGs was higher (26 percent). The overall impact of scheme on income of selected self help groups were 21.5 per cent. Impact of scheme on the Income of livestock rearers under Model Gothan's was highest (38 percent). The average impact of scheme on the selected livestock rearers was 30.5 per cent.

Keywords: Self help groups; impact on income; Gothan and Godhan Nyay scheme.

1. INTRODUCTION

Vermicomposting is one of the generating additional sources of income, economic empowerment, and assuring sustainable livelihood approach along with the already known environmental benefits, has been newly found to be one of the most appropriate and successful models for the rural or not socio-economically resourceful communities. The Generation of a large amount of solid waste around the world is a major ecological problem. Vermicomposting may be the viable option to handle solid waste in an environmentally friendly way [1]. Due to the increased cost of farming couples with environmental and health issues, farmers in India are gradually shifting back to organic farming. Consumers are now willing to pay higher premiums for healthy organic food. According to the International Fund for Agriculture and Development (IFAD), there are over 44,926 certified organic farms in our country making it one of the most important exporters of organic food to the developed nations [2]. With the increasing population, poverty, unemployment is also a serious problem. The use of various types of chemical fertilizers, toxic pesticides to achieve maximum production of food; in the human race food supply affects the ecological system, weakening the fertility of the land. Solution of these problems and getting additional economic benefit to the farmers Chhattisgarh government launched '**Gothan**' and '**Godhan Nyay Yojna**' under the ambitious Suraji village scheme Narwa, Garwa, Ghurwa, and Badi on 20th of July 2020. By the State Government, the Godhan scheme has been started on the occasion of the important festival of Chhattisgarh called 'Hareli'. Gothan is home to cattle; in Godhan Nyay Yojna the State Government purchases cow dung @Rs. 2/kg from the farmers and cattle rearers of the state which leads to source of income as well as employment generation initially in the rural pocket later across the state. The purchasing of cow dung is done at the Gothan which then turned into vermicompost by the self-help group and later the organic manure like vermicompost sale to the farmers @ Rs. 10/kg and

Supercompost @ Rs. 6/kg. Besides preparing organic manure, the dung is used to prepare various other useful items such as Diya, flower vase, etc. Cow rearing is now more viable from these schemes because cows were not treated well until the time they are not economically viable. Once they stop giving milk, they are left to roam around. Now the implementations of the scheme help in stopping the movement of the cattle on the roads. Cattle are used more in farming. More and more of manures made from cattle dung is incorporate in field, which will improve the soil health. These schemes widely promote organic farming in the State as well as help livestock rearers and women self-help groups into a profitable business. These schemes create new employment opportunities in rural areas.

2. METHODOLOGY

2.1 Analytical Tools

The analysis of data was done using different analytical tools, keeping in view objective of the study.

2.2 Tabular Analysis

Tabular analysis was used to present the socio economic status and impact of Gothan and Godhan Nyay schemes on the income of selected self help group members and selected livestock rearers.

3. RESULTS AND DISCUSSION

3.1 General Characteristics of Self-Help Groups

The General characteristics of self help group members are presented in Table 1. It can be seen from the table that the total number of sample SHG members was 120 under different categories like under Model, Non-Model, Village and City Gothan. Among the sample women, majority of respondents belonged to other

backward class (40%) followed by Scheduled caste (25%), scheduled tribe (30.83%) and General (5%). The finding was support the work of Tejaswini and Panigrahi [3]. Majority of the respondents belonged to the age group 31-50 years (70%). The finding was in line with the study of Aziz et al. [4]. The literacy rate of selected respondents was 55.84 per cent. From which 31.66 per cent respondents were educated up to High school, 20.84 per cent were up to Middle school and only 4 per cent respondents, were educated up to higher secondary. The

average family size was 4 members/family. Average family member in Village Gothan was considerably large, as compared to the Non-Model Gothan, Model Gothan and City Gothan.

3.2 General Characteristics of Selected Livestock Rearers

Table 2 represents the general characteristics of selected livestock rearers. Total number of sample livestock rearers was 240 of which 60 respondents from each Model, Non-Model,

Table 1. General information of selected self help group members under different categories of Gothans

Sr. No.	Variables	Model Gothan	Non-Model Gothan	Village Gothan	City Gothan	Aggregate
1	Caste					
	General	0 (0)	3 (10)	0 (0)	2 (6.67)	5 (4.17)
	OBC	20 (66.66)	4 (13.33)	16 (53.33)	8 (26.67)	48 (40)
	SC	0 (0)	13 (43.33)	0 (0)	17 (56.67)	30 (25)
	ST	10 (33.33)	10 (33.33)	14 (46.66)	3 (10)	37 (30.83)
	Total	30 (100)	30 (100)	30 (100)	30 (100)	120 (100)
2	Age					
	Young (20-30)	10 (33.33)	5 (16.66)	5 (16.66)	12 (40)	32 (26.67)
	Middle (31-50)	20 (66.66)	24 (80)	22 (73.33)	18 (60)	84 (70)
	Old (above 50)	0 (0)	1 (3.33)	3 (10)	0 (0)	4 (3.34)
	Total	30 (100)	30 (100)	30 (100)	30 (100)	120 (100)
3	Literacy					
	Illiterate	17 (56.66)	17 (56.66)	12 (40)	7 (23.33)	53 (44.17)
	Literate	13 (43.33)	13 (43.33)	18 (60)	23 (76.66)	67 (55.84)
	Middle school	3 (10)	5 (16.66)	8 (26.66)	9 (30)	25 (20.84)
	High school	10 (33.33)	8 (26.66)	10 (33.33)	10 (33.33)	38 (31.66)
	Higher secondary	0 (0)	0 (0)	0 (0)	4 (13.33)	4 (3.34)
	Total	30 (100)	30 (100)	30 (100)	30 (100)	120 (100)
4	Family size (Average)					
	Male	1	1	2	1	1
	Female	1	2	1	1	1
	Children	2	2	3	1	2
	Total	4	5	6	3	4

Village and City Gothan. It is observed that on an average 51.25 per cent of selected respondents belonged to the other back ward class, 27.91 per cent belonged to the scheduled tribe, 16.67 percent belonged to the scheduled caste, and 5 percent to general category.

Majority of the respondents (81.25%) were in middle age grouped (31-50 years). The finding was in line with Tejaswini and Panigrahi [3].

The literacy rate of selected respondents was 60 per cent. Most of the respondents had middle

Table 2. General information of selected Livestock rearers under different categories of Gothans

Sr. no.	Variables	Model Gothan	Non-model Gothan	Village Gothan	City Gothan	Aggregate
1	Caste					
	General	1 (1.66)	0 (0)	1 (1.66)	8 (13.33)	10 (4.16)
	OBC	27 (45)	18 (30)	32 (53.33)	46 (76.66)	123 (51.25)
	SC	10 (16.66)	22 (36.66)	4 (6.66)	4 (6.66)	40 (16.67)
	ST	22 (36.66)	20 (33.33)	23 (38.33)	2 (3.33)	67 (27.91)
	Total	60 (100)	60 (100)	60 (100)	60 (100)	240 (100)
2	Age					
	Young (20-30)	9 (15)	6 (10)	2 (3.33)	4 (6.66)	21 (8.75)
	Middle (31-50)	48 (80)	50 (83.33)	46 (76.66)	51 (85)	195 (81.25)
	Old (above 50)	3 (5)	4 (6.66)	12 (20)	5 (8.33)	24 (10)
	Total	60 (100)	60 (100)	60 (100)	60 (100)	240 (100)
3	Literacy					
	Illiterate	23 (38.33)	34 (56.66)	21 (35)	16 (26.66)	94 (40)
	Literate	37 (61.67)	26 (43.34)	39 (65)	44 (73.34)	146 (60)
	Primary School	3 (5)	1 (1.66)	2 (3.33)	0 (0)	6 (2)
	Middle school	13 (21.66)	13 (21.66)	14 (23.33)	16 (26.66)	56 (23)
	High school	10 (16.66)	8 (13.33)	8 (13.33)	17 (28.33)	43 (18)
	Higher secondary	11 (18.33)	2 (3.33)	11 (18.33)	6 (10)	30 (13)
	Graduate and above	0 (0)	2 (3.33)	4 (6.66)	5 (8.33)	11 (4)
	Total	60 (100)	60 (100)	60 (100)	60 (100)	240 (100)
4	Family size (Average)					
	Male	1	1	2	1	1.25
	Female	1	2	2	1	1.5
	Children	2	2	3	2	2.25
	Total	4	5	7	4	5

school of education (23%). 18 percent of respondents educated up to high school, 13 percent had higher secondary education and only 4 percent of respondents had graduation and above education.

The average size of family members of selected livestock rearers observed as 5members/family. This size is estimated at 4, 5,7 and 4 under model, non-model, village and city Gothan, respectively.

3.3 Impact of the Scheme on the Income of SHGs Members and Livestockrearers

3.3.1 Impact of the scheme on the Income of selected self help group members

Economic Impact of Scheme on SHGs members was analyzed based on before and after joining status using percentage analysis. Table 3 presents Impact of Scheme on the Income of selected respondents. The result revealed that the average annual income of SHGs members was Rs. 1,40,344 before joining scheme,

whereas after joining scheme it reached up to Rs. 1,66,770. These findings are supported by Abhinav et al. [5].

The table indicates that Impact of income of the scheme on Model Gothan Farmers was higher (26%), followed by Village Gothan (23%), City Gothan (19%) and Non-Model Gothan (18%). The overall impact of scheme on income of selected self help groups were 21.5 per cent. From the table it is clear that Model Gothan SHGs earns more as compared to Other Gothans.

Table 4 shows impact on Income in different categories. Impact on the income of majority (73.33%) of the respondents under Model Gothan's falls between 21-30 per cent. In the case of Non-Model Gothan, majority (66.66%) of respondent's income impact falls between 10-20 percent. Impact on Income of majority (33.33%) of Villages Gothan's respondents was less than 10 per cent. Majority (53.33%) of City Gothan's respondents Income Impact was 10-20 percent. The finding was in line with the work of Bansode et al. [6].

Table 3. Impact of the scheme on the income of selected self help group members (Rs/Year/Household)

Category	Income from different sectors	Income from sale of Vermicompost, Supercompost and Diya	Total income	% of additional income through Godhan Nyay Yojna
Model Gothan (30)	52666.7	13607.68	66274.3	26
Non- Model Gotha (30)	188710	32068.1	220778	18
Village Gothan (30)	100645	17399.7	118045	23
City Gothan (30)	219355	42629.4	261984	19
Overall (30)	140344	26426.2	166770	21.5

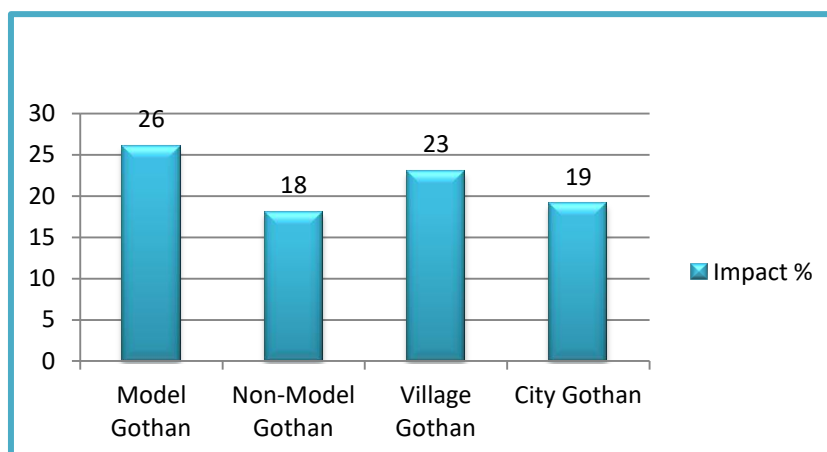


Fig. 1. Impact of scheme on the income of selected SHGs members

Table 4. Impact of the scheme on the Income of selected Self Help group members (per members)

Particular	Model Gothan	Non-model Gothan	Village Gothan	City Gothan	Overall impact
Income					
Less than 10%	1 (3.33)	1 (3.33)	10 (33.33)	2 (6.66)	3.5 (11.66)
10-20%	2 (6.66)	20 (66.66)	9 (30)	16 (53.33)	11.75 (41.66)
21-30%	22 (73.33)	5 (16.66)	2 (6.66)	9 (30)	9.5 (31.66)
31-40%	3 (10)	2 (6.66)	4 (13.33)	2 (6.66)	2.5 (8.33)
41-50%	1 (3.33)	1 (3.33)	1 (3.33)	1 (3.33)	0 (0)
More than 50%	1 (3.33)	1 (3.33)	4 (13.33)	0 (0)	1.5 (5)
Total	30 (100)	30 (100)	30 (100)	30 (100)	30 (100)

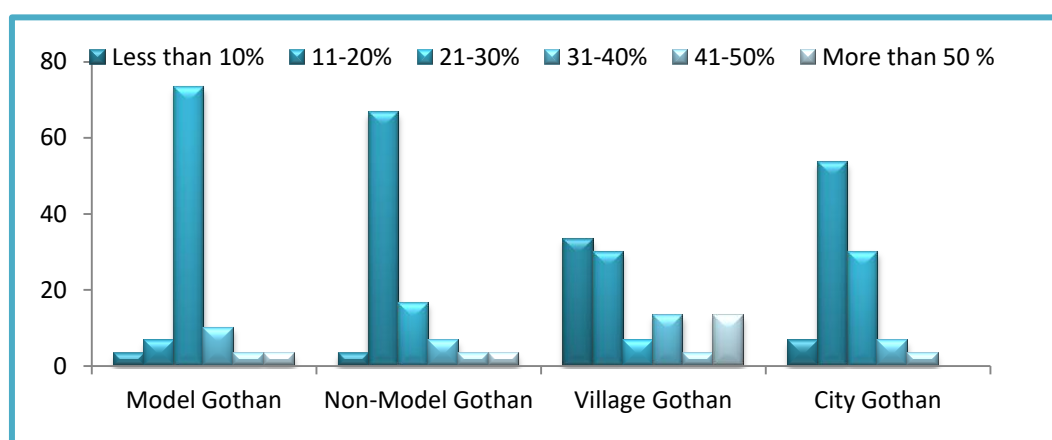


Fig. 2. Impact of scheme on the income of SHGs members in different categories

Table 5. Impact of the scheme on the Income of selected Livestock rearers (Rs. /Year/Household)

Category	Income from different sectors	Income from sale of dung	Total Income	% of additional income through Gothan Nyay Yojna
Model Gothan (60)	72300	23534.17	95834.17	38
Non- Model Gothan (60)	70716.67	22797.67	93514.33	32
Village Gothan (60)	86233.33	27465	113698.3	31
City Gothan (60)	179166.7	37418	216584.7	21
Overall (60)	102104.17	27803.71	129907.97	30.5

3.3.2 Impact of the scheme on the Income of Selected Livestock rearers

Economic Impact of Scheme on Livestock rearers was presented on Table 5.

Findings indicate that before joining with scheme, rearers' average annual income was Rs. 1,02,104.17, whereas after joining the annual income reached up to Rs. 1,29,907.97.

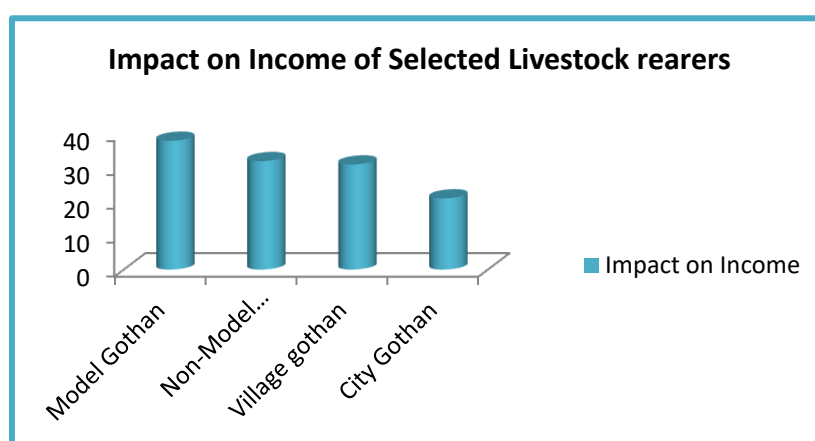


Fig. 3. Impact on income of selected Livestock rearers

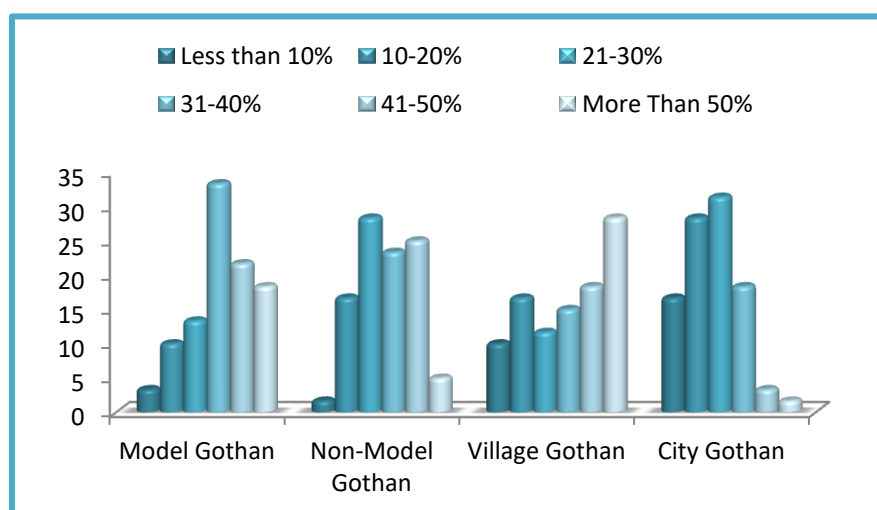


Fig. 4. Impact of Godhan Nyay Yojna on income of selected livestock rearers

Table 6. Impact of Godhan Nyay Yojna on income of selected livestock rearers (per members)

Particular	Model Gothan	Non-model Gothan	Village Gothan	City Gothan	Overall impact
Income					
Less than 10%	2 (3.33)	1 (1.67)	6 (10)	10 (16.67)	4.75 (7.91)
10-20%	6 (10)	10 (16.67)	10 (16.67)	17 (28.33)	10.75 (17.91)
21-30%	8 (13.33)	17 (28.33)	7 (11.67)	19 (31.36)	12.75 (21.25)
31-40%	20 (33.33)	14 (23.33)	9 (15)	11 (18.33)	13.5 (22.50)
41-50%	13 (21.67)	15 (25)	11 (18.33)	2 (3.33)	10.25 (17.08)
More than 50%	11 (18.33)	3 (5)	17 (28.33)	1 (1.67)	8 (13.33)
Total	60 (100)	60 (100)	60 (100)	60 (100)	60 (100)

Impact of scheme on the Income of respondents under Model Gothan's was highest (38%) followed by Non-Model Gothan (32%), Village Gothan (31%) and City Gothan's (21%) selected livestock rearers. The average impact of scheme on the selected livestock rearers was 30.5 per cent. From the table it is clear that rearers registered under Model Gothans earn more as compared to the other Gothans.

Table 6 presents Impact on Income in different categories. In the case of Model Gothan majority (18.33%) of respondent's impact on income was fall between 41-50 per cent. Respondents under Non-Model Gothan, Majority (28.33%) of respondent's income impact from the scheme fall between 21-30 per cent. Respondents registered under Village Gothan, majority of rearers income impact was more than 50 percent and in case of City Gothan respondents (31.36%) income impact was fall between 21-30 percent. Overall Impact of scheme on the Income of selected livestock rearers was 31-40 percent.

4. CONCLUSION

This Research extracted the ground level realities in the study area, the work is highlight the fact that Gothan and Godhan Nyay Yojna is empowering the women self help group members. Also the Livestock rearers are getting additional income. Stray animals are also being protected due to the formation of Gothan in every Village in Cities in the state. Along with this, the use of products made from cow dung is also making the environment safe.

The overall impact of scheme on income of selected self help groups were 21.5 per cent likewise The Impact of scheme on the Income of respondents under Model Gothan's was highest (38 percent) followed by Non-Model Gothan (32 percent).

5. FOLLOWING ARE SOME SUGGESTIONS FOR THE FUTURE RESEARCH WORK

- The government should play a role of promoter to create a supportive environment for the growth and development of the SHGs.
- Connects Gothan to districts of the region where every SHG should report their progress, by this they give better performance.

- For improving the performance of SHGs, government should give authority to the concerned department to view performance reports and make recommendations. So that the government can make suitable measurers to help these SHGs members.
- Promotion of self help groups, help to make the women economically independent.
- Setting up of agri clinics, agri business centers for women laborers to improve their skills and efficiency.

CONSENT

As per international standard or university standard, respondents' written consent has been collected and preserved by the author(s).

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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Peer-review history:
The peer review history for this paper can be accessed here:
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