



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2021; SP-10(7): 817-821
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www.thepharmajournal.com
Received: 20-05-2021
Accepted: xx-06-2021

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An economics analysis of processing and marketing of spices in Mungeli district of Chhattisgarh

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Abstract

In general, all aromatic vegetable products that are used for flavouring foods and drinks are known as spices. According to the International organization for Standardization (ISO) the term spices and condiments applies to such natural plant or vegetable products of mixture thereof, in whole or ground form, as are used as flavour, aroma, frequency and for seasoning of foods. In these 3 products maximum Input- Output ratio was 1:1.25 and minimum Variable: Cost (V: C) ratio was 0.80 for turmeric powder. The minimum Input-Output ratio was 1:1.07 and maximum VC ratio was 0.93 for Chilli Powder. The business performance of Spices product Turmeric powder, Coriander powder and Chilli powder in Deep women SHG Gailugoan, Lormi were as follows. The total sale of Turmeric powder was 4 quintal, net return 40 Rs/kg and total return was 16000 rupees/ year. This was the maximum among all three products. The total sale of Coriander powder was 3.5 quintal, net return 30Rs/kg and total return was 10500 rupees/ year. Whereas the total sale of Chilli powder was 3 quintal, net return 20 Rs/kg and total return was 6000 rupees/ year.

Keywords: Aromatic vegetable, international organization for standardization, frequency, input- output ratio, variable: cost (V: C) ratio, net return, Rs/Kg.

1. Introduction

Spices are increasingly finding other useful roles in healthcare aside their primary use as organoleptic enhancers in culinary. Several herbs and spices are currently being investigated for their potential health benefits, hence the explosion in scientific literature in the fields of nutraceuticals and functional foods. The rise in interest on medicinal properties of herbs and spices is consequent on the failing efficacy and toxicity associated with conventional drugs and their inaccessibility to poor rural dwellers. This work reviews three piquant spices; *Piper guineense*, *Afromomum melegueta*, and *Tetrapleura tetrapetala* common in the culinary of the Southern part of Nigeria, and it aims at concisely highlighting the researches that have been done on the nutritional quality, phytochemistry, and medicinal properties of these spices. (Food Quality and Safety, 2017)

2. Material and Methods

Chhattisgarh state consist 28 districts, out of which 1 district namely Mungeli was selected purposively for the present study.

In this study the data related to expenditure, income, marketing pattern, processing, details and constraints in Spices processing will be collected from selected self-help group (SHG).

The analysis has needed both primary and secondary data. The primary data was gathered from the member of Women Self Help Groups on which the study's various goals were met.

2.1 Method of analysis

The interview plans, structured questionnaires and secondary sources are all methods used for data collection. The data were evaluated using a 5 point rating scale, weight age frequency average, frequency distribution methodology. And the study of the results required basic metrics such as percentage and average.

2.1.1 Gross Income

It is defined as total value of main product

Gross Income = Physical Production x Price/qt

2.1.2 Net Income

It is defined as gross income minus total cost
 Net Income = Gross Income - Total Cost

2.1.3 Input-output ratio

Input-output can be expressed as the ratio of total output to total input. The ratio was calculated as:

$$\text{Input - output ratio} = \frac{\text{Total output}}{\text{Total input}}$$

2.1.4 Total input

Value of purchasing raw materials such as Spices like chilli, coriander, turmeric packaging materials, labour cost and other cost (electricity cost and other maintenance cost).

2.1.5 Total output

The quantity of Spices product sold by SHGs was treated as the output values.

2.1.6 Variable: Cost Ratio (V: C Ratio)

The variable: cost ratio is an expression of a SHGs variable production costs as a percentage of sales, calculated as variable costs divided by total gross income.

$$\text{VC RATIO} = \frac{\text{VARIABLE COST}}{\text{GROSS INCOME}} \times 100$$

With the help of this ratio the management will be able to plane how much gross income required covering the cost and how the profitable is going to change with the production level. This can be used as a tool for future production, budget, pricing and profitability planning

3. Results and discussion

3.1 Cost and returns of various products produced by Deep Women SHG

The Deep Women SHG were producing the products viz. Turmeric powder, Coriander powder, Chilli powder. The cost determination of 3 different products Turmeric powder, Coriander powder, Chilli Powder is presented in table 4.1. In these 3 products maximum Input- Output ratio was 1:1.25 and minimum Variable:Cost (V:C) ratio was 0.80 for turmeric powder. The minimum Input-Output ratio was 1:1.07 and maximum VC ratio was 0.93 for Chilli Powder.

3.2 Cost and returns of various products produced by Jai Minimata SHG

The Jai Minimata Women SHG were producing the products viz. Turmeric powder, Coriander powder, Chilli powder. The cost determination of 3 different products Turmeric powder, Coriander powder, Chilli Powder is presented in table 4.1. In these 3 products maximum Input-Output ratio was 1:1.7 and minimum Variable cost (VC) ratio was 0.57 for turmeric powder. The minimum Input- Output ratio was 1:1.25 and maximum VC ratio was 0.80 for Chilli Powder.

3.3 Cost and returns of various products produced by Maa Kalyani SHG

The Maa Kalyani Women SHG were producing the products viz., Turmeric powder, Coriander powder, Chilli powder. The cost determination of 3 different products Turmeric powder, Coriander powder, Chilli Powder is presented in table 4.1. In these 3 products maximum Input- Output ratio was 1:1.37 and minimum Variable cost (VC) ratio was 0.72 for turmeric powder. The minimum Input- Output ratio was 1:1.17 and maximum VC ratio was 0.85 for Chilli Powder.

Table 3.1: Cost and returns of spices of Deep women (DW SHG)

Sl. No	Particulars	Turmeric Powder Cost (Rs/100gm)	Coriander Powder Cost (Rs/100gm)	Chilli Powder Cost (Rs/100gm)
1	Raw Material Costs*	8(50%)	8.5(50%)	22(78%)
2	Packaging Materials Cost	3(18.7%)	3(17%)	3(10%)
3	Labour Cost	3(18.7%)	3(17%)	2(7%)
4	Other Cost (repair & maintenance)	2(12.5%)	2.5(14%)	1(3.7%)
5	Total variable Cost	16(100)	17(100)	28(100)
6	MRP	20	20	30
7	Sale Price (Total Returns)	20	20	30
8	Net Returns(TR- TC)	4	3	2
9	Input- Output Ratio	1:1.25	1:17	1:1.07
10	Variable Cost (VC) Ratio	0.8	0.85	0.93
11	VC Ratio (%)	80	85	93

Note-figures in indicate percentage to total variable cost.

- * Turmeric:-130 gram of Raw Material is required to make 100 gram of turmeric powder.
- * Coriander: - 150 gram of Raw Material is required to make 100 gram of coriander powder.
- Chilli: - 200 gram of Raw Material is required to make 100 gram of chilli powder.

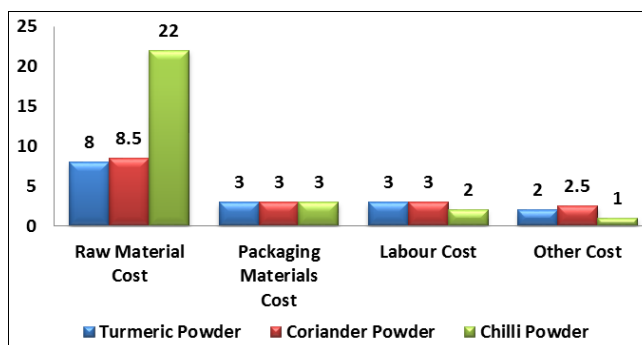


Fig 1: Cost and returns of spices Deep women (DW SHG)

Table 3.2: Cost and returns of spices Jai Minimata (JM SHG)

Sl. No	Particulars	Turmeric Powder Cost (Rs/100gm)	Coriander Powder Cost (Rs/100gm)	Chilli Powder Cost (Rs/100gm)
1	Raw Material Costs*	9(52%)	8(50%)	20(71%)
2	Packaging Materials Cost	3(17%)	3(18%)	3(10%)
3	Labour Cost	3(17%)	3(18%)	3(10%)
4	Other Cost (repair & maintenance)	2(11%)	2(12%)	2(12%)
5	Total Cost	17(100)	16(100)	28(100)
6	MRP	20	20	30
7	Sale Price (Total Returns)	20	20	30
8	Net Returns(TR- TC)	3	4	2
9	Input- Output Ratio	1:17	1:1.25	1:1.07
10	Variable Cost (VC) Ratio	0.85	0.80	0.93
11	VC Ratio (%)	85	80	93

Note- Figures in indicate percentage to total variable cost.

- Turmeric:-130 gram of Raw Material is required to make 100 gram of turmeric powder.
- Coriander: - 150 gram of Raw Material is required to make 100 gram of coriander powder.
- Chilli: - 200 gram of Raw Material is required to make 100 gram of chilli powder.

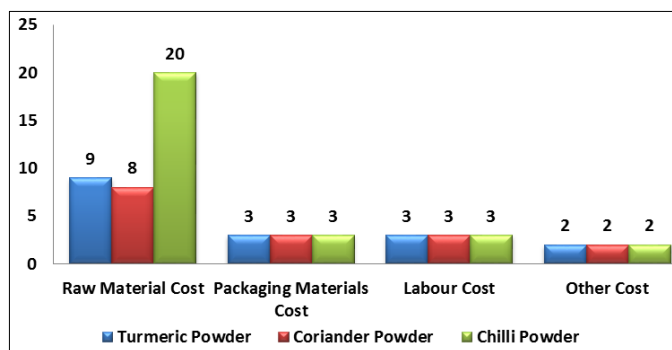


Fig 2: Cost and returns of spices Jai Minimata (JM SHG)

Table 3.3: Cost and returns of spices Maa Kalyani (MK SHG)

Sl. No	Particulars	Turmeric Powder Cost (Rs/100gm)	Coriander Powder Cost (Rs/100gm)	Chilli Powder Cost (Rs/100gm)
1	Raw Material Costs*	10(58)	10(55%)	20(71%)
2	Packaging Materials Cost	3(17%)	3(16%)	3(10%)
3	Labour Cost	3(17%)	2(11%)	2(7%)
4	Other Cost (repair & maintenance)	1(5.8%)	3(16%)	3(10%)
5	Total Cost	17(100)	18(100)	28(100)
6	MRP	20	20	30
7	Sale Price (Total Returns)	20	20	30
8	Net Returns(TR- TC)	3	2	2
9	Input- Output Ratio	1:17	1:1.11	1:1.07
10	Variable Cost (VC) Ratio	0.85	0.90	0.93
11	VC Ratio (%)	85	90	90

Note- Figures in indicate percentage to total variable cost.

- Turmeric:-130 gram of Raw Material is required to make 100 gram of turmeric powder.
- Coriander: - 150 gram of Raw Material is required to make 100 gram of coriander powder.
- Chilli: - 200 gram of Raw Material is required to make 100 gram of chilli powder.

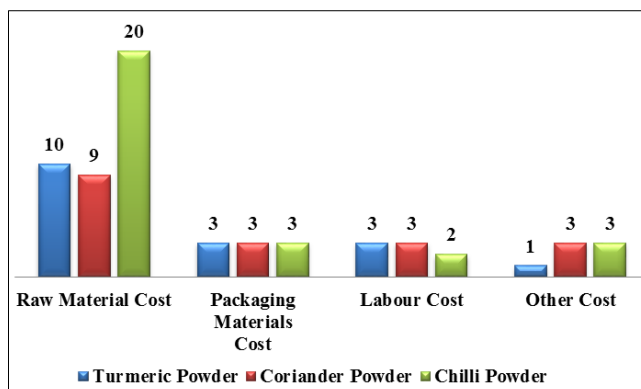


Fig 3: Cost and returns of spices Maa Kalyani (MK SHG)

3.4 Business Performance of Spices Products of DW (Deep women) SHG (Rs/Year)

The business performance of Spices product Turmeric powder, Coriander powder and Chilli powder in Deep women SHG Gailugoan, Lormi were as follows. The total sale of Turmeric powder was 4 quintal, net return 40 Rs/kg and total return was 16000 rupees/ year. This was the maximum among all three products. The total sale of Coriander powder was 3.5 quintal, net return 30Rs/kg and total return was 10500 rupees/ year. Whereas the total sale of Chilli powder was 3 quintal,

net return 20 Rs/kg and total return was 6000 rupees/ year.

Table 3.4: Business Performance of Spices Products of DW (Deep women) SHG (Rs/Year)

Product	Quantity sale (Kg/Year)	Net Return Per in Rs	Total Net Return in Rs
Turmeric Powder	4 Quintals	40	16000(49%)
Coriander Powder	3.5 Quintals	30	10,500(32%)
Chilli Powder	3 Quintals	20	6,000(18%)
Total			32500

*Note- 32500/13=2500/per person

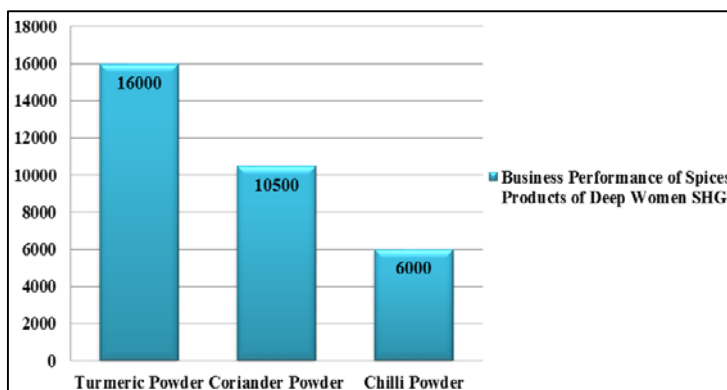


Fig 4: Business Performance of Spices Products of Deep Women SHG

3.5 Business Performance of Spices Products of JM (Jai Minimata) SHG (Rs/Year)

The business performance of Spices product Turmeric powder, Coriander powder and Chilli powder in Jai Minimata SHG Kudhurtal, Lormi were as follows. The total sale of Turmeric powder was 3.5 quintal, net return 30 Rs/kg and total return was 10500 rupees/ year. This was the maximum among all three products. The total sale of Coriander powder was 3 quintal, net return 40Rs/kg and total return was 12000 rupees/ year. Whereas the total sale of Chilli powder was 2.5 quintal, net return 20 Rs/kg and total return was 5000 rupees/ year.

Table 3.5: Business Performance of Spices Products of JM (Jai Minimata) SHG (Rs/Year)

Product	Quantity sale (Kg/Year)	Net Return Per in Rs	Total Net Return in Rs
Turmeric Powder	3.5 Quintals	30	10,500 (38%)
Coriander Powder	3 Quintals	40	12,000 (43%)
Chilli Powder	2.5 Quintals	20	5,000 (18%)
Total			27500

Note- 27500/10=2750/per person

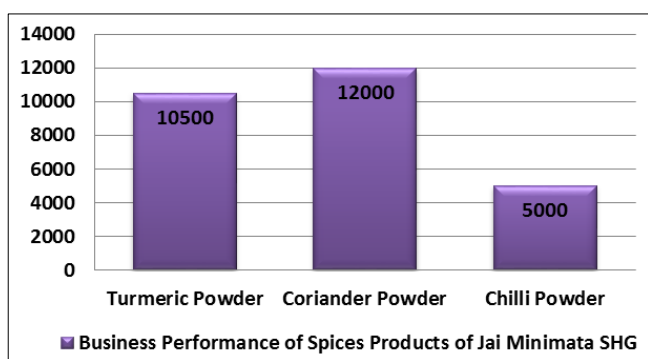


Fig 5: Business Performance of Spices Products of Jai Minimata SHG

3.6 Business Performance of Spices Products of MK (Maa Kalyani) SHG (Rs/Year)

The business performance of Spices product Turmeric powder, Coriander powder and Chilli powder in Maa Kalyani SHG Rajpur, Lormi were as follows. The total sale of Turmeric powder was 2.5 quintal, net return 30 Rs/kg and total return was 7500 rupees/ year. This was the maximum among all three products. The total sale of Coriander powder was 3 quintal, net return 20Rs/kg and total return was 4000 rupees/ year. Whereas the total sale of Chilli powder was 2quintal, net return 20 Rs/kg and total return was 4000 rupees/ year.

Table 3.6: Business Performance of Spices Products of MK (Maa Kalyani) SHG (Rs/Year)

Product	Quantity sale (Kg/Year)	Net Return Per in Rs	Total Net Return in Rs
Turmeric Powder	2.5 Quintals	30	7,500(48%)
Coriander Powder	2 Quintals	20	4,000(25.8%)
Chilli Powder	2 Quintals	20	4,000(25.8%)
Total			15500

*Note-15500/12=1291/per person

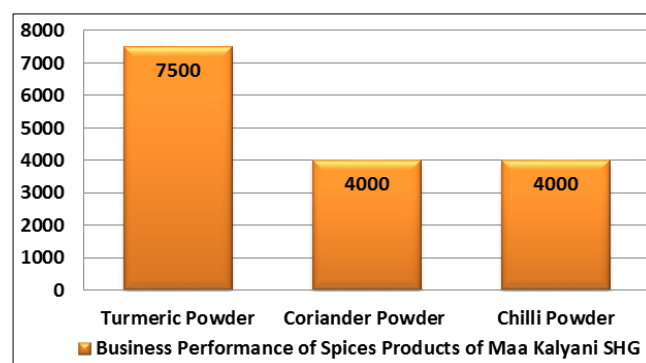


Fig 6: Business Performance of Spices Products of Maa Kalyani SHG

5. Suggestion for betterment of selected SHGs

- Enhance packaging and grading standards to make products attractive to consumers.
- Mobile app intended to provide a platform for buyers and sellers could be developed for better market access.

6. References

1. Bhat S, Kaushal P, Kaur M, Sharma HK. Coriander (*Coriandrum sativum* L.): Processing, nutritional and functional aspects. African Journal of plant science 2014;8(1):25-33.
2. Chandrasekaran I, Manoharan D, Shanmugam G, Singh BC. Effect of processing of turmeric rhizomes (*Curcuma longa* L.) on the concentrations of bioactive constituents. The Canadian society for engineering in agricultural, food, environmental, and biological systems. Paper No. CSBE 2018, 18-199.
3. Govindrajan VS. Modern technologies used in spices processing”, J. Fd. Sci. and Tech 1986;23(3):207-228.
4. Jayashree E, Zachariah TJ. Processing of turmeric (*Curcuma longa*) by different curing methods and its effect on quality 2016.
5. Lal J. Turmeric, Curcumin and our life: A review. Bull Environ Pharmacol Life Sci 2012;1(7):11-17.