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## Cost and return of ginger in Bidar district of Karnataka an economic analysis

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### Abstract

The study was conducted in the year 2016 – 2017 to study the “Cost and Return of Ginger in Bidar district of Karnataka” with a sample of 120 respondents. It revealed that, the cost of cultivation Ginger for small, medium and large of farms groups were Rs.209774.00/ha, Rs. 201572.80/ha and Rs.195584.00/ha respectively. Average cost of cultivation in different size farms group was Rs.204538.51/ha. The Gross Returns obtained per hectare by large size farms were high (Rs. 633600/ha) as compare to medium and small size farms (Rs.617600/ha and Rs.608000 /ha) respectively. Net returns per hectare were highest in large size farms (Rs.436036/ha) compare to the medium and small size farms (Rs.416027/ha and 398226/ha). Cost A<sub>1</sub> was highest in small size farms (Rs. 180754.00/ha) followed by medium size farms (Rs. 174192.80/ha) and lowest in large size farms (Rs. 169313.60/ha) respectively. Cost A<sub>2</sub> in small, medium and large size of farms groups was Rs. 180754.00/ha, Rs.174192.80/ha and Rs.169313.60/ha respectively. Cost B was highest in small size farms (Rs. 194474.00/ha) as compared to medium size farms (Rs. 187892.80/ha) and in large size of farms (Rs. 182983.60ha) respectively. Cost C was highest in small size farms (Rs. 195583.60/ha) and lowest in large size farms (Rs. 209774.00/ha). Farm business income in small, medium and large size of farms group was Rs. 427246.00/ha, Rs. 443407.20/ha and Rs. 464286.00/ha respectively. Farm investment income was highest in large size farms (Rs. 449706.00/ha) as compared to medium size farms (Rs. 429727.20/ha) and lowest in small size farms (Rs. 411946.00/ha) respectively. Family labour income was Rs. 413526.00/ha for small size farms group, Rs.429707.20/ha for medium size farms group and Rs.450616.00/ha for large size of farms group.

**Keywords:** Cost and Returns, Ginger.

### Introduction

India is rightly called as “spice bowl of the world” for its production of variety and superior quality spices. Growing of spices for various purposes has been famous since the ancient times. There are records about its various properties in Vedas as early as 6000 BC. India is known for trade since the exploration of sea routes. All these attracted the foreigners to India and this was the key reason why India invaded by European countries and was imperialized. To such an extent India was famous for the spices. According to the Bureau of Indian Standards (BIS), 63 spices are grown in India. The spices are grown throughout the country from tropical to temperate climate. India has highest number of spice varieties in the world. Ginger can and has been used in many different products. Ginger tea has been used as a carminative and for the treatment of colds at their onset for centuries. It has been used in China as a tonic. The Greeks, after a large meal, used to wrap bread around a piece of ginger and eat it to ease indigestion. In England, ginger was added to beer, forerunner to ginger ale, as a remedy for diarrhea, nausea and vomiting. The Chinese also considered ginger root to be an antidote to shellfish poisoning, explaining why it is found in so many sea food dishes. Ginger is popular because of its pungent flavour. It is a complement to many meals, drinks and desserts. Due to its popularity and diverse scope for product development it would be advantageous for the local communities of Nepal to value add their products. This would assist in gaining a higher profit margin for the local producers and product variety for consumers in local markets and in Kathmandu. It would lessen the gap between products produced in Nepal and those imported from overseas and be an import replacing Nepal made product. With an appeal for ginger-based preparations, ginger oil etc, have been encouraged. It is very useful for cold induced diseases, like nausea, asthma, cough, heart palpitation, syperia and home remedy in the country as it was 2000 years ago. These added medicinal values besides taste-maker need to be popularized, supported with clinical tests having scientific evidences. Ginger contains 2-3 per cent protein, 0.9 per cent fat, 1.2 per cent minerals, 2.4 percent fiber, 12.3 per cent carbohydrate and a good source of calcium, phosphorous, iron and vitamins. The pungency of ginger has all the constituents, which are needed for good health and improving the quality of food.

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**Objective**

To find out the Costs and Returns per hectare of Ginger crop in different size of farms groups.

**Materials and Methods**

Ginger cultivation is practiced throughout the district. However, the large scale cultivation of Ginger is concentrated mainly in humnabad taluk extending on an area of 1020 hectares. Hence, humnabad taluk was specifically selected for the study. The information on area under Ginger crop and number of Ginger growers from the selected villages was

obtained from the respective village accountants (Talati). A proportionate sample of ten per cent of the population from each village was selected randomly. Thus, the total size of the sample selected for the study was 120. For analyzing the data collected during the study, tabular analysis and financial analysis were employed. The technique of tabular analysis was employed for estimating the cost of cultivation, yield and return structure of Ginger.

**Results and Discussion****Table 1:** Cost of Cultivation of Ginger crop per hectare in different size of farm groups.

Sl. No	Particulars of Farm Operations	Size of Farms Groups			Sample Average
		Small	Medium	Large	
1	Hired Human Labour Charges	8100.00 (3.86)	8460.00 (4.20)	8820.00 (4.51)	8346.00 (4.08)
2	Bullock Labour Charges	3850.00 (1.84)	3500.00 (1.74)	3150.00 (1.61)	3610.83 (1.77)
3	Machinery Labour Charges	3600.00 (1.72)	4200.00 (2.80)	4200.00 (2.15)	3910.00 (1.91)
4	Cost of Seeds and Seedlings	87500.00 (41.71)	85000.00 (42.17)	82000.00 (41.93)	85708.33 (41.90)
5	Cost of Farm Yard Manure	15000.00 (7.15)	14500.00 (7.19)	14000.00 (7.16)	14658.33 (7.17)
6	Cost of chemical Fertilizers	14000.00 (6.61)	13100.00 (6.50)	12650.00 (6.47)	13460.00 (6.58)
7	Cost of Irrigation charges	20000.00 (9.53)	18000.00 (8.92)	18000.00 (9.20)	18966.67 (9.27)
8	Cost of Plant Protection charges	8000.00 (3.81)	7700.00 (3.82)	7500.00 (3.83)	7811.67 (3.82)
9	Miscellaneous charges	2500.00 (1.19)	2200.00 (1.09)	2100.00 (1.07)	2328.33 (1.14)
10	Interest on Working Capital @ 8%	13004.00 (6.20)	12532.8 (6.22)	12193.60 (6.23)	12704.01 (6.21)
11	Deprecation on Fixed Resources	5000.00 (2.38)	4800.00 (2.38)	4500.00 (2.30)	4846.67 (2.37)
12	Land Revenue Paid to Government	200.00 (0.10)	200.00 (0.10)	200.00 (0.10)	200.00 (0.10)
13	Interest on Fixed Capital @ 10%	1720.00 (0.82)	1700.00 (0.84)	1670.00 (0.85)	1704.67 (0.83)
14	Rental Value of Own Land	12000.00 (5.72)	12000.00 (5.95)	12000.00 (6.14)	12000.00 (5.87)
15	Imputed value of Family Labour charges	15300.00 (7.29)	13680.00 (6.79)	12600.00 (6.44)	14283.00 (6.98)
16	Total Cost of Cultivation	209774.00 (100.00)	201572.80 (100.00)	195584.00 (100.00)	204538.51 (100.00)

**Note:** Figure in parenthesis indicate per cent to the total.

Table 1 shows that among different size of farms total cost of cultivation incurred by the small size farms were high (Rs.209774/ha) as compared to medium and large size farms (Rs.201573/ha and Rs.197564/ha) respectively. The cost of human labour were the items of cost with major share in the variable costs, because most of the operations like harvesting, and weeding were human labour intensive operations. The distribution pattern of operational cost under various inputs shows that cost of hired human labour was highest in the large size farms (Rs.8820.00/ha), compared to medium size farms (Rs.8460.00/ha) and lowest in small size farms (Rs.8100.00/ha) respectively. As Ginger would respond well

with chemical fertilizer, so the cost of farm yard manure was ranged from Rs. 29000.00/ha (small size farms) to 26650.00/ha (large size farms).The expenditure on miscellaneous for small, medium large size farm groups was Rs.2328.33/ha. It was also noticed that the highest expenditure on plant protection chemical was seen on small size farms (Rs.8000/ha) as compared to medium (Rs.7700/ha) and large size (Rs.7500/ha) farms respectively. Land revenue paid to government was Rs.200 in different size of farms group. The cost of rental value of own land was Rs.12000/ha in different size of farms group.

**Table 2:** Average Costs and Returns in Ginger crop per hectare in different Size of Farms Group.

Sl. No	Particulars	Size of Farms Group			Sample Average
		Small	Medium	Large	
1	Total Cost of cultivation	209774	201573	197564	204868.58
2	Yield in quintals per hectare	190	193	198	192.38
3	Gross Returns per hectare	608000	617600	633600	615626.67
4	Net Returns per hectare	398226	416027	436036	410758.09
5	Cost of Production per Quintal	1104.07	1044.42	997.80	1065.48
6	Price per Quintal	3200	3200	3200	3200
7	Input – Output Ratio	1:2.90	1:3.06	1:3.21	1:3.01

Average Costs and Returns in Ginger cultivation up to among different size of farms group (Table 2), the total cost of cultivation incurred by the small farms were high (Rs. 209774.00/ha) as compared to medium (Rs. 201573.00/ha) and large farms (Rs. 197564.00/ha). The gross returns obtained per hectare by large size farms were high (Rs. 633600.00/ha) as compare to medium and large size farms (Rs. 617600.00/ha) and (Rs. 608000.00/ha) respectively. The

net returns per hectare obtained by large size farms were high (Rs. 436036.00/ha) as compared to medium and small size farms (Rs.416027.00/ha) and (Rs. 398226.00/ha) respectively. The yield was highest in case of large size farms 198 Quintals/ha as compared to medium (193 Quintals/ha) and small size farms (190 Quintals/ha) respectively. Average cost of production per quintal was Rs. 1065.48/quintal. Average Price per quintal was Rs. 3200/quintal.

**Table 3:** Cost Concepts in Ginger crop per hectare in different Size of Farms Group

Sl. No	Cost Concepts	Size of Farms Group			Sample Average
		Small	Medium	Large	
1	Cost A <sub>1</sub>	180754.00	174192.80	169313.60	176550.80
2	Cost A <sub>2</sub>	180754.00	174192.80	169313.60	176550.80
3	Cost B	194474.00	187892.80	182983.60	190255.50
4	Cost C	209774.00	201572.80	195583.60	204538.50

Table 3 shows that Cost Concepts on different size of farms group per hectare. Cost A<sub>1</sub> was highest in small size farms (Rs. 180754.00/ha) followed by medium size farms (Rs. 174192.80/ha) and lowest in large size farms (Rs. 169313.60/ha) respectively. Cost A<sub>2</sub> in small, medium and large size of farms groups was Rs. 180754.00/ha,

Rs.174192.80/ha and Rs.169313.60/ha respectively. Cost B was highest in small size farms (Rs. 194474.00/ha) as compared to medium size farms (Rs. 174192.80/ha) and lowest in large size of farms (Rs. 169313.60/ha) respectively. Cost C was highest in small size farms (Rs. 209774.00/ha) and lowest in large size farms (Rs. 195583.60/ha).

**Table 4:** Measures of Farm Profitability in Ginger crop per hectare in different Size of Farms Group

Sl. No	Particulars	Size of Farms group			Sample Average
		Small	Medium	Large	
1	Gross Returns	608000.00	617600.00	633600.00	615626.67
2	Farm Business Income	427246.00	443407.20	464286.00	439075.82
3	Farm Investment Income	411946.00	429727.20	449706.00	424462.75
4	Net Returns	398226.00	416027.20	438016.00	411088.15
5	Family labour income	413526.00	429707.20	450616.00	425371.15
6	Input – Output Ratio	1:2.90	1:3.06	1:3.21	1:3.01

Table 4 shows that Measures of Profitability in Ginger cultivation in different size of farms group. The gross returns obtained per hectare by large size farms were high (Rs. 633600.00/ha) as compare to medium and small size farms (Rs.617600.00/ha and Rs. 608000.00/ha) respectively. Farm business income in small, medium and large size of farms group was Rs.427246.00/ha, Rs.443407.20/ha and Rs.464286.00/ha respectively. Farm investment income was highest in large size farms (Rs.449706.00/ha) as compared to medium size farms (Rs.429727.20/ha) and lowest in small size farms (Rs. 411946.00/ha) respectively. The net return per hectare obtained by large size farms were high (Rs.438016.00/ha) as compared to medium and small size farms (Rs.416027.20/ha and Rs.398226.00/ha) respectively. Family labour income was Rs.413526.00/ha for small size farms group, Rs.429707.20/ha for medium size farms group and Rs.450616.00/ha for large size of farms group.

### Conclusion

The list of results obtained in this research study concludes

that the investment on manures and fertilizers and plant protection followed by irrigation should highly be considered. Factors having higher elasticity of production value would be looked after carefully and increase their input level for securing a higher return. To minimize the cost of cultivation of Ginger crop in small size farm cost involved on human labour use to be decreased but this avenue is opened for larger size farms. Problems observed during the study should accordingly be handled to minimize their incidence. Proper borrowing facility and marketing information should also be followed which influence the return of this crop.

### Reference

1. Rajesh SR, Raveendran N, Ajjan N. An analysis: Trends in area, production, productivity and export of major spices in India. *Spice India*. 2002; 15(2):19-22.
2. Damate S, Singh B, Singh J. Changes in costs and returns of major crops in Punjab. *Agric. Sitn. India*, 2003; 60(1-6):11-17.
3. Anonymous. Economics of production of capsicum under

- low cost polyhouse in Andaman and Nicobar islands. Cari, res, in/mbm-english/mbm-Cari-7. 2004
4. RohitSingla, Chahal SS, Kataria P. Economics of production of greenpeas (*Pisum sativum* L.) in Punjab. Agric. Res. Rev. 2006; 19(3):237-250.
  5. Hatai. Economics of production and marketing of strategies of potato in Orissa. Indian J. Mktg., 2007; 30(2):17-21.
  6. Rama Rao CA, Reddy YVR. Economics of crop production in different agro- climatic zone of Andhra Pradesh. Agric. Situ. India, Rev., 2007; 25(1):167-171.
  7. Surwase RV, Kshirsagarm PJ, Talathim JM, Gorem ST. Costs, returns and profitability of sapota in Thane district. Internat. Res. J. Agric. Eco. & Stat., 2015; 6(1):96-99.
  8. Verma VK, Jheeba SS. Marketing cost and price spread of coriander in Kota district of Rajasthan, Int. J. Seed Spices. 2016; 6(1).
  9. Districts at Glance, bidar, 2016-2017.