

Original Research Article

Doubling Farm Income through AGRO-Tourism Centers (ATCS) in Ratnagiri District (M.S.)

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ABSTRACT

Konkan region of Maharashtra has a great potential for the development of Agro-tourism. Ratnagiri district is one of the major tourist centers and there is large scope and great potential to encourage farmers to establish small and viable subsidiary agribusiness such as Agro-tourism in rural areas. The data for present study was collected from selected six Agro-Tourism Centers (ATCs) in four tahsils of Ratnagiri districts (M.S.) viz; Dapoli, Guhagar, Mandangad and Khed. The per ATC capital investment was Rs. 1,46,38,084 out of which land value Rs. 88,28,333 (60.31 per cent) was major followed by buildings and other structures Rs. 53,19,167 (36.34 per cent), machineries, implements and equipment was Rs. 16,06,500 (1.83 per cent) and the value of irrigation structure was Rs. 2,22,833 (1.52 percent). The average annual employment generated in ATCs was 18341 (temporary and permanent) man days in which the share of temporary and permanent employment was 3831 days (20.89 per cent) and 14510 days (79.11 per cent). This is clearly indicated that the ATCs have been creating a massive employment generation opportunities. Thus, the ATCs in the rural areas are having good potential for creating employment. The total variable cost was estimated to Rs. 83,68,042, of the selected ATCs. The per ATC monthly average arrival of tourist was 1,052 in a year, out of these 1030 had night stay. Among the six ATCs the highest number of tourists arrived at the ATC AATD center was 10046 and 5023 had night stay in a year. The average gross income of the ATC was estimated to Rs.46,90,375. Out of this, the major share (87.05 per cent) of income from Agro-tourism enterprise and 12.95 per cent share from crop production and livestock enterprises of ATC. The average benefit: cost ratio at total cost level was worked to 1.26 and at variable cost it was 3.36, indicated that, the Agro-tourism business was profitable. The highest B:C ratio were AATD at total cost was (1.39) and lowest SMAG was (0.99) which is near about equal to one. The payback period of ATC was 6.91 years which indicated length of time required to recover the initial investment of fund in Agro-tourism activity, which was comparatively low. Break-even point (BEP) in terms of physical units for ATCs was worked to, 4191 visitors per year. BEP in terms of monetary terms was estimated to Rs. 37,71,809. The strengths of ATCs were additional income source and employment opportunities to the farmers including farm family members and Youths in the area.

Keywords

Agro-tourism,
Investment,
Payback period,
Break-even point

Introduction

Tourism has great capacity to generate large-scale employment and additional income sources to the skilled and unskilled labour. Tourism is a massive and growing industry already affecting millions of the poor, so a marginal improvement. It could generate substantial economic benefits. Today the concept of traditional tourism has been changed. Some new areas of the tourism have been emerged like Agro-Tourism. Promotion of tourism would bring many direct and indirect benefits to the people. Agro-tourism is an innovative agricultural activity related to tourism and agriculture both.

‘Agro-tourism’, is that it is the holiday concept of visiting farm or any agricultural, horticultural, or agribusiness operation for the purpose of enjoyment, education or active involvement in the activities of the farm or operation. Agro tourism model gives the authentic experiences to the visitors by showcasing village culture, agriculture, traditions that has helped gain sustainable supplementary income source and generated local employment. Agro tourism also provides communities with the potential to increase their local tax bases and new employment opportunities. Additionally, Agro-tourism provides educational opportunities to the public, helps to preserve agricultural lands, and allows states to develop business enterprises.

Maharashtra is the second largest state of India in terms of population and third in area. Maharashtra is the third largest state in India and one of the few regions in the world that have an offer a variety of tourist destination. It is located on the west coast of India with a 720 km long coastline along the green Konkan region. Historically Konkan has been land with dense forest cover and a landscape fringed with beautiful beaches, picturesque hamlets, paddy fields, coconut grooves and

mango orchards. The region has tremendous potential with a variety of cultural aspects and production systems sufficient to attract tourists and other advantage is Mumbai and Pune is the nearest big cities. It has seen substantial growth in tourism in the past few years. Now the target area of Ratnagiri Agro-tourism is easily possible where mango, cashew and coconut based intercropping cultivation is present. Mango orchards have seasonal earning which starts from early April and it ends by June. It is experiencing that excess production of Mangoes never results in higher profit if that farmer cannot process that output in form of Pulp etc. on the other hand of due to natural factors if production is less than the average, it will clearly result in financial setback. Other than Mango, district produces Rice which is purely seasonal crop therefore no assurance can be given of income to farmers. According to data of 2011-12 related to Ratnagiri District, 27 % area is not suitable for agriculture, 40 % area is suitable but not used for agriculture, and this creates the opportunity for Agriculture Based Tourism activity.

Materials and Methods

The data for present study was collected from selected six Agro-tourism centers in four tahsils of Ratnagiri districts (M.S.) viz; Dapoli, Guhagar, Mandangad and Khed. Therefore Ratnagiri district was selected for present study has it's having more number of ATCs in the Konkan region of Maharashtra (2016).

The primary data were collected by survey method from selected ATCs; The ATC owners were interviewed personally with the help of comprehensive pretested schedule specially designed for the purpose. The data collected was analyzed to know the initial capital investment of ATCs, annual maintenance cost of the ATCs, employment

generation by ATCs, number of tourists arrivals in one years, income of the ATC owners. Also estimate the total fixed costs, total variable costs and total initial investment cost of the ATCs, income of the ATCs, B:C ratios of ATCs, payback period and break-even point analysis and also worked out the economic evaluation of the investment made in the ATCs.

Results and Discussion

General information of selected Agro-tourism Centers (ATCs)

It is seen from the Table.1 that, ANSD is located at village Gavhe from Dapolitahsil of Ratnagiri district (M.S.). It was established in 2005 and operating experience was 14 years. The AATD is located at village Sukondi, Dapolitahsil of Ratnagiri district (M.S.).

AATD was established in 2014 and operating experience is 5 years. The GATG is located at village Abloli, Guhagartahsil of Ratnagiri district (M.S.). It was established in 2009 and operating experience is 10 year. The SMATG is located at village Asgoli, Guhagartahsil of Ratnagiri district (M.S.). It was established in 2011 and operating experience is 8 year. The BGEM is located at village Konzar, Mandangad tahsil of Ratnagiri district (M.S.). It was established in 2015 and operating experience is 4 years and the last RATK is located at village Shirvali, Khedtahsil of Ratnagiri district (M.S.). It was established in 2015 and operating experience was 4 years.

Total capital assets investment

The total capital assets investment of selected ATCs was given in Table- 2.

It is seen from Table-2 that, the initial capital investment of ATC, ANSD was Rs. 1,86,45,200, AATD was Rs. 2,59,71,500,

GATG was Rs. 79,24,600, SMAG was Rs. 32,84,000, BGEM was Rs. 2,88,71,500 and the RATK initial investment was Rs. 31,32,200 respectively. At the overall level, the total initial investment by selected ATCs was Rs. 1,46,38,084.

The proportionate share of the individual items of capital assets in the total capital investment varied greatly over the period of time. The average investment in land was more than 60.00 per cent of the total investment, followed by investment in construction structure of ATCs was 36.34 per cent. The investment in machineries, implements and equipment's were 1.83 per cent and investment in irrigation structures was 1.52 per cent. The interest on fixed capital was worked out at the rate of 12 per cent of total initial investment of ATCs which excluding the land value. At the overall level interest on fixed capital was Rs. 6,97,170 and rental value of land at the rate of 10 percent was Rs. 8,82,834. The annualized establishment cost was Rs.7,41,924 at overall level excluding land value and Machineries, Implements and Equipment values. The total imputed cost of the ATCs at overall level was Rs. 23,21,927.

Total Variable costs of selected ATCs

Variable costs are the costs of using the variable resources or inputs. These costs vary with the level of production and extent of use of these variables. These costs included variable resources such as, electricity charges, labour charges, transportation facilities charges, structure and machineries maintenance charges, miscellaneous charges, employment wages, food, non-food and other material costs, etc. Therefore the total variable cost were worked out and presented in Table 3 shows that, the estimated total variable cost of maintenance charges, food, non-food and other material, labour

employment wages and interest on working capital was estimated to Rs. 83,68,042, of the six ATCs. The average labour cost was Rs. 8,24,704 which has maximum share in total variable cost *i.e.* 59.13 per cent, followed by maintenance expenditure was Rs. 2,68,520, (19.25 per cent) and expenditure on food, non-food and other material cost was Rs. 1,52,023 (10.90 per cent) at overall level. The interest on working capital at 12 per cent was worked out to Rs. 8,96,576, *i.e.* 10.90 per cent of the total variable cost.

The highest total variable cost of the ATC, BGEM was Rs. 27,64,888, followed by ATC, AATD was Rs. 21,98,588. The minimum total variable cost of the ATC, SMAG was Rs. 3,13,780, followed by RATK was Rs. 3,33,010.

Income of ATCs

The main aim of the establishing the ATCs by the farmers are to be supplements or increasing the income of the farm families. The ATCs studied were analyzed for their annual income from different sources which mainly comprised of returns/ income from ATC in addition to the income from crop production, livestock and other farm activities. The information about income received from these sources has been presented in Table 4 and 5.

The data presented in Table 4 shows that, the income of the ATCs were worked out for two categories of tourists, *i.e.* income received from tourists visiting during day time and the tourists stayed/made a stay at ATC over night during the year 2018. The total income from ATCs was estimated at overall level to Rs. 48,83,342, of which 38.57 per cent share was of income from tourists visiting ATCs on day time and 61.43 per cent from the visitors making stay at night the ATCs. The income of the ATC, AATD from these two kinds of

tourists for the year 2018 was recorded highest, Rs. 83,36,350, followed by the income ATC BGEM Rs. 82,55,900.

At overall level, the number of visitors visiting day time and the tourists making stay at ATCs were 4164 per year of which nearly 50.52 per cent were tourists visiting day time and 49.48 per cent visitors making stay at night at ATCs. The similar kind of trade as that of income was noticed in the case of tourists/visitors visiting AATD and BGEM during the year.

Gross income of ATC from different sources

The gross income of the ATCs owners from different sources such as ATC, crop production and livestock was worked out. The data presented in the Table-5 shows that, the total gross income of the ATCs were estimated to Rs. 2,81,42,250.

Out of this, the major share was of income from Agro-tourism enterprise *i.e.* 87.05 per cent and 12.95 per cent share from crop production and livestock enterprises of these ATCs. The average income of the ATCs from these farm activities (Agro-tourism, crop production and livestock) were estimated to Rs. 46,90,375.

The data thus analyzed of the revealed that the Agro-tourism was the major source of income during the year 2018 for all these ATCs under study. The crop production and livestock rearing notice to be the secondary enterprises having very merge share in the total income received.

Profitability of the ATCs

The analytical or statistical tools and techniques *viz.* Benefit: cost ratio, payback period and break-even point of the ATCs was

worked out. The profitability of the ATCs indicates where the Agro-tourism enterprise in profit or in loss, etc.

Benefit: cost ratio of the ATCs

The benefit cost ratios of the ATCs were worked out at two categories of costs *i.e.* at i) variable cost, ii) total costs incurred by the ATCs and presented in Table 6. The benefit: cost ratios at overall level of total cost were worked to 1.26 and at variable costs it was 3.36. The B:C ratios of the individual ATCs were in the range 0.99 to 1.39 at total costs level.

The highest B:C ratio were AATD at TC was (1.36) and lowest SMAG was (0.99). This table revealed that the running of the Agro-tourism enterprise was profitable to the farmers except at SMAG, ATC were B:C ratio at total cost was near about one (0.99).

Payback period of selected ATCs

It is the length of time required to recover the initial costs of outlay on the ATCs enterprise. The payback period of any economic activity indicates the initial investment made during the number of years. The payback period of selected ATCs are presented in the Table 7. The payback period of ATCs were worked out to, 6.91 years, at the overall level. This period of 6.91 years is a good economic period for recovery of the initial investment made on Agro-tourism activity.

Considering the payback period of individual ATC under study, the minimum payback period was worked out to 4.23 and maximum period of 10.40 years. The Table 7 revealed that overall payback period was 6.91 years *i.e.* length of time required to recover the initial investment of outlay is 6.91 years of Agro-tourism enterprise.

Table.1 General information of selected Agro- tourism Centers (ATCs)

Sr. No.	Name of Agro-tourism centers	Location	Year of Establishment	Operating experience (year)
1	AmruttejNisargSahavasDapoli(ANSD)	Gavhe, Dapoli	2005	14
2	Arihant Agro-Tourism center Dapoli (AATD)	Sukondi, Dapoli	2014	5
3	Garva Agro-Tourism centerGuhaghar(GATG)	Abloli, Guhagar	2009	10
4	SaiMeru Agro-Tourism centerGuhaghar (SMATG)	Asgoli, Guhagar	2011	8
5	Blue Green Exotica Mandangad (BGEM)	Konzar, Mandangad	2015	4
6	Raturaj Agro-Tourism centerKhed(RATK)	Shirvali, Khed	2015	4

Table.2 Total capital assets of ATCs

(Figures in Rs)

Sr. No.	Particulars	ANSD	AATD	GATG	SMAG	BGEM	RATK	Average
1	Land	10920000 (58.57)	11500000 (44.28)	5500000 (69.40)	1350000 (41.10)	22500000 (77.93)	1200000 (38.31)	8828333 (60.31)
2	Buildings & other structures	7590000 (40.70)	13927000 (53.62)	1957000 (24.70)	1745000 (53.14)	4950000 (17.15)	1746000 (55.74)	5319167 (36.34)
3	Irrigation structure	65000 (0.35)	310000 (1.20)	190000 (2.40)	152000 (4.63)	602000 (2.08)	18000 (0.57)	222833 (1.52)
4	Machineries, Implements and Equipment	70200 (0.38)	234500 (0.90)	277600 (3.50)	37000 (1.13)	819000 (2.84)	168200 (5.37)	267750 (1.83)
	Total	18645200 (100.00)	25971500 (100.00)	7924600 (100.00)	3284000 (100.00)	28871000 (100.00)	3132200 (100.00)	14638084 (100.00)
	a) Interest on fixed capital @ 12 % (excluding land)	927024 (30.45)	1736580 (36.23)	290952 (25.78)	232080 (37.37)	764520 (20.34)	231864 (39.43)	697170 (30.02)
	b) Rental value of land at 10 %	1092000 (35.88)	1150000 (24.00)	550000 (48.74)	135000 (21.74)	2250000 (59.87)	120000 (20.41)	882834 (38.02)
	c) Annualized Establishment cost	1024797 (33.67)	1905948 (39.77)	287425 (25.47)	253957 (40.89)	743262 (19.78)	236152 (40.16)	741924 (31.96)
	Total imputed costs (a+b+c)	3043821 (100.00)	4792528 (100.00)	1128377 (100.00)	621037 (100.00)	3757782 (100.00)	588016 (100.00)	2321927 (100.00)

(Figures in parentheses are the percentages to the total)

Table.3 Total Variable costs of selected ATCs

(Figures in Rs)

Sr. No.	Particulars	ANSD	AATD	GATG	SMAG	BGEM	RATK	Total	Average
1	Maintenance Expenditure (M)	338000 (16.59)	228000 (10.37)	101000 (14.01)	54500 (17.37)	829600 (30.00)	60000 (18.01)	1611100 (19.25)	268520 (19.25)
2	Food , Non-food & other material cost (F)	188330 (9.25)	358650 (16.31)	61260 (8.50)	28261 (9.01)	232560 (8.41)	43080 (12.93)	912141 (10.90)	152023 (10.90)
3	Labour cost (L)	1292500 (63.45)	1376375 (62.60)	481210 (66.77)	197400 (62.91)	1406490 (50.87)	194250 (58.33)	4948225 (59.13)	824704 (59.13)
A)	Working Capital (M+F+L)	1818830	1963025	643470	280161	2468650	297330	7471466	1245245
B)	Interest on working capital (@ 12%)	218260 (10.71)	235563 (10.71)	77216 (10.71)	33619 (10.71)	296238 (10.71)	35680 (10.71)	896576 (10.71)	149429 (10.71)
	Total Variable costs (A+B)	2037090 (100.00)	2198588 (100.00)	720686 (100.00)	313780 (100.00)	2764888 (100.00)	333010 (100.00)	8368042 (100.00)	1394674 (100.00)

Table.4 Yearly Arrival and Income of ATCs from tourists

(Figures in Rs)

Sr. No	Particulars		ANSD	AATD	GATG	SMAG	BGEM	RATK	Average
1	Nos. of tourists arrived in day period (in one year)	M	874	1708	318	134	1223	222	747
		F	833	1681	310	128	1170	226	725
		C/S	722	1634	183	111	915	229	632
	Total tourists		2429 (50.00)	5023 (50.00)	811 (50.00)	373 (50.00)	3308 (50.00)	677 (61.66)	2104 (50.52)
	Total Income (Rs)	M	699200	1281000	254400	93800	1467600	144300	656717
		F	666400	1260750	248000	89600	1404000	146900	635942
		C/S	288800	571900	73200	38850	640500	80150	282233
	Total (Rs)		1654400 (34.52)	3113650 (37.35)	575600 (34.60)	222250 (35.30)	3512100 (42.54)	371350 (45.18)	1574892 (38.57)
2	Nos. of tourists stayed at Night In one year	M	874	1708	318	134	1223	149	734
		F	833	1681	310	128	1170	151	712
		C/S	722	1634	183	111	915	121	614
	Total (Night tourist)		2429 (50.00)	5023 (50.00)	811 (50.00)	373 (50.00)	3308 (50.00)	421 (38.34)	2061 (49.48)
	Total Income (Rs) (Night stay)	M	1311000	2220400	477000	174200	1956800	193700	1055517
		F	1249500	2185300	465000	166400	1872000	196300	1022417
		C/S	577600	817000	146400	66600	915000	60500	430517
	Total (Rs) (Night stay)		3138100 (65.48)	5222700 (62.65)	1088400 (65.40)	407200 (64.70)	4743800 (57.46)	450500 (54.82)	2508450 (61.43)
	Grand total of tourists (M+F+C/S)		4858 (100.00)	10046 (100.00)	1622 (100.00)	746 (100.00)	6616 (100.00)	1098 (100.00)	4164 (100.00)
	Grand total of income (Rs) (M+F+C/S)		4792500 (100.00)	8336350 (100.00)	1664000 (100.00)	629450 (100.00)	8255900 (100.00)	821850 (100.00)	4083342 (100.00)

(Figures in parentheses are the percentages to the total)

Table.5 Gross income of ATC from different sources

(Figures in Rs)

Sr. No.	Name of ATCs	Sources of Income			Total Income
		From ATCs	Crop production	Livestock	
1	ANSD	4792500 (85.70)	800000 (14.30)	-- (0.00)	5592500 (100)
2	AATD	8336350 (85.24)	1403000 (14.36)	40000 (0.40)	9779350 (100)
3	GATG	1664000 (83.53)	328200 (16.47)	-- (0.00)	1992200 (100)
4	SMAG	629450 (67.87)	263000 (28.35)	35000 (3.78)	927450 (100)
5	BGEM	8255900 (92.62)	658000 (7.38)	-- (0.00)	8913900 (100)
6	RATK	821850 (87.72)	115000 (12.28)	-- (0.00)	936850 (100)
	Total	24500050 (87.05)	3567200 (12.68)	75000 (0.27)	28142250 (100)
	Average	4083342 (87.05)	594533 (12.68)	12500 (0.27)	4690375 (100)

(Figures in parentheses are the percentages to the total)

Table.6 Profitability of selected ATCs

(Figures in Rs)

Sr. No.	Name of ATCs	Fixed Cost	Variable Cost	Total Cost	Gross Income	B:C Ratio	
						VC	TC
1	ANSD	3043821	2037090	5080911	5592500	2.74	1.10
2	AATD	4792528	2198588	6991116	9779350	4.45	1.39
3	GATG	1128377	720686	1849063	1992200	2.76	1.07
4	SMAG	621037	313780	934817	927450	2.95	0.99
5	BGEM	3757782	2764888	6522670	8913900	3.22	1.36
6	RATK	588016	333010	921026	936850	2.81	1.02
	Total	13931561	8368042	22299603	28142250	3.36	1.26

Table.7 Payback period of selected ATCs

Sr. No.	Name of ATCs	Particulars (Rs)				
		Initial Investment	Total Income (I) From ATCs	Variable Costs (VC)	Net Income (I – VC)	Payback period
1	ANSD	18645200	4792500	2037090	2755410	6.77
2	AATD	25971500	8336350	2198588	6137762	4.23
3	GATG	7924600	1664000	720686	943314	8.40
4	SMAG	3284000	629450	313780	315670	10.40
5	BGEM	28871000	8255900	2764888	5491012	5.26
6	RATK	3132200	821850	333010	488840	6.41
	Overall	14638084	4083342	1394674	2688668	6.91

Table.8 Break Even Point (BEP) analysis

Sr. No.	Particulars	ANSD	AATD	GATG	SMAG	BGEM	RATK	Overall
1	Fixed cost (FC)	3043821	4792528	1128377	621037	3757782	588016	2321927
2	Variable cost (VC)	2037090	2198588	720686	313780	2764888	333010	1394674
3	Total cost (TC)	5080911	6991116	1849063	934817	6522670	921026	3716601
4	Total income	5592500	9779350	1992200	927450	8913900	936850	4690375
5	VC incurred /Visitors (V)	419	219	444	421	418	536	410
6	Per head Charges (P)	1046	696	1140	1189	986	1028	1014
7	Total number of visitors	4858	10046	1622	746	6616	1098	4164
	i) BEP In Physical Unit(Tourists)	4858	10046	1622	808	6616	1195	4191
	ii) BEP at Monetary terms	5080656	6990268	1848889	960763	6521663	1228617	3771809

Break Even Point (BEP) analysis

The point at which the two curve *i.e.* total cost curve and total revenue curve intersect is called Break-even point (BEP). Which indicates the level of production at which the producer neither loses money nor makes a profit, in other words, the quantity at which all costs allocated to a product are equal to all revenues from its sell is known as Break-even point (BEP). The information regarding the BEP worked out for the ATCs is presented in Table 8.

The break-even point was estimated by two categories, *i.e.* i) on the basis of number of tourists visiting the ATCs (on the basis of physical units), ii) on the basis of income earn by ATCs (in monetary terms).

BEP in terms of physical units

BEP in terms of physical units was worked out by considering per head charges and

variable cost of ATC and fixed cost incurred.

At overall level the break-even point worked out to, 4191. This number implies that at overall level the ATCs under studies at least have 4191 number of visitors should visit during a year for having no loss or no profit.

BEP in terms of monetary terms

BEP in terms of monetary terms was estimated by considering fixed cost, per visitor variable cost and per visitor charges. The BEP at overall level worked out to Rs. 37,71,809. This figure of income implies that at the overall level, the ATC must receive this much (Rs. 37,71,809) revenue per year, so as to have no loss no profit in the ATC business. At this point (BEP) all the fixed cost of the ATCs were covered by paying some variable costs.

The BEP of individual ATCs was worked out for AATD in monetary terms was

Rs.69,90,268 and in terms of number of visitors it turned out to be 10,046 for running the ATC with no loss no profit.

In case of BGEM, ANSD and GATG ATCs the break-even point in monetary terms and number of visitors worked out to, Rs. 65,21,663 (6616 visitors), Rs. 50,80,656 (4858 visitors) and Rs. 18,48,889 (1622 visitors), respectively.

The ATC, SMAG however was having less magnitude of break-even points in monetary terms and physical units Rs. 9,60,763 and 808 visitors. These results are in conformity with the finding of Sanap and Misal (2017) in economic viability of the Agro-tourism centers in Maharashtra. Konkan region of Maharashtra has a great potential for the development of Agro-tourism. The per ATC capital investment was Rs 1,46,38,084 out of which land value Rs. 88,28,333 (60.31 per cent) was major followed by buildings and other structures Rs. 53,19,167 (36.34 per cent), machineries, implements and equipment was Rs. 16,06,500 (1.83 per cent) and the value of irrigation structure was Rs. 2,22,833 (1.52 per cent).

The average annual employment generated in ATCs was 18341 (temporary and permanent) man days in which the share of temporary and permanent employment was 3831 days (20.89 per cent) and 14510 days (79.11 per cent). This is clearly indicated that the ATCs have been creating a massive employment generation opportunities. Thus, the ATCs in the rural areas are having good potential for creating employment. The total variable cost was estimated to Rs 83,68,042, of the selected ATCs. The per ATC monthly average arrival of tourist was 1,052 in a year, out of these 1030 had night stay. Among the six ATCs the highest number of tourists arrived at the ATC AATD center was 10046 and 5023 had night stay in a year.

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The average benefit: cost ratio at total cost level was worked to 1.26 and at variable cost it was 3.36, indicated that, the Agro-tourism business was profitable.

The highest B:C ratio were AATD at total cost was (1.39) and lowest SMAG was (0.99) which is near about equal to one.

The payback period of ATC was 6.91 years which indicated length of time required to recover the initial investment of fund in Agro-tourism activity, which was comparatively low.

Break-even point (BEP) in terms of physical units for ATCs was worked to, 4191 visitors per year. BEP in terms of monetary terms was estimated to Rs. 37,71,809.

The strengths of ATCs were additional income source and employment opportunities to the farmers including farm family members and Youths in the area.

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