Case- Goats: The Green Alternative (B) Assignment

Required Task (Question)

Answer the following questions.

Organize financial analysis in supporting appendices. Summarize your descriptive and concluding comments in the main body of the report.

1. Compute the number of calendar days needed to complete a one-acre job using the current truck/trailer combination and the larger truck/trailer combination. Use the result to calculate the maximum number of jobs McCoy could accept per year using each truck/trailer combination.

2. Using the results from Question 1, compute the incremental annual revenues (cash flows) if McCoy invests in the larger truck and trailer. Use the model in case Exhibit 1 to compute incremental annual expenses (cash outflows) if McCoy invests in the larger truck and trailer. Determine incremental cash flows for the larger truck and trailer.

3. Using the results from Question 2, prepare a spreadsheet modeling the initial investment and the incremental annual cash inflows and outflows for each of the next five years.

4. Use the incremental annual cash flows computed in question 3, together with other information in the case, to evaluate the investment in the larger truck and trailer. (Hint: Perform payback period, net present value, and internal rate of return.

5. What would you recommend to McCoy regarding the goat rental operation? Make sure to integrate your analysis from above.

Answer

Question 1

	Current truck/ trailer combination	Larger truck/ trailer combination
Nos. of goats	25	32
Area (in acres)	1	1
Nos. of days to complete the job	**7.00**	**=(7*25)/32 = 5.47**
Nos. of days available in a year	365	350
Maximum nos. of jobs (=Nos. of days available in a year/ Nos. of days to complete the job)	**52**	**64**

Question 2

	Current truck/ trailer combination	Larger truck/ trailer combination	Incremental Cash flow
Revenue per day	$375.00	$480.00	
Nos. of days	365	350	
Total revenues (=Revenue per day*no. of days)	$136,875.00	$168,000.00	=$168,000.00 - $136,875.00 = $31,125.00
(+) Transportation cost per day	$50.40	$100.00	
(+) Shepherd and dog cost per day	$190.00	$190.00	
Total variable cost per day	$240.40	$290.00	
Nos. of days	365	350	
Total variable expense (=Total Variable Cost per day*no. of days)	$87,746.00	$101,500.00	=$101,500.00 - $87,746.00 = $13,754.00
(+) Set-up cost per job	$100.00	$100.00	
(+) Fencing cost per job	$721.50	$721.50	
Total cost per job	$821.50	$821.50	
Nos. of jobs	52	64	
Total job cost (=Total Cost per job*no. of days)	$42,835.36	$52,576.00	=$52,576.00 - $42,835.36 = $9,740.64
Total annual expense (=Total variable expense + Total job cost)	$130,581.36	$154,076.00	=$154,076.00 - $130,581.36= $23,494.64

Question 3

Spreadsheet Modelling

	Year					
	0	**1**	**2**	**3**	**4**	**5**
Initial investment:						
Heavy duty pickup truck	-$15,000.00					
20' used livestock trailer	-$7,250.00					
Taxes, titles etc.	-$2,225.00					
Sale of current truck and trailer	$500.00					
Total initial investment	**-$23,975.00**					
Operating cash flows:						
Incremental revenues		$31,125.00	$31,125.00	$31,125.00	$31,125.00	$31,125.00
Incremental annual expenses		-$23,494.64	-$23,494.64	-$23,494.64	-$23,494.64	-$23,494.64
Incremental operating cash flows		**$7,630.36**	**$7,630.36**	**$7,630.36**	**$7,630.36**	**$7,630.36**
Salvage value:						
Sale of larger truck and trailer						$2,500.00
Total salvage value						**$2,500.00**
Net cash flow	**-$23,975.00**	**$7,630.36**	**$7,630.36**	**$7,630.36**	**$7,630.36**	**$10,130.36**

Question 4

	Year					
	0	**1**	**2**	**3**	**4**	**5**
Net cash flow	-$23,975.00	$7,630.36	$7,630.36	$7,630.36	$7,630.36	$10,130.36

Cost of capital	12%	12%	12%	12%	12%	12%
Discounted cash flow	-$23,975.00	$6,812.82	$6,082.87	$5,431.14	$4,849.23	$5,748.24
Cumulative cash flow	-$23,975.00	-$16,344.64	-$8,714.29	-$1,083.93	$6,546.43	$16,676.79
Payback period	3.14					
Net present value	$4,949.30					
Internal rate of return	19.72%					

Question 5

Based on the calculations done, my recommendation is that Mr. McCoy should accept the expanding the rental of his goats because:

- Incremental expense is lower even when the larger truck/ trailer expense is more whereas incremental revenues are higher leading to positive operating cash flows
- Net cash flow shows negative cash flow in the base year with positive net cash flows in the next 5 years.
- The Net Present Value is positive which shows that the project/ proposal should be accepted.
- The payback period is less and internal rate of return shows 19.72% of return for net cash flows.

After analyzing the decision, the proposal/ project turns out to be profitable for Mr. McCoy.