



How Lucrative is the Tilapia Farming Business?

A Guide To Running
A Profitable Tilapia Farm In Ghana

Tilapia Farming vs. Stocks and Bonds

Aquaculture is a highly profitable venture in Ghana. In 2021, Ghana's total revenue from aquaculture production amounted to 1.7 billion Ghanaian cedis, about 140 million U.S. dollars. The Ghanaian company Tropo Farms, is West Africa's leading producer of tilapia.

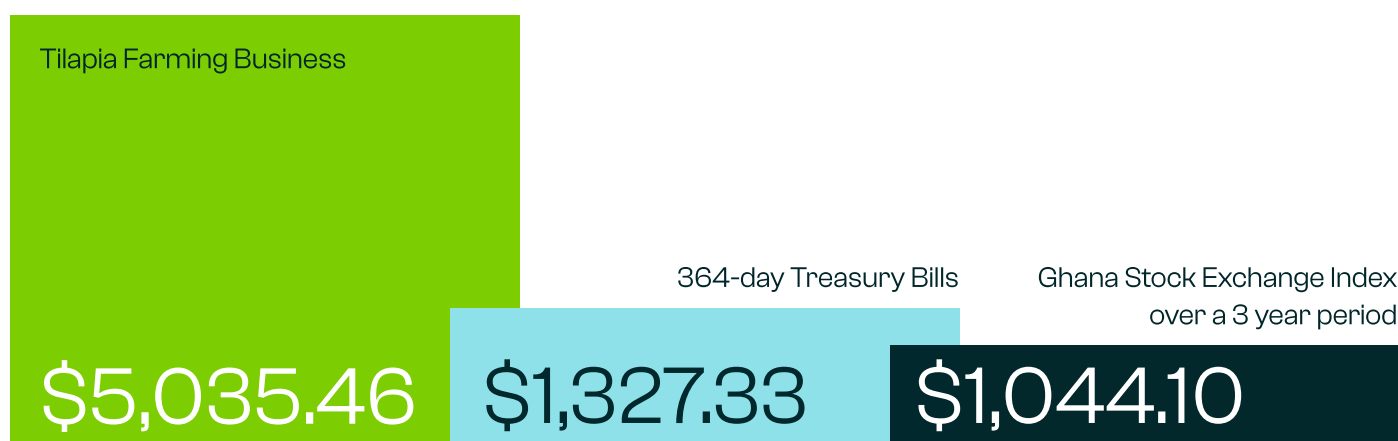


Fig 1. Annual free cash flow with a \$1,000.00 Investment

The figure above underscores the staggering returns of tilapia farming in contrast to the returns of stocks and bonds. With an investment of \$1,000.00, your return in a tilapia farm business could generate an average annual free cash flow of \$5,035.46, compared to \$1,327.33 from 364-day Treasury Bills and \$1,044.10 from the Ghana Stock Exchange (GSE) Index over a three-year period.

These figures are based on investing Treasury Bills at the last three-year December average yield of 32.73%, assuming the GSE Index maintains the last three-year average annual return of 4.41%, and that the tilapia farming business follows the financial model outlined in the table 1.

However, it is important to note that past performance of stocks and bonds is not necessarily indicative of future results.



Requirement of starting a Snail Farm in Ghana

Annual fish feed constitutes the largest portion (**58.15%**) of the total cost in tilapia farming.

Tarpaulin tanks (**9.69%**) and labour (**8.61%**) follow, underscoring the substantial impact of feed and infrastructure on overall expenses.

Legal and Regulatory Requirements

Business Registration



You must register your business with the Registrar General's Department (RGD) in Ghana. You can register as a sole proprietor, partnership, or limited liability company.

Obtain a Fisheries Permit from the Fisheries Commission



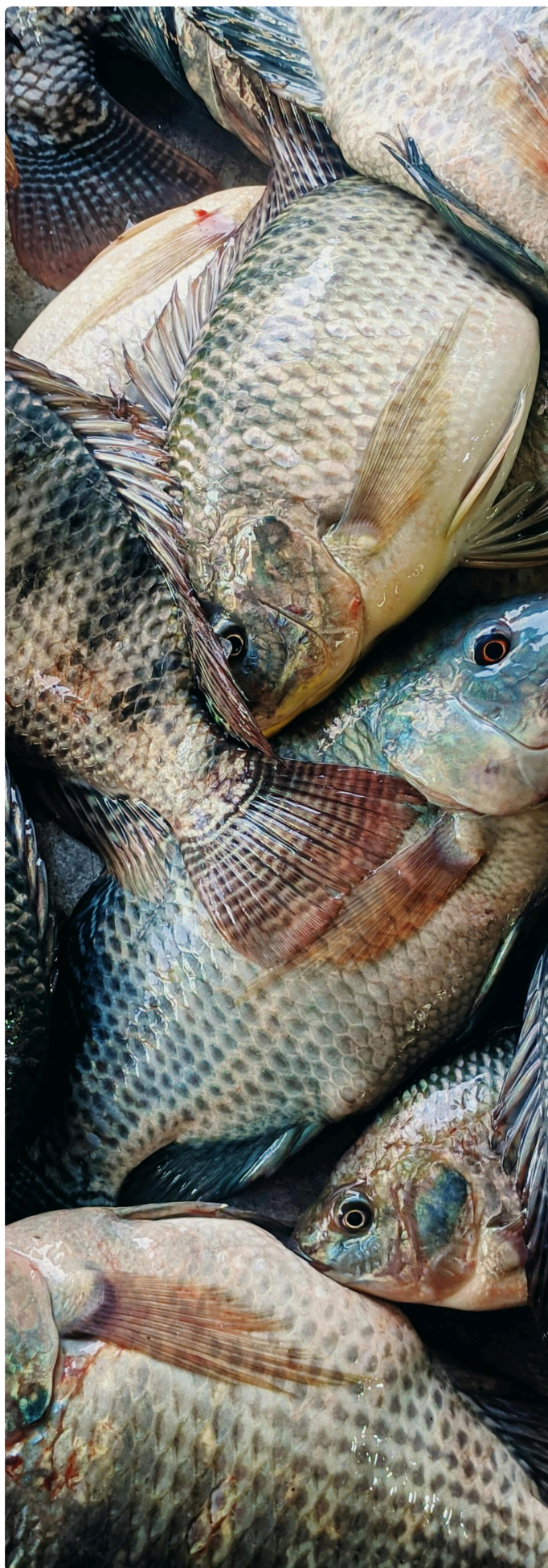
Secure an Environmental Permit from the Environmental Protection Agency (EPA).



Apply for a Water Use Permit from the Water Resources Commission (if using natural water sources).



Obtain Food Safety Certification from the Food and Drugs Authority (FDA) (if processing fish for sale).



Tilapia Farm Business: Summary of Cashflow Analysis

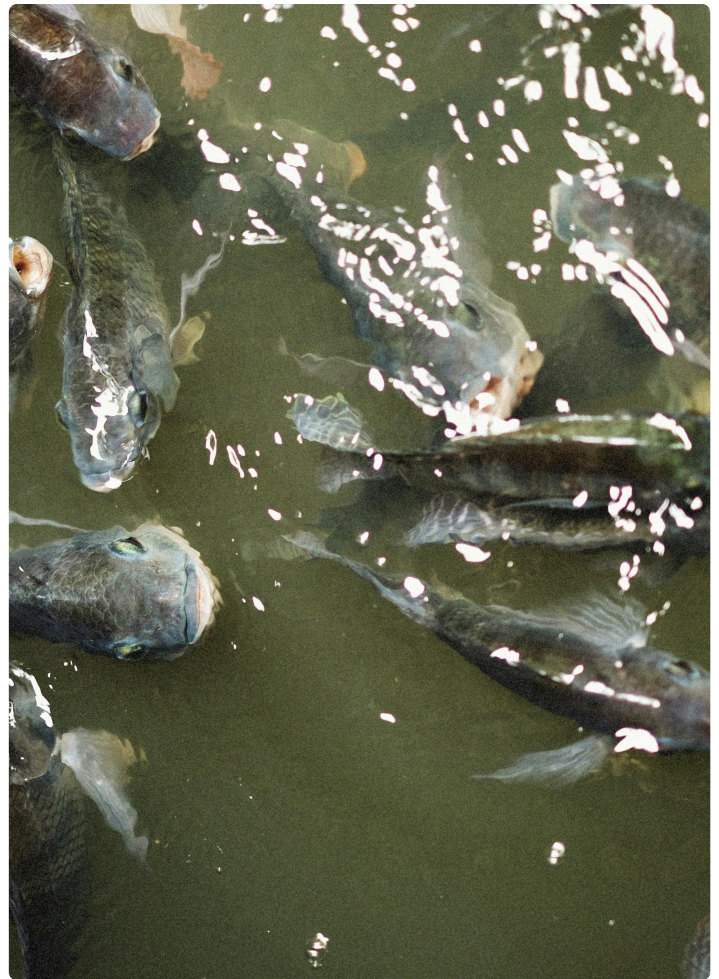
Description	Unit	Year 1	Year 2	Year 3
Number of fishes purchased	Fish	1,000.00	1,000.00	1,000.00
Mortality rate	%	10%	10%	10%
Number of fishes sold (after mortality)	Fish	900.00	900.00	900.00
Average weight per fish	Kg	0.50	0.50	0.50
Total weight sold	Kg	450.00	450.00	450.00
Sale price per kg of fish	GHS	70.00	84.00	100.00
Total revenue from the sale of fish	GHS	31,500.00	37,800.00	45,360.00
Number of harvests per year	Harvest	2.00	2.00	2.00
Total annual revenue from fish sales	GHS	63,000.00	75,600.00	90,720.00
Capital Cost				
Cost of tarpaulin tanks (10000L)(3x)	GHS	13,500.00	1,350.00	1,620.00
Water supply and monitoring systems	GHS	3,500.00	350.00	420.00
Aeration Equipment	GHS	4,000.00	400.00	480.00
Freed Storage	GHS	1,000.00	100.00	120.00
Miscellaneous	GHS	1,500.00	150.00	180.00
Total	GHS	23,500.00	7,820.00	2,820.00
Operating Cost				
Feed conversion ratio	Kg	1.50	1.50	1.50
Feed needed	Kg	675.00	675.00	675.00
Price of fish feed	GHS/Kg	10.00	12.00	14.00
Total annual fish feed cost	GHS	13,500.00	16,200.00	19,440.00
Labour	GHS	12,000.00	14,400.00	17,280.00
Water Management	GHS	500.00	600.00	720.00
Utilities	GHS	4,800.00	5,760.00	6,912.00
Price per fingerlings	GHS	1.50	1.80	2.16
Total cost of fingerlings (2 cycles)	GHS	3,000.00	3,600.00	4,320.00
Licenses and Permits	GHS	1,000.00	1,200.00	1,440.00
Maintenance & Repairs	GHS	2,000.00	2,400.00	2,880.00
Disease Treatment	GHS	1,000.00	1,200.00	1,440.00
Transportation	GHS	3,000.00	3,600.00	4,320.00
Packaging	GHS	8,000.00	9,600.00	11,520.00
Total	GHS	48,800.00	58,560.00	70,272.00
Economics				
Average EBIT	GHS	14,200.00	17,040.00	20,448.00
Average Operating Margin	%	23%	23%	23%
Average Free Cashflow (After Tax)	GHS	9,300.00	14,690.00	17,628.00
Return on Investment	(%)	-39.6%	625.1%	625.1%

Financials

The values in the table represent a potential three-year cash flow projection of a Tilapia farm with an initial fingerlings of 1000 using a Tarpaulin tank structure.

Total Capex and Operational is projected to be approximately GHS 23,500.00 and GHS 49,000.00 respectively in year 1. Revenue is projected to grow from GHS 63,000.00 in year 1 to GHS 91,000.00 by year 3, solely from price inflation of 20% over the three-year period.

The business is projected to have an operating margin of approximately 23% based on the cashflows highlighted in the table and an average return on investment of 403.5%.



Major Risks Involved in Snail Farming

Disease Outbreaks

Diseases such as Tilapia Lake Virus (TiLV) and bacterial infections can cause high mortality rates, sometimes wiping out entire stock.

Water Quality Issues

Poor oxygen levels, ammonia buildup, or pH imbalance can reduce fish growth and health.

High Feed Costs

Feed is the largest expense, and price volatility can significantly hurt profitability.

Market Price Fluctuations

Competition from cheaper imports affects local tilapia prices.

Environmental Risks

Flooding, drought, or extreme weather can disrupt operations.

Theft and Vandalism

Farms, especially in rural areas, are prone to fish or equipment theft.