



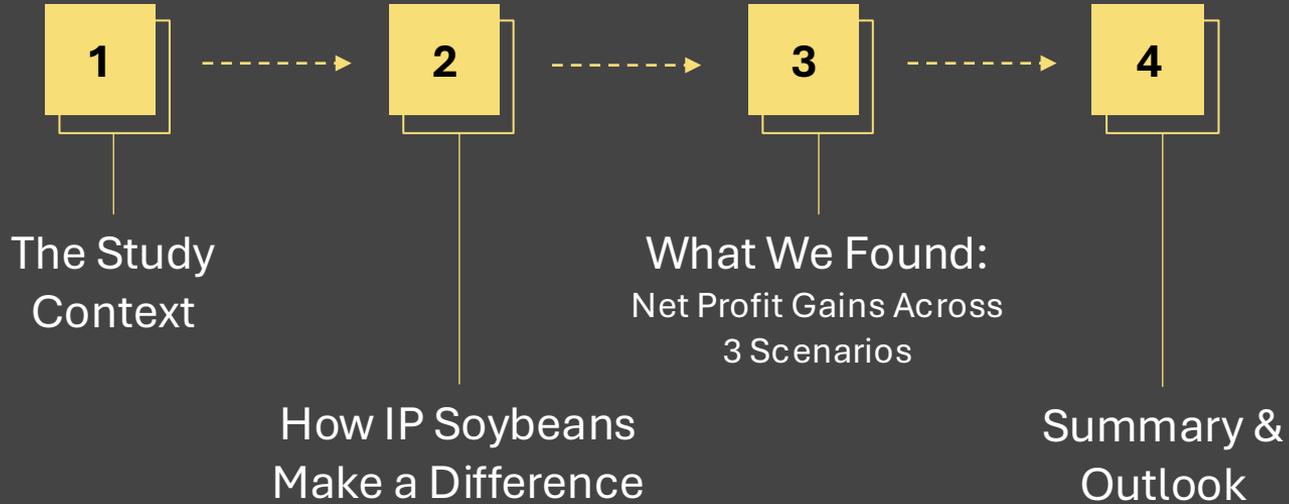
**YAMADA  
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& SPIRE**



# Financial & Operational Impact of **IP Soybeans** in Tofu Manufacturing

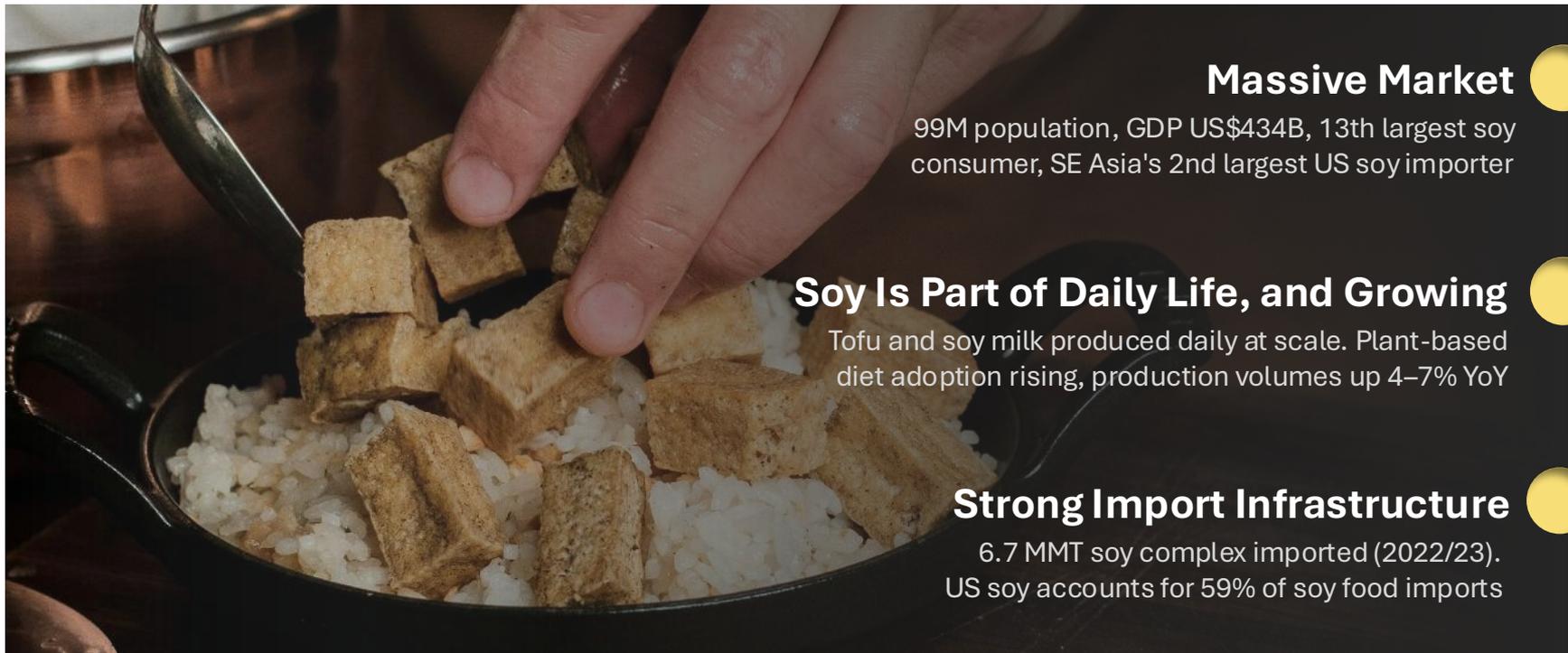


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# VIETNAM: A STRATEGIC SOY MARKET

US\$434B economy with a growing soy market.



## Massive Market

99M population, GDP US\$434B, 13th largest soy consumer, SE Asia's 2nd largest US soy importer

## Soy Is Part of Daily Life, and Growing

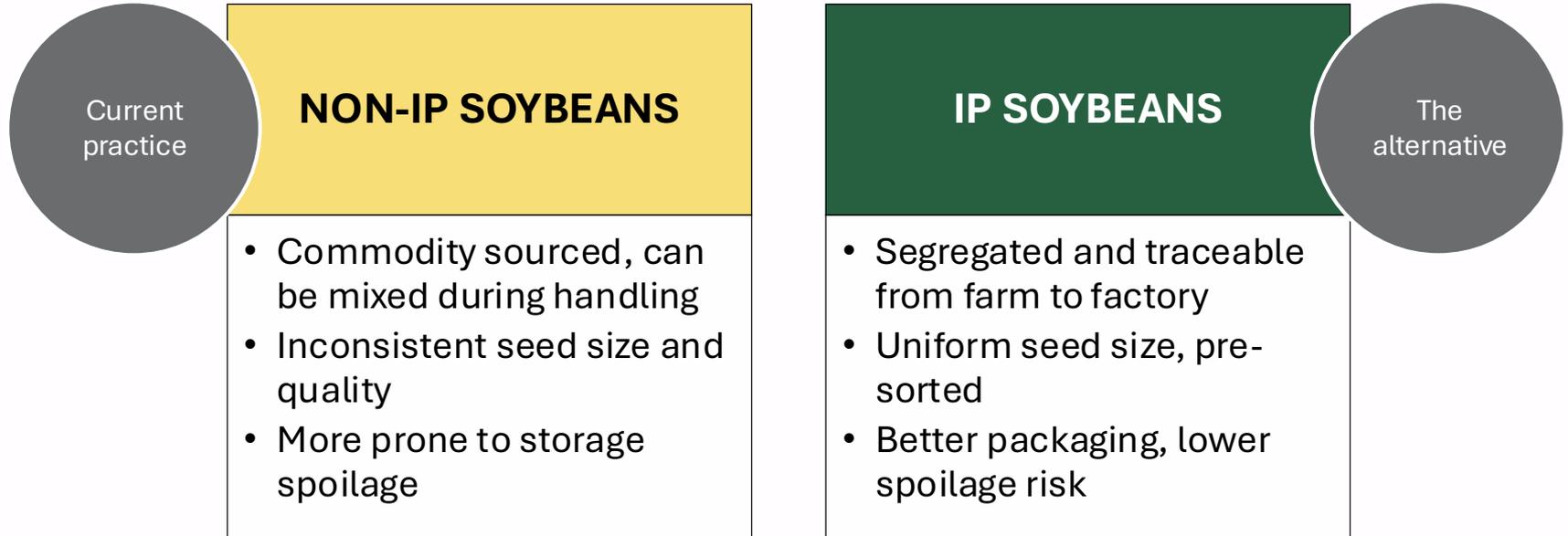
Tofu and soy milk produced daily at scale. Plant-based diet adoption rising, production volumes up 4–7% YoY

## Strong Import Infrastructure

6.7 MMT soy complex imported (2022/23).  
US soy accounts for 59% of soy food imports

# HOW IS THIS DEMAND BEING MET?

Majority of Vietnamese tofu manufacturers source **conventional Non-IP soybeans**.



THE QUESTION IS:

**IP SOYBEANS COST ~34% MORE.**

**DOES SWITCHING PAY OFF?**



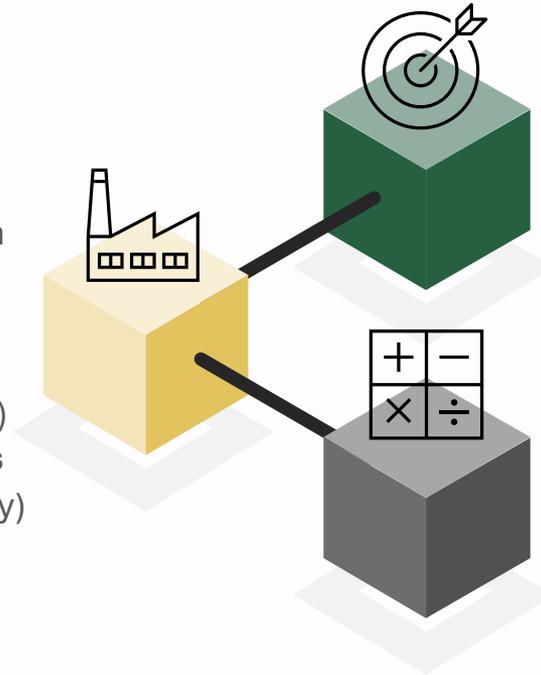
# THE STUDY AT A GLANCE

Comparing the real financial impact of IP vs Non-IP soybeans.

## Scope

Real factory data collected through in-depth interviews with:

- **1 SSGA expert** member
- **1 Large tofu manufacturer** (4,000 - 5,000 kg soybeans/day)
- **2 Medium tofu manufacturers** (500 kg – 1,000 kg soybeans/day)



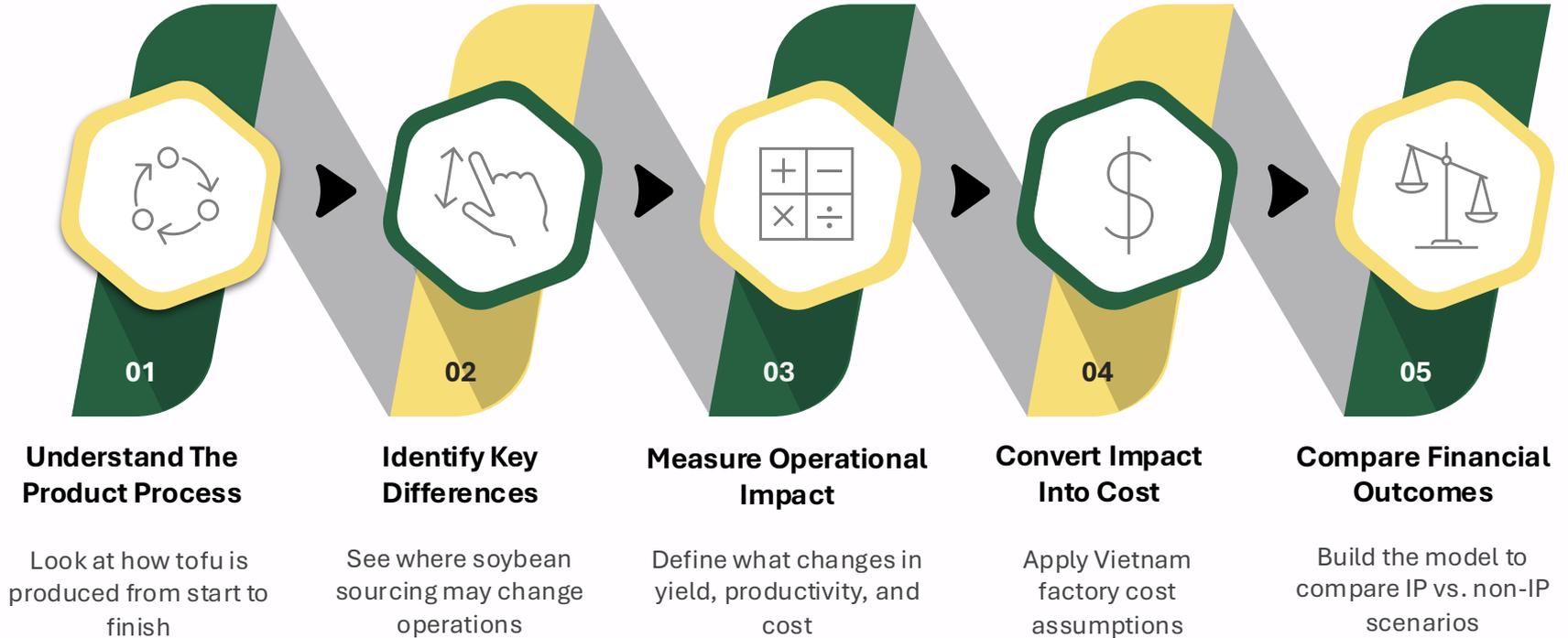
## Objective

Quantify the financial and operational impact of switching from Non-IP to IP soybeans in Vietnamese tofu manufacturing.

## What We Measured

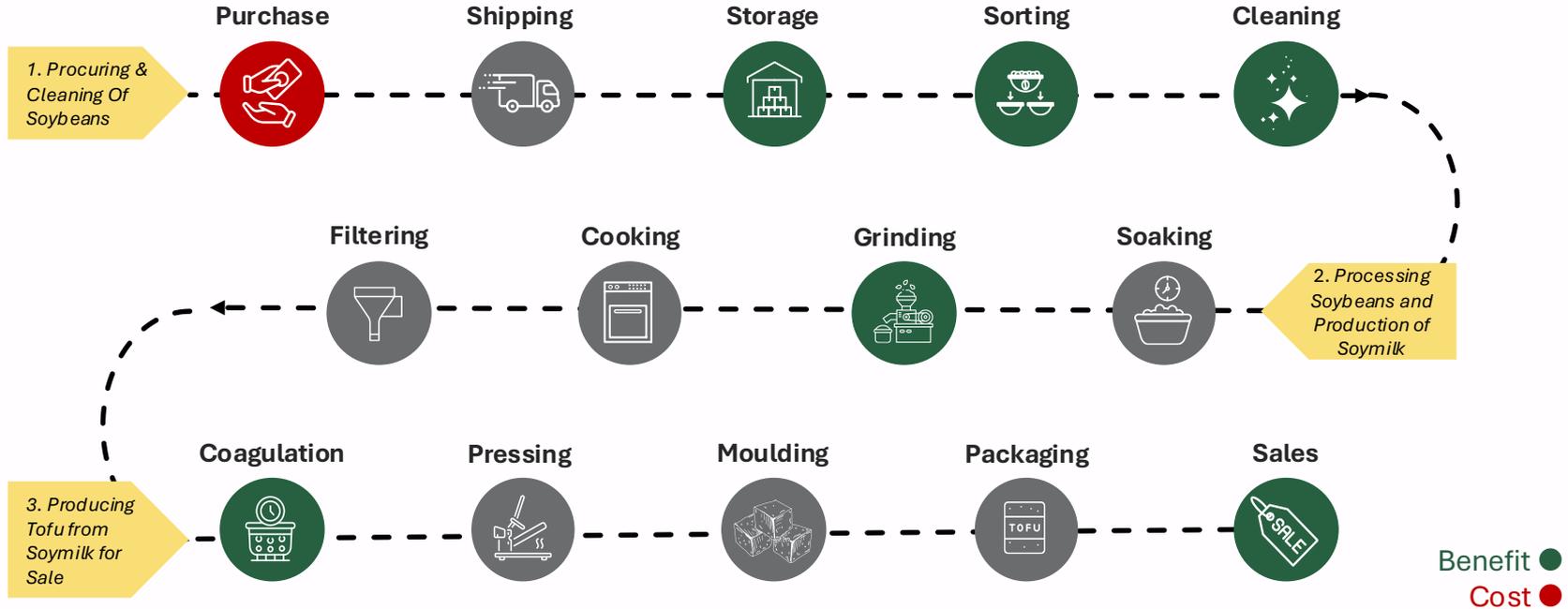
Revenue & profit, operating costs, and productivity, compared side by side, IP vs Non-IP.

# HOW WE CONDUCTED THE STUDY



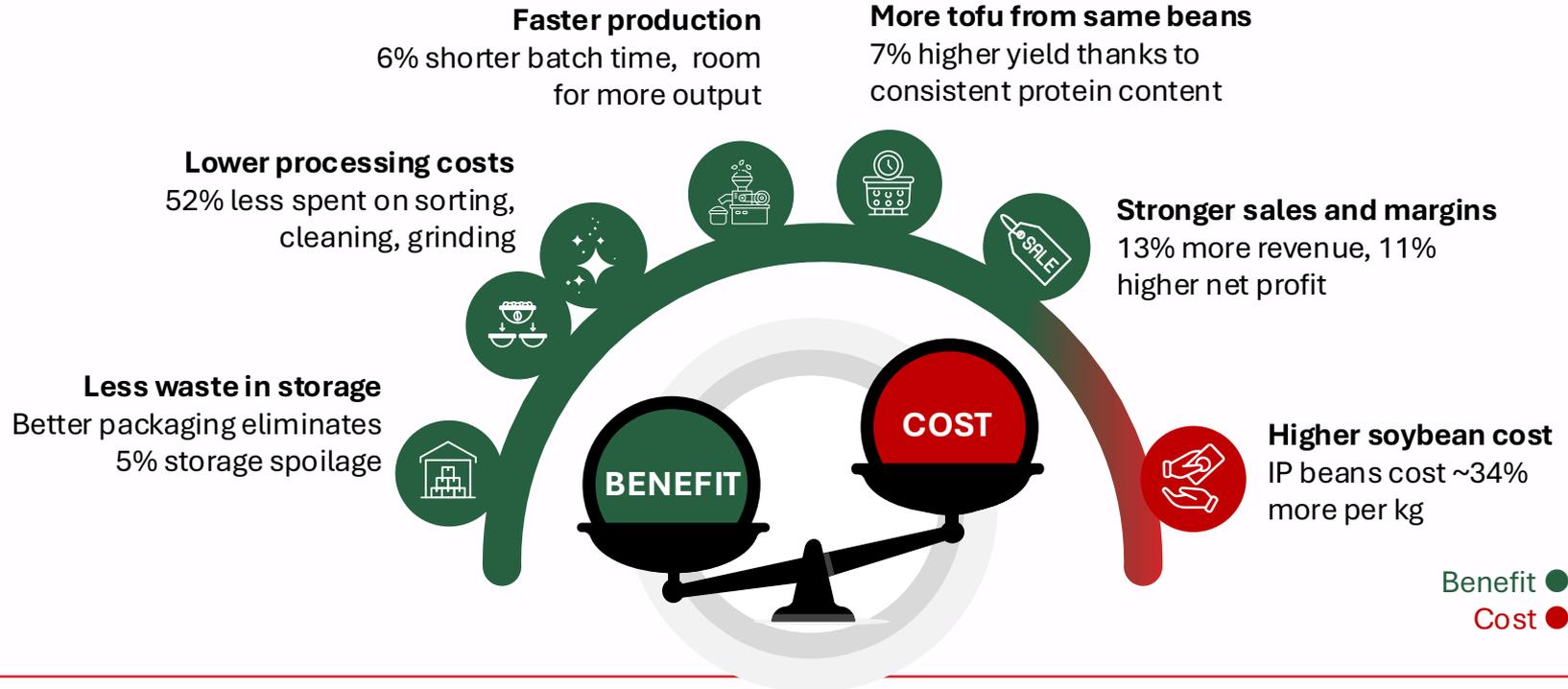
# HOW TOFU IS MADE & WHERE IP MAKES A DIFFERENCE

14 steps from bean to sale. IP soybeans impact 6 of them.



# COSTS VS. BENEFITS OF SWITCHING TO IP SOYBEANS

One cost trade-off, five operational gains.



# LET'S BREAK DOWN THE NUMBERS

In the case study of **large tofu manufacturers**, daily soybean consumption of 4,000 to 5,000 kg.

FPP1  
Revenue & Profit

*Does IP improve the top and bottom line?*

FPP2  
Operating Costs

*Does IP lower day-to-day expenses?*

FPP3  
Productivity

*Does IP make production faster?*

*FPP = Financial Proof Point*

## FPP 1: REVENUE & PROFIT

The 34% cost premium is offset by gains in yield, spoilage, and pricing.

Formula: Gross Profit = (Beans processed × Yield × Selling price) – (Beans purchased × Bean cost)

METRIC	NON-IP	IP	IMPACT	COST/ BENEFIT
Storage spoilage	5% wasted	0%	<b>-5% waste</b> (~79K kg saved)	●
Soybeans purchased / year	1,579K kg	1,500K kg	<b>-5% purchase</b>	●
Soybean cost / kg	\$0.64	\$0.90	<b>+34% cost</b> (+339K/yr)	●
Tofu yield per kg soybean	2.8 kg	3.0 kg	<b>+7% yield</b> (+300K kg/yr)	●
Tofu selling price	\$2.26/kg	\$2.40/kg	<b>+6% price premium</b>	●
Sales revenue / year	\$9.5M	~\$10.8M	<b>+13% revenue</b> (+~1.3M)	●
<b>GROSS PROFIT</b>	<b>\$8.5M</b>	<b>\$9.4M</b>	<b>+11% profit</b> (~+940K)	

● Benefit ● Cost

All figures are in USD unless otherwise stated. Exchange rate as of March 2026: 1 USD = 26,312 VND.

## FPP 2: OPERATING COST

-52% Operation expense, driven by pre-sorted, uniform IP beans reducing labor, water, and maintenance.

Formula: Simplified Net Profit = Gross Profit - (Sorting + Cleaning + Grinding costs)

METRIC	NON-IP	IP	IMPACT	COST/ BENEFIT
Sorting costs / year	\$4,317	\$0	-\$4,317 (100% saved)	●
Cleaning costs / year	\$6,107	\$3,054	-\$3,054 (50% saved)	●
Grinding maintenance / year	\$5,996	\$4,796	-\$1,199 (20% saved)	●
<b>TOTAL OpEx / year</b>	<b>\$16,420</b>	<b>\$7,850</b>	<b>-\$8,570 (52% saved)</b>	●
Gross profit / year	\$8.5M	\$9.4M	+\$940K (from FPP1)	--
<b>SIMPLIFIED NET PROFIT</b>	<b>\$8.4M</b>	<b>\$9.4M</b>	<b>+\$948K (+11%)</b>	

● Benefit ● Cost

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## FPP 3: PRODUCTIVITY

~7 hours of production time freed per day, driven by eliminating sorting and faster cleaning.

Formula: Batch Time = Sorting Time + Cleaning Time + Other Production Time

METRIC (PER BATCH)	NON-IP	IP	IMPACT	COST/ BENEFIT
Sorting time / batch	10.8 min	0 min	<b>-10.8 min (100% eliminated)</b>	●
Cleaning time / batch	4 min	2 min	<b>-2 min (50% saved)</b>	●
Other production / batch	198 min	198 min	No change	●
<b>TOTAL TIME / BATCH</b>	<b>212.8 min</b>	<b>200 min</b>	<b>-12.8 min (-6%)</b>	
Daily impact	12.8 min × 33 batches = ~7 hrs freed/day			

● Benefit ● Cost

# THE COMPLETE PICTURE

+11% profit from revenue gains, -52% OpEx, and ~7h/day capacity.

<p><b>FPP1</b> Revenue &amp; Profit</p>	<p><b>+11%</b> gross profit</p>	<p>Driven by: +7% yield ; +6% price premium ; 0% spoilage</p>
<p><b>FPP2</b> Operating Costs</p>	<p><b>-52%</b> OpEx</p>	<p>Driven by: 100% sorting cost eliminated; 50% cleaning cost reduction; 20% maintenance reduction</p>
<p><b>FPP3</b> Productivity</p>	<p><b>6%</b> faster/ batch</p>	<p>Driven by: Pre-sorted, uniform beans removing sorting and reducing cleaning effort</p>



## IT WORKS FOR MEDIUM TOFU MANUFACTURERS TOO

Operational gains are consistent across both sizes; profit impact depends on pricing power.

Metric	LARGE (6% PRICE MARKUP)	MEDIUM (6% PRICE MARKUP)	MEDIUM (25% PRICE MARKUP)
Storage spoilage saved	5% (~78,947 kg)	5% (~12,632 kg)	5% (~12,632 kg)
Tofu yield increase	+7%	+7%	+7%
Soybean cost increase	+34% (~\$339K)	+34% (~\$54K)	+34% (~\$54K)
Gross profit increase	+\$940K (+11%)	+\$19K (+5%)	+\$128K (+34%)
OpEx savings	\$8,570 (52%)	\$4,024 (46%)	\$4,024 (46%)
Batch time saved	12.8 min (6%)	1.2 min (1%)	1.2 min (1%)
<b>Simplified Net Profit increase</b>	<b>+\$948K (+11%)</b>	<b>+\$23K (+6%)</b>	<b>+\$132K (+36%)</b>

*Two pricing scenarios for medium manufacturer:*

- 25% markup = current IP tofu market price (niche buyers)
- 6% markup = maximum price most Vietnamese consumers will accept (mass market).

All figures are in USD unless otherwise stated. Exchange rate as of March 2026: 1 USD = 26,312 VND.

# SO WHY ISN'T EVERYONE SWITCHING?

Adoption is constrained not by value, but by awareness and pricing barriers.

## DRIVERS



- Rising health consciousness and plant-based diet adoption are driving soy food production volumes up 4–7% YoY
- Interest exists among forward-looking manufacturers

## CHALLENGES



- Awareness of IP remains low
- Willingness to pay a premium is limited for now

## IN THE WORDS OF THE EXPERTS

*“1kg of Non-IP soybeans produce about 2.8kg tofu but 1kg of IP soybeans can produce 3kg tofu.”*

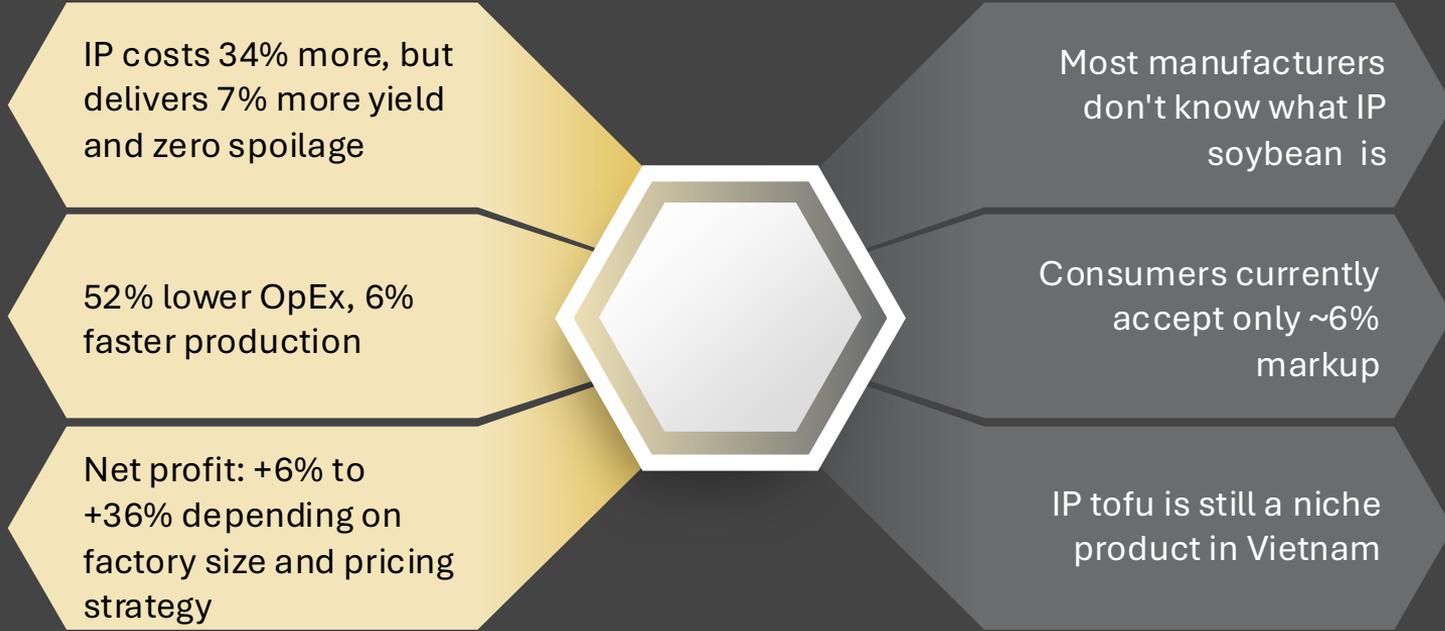
*“If majority of Vietnamese consumers were to purchase IP tofu, they are only willing to purchase it if the price increase is within 6-6.5%”*

*“Most tofu manufacturers only stop at understanding what Non-GMO is. Awareness about IP soybeans is still low, almost unknown...”*

*“I see potential for IP in Vietnam in the near future, which is why I am aiming to secure a first-mover advantage and investing in IP soybeans.”*

*“IP soybean demand in Vietnam will increase in the next 5 years due to rising consumer health consciousness trends.”*

# WHAT THIS STUDY TELLS US



*What the data shows*

*What the market shows*



**YAMADA  
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# THANK YOU

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