

SESSION 1: STATE OF THE AQUAFEED INDUSTRY IN ASIA AND GROWTH IN VIETNAM



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Challenges In Shrimp Production In Vietnam: Role Of Aquafeed Players

Abstract

Recently, shrimp farmers had to cope with the Covid-19 pandemic and its numerous associated challenges, and now must face the uncertainties of the world economy. In addition to these factors, farmers experienced poor weather conditions and additional disease risks. All of these create the conditions for a perfect storm. On the other hand, the situation can lead the industry to move towards more resilient and sustainable practices. In this presentation, we will review ways in which aquafeed manufacturers, in partnership with other stakeholders, can support shrimp farmers to reduce their risks and increase their options for profitability. Examples will be provided to document the benefits of these actions.



Challenges in Shrimp Production in Vietnam: Role of Aquafeed Players

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Shrimp export vs shrimp production

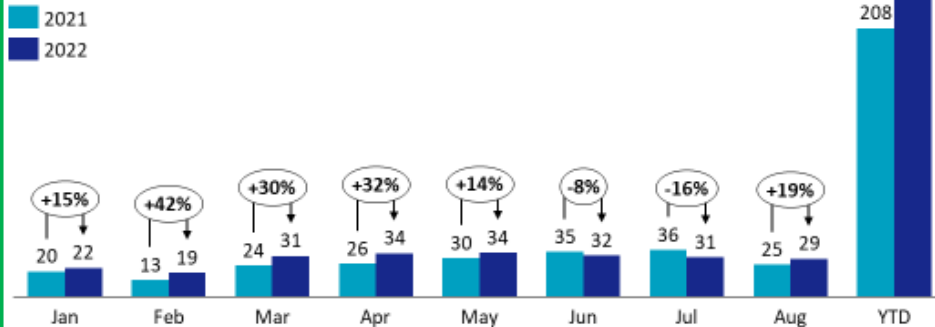
Vietnamese shrimp exports set to top \$4 billion

INDUSTRY ANALYSIS REGULATIONS POLITICS PRODUCTION SYSTEMS

by The Fish Site
20 July 2022, at 11:00am

The Vietnamese shrimp sector expects its export values to surpass its USD 4 billion target this year.

Shrimp export volume growth by month, ktons, %

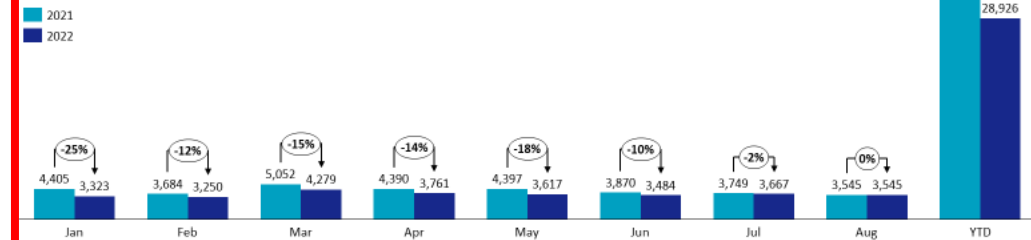


Seafood exporters face challenging second half of 2022: conference

Seafood exporters in Vietnam may find the second half of 2022 a challenging period compared to the first due to slowing global economic growth, despite a successful first half of the year, according to a conference held by the Vietnam Association of Seafood Exporters and Producers.

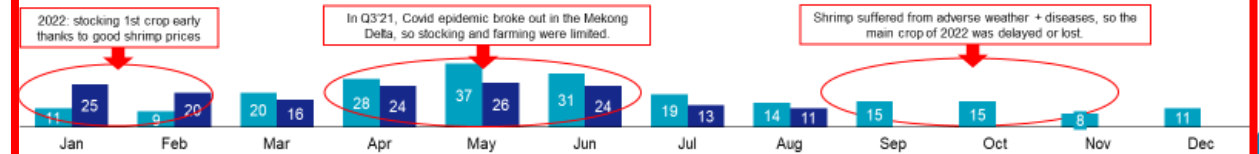
NA - Thursday, June 23, 2022 15:03 <https://link.gov.vn/RP1OF8w6>

PL sales of Ninh Thuan by month (Unit: million)



Source: Ninh Thuận

New Stocking Area (%)



Challenges - climate

Shrimp culture to respond to unfavorable weather

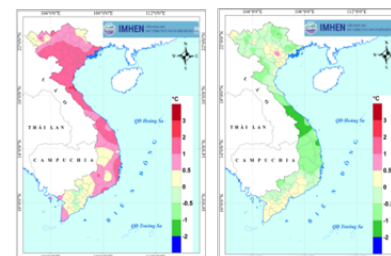
Vietnam Fisheries Magazine • 2 weeks ago

0 88 5 minutes read

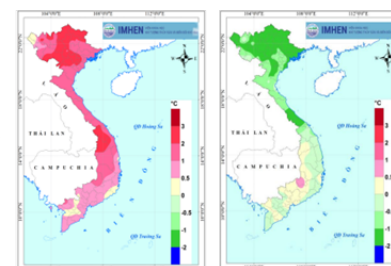


Temp. vs. Standard
2021 2022

Apr

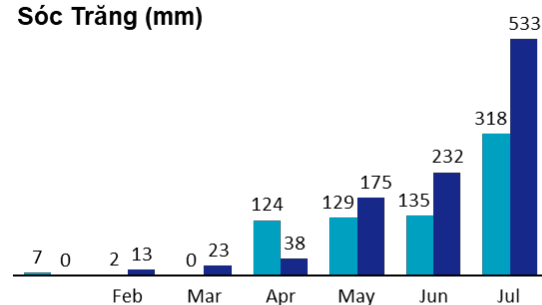


May

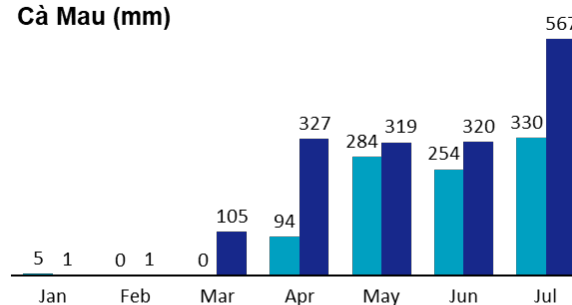


2021 2022

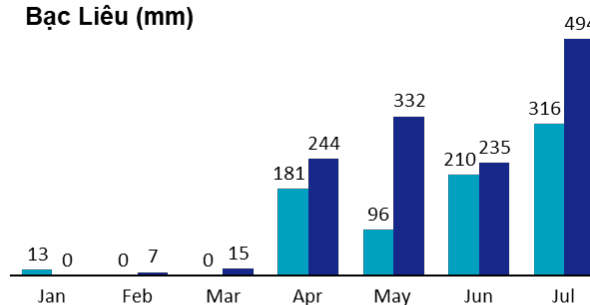
Sóc Trăng (mm)



Cà Mau (mm)



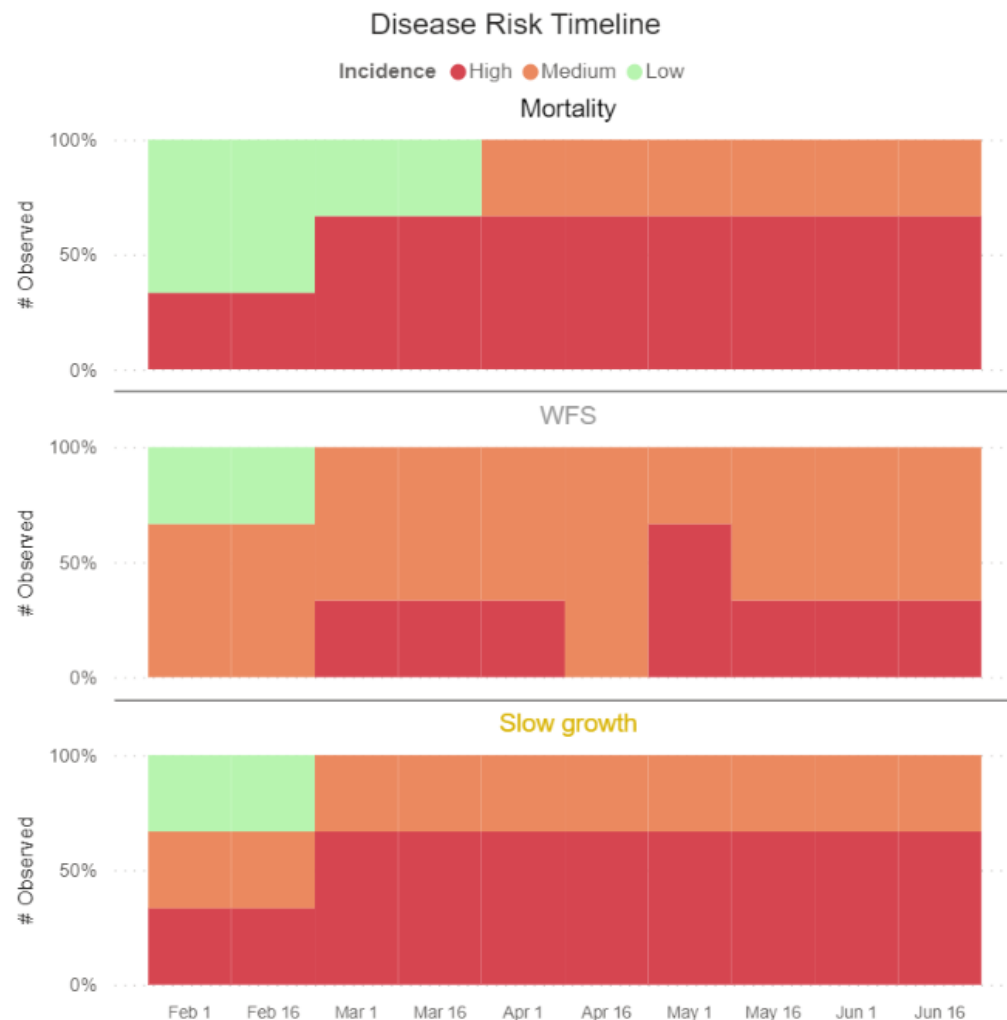
Bạc Liêu (mm)



Challenge - diseases

Disease Outbreak Tracking by Grobest Technical Team

● High: > 30% ● Medium: Upto 30% ● Low: < 30%



Key Highlights

❖ In Mekong

- WFS & EHP
- AHPND

❖ In Central

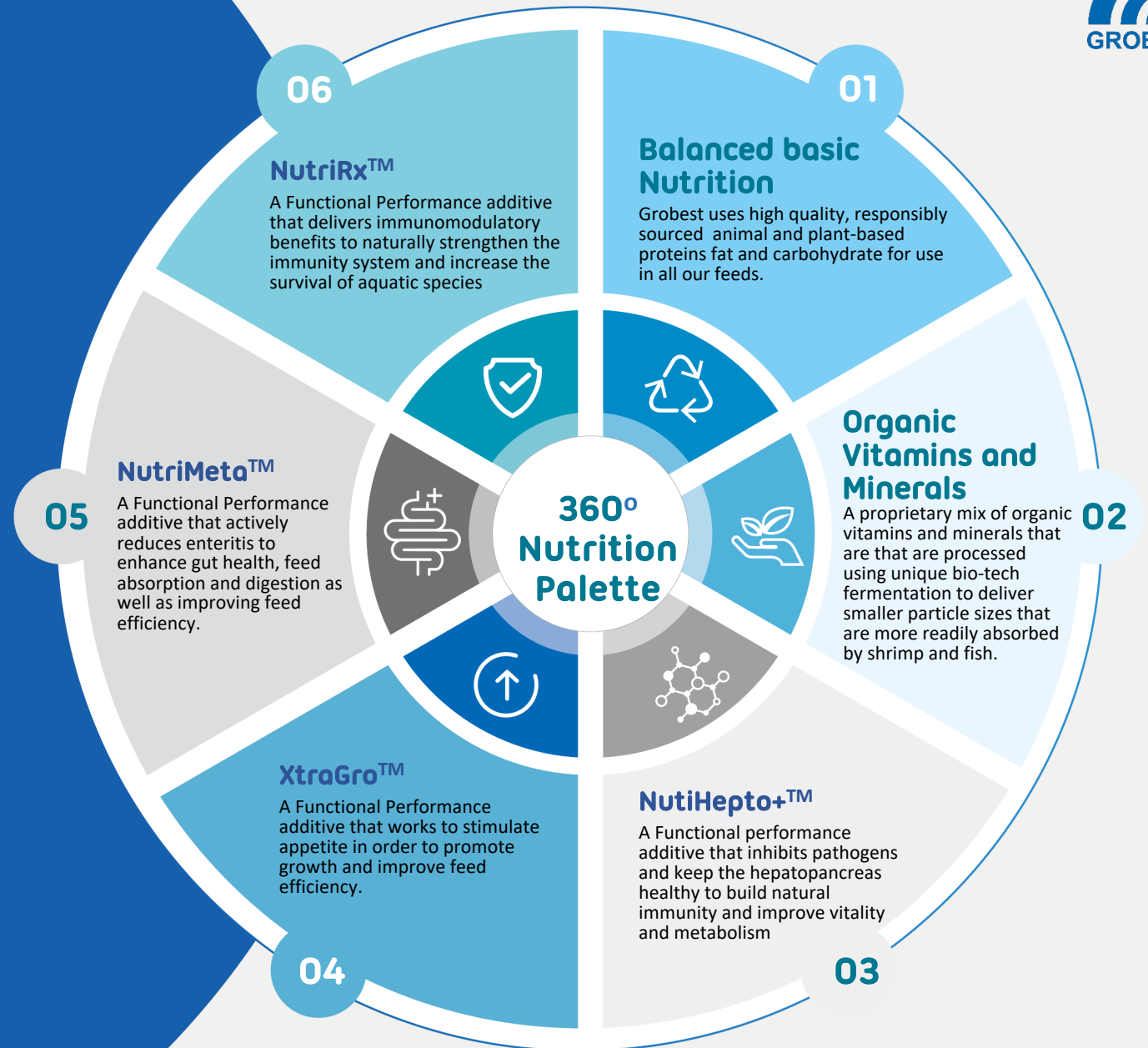
- WFS & EHP
- AHPND due to rain

❖ In North

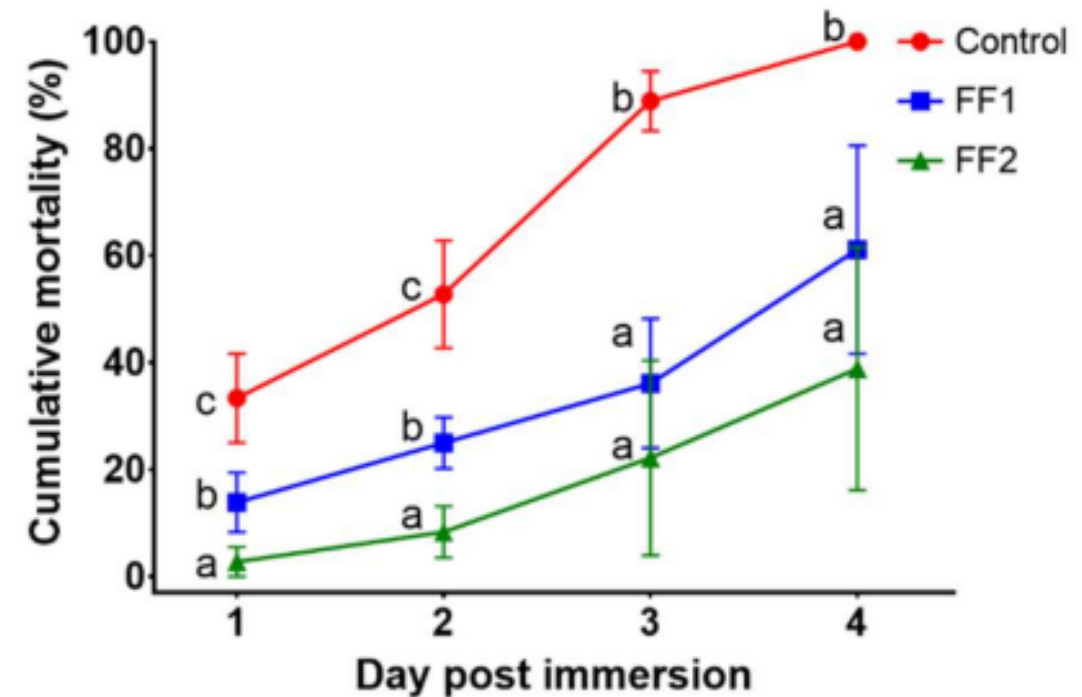
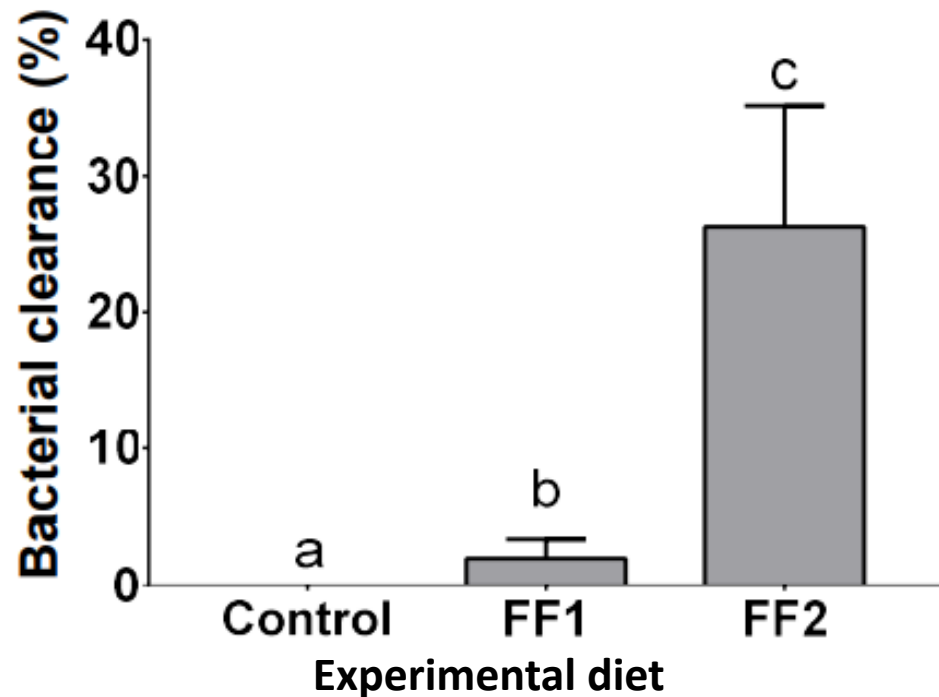
- EHP
- AHPND
- WFS
- WSSV

Grobest 360° Nutrition™

- Return on investment
- Protocol adapted to conditions
- Right feed for the right problem



EMS/AHPND – Benefit of functional feed



- AHPND immersion challenge (10^3 CFU/ml)
- Grobest FF conferred resistance to AHPND infection and also promoted better performance compared to a control

Grobest insight – search for alternative ingredients



Grobest Group established an Innovation team to validate new sustainable protein ingredients

1. Insect meal (*Hermetia illucens* - BSF)
 1. Sustainable Alternative Protein Source
 2. Safe - No risk of disease transmission
 3. Recognized by experts as a solution to the upcoming food crisis (FAO)
 4. Can replace standard feed components in animal diets
2. Single Cell Protein
 1. Produced by a controlled bacterial fermentation process
 2. Gas fermentation converts carbon compounds into high quality proteins
 3. Efficient, reliable and sustainable process for the production of high-quality alternative proteins

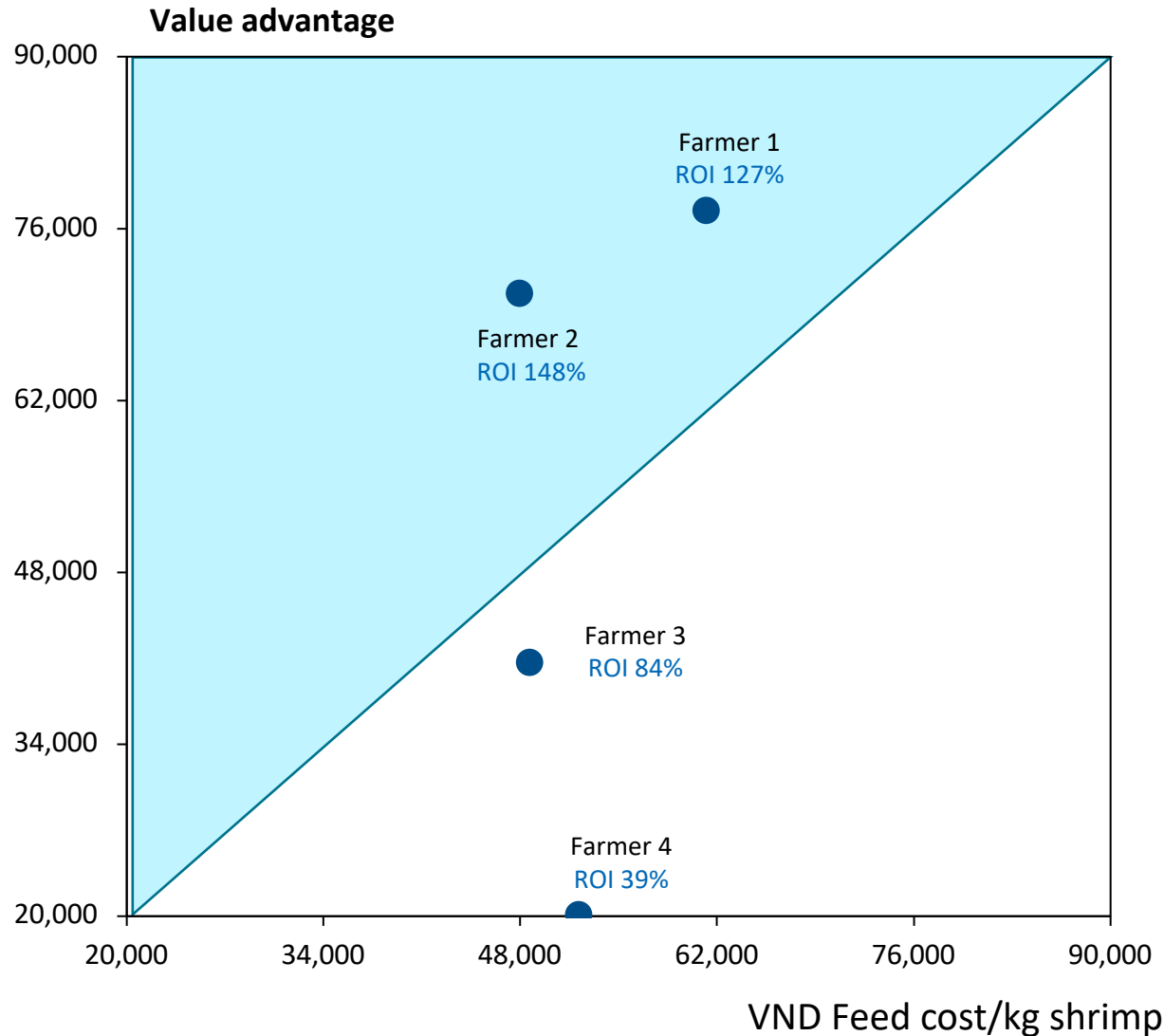
Treatment	PWG (%)
Control	290.5 ± 1.80 ^{cd}
BSF replace FM 100% +Amino Acid	306.3 ± 3.48 ^{ab}
BSF replace FM 100% +Amino Acid +Fish oil	310.3 ± 6.91 ^a
BSF replace FM 100%	301.9 ± 2.94 ^{ab}

Treatment	PWG(%)
Control	259.63 ± 3.20 ^c
SCP replace FM 100% +Amino Acid +Fish oil	309.27 ± 11.88 ^{ab}
SCP replace FM 100% +Soy oil	278.10 ± 11.14 ^{bc}
SCP replace FM 100% +Fish oil	307.97 ± 18.98 ^{ab}
SCP replace FM 100% +Soy oil +Attractant	304.47 ± 11.79 ^{ab}

PWG: Percentage weight gain

Value of feed and feed SOPs

VND Harvest profit per Kg shrimp



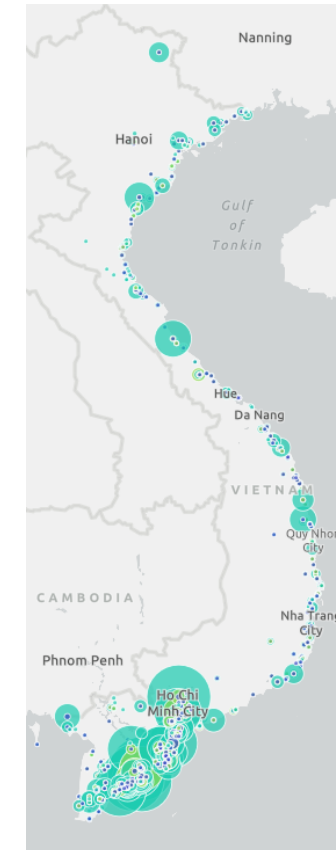
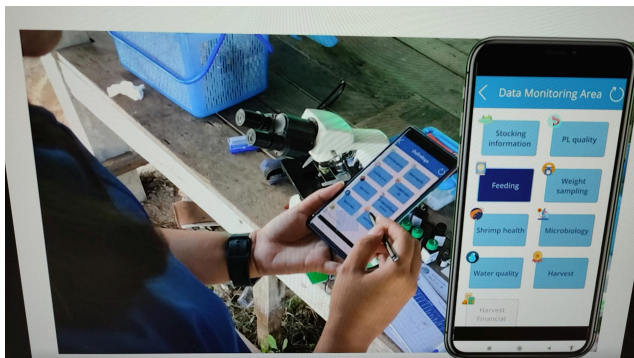
1. Analyse cost benefit of each part of SOP
2. Work with farmer to improve performance (survival growth, FCR)
3. Translate these improvements into improved ROI



Importance of data collection & analysis



Importance of data collection & analysis



Way forward

Intensification and partnership between major stakeholder

			PL Density
			Productivity (MT/ha/cycle) range
Infrastructures	1. Water management	1.a	Surface aeration (HP per 1000 sqm)
		1.b	Benthic aeration (HP per 1000sqm)
		1.c	Presence of central drain
	2. Pond Segregation	2.a	Pond shed (% surface covered)
		2.b	HDPE geomembranes (% surface covered)
		2.c	Fences (F) & inlet sleeves (IS)
	3. Automation and monitoring	3.a	Presence of feed tray
		3.b	Presence of water quality test kits
		3.c	Feeders
	4. Water management	4.a	Presence of storage ponds
		4.b	Systematic disinfection of incoming water
		4.c	Surface dedicated to water treatment
Operational	5. PL and Stocking	5.a	Use of SPF PL
		5.b	Audit QC documents from Hatchery (Y/N)
		5.c	Stress tests
	6. Biosecurity	6.a	Water disinfection
		6.b	Equipment specific for each pond
		6.c	Disinfection protocols
	7. Feeding	7.a	Feeding table with adjustments based on observations
		7.b	Biomass estimation
		7.c	Functional feeds based on Health programme
	8. Production records	8.a	Water quality
		8.b	Growth, feeding and biomass estimation
		8.c	Health records



Way forward



Intensification and partnership between major stakeholder



17 Th12, 2021 15:08:09
Việt Nam
A4 TS of GBVN



Wednesday, 20 October 2021 at 17:04:32



Take home message



Numerous challenges faced by farmers and other stakeholders

Role of Aquafeed company:

- identity, understand and prioritize the challenges
- develop and improve cost efficient diet and feed management protocols
- analyse farm and feed performance data and share with farmers
- support farmers in their decision towards improved profitability
 - access to performing PLs
 - recommendations on infrastructure
 - access to new technologies
 - access to funding



THANK YOU

Terima kasih

ขอขอบคุณ

谢谢

Tack

Grazie

Merci

Takk Skol Du Ha

謝謝

Cảm ơn bạn

Salamat

धन्यवाद

Danke Dir