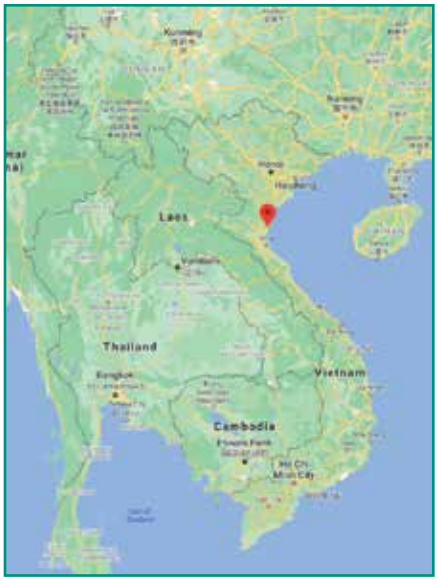
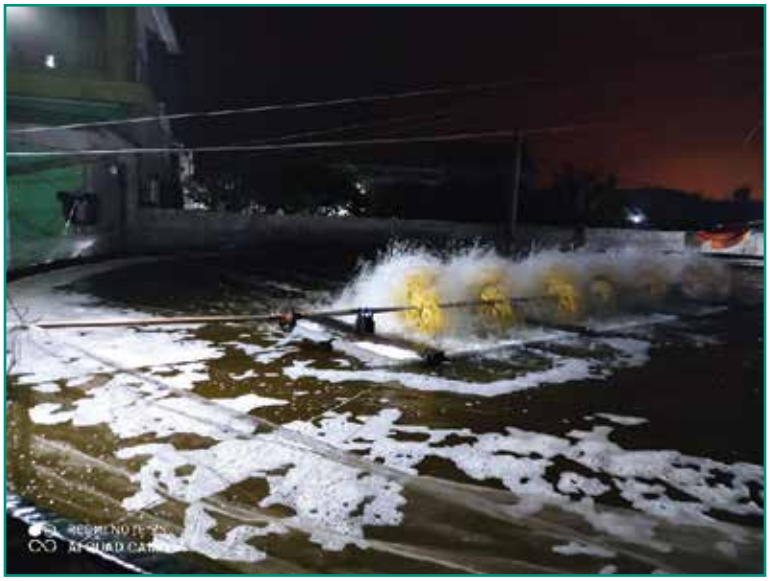
2020 Vannamei Aquaculture Case Reference from Vietnam

Name of Farm: **Anh Quang**

Location: **Hoang Mai, Quynh Luu, Nghe An, Vietnam**

Background: Nghe An is located in the northern coastal area of Vietnam.Microbe-Lift bacterial formulas were introduced in a single pond at the farm to demonstrate the product performance in shrimp aquaculture.





The farm uses polyurethane sheet constructed tanks each 600 to 800 m2 with 1.2m water depth. Vannamei post larvae are introduced into a Juvenile pond at 1000 pieces/m2 for 3 to 4 weeks. Thereafter, the stock is transfer to grow-out tanks housing 200 shrimps/m2 for grow out to harvest at 3 months.

THE MICROBE-LIFT® TREATMENT

In August 2020, MICROBE-LIFT® **Aqua-C**, MICROBE-LIFT® **Aqua-SA** and MICROBE-LIFT® **Aqua-N1** advanced microbial products were introduced in one juvenile tank instead of the normal locally produced bacteria supplied in order to compare the performance of Microbe-Lift versus locally produced bacteria for shrimp aquaculture in Vietnam.

One 600 m^2 juvenile tank was selected for MICROBE-LIFT® treatment with all other ponds using the locally produced bacteria for tank water treatment as control. About 750,000 post larvae were introduced into the 600 m^2 juvenile tank on day 1.

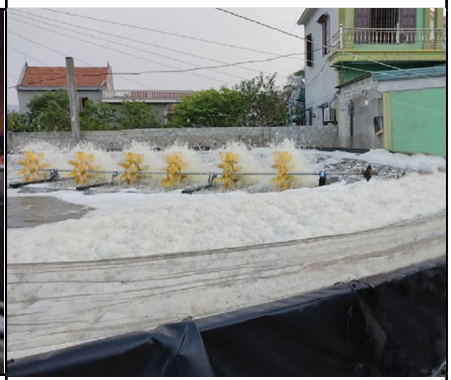
(600,000 P10 larve was purchased, but its normal that extra 20 to 30% is being supplied).

The juvenile shrimp were bred in this tank from day 1 to day 22, thereafter 2/3 of the shrimp were transferred to 2 additional tanks to reduce the breeding density to 200 shrimps per m^2. MICROBE-LIFT® treatment was continued for the same juvenile tank until day 90 at harvest. The other tanks were treated only with locally produced bacteria.

MICROBE-LIFT® Application Rate for the 600m^2 x 1.2 m deep tank were as follows:-

Description	Aqua-C	Aqua-SA	Aqua-N1	Remarks
Juvenile Tank				
Day 1	1.5 Qt.	1.5 Qt.		1.9 ppm Aqua-C +1.9ppm Aqua-SA and No Aqua-N1 were used
Day 15	1.5 Qt.	1.5 Qt.	1 Qt.	1.9 ppm Aqua-C +1.9 ppm Aqua-SA and 1.25 ppm Aqua-N1
Grow-out Pond (same tank)				
Day 30	1 Qt.	1 Qt.	1 Qt.	1.25 ppm each / every two weeks
Day 45	1 Qt.	1 Qt.	1 Qt.	
Day 60	1 Qt.	1 Qt.	1 Qt.	
Day 75	1 Qt.	1 Qt.	1 Qt.	
Total for one season	**7 Qt.**	**7 Qt.**	**5 Qt.**	

Observations:

Description	Microbe-Lift® Tank	Control Tank (same size)
Tank Size	600 m^2	600 m^2
Surface Foam and Scum		
	Minimal foam was observed on the surface indicating reduced protein in the water	Extensive amounts surface foams

Description	Microbe-Lift® Tank	Control Tank (same size)
Ammonia NH_3	Average 7 mg/L	Average 15 mg/L
pH	7.5	8.2
Nitrite NO_2	3 mg/L	20 mg/L
Nitrate NO_3	No data available	
kH	150 mg/L	150 mg/L
Water Color	Light green (desired color)	Greyish-brown (sign of contamination)
Bottom Sludge after harvest	Very thin layer, clean, not viscous, easy to clean, easy to peel. No bad smell	Thick and dirty, viscous with algae growth, sticky difficult to clean. Fishy smell, characteristic of rotten prawn.

ECONOMIC EVALUATION

Description	Microbe-Lift® Tank	Control Tank (same size)
Shrimp size at harvest	52 counts per kg	75 counts per kg
Total weight harvested	3,850 kg	2,400 kg
Shrimp count at harvest	200,000 (100% survivor)	180,000 (90% survivor)
Wholesales value of shrimp	145,000 vnd/kg (USD 6.30 per kg)	125,000 vnd/kg (USD 5.43 per kg)
Revenue per tank	558M vnd (USD 24,255)	300M vnd (USD 13,000)
Bacteria cost	8.5M vnd (USD 370)	11.5M vnd (USD 500)
FCR	1.4	1.55
Feed Use	5,390 kg	3,720 kg
Cost of Feed	(USD 1)	
Total Feed cost	USD 5,390)	(USD 3,720)
Other cost	230M vnd (USD 7,000)	230M vnd (USD 7,000)
Net profit	**USD 11,495**	**USD 1,780**

Conclusion:

There is a big economic benefit on the use of Microbe-Lift for Vannamei shrimp aquaculture in tanks and open lagoon. The above have not taken into consideration healthier shrimp that are less susceptible to diseases. There is also a big potential of eliminating bottom sludge clean up saving labor and lost production time.

For more information on MICROBE-LIFT® Technology contact

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