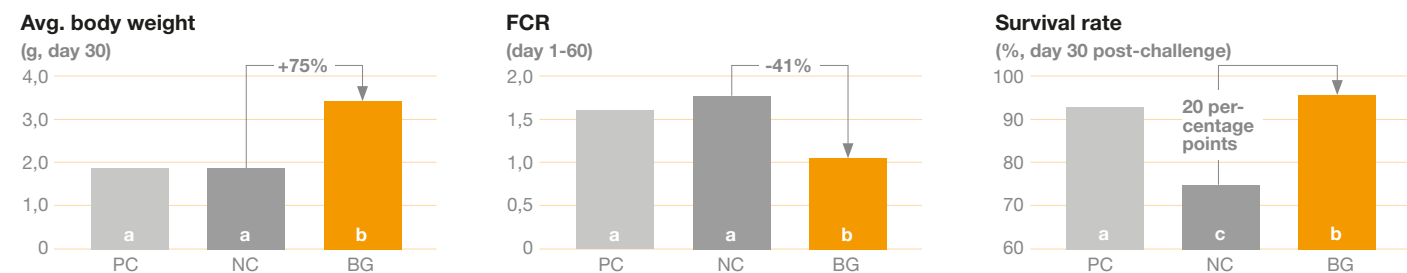


## BalanGut® AQ as supplement for shrimp *P. vannamei* in a tank trial under challenge conditions

### BalanGut® AQ has positive impacts on shrimp



Tank trial in Thailand with *P. vannamei* 1.0-1.5 g (SPF) for 30 days then challenged, monitor for another 30 days.

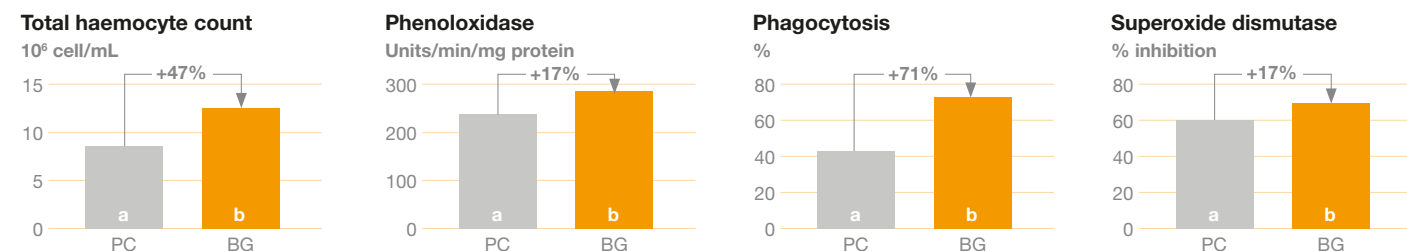
- PC: Positive control, basal diet, no challenge
- NC: Negative control, basal diet, challenge
- BG: BalanGut® group, BalanGut® AQ L supplemented at 8kg/MT feed

BalanGut® AQ significantly improved performance parameters and animal resilience under challenge conditions.

Not sharing a common letter signifies significantly difference (P < 0.05).

AT-18-KU

## BalanGut® AQ helps to improve shrimp host resilience



Tank trial in Thailand with *P. vannamei* after feeding for 45 days in tanks.

- PC: Positive control, basal diet
- BG: BalanGut® group, BalanGut® AQ L supplemented at 5kg/MT feed

BalanGut® AQ improved anti-oxidant and phagocytic capacity of the host for challenge conditions.

Not sharing a common letter signifies significantly difference (P < 0.05). Astaxanthin included in basal diet.

TID-115-19

## Choose the BalanGut® AQ formulations that are right for you

Product name	Form	Application	Packaging	Article number
BalanGut® AQ P	Powder	Aquaculture Fish, Shrimp	25 Kg Paper bag 650 Kg Big bag	50625849 50625855
BalanGut® AQ L	Liquid	Aquaculture Fish, Shrimp	20 Kg Jerry can 1000 Kg IBC	50624702 50624706

### Also available for livestock

Product name	Form	Application	Packaging	Article number
BalanGut® LS P	Powder	Livestock Pigs, Poultry	25 Kg Paper bag 650 Kg Big bag	50624860 50624881
BalanGut® LS L	Liquid	Livestock Pigs, Poultry	20 Kg Jerry can 1000 Kg IBC	50624857 50624858

### Contacts

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**BASF**  
We create chemistry

**BalanGut® AQ**  
The right balance for a healthy gut to support shrimp resilience



The unique mixture of naturally occurring monoglycerides of short and medium chain fatty acids.

- Fortifies natural beneficial microbiota balance
- Strengthens epithelium integrity
- Supports host resilience

The science of sustainable feed that succeeds

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## BalanGut® AQ. The way it works

BalanGut® contains a proprietary, balanced mixture of butyric, propionic, caproic and other medium chain fatty acid mono-glycerides, which have active impacts on the digestive tract, resulting in:

- Cell proliferation and epithelium renewal
- Positive effects on tight junctions
- Promotion of peptide secretion
- A balanced microbial population

Interacting with bacteria

BalanGut® AQ

Interacting with enterocytes

Moving into cells

Strengthening proteins

Moving towards the portal vein

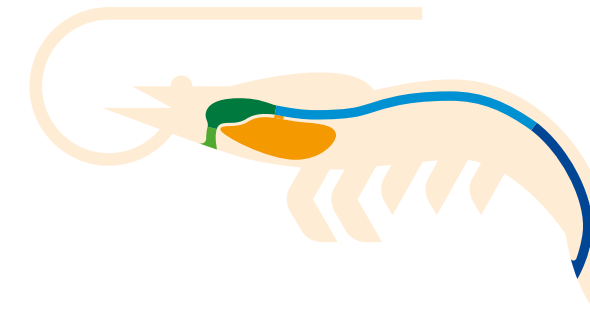
## A healthy gut is the key for healthy shrimp aquaculture

Far more than being just a digestive system, the hepatopancreas and the gut are the keys to effect the health of Pacific white shrimp (*Penaeus vannamei*), in their wellbeing and performance. BalanGut® AQ is proven to play an important role in this, supporting gut health, fortifying microbiota balance and benefiting host resilience.

So it can help you create feed that delivers benefits to the animals, your business and your customers, while meeting the demands of the market and consumers. Sustainable feed that succeeds.



### Where it works



BalanGut® AQ's main active ingredients of monoglycerides of butyric, propionic, caproic, heptanoic, caprylic, nonanoic, capric and lauric acids are delivered via feed and are active throughout the digestive tract.

### Fortifying intestinal health in shrimp

The unique mixture of naturally occurring monoglycerides of short and medium chain fatty acids in BalanGut® AQ supports:

- Intestinal health;
- Improvement in performance results;
- Enhanced host resilience;
- Sustained wellbeing;
- Economic and ecological sustainability

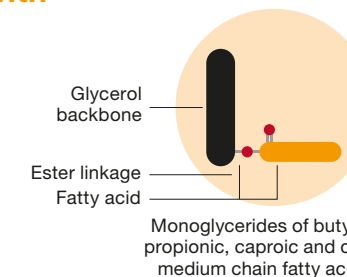
BalanGut® AQ is a sustainable solution that fosters gut balance and good health of the GI tract.

### Robust product, easy to handle with powder and liquid formulations

The presence of ester bonds ensures:

- Non-corrosivity
- Heat stability
- Non-volatility
- Non-pungent smell
- A pH-independent action in the GI tract

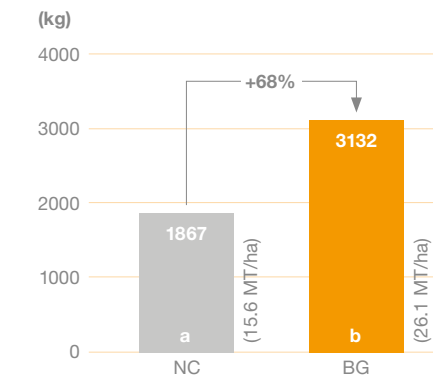
### Monoglyceride



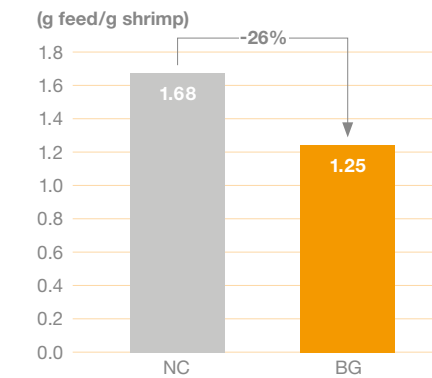
## BalanGut® AQ as a supplement for shrimp *P. vannamei* in a pond trial in Vietnam

### BalanGut® AQ has positive effects on farm

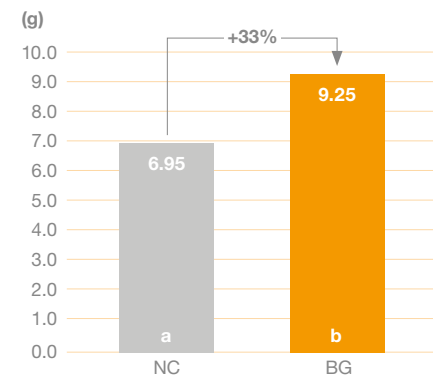
#### Total Harvested Biomass



#### FCR

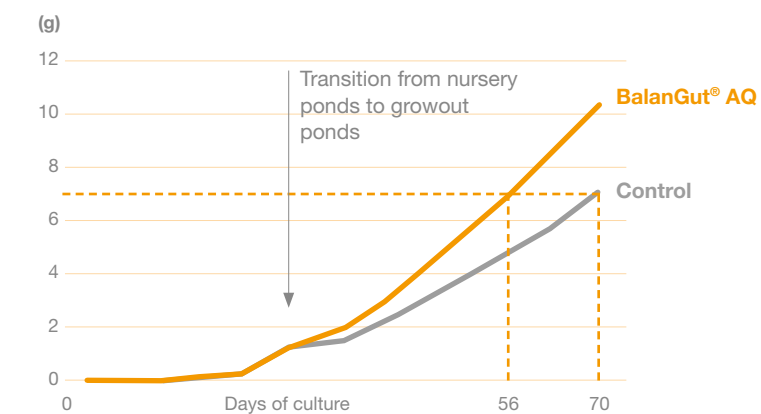


#### Day 70 Average Shrimp Weight



a, b denotes that values are statistically different (P<0.05)\*\*

#### Average weight



BalanGut® AQ L used in nursery diet at 1%;  
BalanGut® AQ P used in growout diet at 1.5%.

Trial was conducted from Jan-April 2018 in Binh Tuan, Vietnam.  
Not sharing a common letter signifies significantly difference (P < 0.05).

Farm trial in Vietnam stocked with PL<sub>12-15</sub> (SPF) *P. vannamei* at density 200 per sq.m in 1200 sq.m plastic lined ponds

- 4 replicate ponds per treatment
- NC: Negative control, basal diet
- BG: BalanGut® group, BalanGut® AQ L/P supplemented at 15kg/MT feed

With better animal resilience, BalanGut® AQ significantly improved shrimp performance at harvest, numerically enhanced multiple output parameters.