

ohsung^o
Ohsungbio Co., Ltd.



Human-Nature Harmony

We aim to provide excellent products and services, aiming for an ideal workplace where humans, nature, and technology coexist through the harmony between precious human life and nature (animals) and the development of new technologies in our research institute.

Human-Nature Harmony

The new trend of eco-friendly livestock industry

Ohsungbio is realizing the value of respect for human beings and establishing itself as an outstanding bio venture company by securing product growth and customer satisfaction management through continuous technical development and research and employing talented people. We appreciate for our customers' kind watching Ohsungbio with warm eyes

Business Field



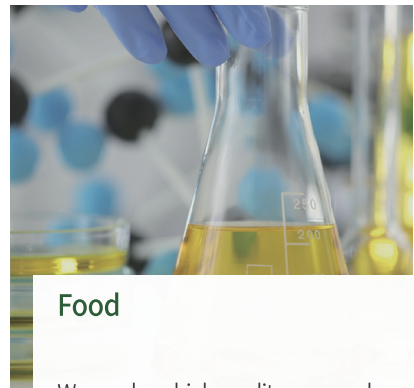
Research and Manufacturing of Feed Additives (Supplementary Feed)

We research and develop to find the optimal mixing ratio of essential amino acids and produce animal feed additives that apply it. In addition, we improve productivity by promoting growth rates and boosting immunity.



Improvement of livestock environment

We use useful microorganisms to improve the livestock environment and produce eco-friendly livestock products using microbial agents with excellent decomposition ability of organic matter.



Food

We produce high-quality agro and livestock products rich in omega-3 through products such as meat and eggs produced, after intaking by pigs, laying hens and chicken.

Organization



Company history

- **2020**
 - Registered products to be procured by Korea On-Line E-Procurement System
 - Started production and sale of pig feed (OEM)
- **2019**
 - Obtained INVIVO functional test certificate
 - Developed Optiami products
- **2018**
 - Registered qualification to participate in competitive bidding (by Korea On-Line E-Procurement System)
 - Joined the Korea International Trade Association
 - ISO-9001 certified
 - Developed Tamoot-All products
- **2017**
 - Established Ohsung Bio Co., Ltd.
 - Moved into Chungnam Technopark Bio Center
 - Registered the manufacturing plant
 - Produced Amisan-1000 prototype
 - Registered feed ingredients
 - Registered auxiliary feed manufacturing business

Certificates



Functional test certificate



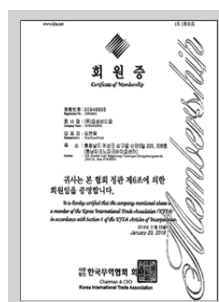
Feed ingredient registration certificate



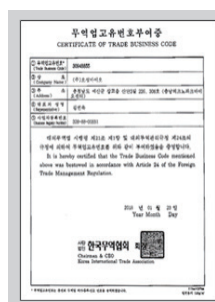
Feed manufacturing business registration certificate



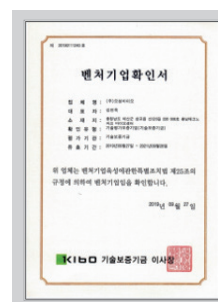
Competitive Bidding Qualification Registration Certificate



Trade association membership card



Trade business identification number certificate



Venture company certificate



ISO 9001:2015 Certificate

Key Products



Amisan-1000

Features	Performance / Expected effect	Product information
<p>A new concept of immune booster</p> <ul style="list-style-type: none"> • Contains essential amino acids for drinking water • Boosts immunity • Improves growth rate • Improves productivity 	<ul style="list-style-type: none"> • Enhances immunity for fish and livestock. • Increases the amount of weight gain. • Reduces mortality. • Shortens the shipping age. • Improves feed requirements. 	<ul style="list-style-type: none"> • Product Type: Feed Additives • Condition: Liquid • Packaging size: 1L (plastic container), 10 packs (1BOX)



OptiAmi

Features	Performance / Expected effect	Product information
<p>A new concept of immune-boosting single ingredient for livestock</p> <ul style="list-style-type: none"> • Powdered single ingredient • Boosts immunity • Improves the growth rate • Increases productivity • Convenient feeding 	<ul style="list-style-type: none"> • Improves immunity of livestock • Gains weight • Decreases mortality • Reduces shipping age • Improves feed demand • Increases sow pregnancy and fertility rate 	<ul style="list-style-type: none"> • Product Type: Feed Additives • Condition: Powder • Packing size: 15kg/pack



Tamoot-All

Features	Performance / Expected effect	Product information
<p>Poultry Pest Natural Repellent</p> <ul style="list-style-type: none"> • Does not detect pesticide residue using natural substances as main ingredients (320 types) • Excellent inhibition of reproductive function by blocking pest reproductive function. 	<ul style="list-style-type: none"> • Relieves stress caused by chicken flea (wagumo) and mites to increase egg production. • Decreases mortality • Improves egg quality 	<ul style="list-style-type: none"> • Product Type: Feed Additives • Condition: Liquid • Packing size: 10L, 20L

OptiAml

✓ 6 Features of OptiAml

- 01. Increases daily weight gain
- 02. Increases fertility rate (maintaining 88-93% level)
- 03. Reduces shipping age (20-30 days earlier shipping)
- 04. Increases fat meat rate: 1-2%
- 05. Increases feed efficiency: expecting more than 5%
- 06. Boosts immunity

✓ Excellent effect to increase basic immunity

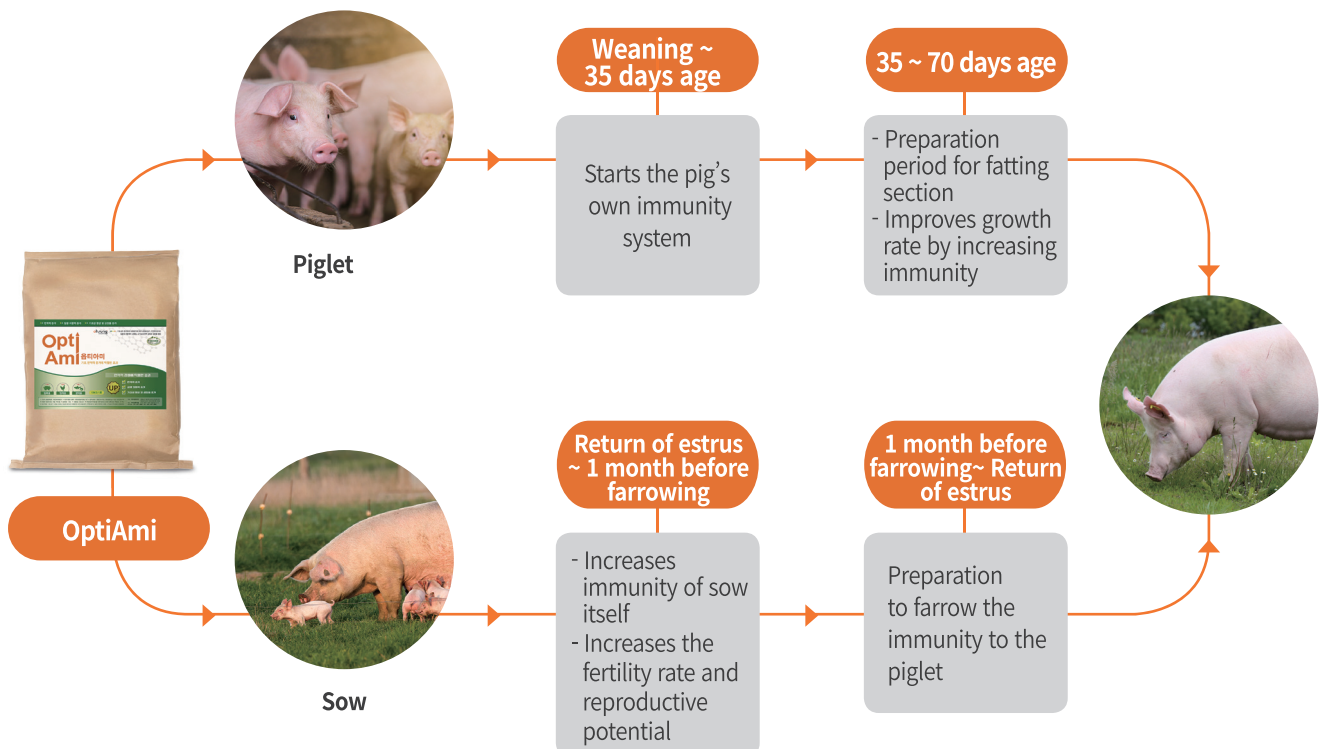
Enhances palatability, **Increases growth rate and immunity**, and reduces mortality greatly.

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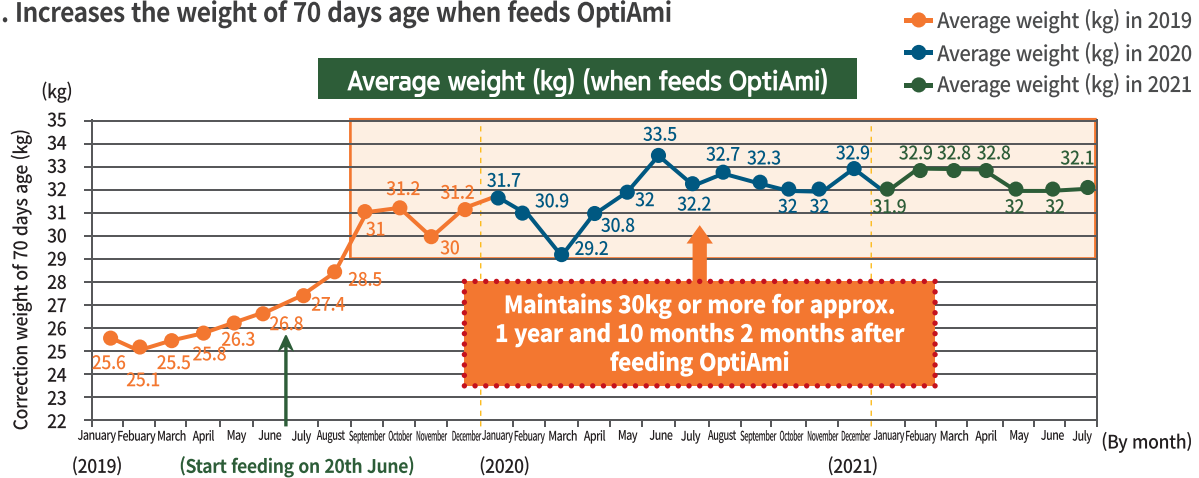
○ Product Background and Overview of OptiAml

Currently, worldwide, due to viral diseases such as PRRS, PCV-2, PMWS, and PED, the economic loss of livestock and pig farms is very large. These diseases have not been removed even with vaccines. Therefore, we have developed OptiAml by focusing on immune enhancement, which is one of the ways to solve this situation.



○ Efficacy and effect when feeds to the piglet

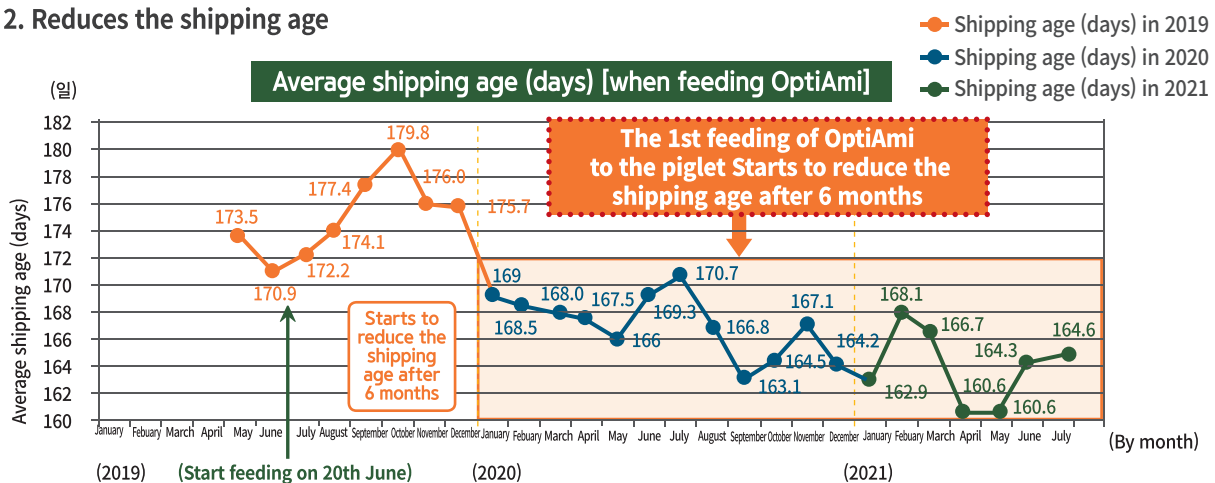
1. Increases the weight of 70 days age when feeds OptiAmi



Test result

- (1) Started feeding on June 20, 2019: Average weight of 25.8kg before feeding
- (2) **Gained average weight of 70 days age 2 months after feeding** (end of August 2019)
- (3) After feeding, continuously **maintains 30kg or more** for 1 year and 6 months
- (4) Increased the correction weight of 70 days age by **4 to 6 kg** compared to before feeding OptiAmi.

2. Reduces the shipping age



Test result

- (1) Average shipping age before feeding OptiAmi – 175 days
- (2) **Average shipping age after feeding OptiAmi – 166 days**
- (3) **Reduced the shipping age by 9 days from 175 days to 166 days**

3. Improvement effect of feed demand rate

	Control Group	Test Group
23 days age weight	5.46kg	5.53kg
53 days age weight	12.53kg	13.55kg
Total weight gain	7.08kg	8.01kg
Daily weight gain	235.9g / day	267.22g / day
Daily feed intake	515	527.5
Feed demand rate	2.185	1.97

- About 9.8% improvement in feed demand rate compared to the control group
- Feed intake has increased when feeding OptiAmi
- Daily weight gain increased to reach the reference weight quickly, thereby improved feed efficiency

Efficacy and effect when feeds OptiAmi to the sow

1. Weaning weight increases when OptiAmi is fed

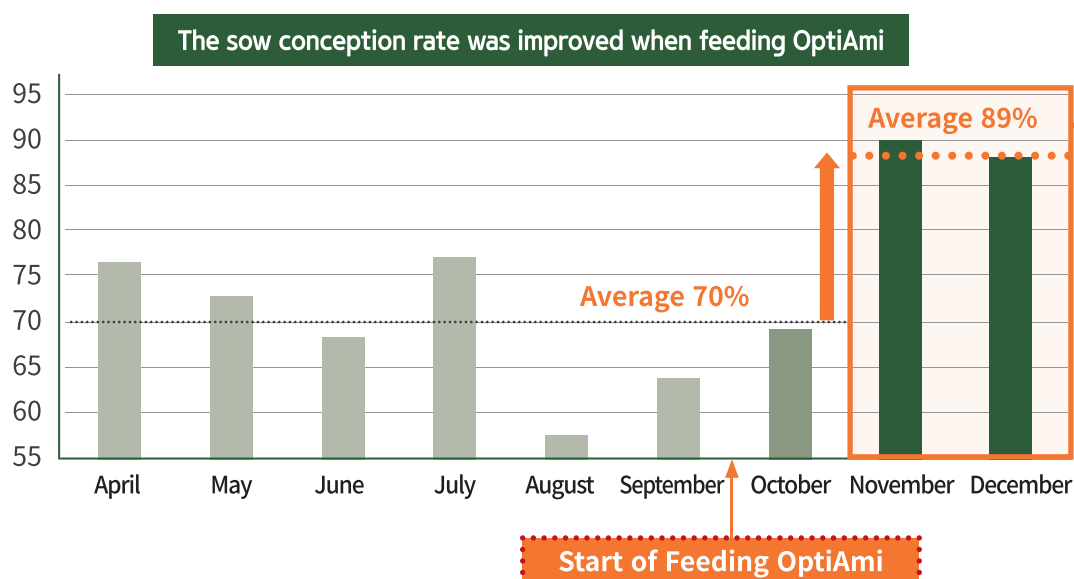
Date	Number of pigs measured	Total weight	Average weight
03/14	207	2005.8kg	9.69kg
03/21	209	2092.8kg	10.11kg
03/28	298	2817.6kg	9.18kg
04/04	210	2129.4kg	10.14kg
04/11	235	2305.4kg	9.81kg
04/18	212	1975.8kg	9.32kg
04/25	260	2399.8kg	9.32kg

- Targets weaning weight of 8kg or more at 4 weeks age when feeds OptiAmi
- Expects to gain the weight by approx. 1.5 to 2 kg or more at the weaning stage
- Increases immunity of piglets through feeding to sow
Forms a basis for weight gain of piglets

2. Improvement of sow fertility when feeds OptiAmi

Item	April	May	June	July	August	September	October	November	December
Mating	34	26	19	39	40	25	39	30	33
Pregnancy	26	19	13	30	23	16	27	27	29
Ratio	76.5	73.1	68.4	76.9	57.5	64.0	69.2	90.0	87.9
Remark							Start feeding		

After 30 days of feeding OptiAmi, the conception rate recovered to more than 85%.



Test result

The sow's average conception rate was 70% in April ~ October. However, the conception rate recovered to normal rate of average 89% after feeding OptiAmi from October 1.

OptiAmi

How to feed OptiAmi



How to feed OptiAmi

(1) Piglet

Feeding period | from weaning to 80 days age
(for 50 days or more)

Feeding method | Mix 3kg OptiAmi per 1 ton feed and feed it to the piglet.

(2) Sow

Feeding period | Recommend feeding for all period of sow (necessary to feed OptiAmi to Sow for at least from 1 months to 2 months before farrowing)

Feeding method | Mix 3kg OptiAmi per 1 ton feed and feed it to the sow.

	Sow	sucking piglet period	Weaning piglet period	Piglet	Growing pig	Fed pig period
	OptiAmi feeding period		OptiAmi feeding period			
Rearing period		0-4th week (28 days age after birth)	7th week (49 days age after birth)	11th week (80 days age after birth)	19th week (140 days age after birth)	26th week (180 days age after birth)
Weight(kg)		1.4~7kg	7~14kg	14~30kg	30~70kg	70~110kg
Daily weight gain(kg)		0.20	0.33	0.57	0.71	0.80
Daily feed intake(kg)		0.15	0.56	1.22	2.31	2.90
	farrowing	Weaning	Piglet	Growing pig	Fed pig	Shipping

Immunity builder of New Concept

Amisan1000

Necessary drinking Amino acid

Amisan-1000 is an immunity builder of new concept born with a technology that optimized necessary Amino-acid.
A new flow of eco-friendly livestock business

A new flow of eco-friendly livestock business



Background and overview of Amisan-1000

Since fish farming mainly uses non-water exchange method, viral diseases such as bacterial and white spot virus diseases occur due to water pollution (organic substances such as shrimp feed residues and excrement are precipitated and decayed, then, harmful gases such as ammonia and hydrogen sulfide are generated).

To improve this, we developed Amisan-1000 product. Use of Amisan-1000 helps to raise the farm by reinforcing immunity and improving the environment.

Features of Amisan-1000

※ Expected effect after use – when use Amisan-1000 in the shrimp farm



Amisan-1000 helps to strengthen immunity by supplying essential amino acids during growth.



Improves productivity by increasing survival rate



Shortens shipping age due to increased weight.



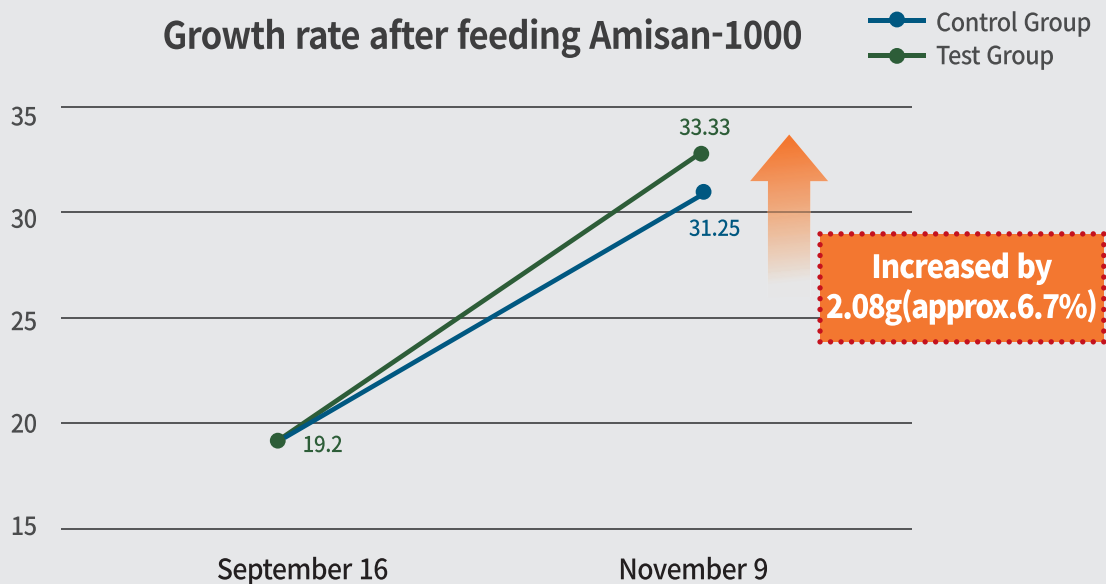
Increases the digestion efficiency of feed, reduces odors, and helps to improve the environment.

Amisan-1000

Efficacy and effect of Amisan-1000 when used in the shrimp farm

Test

Growth rate after feeding Amisan-1000



Test result

- (1) Started feeding on September 16, 2021
- (2) Measured weight of the test group and control group after 54 days (November 9, 2021)
- (3) The average weight of the test group fed with Amisan-1000 increased by 2.08g (**increased by approx. 6.7%**)



How to feed Amisan-1000

- | | |
|-------------------------|---|
| Product | Add 3L of Amisan-1000 to 1000kg of feed when manufacturing feed and feed them during rearing period. |
| Target to be fed | Whole period of shrimp rearing
(15-18th week: Middle rearing group
(4-6 weeks) -> Pond (9-12 weeks) |
| Feeding method | When use in the shrimp farm
Add 3L of Amisan-1000 to 1000kg of feed when manufacturing the feed. |

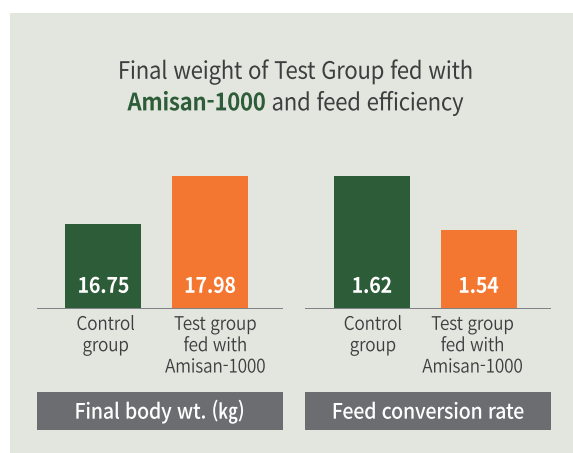
○ Efficacy and effect when feeds Amisan-1000 to the weaning piglets

01

Effect of Amisan-1000 on growth rate, feed intake and feed demand of weaning piglets

in the experiment of weaning piglets, the Amisan-1000 fed group significantly improved the daily gain, which shows that the feed efficiency was improved. This is considered to be the result of the increase in digestibility by the functional and physiologically active substances in Amisan-1000.

► Location: 10,000 pig farm in Gochang-gun 40 weaning piglets with 21 days age weighing 6.57 ± 0.29 kg at starting to feed Amisan-1000



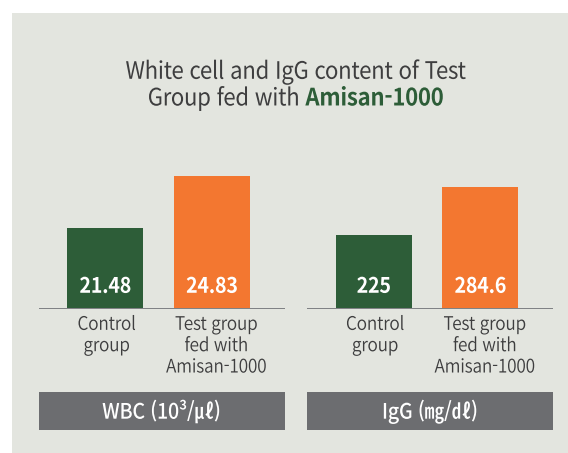
Items	Control Group	Test Group fed with Amisan-1000
Initial BW (kg)	6.59	6.48
Final BW (kg)	16.75	17.98
ADG (g)	362	410
DFI (g)	586	632
FCR	1.62	1.54

► Effects of Amisan-1000 on Blood Chemistry in weaning piglets

02

Effect of Amisan-1000 on the immunity activation of weaning piglets

As a result of blood component analysis (Complete Blood Count) and IgG content analysis, in the test group fed Amisan-1000, white blood cells and IgG increased, and the concentration of red blood cells increased, which improved overall blood circulation. An increase in white blood cell count and immunoglobulin(IgG) shows an increase of antiviral resistance.



Items	Control Group	Test Group fed with Amisan-1000
WBC ($10^3/\mu\text{l}$)	21.48	24.83
RBC ($10^6/\mu\text{l}$)	6.68	6.97
HGB (g/dl)	9.85	10.58
HCT (%)	30.75	32.49
MCV (fl)	46.23	47.45
MCH (pg)	14.61	15.17
MCHC (g/dl)	32.48	32.88
PLT ($10^3/\mu\text{l}$)	328.2	425.5
IgG (mg/dl)	225	284.6

► Effects of Amisan-1000 on Blood Chemistry in weaning piglets



For
Livestock
farming



For
Poultry
farming



For
Fish
farming