Product Manual



USER GUIDANCE INCLUDED

BACKBONE EAST AFRICA



Introduction

ABOUT US

Backbone Feed (East Africa) has 3 operations respectively located in Tanzania, Kenya, and Uganda. Founded in 1995 in China, its parent company, Backbone Agricultural and Animal Husbandry Science and Technology Group, is a multinational corporation specialized in feed production, animal husbandry, and fermentation biotechnology.

---- Nearly 30 years of experience in feed production

---- Over 30 subsidiaries in China and Africa

---- Achieved 1.4 billion USD of annual feed output

---- Ranked in top 50 feed producers in the world



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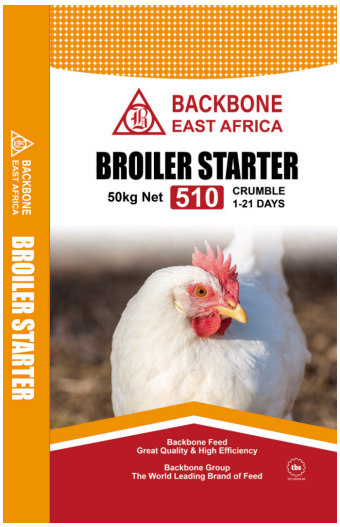


510 Broiler Starter



SUITABLE FOR CHICKS AGED 1-21 DAYS

This product is easy to be digested and absorbed, produced with world-class equipment, advanced production technology, and high-quality raw materials. This feed uses a scientifically formulated, nutrient-rich blend with exclusive broiler premixes to ensure rapid growth, high digestibility, and enhanced palatability, significantly improving feed conversion rates. Its design further enhances disease resistance, boosts immune function, and increases survival rates in broiler starters through optimal nutritional-health synergies.



Breeding Recommendations

1. The temperature control directly affects the health and growth performance of broilers and feed utilization.

Age of Broiler	Room temperature
1-2 days	34°C
3-7 days	32-33°C
8-14 days	30-31°C
15-21 days	27-29°C

2. During brooding period, humidity should be controlled at 65-70%. Regular watering and disinfection are also necessary.

3. For chicks aged 1-7 days, it is suggested to perform 23 hours of continuous light, 1 hour dark (anti-stress); the light can be based on natural light at 8-21 days of age.

4. It is needed to maintain suitable temperature with proper ventilation. The ammonia concentration should be less than 10 ppm, and no smoke or dust.

5. Immunization is very important. Chicken fleas must be prevented at 0-7 days of age, while Newcastle disease and infectious bronchitis should be controlled at 8-21 days of age.

6. The feed can be fed directly without adding any additives.

7. It is best to provide 20°C water during the brooding stage and glucose can be properly added.

8. The feed should be stored in a cool, ventilated and dry place, and be protected from moisture.

NUTRIENT VALUE COMPOSITION (%)

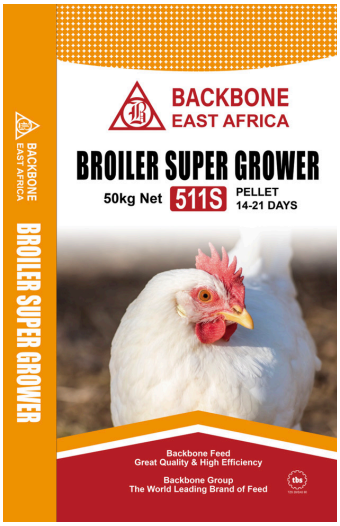
Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Calcium	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
22.0	8.0	6.0	0.9-1.2	0.73	0.3-0.8	1.2	12.5

511S Broiler Super Grower



SUITABLE FOR CHICKS AGED 14-21 DAYS

This product is rich in various amino acids, vitamins and necessary trace elements for the growth of broiler growers. It has a full range of nutrients to ensure rapid growth of chickens and increase bone and body health.



Breeding Recommendations

1. This stage is important for the growth of broilers. Please avoid alternating cold and hot at this stage. According to the condition of the flock and the outside temperature, the room temperature should be controlled at 26-29°C and the humidity at 60%. The humidity can be controlled by regular sprinkling and fan.

2. Light can be based on natural light. If possible, maintain 6 hours of light and 1 hour of darkness three times a day. Turn on the light when feeding and turn off the light after feeding. Approximately 0.75 watts per square meter is required.

3. Please ventilate properly to maintain suitable temperature. The ammonia concentration should be less than 10 ppm.

4. Please pay attention to the prevention and treatment of coccidiosis and infectious bronchitis. Also pay attention to the intestinal health condition of the broilers.

5. The feed can be fed directly without adding any additives.

6. Drinking water can be tap water or deep well water. The water and feed trough need to be kept clean.

7. The feed should be stored in a cool, ventilated and dry place and be protected from moisture.

8. When you change the feed, the two kinds of feed should be fully mixed and gradually replaced to avoid stress reaction.

9. This product must not be used for ruminants; if there is agglomeration, mildew, etc., please do not feed.

NUTRIENT VALUE COMPOSITION (%)

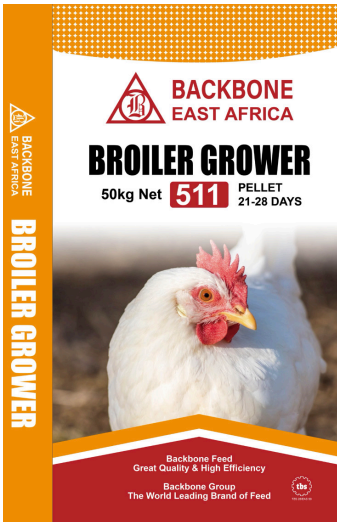
Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Calcium	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
20.0	8.0	7.0	0.7-1.2	0.84	0.3-0.8	1.2	12.5

511 Broiler Grower



SUITABLE FOR BROILERS AGED 21 DAYS – 1 WEEK BEFORE MARKET AGE

This product is rich in various amino acids, vitamins and necessary trace elements for the growth of broiler growers. It has a full range of nutrients to ensure rapid growth of chickens and increase bone and body health.



Breeding Recommendations

1. This stage is important for the growth of broilers. Please avoid alternating cold and hot at this stage. According to the condition of the flock and the outside temperature, the room temperature should be controlled at 22-26°C and the humidity at 60%. The humidity can be controlled by regular sprinkling and fan.

2. Light can be based on natural light. If possible, maintain 6 hours of light and 2 hours of darkness three times a day. Turn on the light when feeding and turn off the light after feeding. Approximately 0.75 watts per square meter is required.

3. Please ventilate properly to maintain suitable temperature. The ammonia concentration should be less than 10 ppm.

4. Please pay attention to the prevention and treatment of coccidiosis and infectious bronchitis. For chickens aged 25-30 days, pay attention to the prevention and treatment of Newcastle disease and Bursal Disease.

5. The feed can be fed directly without adding any additives.

6. Drinking water can be tap water or deep well water. The water and feed trough need to be kept clean.

7. The feed should be stored in a cool, ventilated and dry place and be protected from moisture.

8. When you change the feed, two kinds of feed should be fully mixed and gradually replaced to avoid stress reaction.

9. This product must not be used for ruminants; if there is agglomeration, mildew, etc., please do not feed.

NUTRIENT VALUE COMPOSITION (%)

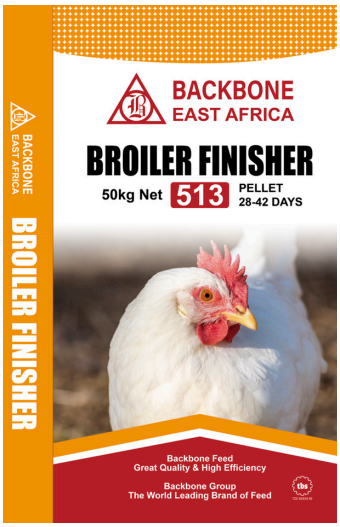
Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Calcium	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
19.0	8.0	7.0	0.7-1.2	0.84	0.3-0.8	1.2	12.5

513 Broiler Finisher



SUITABLE FOR BROILERS AGED WITHIN 1 WEEK BEFORE MARGET AGE

This product has high absorption and utilization rate, low material consumption, strong disease resistance, and stable and reliable quality. It can meet the nutritional needs of broiler finishers and enable farmers to obtain higher profits.



Breeding Recommendations

1. This period is the rapid growth period of broilers, and the temperature should be controlled at 21-22°C. In summer, it is necessary to protect the chickens from high temperature and heat stroke.

2. The humidity should be controlled at 50-60%. It is needed to prevent low temperature and high humidity at night.

3. The light increases with the age, and it is restored to 23 hours continuous light and 1 hour dark at 7 days before the slaughter.

4. It is needed to maintain proper temperature and ventilation. The ventilation volume of one broiler finisher is 30-50 cubic meters per hour in summer.

5. Pay attention to the prevention and treatment of E. coli and kidney disease.

6. The feed can be fed directly.

7. Make sure the chickens drink adequate water.

8. The feed should be stored in a cool, ventilated, dry place and be protected from moisture.

9. When the feed is changed, the two kinds of feed should be fully mixed and gradually reloaded to avoid stress reaction.

10. This product must not be used for ruminants; if there is agglomeration, mildew, etc., please do not feed.

NUTRIENT VALUE COMPOSITION (%)

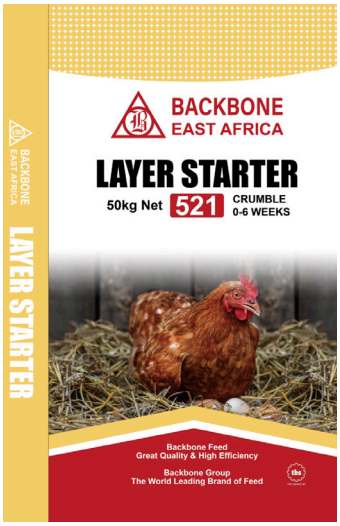
Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Calcium	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
18.0	8.0	7.0	0.6-1.2	0.70	0.3-0.8	1.1	12.5

521 Layer Starter



SUITABLE FOR CHICKS AGED 0-6 WEEKS

This nutrient -rich product can promote the rapid growth of chicks, enhance their bodies' immunity and resistance to disease, and increase their survivial rate.



Breeding Recommendations

1. The brooding house should be thoroughly cleaned and disinfected before use.

2. House temperature control

Age of Chick	House temperature
0-3 days	33-36°C
4-7 days	31-32°C
>7 days	Reducing by 2-3°C per week until 21°C

3. At 0-7 days of age, the relative humidity in the house should be controlled at 60%. After that, the humidity should be appropriately adjusted according to the condition of the chicks so that the chicks feel comfortable.

4. Give 22 hours of light at 0-7 days of age to help the chicks find feed and water and to prevent stress, with light intensity at 30-50 lux. Then, slowly reduce light by 1.5 hours per week. From 2 to 4 weeks of age, light intensity should be 25 lux. From 4 to 6 weeks, light intensity should be 10-15 lux.

5. Maintain suitable temperature with proper ventilation in the brooding house.

6. Clean the drinker every day during the brooding period, and keep the water temperature at 10-20°C.

7. Debeaking is carried out at 7-10 days of age, while trimming beak at 6 weeks or 12-14 weeks of age.

8. Timely immunization is necessary to prevent the occurrence of infectious diseases.

9. The feed can be fed directly without adding any additives.

10. Feed should be stored in a cool, ventilated and dry place, and be protected from moisture.

11. The feed color might be somewhat different from batch to batch. Please use at ease as it does not affect the quality.

NUTRIENT VALUE COMPOSITION (%)

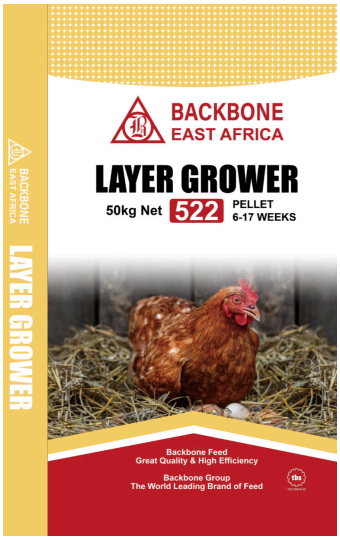
Crude Protein	Crude Ash (≤)	Crude Fiber (≤)	Calcium	Total Phosphorus (≥)	Sodium Chloride	Lysine (≥)	Moisture(≤)
18.0	8.0	6.0	0.6-1.2	0.75	0.3-0.8	1.1	12.5



522 Layer Grower

Suitable for layer pullet aged 6-17 weeks

This product contains adequate nutrition. After being fed, pullets will grow with high uniformity, develop even and robust bodies, and smoothly enter into the laying period.



Breeding Recommendations

1. The layer pullet grower feed can be replaced with layer peak phase feed only after the replacement pullets weight reach the standard when entering the laying period.

2. The layer growers were weighed by an electronic scale and calculated for uniformity.

3. It is needed to expand the group in a timely manner to maintain the appropriate density.

4.Temperature should be controlled at around 21°C and humidity at 40-60. Please make adjustment according to the actual conditions of the flock.

5. The light duration should be 10-12 hours, and the intensity should be 10-15 lux; reducing the light duration can prevent the precocious puberty and promote the growth and development of replacement pullet to increase the early egg weight.

6. Timely immunization is necessary to prevent the occurrence of infectious diseases.

7. Collect blood at an appropriate time to assess immunity and disease epidemic.

8. The feed can be fed directly.

9. Provide adequate drinking water. Water and water trough should be kept clean.

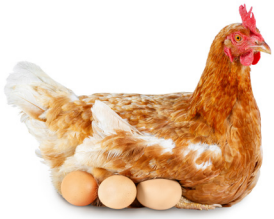
10. Change feed gradually. To avoid stress response, the transition period should be 4-7 days.

11. Feed should be stored in a cool, ventilated, dry and be protected from moisture.

Nutrient Value Composition (%)

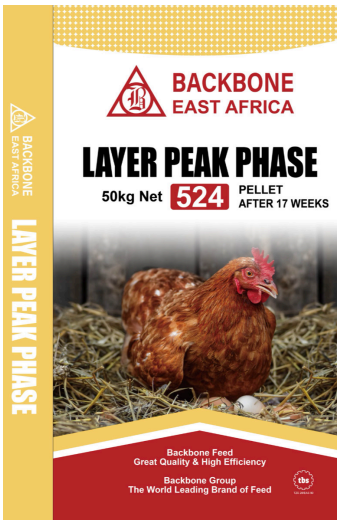
Crude Protein	Crude Ash(≤)	Crude Fiber(≤)	Calcium	Total Phosphorus	Sodium Chloride	Lysine(≥)	Moisture(≤)
14.0	10.0	7.5	0.6-1.4	0.73	0.3-0.8	0.6	12.5

524 Layer Peak Phase



SUITABLE FOR LAYERS AGED ABOVE 17 WEEKS

According to the energy and protein requirements during egg-laying peak phase, the feed adopts the scientific formula and the company's special premixes to ensure the best quality. The use of this product can result in an increase in egg weight, a significant reduction in incidence and mortality, and a stable peak egg production period of up to 10 months. The ingredients of 524 and 524L are the same. The only difference is that 524 is pellets and 524L is mash.



Breeding Recommendations

1. During this period, the temperature of the chicken house should be increased by 1°C every two weeks until it reaches 25°C.

2. From the 16th week, the light time should be gradually increased until it reaches 16 hours at 30 weeks of age and the light intensity should be kept at 30 lux.

3. Humidity should be set at 40-60 and please pay attention to the ventilation.

4. It is necessary to weigh eggs every 2 weeks before 35 weeks of age and every 5 weeks after 35 weeks of age. Please start controlling the egg weight when the egg weight reaches within 2 grams of the target egg weight.

5. The laying hens should be weighed regularly to control for uniformity.

6. Timely immunization is necessary to prevent the occurrence of infectious diseases.

7. The feed can be used directly without adding any additives.

8. Provide adequate drinking water. Water and trough should be kept clean.

9. Change feed gradually. To avoid stress response, the transition period should be 4-7 days.

10. The feed color might be somewhat different from batch to batch. Please use at ease as it does not affect the quality.

11. Feed should be stored in a cool, ventilated and dry place, and be protected from moisture.

NUTRIENT VALUE COMPOSITION (%)

Crude Protein	Crude Ash(≤)	Crude Fiber(≤)	Calcium	Total Phosphorus	Sodium Chloride	Lysine(≥)	Moisture(≤)
15.0	15.0	7.0	3.5-4.5	0.73	0.3-0.8	0.6	12.5

Breeding Guidance: How to Raise Broilers Effectively?

The efficiency of broiler farming is determined by every detail in breeding management. There are four indispensable conditions to raising broilers efficiently: healthy chicks, high-quality feed, a suitable environment, and healthy bodies of chickens.

1. The healthiness of chicks is the most important, as it is something that cannot be repaired or compensated for later. Therefore, be careful in choosing chicks.

2. High-quality feed is also a very significant factor in determining the efficiency of broiler farming. Adding functional feed additives into broiler feed can efficiently solve the problems that may arise in the process of broiler farming.

3. Providing a comfortable environment by applying standardized farming and adjusting the environmental conditions timely is another necessary requirement for the rapid growth of broilers.

4. Only when the above three conditions are appropriately fulfilled, the broilers can have healthy bodies (take disease prevention and control seriously).

At the pre-placement stage

The points of concern before placing chicks into the brooding area are (1) setting up the cleaning and disinfection procedure, (2) monitoring each step of your work, (3) monitoring the effectiveness of disinfection, and (4) other preparatory work.

At 1-7 days of age

To achieve an ideal weight at the end of the first week for your chickens, it is necessary to properly control these five farming elements: temperature, ventilation, density, light, and humidity. However, there is no fixed standard for these elements. They must be adjusted accordingly with your equipment, climate, chickens' weight and other factors. In short, the principle is to make your broilers comfortable.

Medication:

The first principle of using medication is safety. In choosing your starter medication, we recommend you choose drugs according to the physical quality of the chicks. Additional principles are to ensure that the drug will not affect chickens' weight at the end of first week or the development and growth of their organs and to ensure that the drug reduces various stresses.

Immunization:

First of all, the vaccine strains are very important. Second, in the immunization process, you should adopt the correct immunization pathways. Vaccines intended for injections should be injected, vaccines intended for oral use should be given orally, and vaccines intended for nasal drops should be used as prescribed. Third, do not miss any vaccines, including the vaccine for a comprehensive antibody, the vaccine for intestinal mucosa, and the vaccine for respiratory mucosa. Fourth, pay attention to the immune response and the immune index. It is recommended that farms with over 50,000 broilers use an antibody testing equipment. And finally, pay attention to chickens' reactions following the vaccination.

At 8-14 days of age

This week's concerns are to gradually increase the amount of air exchange, pay attention to the balance between ventilation and temperature, and pay attention to the control of immune stress after the immunization of Newcastle disease. In terms of environmental conditions, there are five things to do:

1. Decide whether to change the temperature according to the body condition of the chickens and the season.
2. Try to reach the standard humidity.
3. Increase ventilation according to the weather and season and pay attention to the location of ventilation.
4. Adjust the time and intensity of light to reduce Sudden Death Syndrome.
5. Adjust the density according to the season.

In doing the five things mentioned above, one should center around one major principle: keep the internal environment of the chickens' bodies stable.





At this stage, also pay attention to:

- the mycoplasma disease and excessive immune stress control;
- the immune stress 24 hours after the immunization of Newcastle disease;
- the intestinal reaction: indigestion (overfeeding) or diarrhea and other symptoms;
- the mold, and gastric symptoms (glandular gastritis) caused by immunosuppressive disease;
- the intestinal tract (as the intestinal tract is the largest immune organ of the body and the intestinal mucosa determines the conversion and absorption of feed).

Immunization:

At this stage, focus on the immunization of infectious bursal disease (IBD), including the choice of vaccines and immunization pathways, immunization effects, immunization precautions, and other work priorities in the management of immunization. The immune response to IBD should disappear in 72 hours. Otherwise, it means the bodily resistance of the chickens is too weak or the virulence of the vaccine strain is too strong.

At 15-21 days of age

At this stage, pay attention to the problem of ventilation (e.g. how to change the ventilation method). Pay close attention to chickens' body temperature, the temperature of the front, middle, and back of the chicken house, the speed and direction of the wind on chickens' back, and the humidity of the chicken house. If ventilation is not done appropriately, the day of ventilation will be the onset of the disease. From then on, respiratory symptoms will appear within 3 days, cloudy air sacs will appear within 5 days, and the disease will break out within 10 days. The immunological window period of Newcastle disease is at the age of 10 to 15 days and of avian influenza is at the age of 21 to 28 days. It is important to focus on protecting the chickens during the window period, which determines whether the body will be healthy in the fourth week. Also, focus on the IBD immune response during this time to minimize immune stress.

At 22-28 days of age

The primary work of the fourth week is to master the balance between ventilation and temperature (it is recommended to install a vacuum gauge, so that the negative pressure in the house can be visualized). Meanwhile, this week is also the immunological window period of avian influenza, so it is necessary to balance between ventilation and temperature, achieving a smooth transition, as even a temperature difference of 5°C can trigger an outbreak of the disease, so as to ensure chickens' sustained intake of food.

At 29-35 days of age

This week is the red warning stage. If there are any problems with early management, they will break out during this period. In fact, diseases oftentimes occur because we created opportunities for the pathogen. Insufficient farming management in any aspect can lead to the occurrence of diseases related to that particular aspect. This week's main concerns are avian influenza, Newcastle disease, chickens' body temperature, and the prevention of overfeeding and diarrhea. In general, before chickens turn to 35 days old, the most important thing is ventilation, and the focus should be on controlling chickens' body temperature by adjusting the temperature, humidity and the speed of the wind on chickens' back.

At 35 days – market age

From 35 days old to market age, we should pay attention to the prevention and control of intestinal diseases, such as to prevent the danger of mycotoxins, Clostridium difficile and so on. Meanwhile, we should pay attention to the growth efficiency and the prevention of emergencies. Standardized farms are especially vulnerable to power outages, as blackouts for half an hour may lead to the death of four to five thousand chickens.

To summarize, in broiler farming, healthy chicks, feed with full nutrition, a suitable environment, and healthy bodies are the four indispensable conditions to raise broilers successfully. If the chickens are well managed, there will be less diseases and higher profits. Therefore, it is recommended to pay attention to every detail in your breeding management, learn and summarize from your previous experiences until you find a breeding model that suits your farm the best.

Breeding Guidance: How to Raise Laying Hens Effectively?

Stages of the Laying Period

The laying period of egg-laying hens is generally divided into three stages: The first stage is called pre-laying period, which extends from the time hens are moved to the cages until the egg production rate reaches 5%. The second stage is called peak-laying period, which spans from the 5% egg production rate to approximately 50 weeks of age or until after the peak of production when the rate drops to 70%. The third stage starts from the 50th week until the hens are culled.

Feeding Management

During the laying period, hens are usually fed 2 to 3 times a day with ad libitum feeding. From the time they are moved to the cages until the egg production rate reaches 5%, give them layer starter feed. At this point, the flock has not fully started laying, so the protein content in the diet is lower. From the time when the egg production rate reaches 5% until layers are 50 weeks old, give them peak laying feed. At this stage, the flock is in a robust laying period, thus requiring increased protein, energy, and other nutrients. After 50 weeks, give layers post-peak laying feed. At this stage, the hens' nutritional needs are relatively lower, and even with high-protein feed, there will not be significant increase in egg production. Thus, economically speaking, it is better to feed them post-peak laying feed. The feed in the trough should be spread evenly, and the trough should be cleaned regularly, especially in summer. Wet and dirty feed must be cleaned out completely. Do not overfill the feed (the feed should not exceed one-third of the trough), otherwise there will be waste caused by hens scattering the feed. Drinking water must be clean and fresh. Drinkers or water troughs must be cleaned daily. Nipple drinkers should be checked regularly. If troughs were used during the rearing period, it is important to train the hens to use nipple drinkers after they are moved to the cages. Generally, water consumption is about twice the feed intake.

Standardized and Healthy Breeding of Laying Hens

1. Facilities for Laying Hen Farming

Strict adherence to farming standards is required. Hen houses should be built in high, dry areas with convenient traffic and suitable for waste disposal, along with appropriate greening/afforesting measures. Chicks, mature hens, and laying hens should be reared separately to prevent cross-infection. To avoid overcrowding, there should be fewer than 13 hens per square meter. Additionally, to provide a good growth environment for laying hens, the hen house should be equipped with chicken cages, automatic feeding and drinking systems, exhaust fans, and faeces removal systems. It is also important to maintain suitable temperature, humidity, and lighting levels conducive to the growth of laying hens.

2. Disease Prevention for Laying Hens

To prevent disease, start by selecting healthy and high-quality chicks from licensed and regulated farms. Healthy and high-quality chicks should be able to grow into hens that are physically strong, have high egg production rates, and possess strong resistance to disease. Second, conduct disinfection practices, which should include both personnel and hen house disinfection. Establish disinfection pools at hen house entrances where all individuals must wash and disinfect their hands to prevent external contaminants. Disinfectants should be changed regularly, usually 2 to 3 times a week. Meanwhile, regularly disinfect the surrounding environment of the hen house as well as equipment such as egg baskets, drinkers, and feeders. Third, take infectious disease prevention measures. Properly manage the manure in the layer farm to establish a good ecological breeding environment. Also, handle dead laying hens harmlessly, for example, by constructing a carcass disposal pit in the farm, where all dead bodies are disposed of and sealed or by asking the relevant authorities to handle the bodies professionally.

3. Feed and Medication Safety for Laying Hens

Strictly comply with standards for feed and additives and ensure a scientifically balanced diet that meets the nutritional needs of laying hens. The medication dosage, type, and period should adhere to relevant standards, and the use of unqualified drugs on laying hens is prohibited. Every medication use should be recorded accurately.

During the Early Production Period

1. Vaccination: Currently, immunization using the appropriate vaccines has become an important measure to prevent and control infectious diseases in chickens. When the egg production rate reaches 5%, inject the hens with “oil emulsion inactivated vaccines” (immunity lasts for 6 months) through intramuscular injection. This not only achieves the goal of disease prevention within six months but also effectively avoids any negative impact of immunization on the egg production rate of high-yielding hens.



2. Light Adjustment: To meet the lighting needs of high-yielding laying hens, it is advisable to adjust the lighting during the early production period. Generally, when the egg production rate reaches 10%, begin increasing the light at a constant speed and use 2 to 3 weeks to increase the lighting to 16 hours with a light intensity of 10 to 15 lux. Increasing the light too soon, too quickly, or too intensely can cause strong stress responses in hens.

3. Feed Change: To meet the nutritional needs of high-yielding laying hens, provide feed that meets their physiological needs for them to produce eggs. To avoid or minimize stress caused by feed change, it is recommended to gradually change from little to more, typically over a period of 2 weeks. To reduce the stress response in hens at the start of production, consider adding vitamins A and C to their feed.

4. Flock Adjustment: To improve the uniformity and egg production rate during the high-production period, adjust the flock by weight during the early production period. This adjustment should effectively reduce the occurrence of underdeveloped hens failing to access food, thereby promoting the growth and development of weaker members of the flock.

5. Maintenance: Damaged equipment not only affects the work efficiency of staff but also damages eggs and can even pose a threat to the life and health of the hens. Therefore, strict maintenance of chicken cages and other equipment is required during the early production period to ensure they are in good shape and functioning well.

6. Parasite Control: Both internal and external parasites not only consume nutrients from hens and cause stress in hens, but also provide conditions that facilitate the invasion of pathogens. Therefore, it is necessary to deworm laying hens during the early production period, with common deworming drugs such as ivermectin and levamisole.

During the Peak Production Period

1. Temperature Control: To fully exploit the genetic advantages of laying hens in terms of egg production rate, feed-to-egg ratio, and immunity, it is important to properly control the temperature inside the hen house. High temperatures can cause diarrheal diseases, increasing the feed-to-egg ratio and reducing egg quality, while low temperatures can lead to respiratory diseases, reducing both egg production rate and egg quality. Therefore, the environmental temperature inside the henhouse should be controlled between 16°C and 24°C, ideally around 20°C.

2. Humidity Control: The optimal humidity inside the hen house is between 55% and 60%. Under these conditions, the hens' immunity, egg production rate, feed-to-egg ratio, and egg quality can reach their highest levels. Thus, it is necessary to ventilate and disinfect with sprays at appropriate times to adjust the humidity.

3. Scientific Lighting: Lighting with proper time and intensity control not only maintains a high level of immunity and feed intake in the flock but also effectively enhances the egg production rate and egg quality. Lighting that is too strong or too long can easily induce pecking disorders. Typically, the light intensity inside the henhouse should be controlled at about 15 lux and the lighting time at 16 hours.

4. Timely Egg Collection: Normally, the egg-laying time for hens is concentrated between 9 AM and 12 PM, with only 10% to 20% of eggs laid in the afternoon. Therefore, the first egg collection should be conducted after 12 PM, and the second collection after 4 PM. Timely egg collection not only effectively reduces the chances of egg pecking and damage but also facilitates egg formation and laying by stimulating conditioned reflexes in hens.

5. Feed Nutrition: Choose high-quality feed that meets the nutritional needs of laying hens during the peak production period.

Other Considerations

1. Disinfection: When disinfecting chickens, it is important to correctly select and dilute the disinfectants and strictly adhere to disinfection technical standards to achieve efficient disinfection with minimal stress and side effects.

2. Hygiene: It is recommended to clean and disinfect at least twice a week, and promptly carry out harmless disposal of removed feces and waste.

3. Feed Storage: Store feed in order in a well-ventilated, dry, clean, and sanitary feed warehouse. The warehouse should allow for air exchange and be moisture-proof and waterproof.

4. Preventing Birds, Animals, and Rodents: Take appropriate measures in the hen house and feed storage areas to prevent birds, animals, and rodents from entering.

The Common 8 Causes of Chicken Diarrhea

Diarrhea and watery stool are common symptoms of disease in chicken farms. Once chickens start to have diarrhea, it is likely that the chickens have intestinal problems, which should be taken seriously. Intestinal tract is a very important digestive and immune organ of chicken. Intestinal problems will directly affect the chickens' absorption of nutrients, and long-term insufficient nutritional intake will lead to chicken wasting and immunity decline, result in a waste of feed, and increase the chances of chickens getting other diseases.

1. Coccidiosis

Coccidiosis, particularly infections caused by Eimeria in the small intestine, is one of the main causes of chicken diarrhea. Eimeria species predominantly infest the epithelial cells of the chicken's intestinal mucosa. When they proliferate in large numbers, they lead to pathological changes such as thickening, edema, shedding, and hemorrhage of the intestinal mucosa. These changes prevent the complete digestion and absorption of feed. Moreover, they reduce the absorption of water. Even if the chickens increase water consumption, dehydration may occur. Consequently, the feces of the affected flock are thin and unformed, containing undigested feed.

2. Bacterial infection

Bacteria can cause enteritis and are also one of the causes of enterotoxicosis. Organisms such as Salmonella and Clostridium perfringens damage and stimulate the intestinal mucosa, leading to inflammation which in turn accelerates intestinal motility. Excessive secretion of digestive fluid occurs and, with the feed passing through the digestive tract in less time, this results in poor digestion of the feed.

3. Viral infection

Viruses are also one of the contributing factors to enterotoxicosis. For example, intestinal inflammation caused by rotavirus impairs the absorptive function of the intestines.

4. Imbalance in intestinal pH levels

Factors such as season, feed, and pathogenic microorganisms can make the intestinal flora imbalanced. This results in changes in the intestinal environment, where beneficial bacteria diminish, and harmful bacteria proliferate excessively. The toxins secreted by these bacteria increase, stimulating the intestinal mucosa and accelerating intestinal motility. As a result, there is an increase in the excretion of digestive fluids, which reduces the time for feed to pass through the intestinal tract and causes poor digestion. The undigested feed, along with the shed mucosa, is expelled from the body, resulting in feces with a typical appearance similar to tomatoes or fish intestines.

5. A large loss of electrolytes

The rapid proliferation of coccidia and harmful bacteria leads to poor digestion and impaired absorption in the intestines, which reduces the absorption of electrolytes. Meanwhile, the rapid rupture and disintegration of a large number of intestinal mucosal cells result in a significant loss of electrolytes, leading to physiological and biochemical disorders of chickens and triggering the occurrence of necrotic enteritis. In particular, there will be a substantial loss of potassium ions.

6. Autointoxication

During the process of diarrhea, a large number of intestinal epithelial cells rupture. Under the action of bacteria, these cells decompose and putrefy. Then, they ferment and decompose along with the shedding of the intestinal mucosa and the dead bodies of parasites within the body, producing a large amount of toxic substances in the body. Meanwhile, toxins secreted by abnormal bacterial flora in the intestines are absorbed by the body, leading to autointoxication. Symptoms such as agitation, screaming, paralysis, and exhaustion leading to death may occur. These are also the main manifestations of enterotoxicosis.

7. Feed

Excessive energy, protein and certain vitamins in the feed can promote the proliferation of bacteria and coccidia, aggravating the diarrhea. Alternatively, too much salt, or excessive nutrition, nutritional imbalance may increase the incidence of diarrhea and aggravating the symptoms. In addition, moldy feed can also aggravate the symptoms.

8. Farming management, drug poisoning, etc.

In farming management, unreasonable temperature and humidity levels in the chicken house can cause the chickens to drink excessive amounts of water. Alternatively, unreasonable use of medications, or long-term use of medications that leads to drug accumulation, can damage the intestinal mucosa and cause enteritis.

In short, there are various causes of chicken diarrhea and other intestinal diseases. The key to solving the problem is to find the right cause and give treatment accordingly.

740 Tilapia Starter



SUITABLE FOR TILAPIA FRY WEIGHED 0.01-5G

This high-protein feed is carefully developed and crafted from selected raw materials and optimized processes, specially tailored for your tilapia. The product is rich in amino acids, fatty acids, and other essential growth factors. It maximizes the growth potential of juvenile fish while also providing excellent growth performance, laying a solid foundation for the growth phase of tilapia fry.



Breeding Recommendations

1. This product can be used directly. It is recommended to feed 4-6 meals daily at regular times and locations, with a daily feeding rate of 6-10%.

2. It is recommended to follow the "slow-fast-slow" principle for feeding rhythm, with each meal lasting 30-40 minutes until fully consumed. Generally, feed until the fish are 70-80% full.

3. The suitable temperature range for tilapia growth is 23-28°C. On sunny days with high dissolved oxygen, more feed can be given; when the water temperature is too high or too low, during rainy weather, or when dissolved oxygen is low, reduce or stop feeding.

4. This product should be stored in a ventilated, cool, and dry place. After opening, the packaging bag should be tightly sealed to avoid moisture, exposure, and other contamination.

5. Changes in the sensory properties (color, etc.) of the product do not affect the quality, so the feed can be used with confidence.

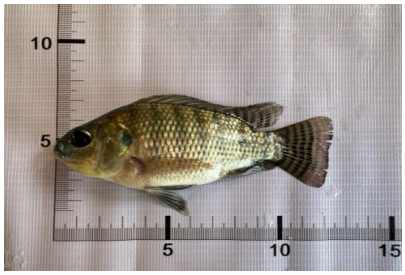
6. If the feed shows signs of mold or other quality changes, stop using the feed immediately.

NUTRIENT VALUE COMPOSITION (%)

Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Crude Fat (≤)	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
40	16	3	5	0.6-2.0	0.2-2.0	2.5	12

738 Tilapia Starter

SUITABLE FOR TILAPIA WEIGHED 5-50G



This 1mm floating feed starts the growth journey of your tilapia fry. The product is carefully developed using high-quality raw materials and features high protein content, rich in amino acids, fatty acids, and other essential growth factors, providing critical nutrition for the early development of fry. The product has high palatability and strong attractant properties, ensuring your fish achieve excellent growth performance, enhanced immunity, and survival rates during early growth stages. It is a reliable choice for your initial breeding phase.



Breeding Recommendations

1. This product can be used directly. It is recommended to feed 3-4 meals daily at regular times and locations, with a daily feeding rate of 4-8%.

2. It is recommended to follow the “slow-fast-slow” principle for feeding rhythm, with each meal lasting 30-40 minutes until fully consumed. Generally, feed until the fish are 70-80% full.

3. The suitable temperature range for tilapia growth is 23-28°C. On sunny days with high dissolved oxygen, more feed can be given; when the water temperature is too high or too low, during rainy weather, or when dissolved oxygen is low, reduce or stop feeding.

4. During the transitional growth stages of the fish, while ensuring normal feeding, appropriately mix other sizes of feed in certain proportions and feed flexibly.

5. This product should be stored in a ventilated, cool, and dry place. After opening, the packaging bag should be tightly sealed to avoid moisture, exposure, and other contamination.

6. Changes in the sensory properties (color, etc.) of the product do not affect the quality, so the feed can be used with confidence.

7. If the feed shows signs of mold or other quality changes, stop using the feed immediately.

NUTRIENT VALUE COMPOSITION (%)

Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Crude Fat (≤)	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
38	16	6	5	0.6-2.0	0.2-2.0	2.5	12

735 Tilapia Grower



SUITABLE FOR TILAPIA WEIGHED 50-150G

This 2mm floating feed is made from selected raw materials, providing precise and comprehensive nutrition with high palatability and attractant properties. While meeting all the nutritional needs of the fish, this product ensures stable and rapid growth, laying a solid foundation for the edible protein part of the tilapia. It is highly effective in promoting muscle development, enhancing the vitality and immunity of the tilapia.



Breeding Recommendations

1. This product can be used directly. It is recommended to feed 3-4 meals daily at regular times and locations, with a daily feeding rate of 4-6%.

2. It is recommended to follow the “slow-fast-slow” principle for feeding rhythm, with each meal lasting 30-40 minutes until fully consumed. Generally, feed until the fish are 70-80% full.

3. The suitable temperature range for tilapia growth is 23-28°C. On sunny days with high dissolved oxygen, more feed can be given; when the water temperature is too high or too low, during rainy weather, or when dissolved oxygen is low, reduce or stop feeding.

4. During the transitional growth stages of the fish, while ensuring normal feeding, appropriately mix other sizes of feed in certain proportions and feed flexibly.

5. This product should be stored in a ventilated, cool, and dry place. After opening, the packaging bag should be tightly sealed to avoid moisture, exposure, and other contamination.

6. Changes in the sensory properties (color, etc.) of the product do not affect the quality, so the feed can be used with confidence.

7. If the feed shows signs of mold or other quality changes, stop using the feed immediately.

NUTRIENT VALUE COMPOSITION (%)

Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Crude Fat (≤)	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
35	14	8	5	0.6-2.0	0.2-2.0	2	12

730 Tilapia Grower



SUITABLE FOR TILAPIA WEIGHED 150-300G

This 3mm floating feed is specially designed for the highest growth rate stage of tilapia. The product uses selected raw materials and precise formulations to provide balanced and rich nutrition for your tilapia. The high conversion rate of the nutrients ensures maximum muscle development and accumulation, laying a solid foundation for high-quality tilapia meat. Additionally, the high uniformity of the feed ensures stable nutrient intake for the tilapia, guaranteeing rapid growth during this stage.



Breeding Recommendations

1. This product can be used directly. It is recommended to feed 3 meals daily at regular times and locations, with a daily feeding rate of 2.5-4.0%.

2. It is recommended to follow the “slow-fast-slow” principle for feeding rhythm, with each meal lasting 30-40 minutes until fully consumed. Generally, feed until the fish are 70-80% full.

3. The suitable temperature range for tilapia growth is 23-28°C. On sunny days with high dissolved oxygen, more feed can be given; when the water temperature is too high or too low, during rainy weather, or when dissolved oxygen is low, reduce or stop feeding.

4. During the transitional growth stages of the fish, while ensuring normal feeding, appropriately mix other sizes of feed in certain proportions and feed flexibly.

5. This product should be stored in a ventilated, cool, and dry place. After opening, the packaging bag should be tightly sealed to avoid moisture, exposure, and other contamination.

6. Changes in the sensory properties (color, etc.) of the product do not affect the quality, so the feed can be used with confidence.

7. If the feed shows signs of mold or other quality changes, stop using the feed immediately.

NUTRIENT VALUE COMPOSITION (%)

Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Crude Fat (≤)	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
30	12	8	5	0.6-2.0	0.2-2.0	1.8	12

730L Tilapia Finisher



SUITABLE FOR TILAPIA WEIGHED ABOVE 300G

This 4mm floating feed is specially designed for the highest growth rate stage of tilapia and for the tilapia harvest. The product uses selected raw materials and precise formulations, supporting your tilapia to achieve optimal muscle development while obtaining the final harvest with a feed conversion ratio below the market average. This product not only helps your tilapia increase growth rates, optimize appearance and meat quality, but also enables your tilapia to reach the market earlier, maximizing your breeding profits.



Breeding Recommendations

1. This product can be used directly. It is recommended to feed 2-3 meals daily at regular times and locations, with a daily feeding rate of 1.5-3.0%.

2. It is recommended to follow the “slow-fast-slow” principle for feeding rhythm, with each meal lasting 30-40 minutes until fully consumed. Generally, feed until the fish are 70-80% full.

3. The suitable temperature range for tilapia growth is 23-28°C. On sunny days with high dissolved oxygen, more feed can be given; when the water temperature is too high or too low, during rainy weather, or when dissolved oxygen is low, reduce or stop feeding.

4. During the transitional growth stages of the fish, while ensuring normal feeding, appropriately mix other sizes of feed in certain proportions and feed flexibly.

5. This product should be stored in a ventilated, cool, and dry place. After opening, the packaging bag should be tightly sealed to avoid moisture, exposure, and other contamination.

6. Changes in the sensory properties (color, etc.) of the product do not affect the quality, so the feed can be used with confidence.

7. If the feed shows signs of mold or other quality changes, stop using the feed immediately.

NUTRIENT VALUE COMPOSITION (%)

Crude Protein (≥)	Crude Ash (≤)	Crude Fiber (≤)	Crude Fat (≤)	Total Phosphorus	Sodium Chloride	Lysine (≥)	Moisture (≤)
30	12	8	5	0.6-2.0	0.2-2.0	1.8	12



Thank You

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