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Formulated to Produce Top-Quality Birds

PREMIUM QUALITY NUTRITION HOMESTEAD

Homestead Poultry Feeds

The foundation for Hubbard's Homestead Poultry feeding program was laid over 100 years ago, when the first bag of Sunshine Feed was sold in October of 1918. Known then as Hubbard Milling, the company began developing its reputation for quality products utilizing the principles of sound nutrition, responsible animal husbandry and reliable ingredients. Today, Hubbard, the leading feed manufacturer in food safety, takes feed security to the next level. The Homestead brand provides assurance for producers and marketers who value traceability, safety and reliability.

Your animals are important to you and us, which is why we pride ourselves on providing top-quality nutrition that contributes to optimal health. Formulated by a team of leading nutritionists, Hubbard delivers first-rate protein, minerals and nutrients designed to meet the growth, performance and health needs of your animals. You can trust Hubbard Homestead Poultry Feed as the best choice for the animals you care for — and care about.

Homestead Poultry Feeds are made only with high-quality grains and contain no animal proteins or fats. These grains are balanced with vitamins and organic trace minerals to encourage optimal growth and performance. Formulated with selenium yeast for immunity and overall health support, Homestead Poultry Feeds are the wholesome way to provide premium nutrition to your flock.

DUCKS & GEESE

Waterfowl need somewhat less heat than chickens. In their first week of life, their environment should be heated to 90° F. This temperature can be lowered in five-degree increments each week until their fifth week, after which they are usually ready to live without supplemental heat.

Bedding

Do not use wood shavings for birds less than two weeks old, as they are more likely to consume the shavings and get blocked up. Try to avoid using slick surfaces like newspapers; if you must use them, spread paper towels over the newspapers for the first few days. Since they are so unsteady at first, goslings are prone to a condition called splay-leg, or spraddle legs, so it is important for them to have good footing immediately after hatching. During warm weather, spending some time walking on grass each day can be very good for their legs — plus, they'll begin eating grass.

Water

A constant supply of fresh water is necessary for ducklings and goslings. For the first week, a chick waterer works well. After that, however, they are too large to submerge their heads and clean their faces in the water, which all waterfowl must be able to do. Avoid using a bowl of water. Here's why: First, ducklings and goslings may walk in their drinking water and/or leave droppings in it. Second, if they stay wet, they may catch a fatal cold. Provide a waterer that is deep enough for older ducklings and goslings to submerge their heads in but not deep enough for them to get inside or tip over. If a waterer does tip over, you will have a mess of wet litter and chilled babies on your hands. Commercial brooders for waterfowl provide a water trough outside the brooding area that the youngsters can reach by sticking their heads between wire bars. These bars are adjustable to allow for growth. One DIY method is to take a flat pan and get some wire that the birds can reach through. You bend the wire into a cylinder that just fits in the pan and attach it so the youngsters can't move it. This creates a small "pond." They can't get in, but they can put their heads in. A heavy rock in the center prevents tipping. Just remember that waterfowl naturally want to play in water, and as their surrogate parent, you must keep this under control for the first few weeks. You should also be prepared to cycle through several soggy cardboard boxes, even in the most ideal watering situations.

Swimming

A mother duck or goose knows just how long to let her kids swim, when to take them out of the water and when to warm them and let them dry, but we aren't always privy to this knowledge. If you want to watch your ducklings or goslings swim, set up a "swimming hole" away from their brooder in a warm place and let them swim (under your supervision) for short periods of time each day. You can start doing this once they are 2–3 days old. While they're little, the water should ideally be around room temperature. Also, take extra care to provide a ramp with good traction so that they can easily get out of the water; without it, they could tire and eventually drown. After they swim, dry and return them to a warm, draft-free brooder. You can start doing this after they're 2-3 days old. It's best if the water is room temperature while they're little.

Feed

Waterfowl often fill their mouths with feed and then hurry to the waterer to get a big drink and wash it down. Therefore, you don't want the water too far from the feeder, or they'll drop all the feed on their way there. Don't place the water too close to the feed either, since doing so can make the feed too wet and lead to the development of toxic molds. Try to set up your feeder so the youngsters can't climb into it. Feed should be available at all times. Use a crumbled feed like Homestead Duck & Goose. Supplement goslings' diets with fresh grass clippings or lettuce. Ideally, when it's warm outside, ducklings and goslings should be able to run a short distance every day so they can pick their own grass — but if they get greens, they should also be provided grit.

Warning: Never give young waterfowl medicated chick feed; ducklings are voracious eaters and could easily overdose and die by consuming medication that is only correctly proportioned for chickens.



DISEASE

Keeping your birds healthy is a top priority. Preventing diseases is better than treating them. Below are some common diseases a n d prevention recommendations, as well as practical suggestions for backyard biosecurity.

Coccidiosis is a disease caused by the coccidia parasite. This disease is common in chickens and turkeys, as well as otheranimals.Homestead Feeds offers a parasite-control option that includes amprolium to aid in developing immunity to this disease. Chickens should have a coccidiostat in their feed until they reach 12 weeks of age.

Marek's Disease affects the nerves and visceral organs of the chicken, resulting in paralysis and tumors of the internal organs. Layers and breeding birds should be vaccinated against this disease at the hatchery.

Fowl Pox is a virus that causes skin lesions on unfeathered body parts and, sometimes, on wet tissues, like the mouth. This disease causes slow growth and reduces egg production. If there is a history of pox on the farm or in the area, you should vaccinate the chickens at 8–10 weeks of age, followed by an annual booster.

Exotic Newcastle Disease (END) is a contagious and fatal viral disease affecting all species of birds. END is probably one of the most infectious diseases of poultry in the world. It impacts the respiratory, nervous and digestive systems. Vaccinate birds at 10–14 days and again at 5 weeks of age, with a third booster at 16 weeks for layers and other older birds.

Blackhead is a disease caused by protozoan shed through feces. It causes loss of appetite, droopiness and poor growth. The best way to prevent blackhead is to avoid co-mingling turkeys and gamebirds with chickens. Treatment of Blackhead is only treated by veterinary prescription.

DISEASES THAT AFFECT CHICKENS						
TREATMENT TYPE						
Feed	1st Vaccination	2nd Vaccination	3rd Vaccination			
	Day 1					
	Day 10–14	Week 5	Week 16			
	Week 8–10	Annual				
Amprolium		Booster				
	Feed Amprolium	Feed 1st Vaccination Day 1 Day 10–14 Amprolium	ESTHAL AFFECT CHICKENS TREATMENT TYPE Feed 1st Vaccination Day 1 2nd Vaccination Day 10–14 Week 5 Week 8–10 Annual Booster			

BACKYARD BIOSECURITY

Do everything you can to protect your birds from disease, including following our six major

tips for backyard biosecurity — which mostly come down to simple but informed common sense:

- Keep your distance Restrict access to your property.
- Keep it clean Clean your clothes and shoes, wash your hands and disinfect your equipment.
- Don't haul disease home Clean poultry cages and isolate show birds.
- Don't borrow disease from your neighbor Don't share birds or equipment.
- Know the signs of infectious diseases Early detection is important.
- Report sick birds Diagnosing and reporting diseases helps prevent epidemics.

Note: Do not give any medicated feed to waterfowl, since they may react negatively to some antibiotics and coccidiastats.

Committed to Quality and Food Safety

PREMIUM QUALITY NUTRITION

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REMIUM QUALITY NUTRITION

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You can rest assured about the quality of our product by knowing that Hubbard's commitment to human food safety goes beyond that of any other North American feed company. Our facilities demonstrate and ensure continuous improvement to the delivery of safe and nutritious livestock feed.

Hubbard maintains quality principles through the Alltech Quality System (AQS), our parent company's quality program, which is subject to internal auditing for compliance. It ensures our products are made the same way every time and according to quality standards.

What does this mean for you? Dependability, reliability, traceability — in a word, trust.

17% Crude Protein

PREMIUM QUALITY NUTRITION

lated to Produce Top-Qualit

Homestead Layer is a nutrient-dense, carefully balanced diet for laying hens that contains no antibiotics, animal proteins or animal fats.

Designed to promote eggshell quality and yolk color, Homestead Layer contains all of the ingredients hens need to maintain both a healthy skeleton and produce strong-shelled, healthy eggs. Specially formulated ingredients included in Homestead Layer help hens produce rich, yellow egg yolks.

MOLTING

Molting is a natural process that occurs at the end of the first production cycle. During this period of rest, birds do not lay eggs; they also lose their feathers and begin to grow new ones. While molting is natural, it can also be caused, either accidentally or on purpose, by the sudden withdrawal of feed or water, a decrease in light, and exposure to extreme temperatures or disease. A second production cycle begins after the birds have rested for 4–8 weeks, and while this cycle will not produce as many eggs, these eggs are often larger.

CULLING

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All of the conditions listed on the previous page can and should be corrected immediately. Remove the affected birds so they don't become targets of aggressive behavior. Finally, provide access to plenty of space and exercise. Distractions like bugs and plants allow birds to express natural behaviors in acceptable, healthy ways. This is just one reason why some producers prefer raising chickens in a free-range style.

Knowing when to cull a bird based on its production performance is fairly straightforward, and several indicators can lead to that decision. Non-layers have dull combs, compared to the bright red combs of healthy layers. Their vents (i.e., where the eggs come out) are small and dry, unlike active layers' larger vents. In non-layers, the distance between pubic bones is only 1-2 finger-widths, while 3-4 fingers can easily fit between the pubic bones of birds in laying condition. Birds that are not culled because of illness are still considered good meat products.

BEHAVIOR

Chickens have the unfortunate ability to become cannibalistic when stressed. A bird experiencing stress will start picking at other birds' feathers, vents and/or other areas, and this behavior can quickly become a nasty habit that spreads rapidly throughout flock. the

Stressful conditions, which can cause this type of behavior to manifest at any age, are usually management-related. Stressors that typically lead to cannibalism include:

- High light intensity (see section on light recommendations)
- Overcrowding (see section on space requirements)
- High temperatures
- Sudden changes e.g., mixing new birds into existing populations, suddenly changing rations, changes to facilities



Poor ventilation

- · Interruption of access to feed and water
- Improper rations

Recommended H

EGG PRODUCTION

Healthy birds start laying eggs at 18–20 weeks of age and peak at about 30 weeks, with 80–90 percent of birds laying each
day at that time. Roosters do not need to be present for hens to lay eggs; however, if fertilized eggs are needed for hatching,
or if eggs will be going to a fertile egg market, roosters must be present. Importantly, though, hens achieve greater lay rates
when they are not housed with
a rooster.

Egg Collection

Collect eggs frequently. Although hens only lay one egg per day, collecting eggs twice daily — and even more often than that when the weather is hot — helps ensure that the eggs are cleaner and fresher and also helps hens avoid developing bad habits, like egg-eating.

Cleaning and Storing

If you plan to hatch eggs, store them at 50° F and 70-percent humidity. Avoid excessive cleaning, as this can destroy the eggshell's natural protective coating. Always wash with water that is warmer than the egg, and use detergents designed specifically for eggs. If you plan to eat the eggs, refrigerate them as quickly as possible to maintain freshness.

NUTRITION

Good-quality feeds provide energy and nutrients that simultaneously help birds grow and produce eggs. Diluting good feed with other grains jeopardizes egg production and bird health. Balanced rations are necessary to provide enough minerals to keep their bones strong and to produce hard eggshells. Feeding the correct amount of a good-quality feed allows each bird to meet its full genetic potential for egg size and production.

Grit is an insoluble material that aids the birds' digestion. Birds use grit in their crops to help grind feedstuffs into smaller particles so that it can be digested further down the alimentary tract. Limit the intake of grit to one pound per 100 pounds of feed, or two pounds free-choice, per 100 birds each week. Supplying grit is optional, however, when using modern feeds such as Homestead Poultry Feeds.

the use of grit is optional.

Water is the birds' most important nutrient. Poultry should be able to access as much clean, fresh water as they can drink.





Homestead Premium Quality Poultry Feeds



Feedi			
S e er	Turkeys All Types	Chick-En-Egg® Concentrate	
			0 weeks of age
			1
			2
			3
			4
			5
			6
			7
	\otimes		8
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			20
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			22

- Homestead Poultry Developer
- Homestead Layer
- Homestead FastGrow
- Homestead Duck & Goose
- Homestead Turkey Starter
- Homestead Chick-En-Egg Concentrate



OULTRY DEVELOPER

16% Crude Protein

Homestead Poultry Developer is designed for raising chicks from hatching through laying age (16–18 weeks) or until maturity. Homestead Poultry Developer contains no animal proteins or animal fats.

Homestead Poultry Developer contains Opti-Remedy, a source of essential oils designed to promote the growth of good bacteria and improved gut health. Homestead Poultry Developer also contains selenium yeast, which supports the chick's immunity and health.





18% Crude Protein

Homestead Duck & Goose is specifically designed for ducks and geese and is formulated to produce top-quality birds. Homestead Duck & Goose contains no antibiotics, no animal proteins and no animal fats.

Homestead Duck & Goose provides birds with the fortification needed for sound skeletal growth and optimal nutrition.

Homestead Duck & Goose contains Opti-Remedy, a source of essential oils designed to promote the growth of good bacteria and improved gut health.



MATURE BIRDS

Space & Equipment Requirements

As your flock matures, stay aware of their space requirements. Many types of facilities are adequate, as long as they offer protection from predators and weather, but it is also important to provide adequate space so the birds are comfortable. Even free-range birds need protection, so consider the space requirements for their short-term confinements.

Roosts

Layers naturally like to roost. Take advantage of this behavior by providing a roosting area, which concentrates the droppings and makes them easier to catch. Roosts can be made from round dowels measuring 1–1.5 inches and spaced 12 inches apart. Provide 6 inches of roost space for each bird, and give the birds access to the roosts when they are young.

Note: Roosts aren't essential for meat birds and could even contribute to foot and leg problems, as well as breast blisters.

Nests

Nesting is an important daily activity for laying hens, so be sure to provide proper, well-bedded nests in the darkest part of the room, as this helps prevent floor eggs. Provide one nest for every four hens. Since hens compete for the nests, make sure they are all uniform; if all of the hens prefer one box, this can lead to increased competition, which encourages poor behaviors like egg-eating and floor-laying. Adequate nests help prevent dirty and broken eggs.

Temperature

The optimum temperature for birds over four weeks of age is $65-75^{\circ}$ F. When the temperature goes above or below this range, production, growth rate and efficiency can suffer. Adequate fresh air movement is essential to helping control t e m p e r a t u r e , ammonia, humidity, dust, disease and litter conditions. While mature birds can withstand some cold temperatures rather well, summer heat stress can be critical and may necessitate providing 5–10 times more ventilation than normal. Keep this in mind even if you are raising free-range birds that are confined at night for their protection.

LIGHT

Light is an important function in hormone production, which allows hens to lay eggs. In fact, light is important throughout a bird's entire life, from hatching onward. For the first week, chicks should have light provided constantly, 24 hours a day.

From the second week through the sixth, pullets need 16 hours of light every day, but this can be reduced to 13 hours a day for the following six weeks. Beginning at 12 weeks of age, pullets need 10 hours of light every day, until they are 18 weeks old. Provide adequate light — that is, 25 watts for every 200 square feet of floor space. This is also enough light for growing meat birds.

Once the birds begin laying, increase the light hours by half an hour each week, up to a maximum of 16 hours. For every 24 hours, laying hens require a minimum blackout resting period of eight continuous hours. One 40-watt bulb per 100 square feet of floor space is adequate to keep birds laying. As long as they are provided a minimum 14 hours of natural light, meat birds will grow just fine.



EQUIPMENT REVIEW

- Feeders one inch of feeder space per chick
- Egg flats or sheets of paper
- Waterers
- Heat lamps minimum of two; one for every 75 chicks
- Litter/shavings
- Brooder guard cardboard, wood, plastic; 18-24 inches tall
- Sanitizer/disinfectant for cleaning the facility
- Proper feed
- Scoop, shovel or pitchfork for cleaning

SPACE REQUIREMENTS							
Bird Type	Age (Weeks)	Floor (sq. ft.)	Feeder(in.)	Water (in.)			
Chicks Ducklings & Goslings	0–1	0.1 0.5	1.0 1.0	0.25 0.5			
Chicks Ducklings & Goslings	2–6	1.0 2.0	2.0 3.0	0.5			
Growing Chickens, Pullets	6–20	2.0	3.0-4.0	1.0			
Mature Chickens Brown Egg Layers White Egg Layers	over 20	2.5 2.0					
Turkeys Ducks (confined) Geese (confined)		3.0–4.0 3.0 5.0					
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HOMESTEAD

Homestead FastGrow[®] is designed for raising chicks from hatching until they reach maturity or go to market. Homestead FastGrow contains no animal proteins 0 animal fats.

meat-type chicks.

health.



Homestead Turkey Starter is a nutrient-dense, carefully balanced diet for raising turkeys until they reach 9–10 weeks of age. Homestead Turkey Starter contains no antibiotics or animal proteins.

Homestead Chick-En-Egg[®] Concentrate is a nutrient-dense and carefully balanced product that allows for the use of local grains to make rations for starting and growing chicks, laying hens or broiler-type birds. Homestead Chick-En-Egg contains no antibiotics or animal proteins.





20% Crude Protein

Homestead FastGrow contains Opti-Remedy, a source of essential oils designed to promote the growth of good bacteria and improved gut health. Homestead FastGrow also contains selenium yeast, which supports chick immunity and

Homestead FastGrow contains the energy and fortification needed by broilers or



26% Crude Protein: Turkey Starter 38% Crude Protein: Chick-En-Egg® Concentrate

Poultry Management Tips

PREPARATION FOR RECEIVING CHICKS

As with any young animal, the care that chicks receive early in their lives may determine how they cope with challenges I a t e r . Our team of experts have provided recommendations for giving your chicks a healthy start.

Housing

Clean facilities are a necessity. Clean, disinfect and air out the building. Let it sit empty for two weeks to dry out and help b r e a k disease cycles.

• Choose a building or area that allows for easy management of drafts and temperatures and that provides an adequate source of

electricity for heat lamps.

- Plan on using one lamp for every 75 birds, with a minimum of two lamps (in case one burns out).
- Use an 18–24-inch brooder guard to keep the chicks close to heat, feed and water for the first few days.
- A brooder guard 6–10 feet across is sufficient for 100 chicks.
- Place lamps 20 inches above the litter so that the temperature will be 90–95° F at chick-level.
- Turn on the lamps 24 hours before your chicks arrive to warm up their environment.
- Secure the heat sources so they cannot be moved or dropped too close to flammable moterial AREA

Check on the chicks often to ensure they are comfortable. Chicks need enough room to regulate their body temperature by moving toward or away from the heat source. Casually observe the chicks as they huddle or spread to determine whether or not the headers are correctly adjusted. After a few days, once the birds have learned to find the heat, you can expand the brooder guard to allow them to escape the heat if necessary and begin adjusting to cooler temperatures. You can begin reducing the temperature by five degrees each week, until reaching the minimum 55° F. Watch the birds for behaviors that indicate their comfort level. For instance, if they huddle together under the lamps, they are too cold, but if they all move toward the brooder guard, they are too hot.



Litter

If you brood chicks on the floor, put down a three-inch base layer of clean, dry litter. To limit excessive litter consumption, avoid sawdust or other fine litter for the first few weeks. Additionally, it is good practice to put a burlap cloth, cheesecloth, newspapers or paper towels over the litter for the first week so the chicks can learn to distinguish feed from litter.

In small brood boxes or coops, it may be easier to line the bottom of the brooding area with 5–10 pages of newspaper as a base. Then, for traction, put a layer of paper towels on top. When the brooder gets dirty, just roll up the top three sheets of

WATER & FEED

Fill the waterers four hours prior to the arrival of your chicks, and allow the birds to drink for 3–4 hours before offering them their first feed. Provide one quart of water for every 25 chicks. Place the waterers near the outside of the brooder guard so the water remains cool and clean. Dipping the beaks of a few of the birds in the water will encourage the others to drink, too.

Chicks should be able to reach — but should not be in danger of falling into — the waterers, so choose them wisely. For bantams, poults, game birds and other miniature fowl, place marbles or pebbles in the water trays so that they can drink without falling in and drowning. Don't let young waterfowl swim freely in the water until they are totally feathered. Empty, clean and refill the water wat

waterers daily. Sprinkle dry litter around the waterers. If the litter becomes wet, remove it from the area and add clean, dry litter, as damp litter is an ideal breeding ground for disease and parasites.



Offer fresh Homestead[®] Feed. Encourage the chicks to eat by placing some feed in egg flats or in small piles on sheets of paper. On the second day, place regular feeders in the pen, and remove the messy papers and egg flats a few days later. Keep the feeders clean.

