

# PEN PALS<sup>®</sup>

CHICKEN FEEDS



From hatch to harvest,  
Pen Pals<sup>®</sup> Chicken Feeds makes backyard  
poultry raising easy and productive.

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**PEN PALS**  
CHICKEN FEEDS

**THE CHICKEN GUIDE**  
**Your Guide to Raising Chickens**  
**for Eggs, Meat and Fun**



## Chicken Ownership

A 2012 study by The Livestock Conservancy estimated 3% of all US households owned chickens. That would equate to more than four million US homes. The study also projected the percentage of households owning chickens could double in just one year. The popularity of chicken ownership continues to thrive today and the outlook for the future shows a strong demand for chickens.

Chickens are becoming known more as a type of extended pet. While it would not be ideal to truly treat them as a pet, owners have an enjoyable experience as they watch them scratch around in the dirt, peck at bugs and grow into beautiful adult birds with some featuring some of the most beautiful colored feathers with unique designs.

The trend to eat healthier foods continues to grow, and the chicken certainly fits well into this desire. Knowing where your food comes from and directing how your food was raised and treated are two benefits chicken ownership can offer. Whether raising chickens for eggs or meat, chicken owners can ensure quality feed is consumed by their chickens and can ensure their chickens were raised in a clean environment with fresh air.

One of the main reasons people raise chickens is for the daily fresh eggs a chicken can provide. With proper management, one single chicken can lay nearly an egg a day. Chicken ownership is a great way to ensure you have fresh, nutrient-rich eggs for you and your family.

Chicken waste can also serve as a natural fertilizer for your lawn. When composted, the waste offers a boost of nitrogen! In addition, chickens love to scratch in the dirt and eat ticks and bugs in your yard. They are natural insect predators!

Since chickens are active, it is extremely important that they receive quality, nutrient-rich feed to produce eggs and meat. With the complete line of ADM Pen Pals chicken feed, you can be assured that your chickens will always receive vital nutrients at all stages of its life.



## Chicken Nutrition

The success of any layer flock depends upon proper pullet rearing. A properly developed pullet will always outperform a poorly raised pullet. It is extremely important for you to feed your birds correctly, starting the first day they arrive right through the laying cycle.

Free ranging chickens, or chickens that freely roam around your property, will greatly benefit from supplemental feed. While chickens can get nourishment by eating grass and bugs, a supplemental ADM Pen Pals feed should be offered at all times. Pen Pals chicken feed will provide nutrition to ensure your laying hens offer calcium-rich, strong egg shells uniform in size and shape.

Chickens that are raised in a coop will be solely dependent on you to provide them a quality feed for their nourishment. The nutritionists at ADM continue to develop the highest quality feed available today.

A balanced formula of all nutrients is essential for the health, growth, reproduction, and maintenance of the chicken. Pen Pals chicken feed ensures an ideal balance of these and other natural ingredients are available for every type of chicken you are raising.

### **Fresh Water**

In addition to quality Pen Pals chicken feed, chickens need to stay hydrated and should always have a source of clean, fresh water.



## Pen Pals® Chicken Program: Feed for wholesome, healthy and stress-free birds

From hatch to harvest, Pen Pals makes raising chickens easy and productive.

Pen Pals poultry feed products are reliable choices for your backyard flock. The Pen Pals brand is supported by well over 100 years of feed formulation history. Pen Pals formulated feeds always covers the essential needs of nutrition for chicks, pullets, layers and broilers (plus turkeys, ducks and geese) with wholesome ingredients to promote healthy, productive birds.

Pen Pals Chicken Feeds are formulated to allow birds to efficiently develop strong, healthy bodies permitting maximum egg and meat production after maturity has been reached.

Pen Pals performance-focused poultry products:

- **Complement protein quality** – Lysine and methionine amino acids
- **Accurate calorie content** – For ideal bird growth
- **Wholesome Choice** – Vegetable-sourced ingredients without added hormones, antibiotics\*, animal products, animal by-products, artificial flavors or colors

*\*For customers that prefer, medicated options are available.*





# PEN PALS

CHICKEN FEEDS

WHOLESOME  
CHOICE



## Chicken Starter/Grower

- A complete ration designed to meet the needs of domestic chickens from 0 to 20 weeks of age.
- Crumbled to reduce waste and ensure each bird receives a balanced diet.



# Pen Pals Chicken Starter Grower (70009AAA)

Chicken Starter-Grower is a highly digestible, 18% protein, 3% fat, complete feed formulated for starting and growing pullets and cockerels. It contains high-quality grain sources for energy, multiple protein sources, and needed minerals and vitamins for efficient growth. This feed is available both non-medicated and medicated with amprolium and bacitracin to promote growth, efficient feed conversion, and to prevent coccidiosis. The crumble form encourages consumption in the critical early growth and development stage.

## GUARANTEED ANALYSIS

Crude Protein, Min. ....	18.0%
Lysine, Min. ....	0.9%
Methionine, Min. ....	0.3%
Crude Fat, Min. ....	3.0%
Crude Fiber, Max. ....	7.0%
Calcium (Ca), Min./Max.....	1.0-1.5%
Phosphorus (P), Min. ....	0.6%
Salt (NaCl), Min./Max.....	0.3-0.8%
Vitamin A, Min. ....	4,100 IU per lb

## INGREDIENTS

Grain Products, Processed Grain By-Products, Plant Protein Products, Calcium Carbonate, Monocalcium Phosphate, Dicalcium Phosphate, Roughage Products, Salt, Vegetable Oil, Extracted Citric Acid Presscake, Manganous Oxide, Manganese Sulfate, Zinc Oxide, Zinc Sulfate, Copper Sulfate, Calcium Iodate, Ferrous Sulfate, Lignin Sulfonate, Sodium Propionate (A Preservative), Vitamin A Supplement, Vitamin D3 Supplement, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Riboflavin Supplement, Niacin Supplement, Calcium Pantothenate, Thiamine Mononitrate, Vitamin B12 Supplement, Biotin, Pyridoxine Hydrochloride, Folic Acid, Dehydrated Aspergillus Niger Fermentation Product, Sodium Selenite, Zinc Amino Acid Complex, Choline Chloride, Dried Trichoderma reesei Fermentation Product, DL-Methionine, d-alpha Tocopheryl Acetate (Source of Vitamin E.)

## FEEDING DIRECTIONS

Feed continuously as the sole ration to replacement chickens. Provide clean, fresh water at all times.



# PEN PALS

CHICKEN FEEDS

WHOLESDOME  
CHOICE



## Egg Maker

- Provides needed protein for maximum egg production and to maintain feather cover.
- Provides nutrients necessary for maximum egg production and for a properly functioning immune system, which is vital to good health.
- Product form helps reduce feed waste and facilitates better feed efficiency.



# Pen Pals Egg Maker Complete (70010AAA)

Egg Maker Complete is designed to meet the complete nutritional needs of domestic layers in production. No additional grain, protein, mineral, or vitamin sources are needed. It is a 16% protein, 3% fat pelleted feed to support maximum egg production. Provide clean, fresh water at all times.

## GUARANTEED ANALYSIS

Crude Protein, Min. ....	16.0%
Lysine, Min. ....	0.7%
Methionine, Min. ....	0.32%
Crude Fat, Min. ....	3.0%
Crude Fiber, Max. ....	6.0%
Calcium (Ca), Min./Max.....	3.9-4.9%
Phosphorus (P), Min. ....	0.4%
Salt (NaCl), Min./Max.....	0.2-0.7%
Vitamin A, Min. ....	3,200 IU per lb

## INGREDIENTS

Grain Products, Processed Grain By-Products, Plant Protein Products, Calcium Carbonate, Forage Products, Roughage Products, Monocalcium Phosphate, Dicalcium Phosphate, Salt, Vegetable Oil, Extracted Citric Acid Presscake, Manganous Oxide, Manganese Sulfate, Zinc Oxide, Zinc Sulfate, Copper Sulfate, Calcium Iodate, Ferrous Sulfate, Sodium Propionate (A Preservative), Vitamin A Supplement, Vitamin D3 Supplement, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Riboflavin Supplement, Niacin Supplement, Calcium Pantothenate, Thiamine Mononitrate, Vitamin B12 Supplement, Biotin, Pyridoxine Hydrochloride, Folic Acid, Dehydrated Aspergillus Niger Fermentation Product, Sodium Selenite, Zinc Amino Acid Complex, Choline Chloride, L-Lysine, DL-Methionine, Dried Trichoderma reesei Fermentation Product, d-alpha Tocopheryl Acetate (Source of Vitamin E.)

## FEEDING DIRECTIONS

Feed continuously as the sole ration to laying hens. Provide clean, fresh water at all times.



# Pen Pals Feather Maker™ (70744AAA)



Feather Maker is a highly digestible, non-medicated, pelleted, complete feed formulated for hens specifically during molting and feather regrowth. It supplies the nutrients needed to support regrowth of feathers after molting and can also be used for laying hens. Good plumage is important to retain body heat as poor feathering exposes body areas, resulting in increased energy maintenance requirement which leads to higher feed intake, increased feed cost, and possible lower performance and reduced income.

## GUARANTEED ANALYSIS

Crude Protein, Min. ....	18.0%
Lysine, Min. ....	1.0%
Methionine, Min. ....	0.42%
Crude Fat, Min. ....	3.5%
Crude Fiber, Max. ....	6.0%
Calcium (Ca), Min./Max. ....	3.75-4.75%
Phosphorus (P), Min. ....	0.4%
Salt (NaCl), Min./Max. ....	0.2-0.7%
Sodium (Na), Min./Max. ....	0.1-0.6%
Manganese (Mn), Min. ....	185 ppm
Selenium (Se), Min. ....	0.30 ppm
Vitamin A, Min ....	3,200 IU/lb
Vitamin D3, Min ....	990 IU/lb
Vitamin E, Min ....	2,900 IU/lb
Lactobacillus acidophilus, Min .....	10,200,000 CFU/lb
Lactobacillus casei, Min .....	10,200,000 CFU/lb
Bifidobacterium thermophilum, Min ..	10,200,000 CFU/lb
Enterococcus faecium, Min .....	10,200,000 CFU/lb

Contains a source of live (viable) naturally occurring microorganisms.

## INGREDIENTS

Grain Products, Plant Protein Products, Calcium Carbonate, Processed Grain By-Products, Vegetable Oil, Monocalcium Phosphate, Salt, DL-Methionine, Vitamin A Supplement, Vitamin D3 Supplement, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Riboflavin Supplement, Niacin Supplement, Calcium Pantothenate, Thiamine Mononitrate, Vitamin B12 Supplement, Biotin, Pyridoxine Hydrochloride, Folic Acid, Extracted Citric Acid Presscake, Dried Lactobacillus Acidophilus Fermentation Product, Dried Lactobacillus Casei Fermentation Product, Dried Bifidobacterium Thermophilum Fermentation Product, Dried Enterococcus Faecium Fermentation Product, Manganous Oxide, Manganese Sulfate, Zinc Oxide, Zinc Sulfate, Copper Sulfate, Calcium Iodate, Ferrous Sulfate, Dehydrated Aspergillus Niger Fermentation Product, Selenium Yeast, Choline Chloride, Zinc Amino Acid Complex, L-Threonine, Marigold Extract.

## FEEDING DIRECTIONS

Feed continuously as the sole ration to laying hens. Provide clean, fresh water at all times.



## Meat Maker

- An all-in-one feed specifically formulated to produce fast growing, healthy meat birds at maximum efficiency.
- Feed in the sole pattern from the day the birds arrive until the desired finished weight is attained.
- Product form reduces waste and ensures each bird receives a balanced diet.

# Pen Pals Meat Maker (70012AAA)

Meat Maker is an all-in-one feed specifically designed to produce fast growing, healthy meat birds (broilers, turkeys, ducks, and geese) at maximum efficiency. No additional grain, protein, mineral, or vitamin sources are needed. Provide clean, fresh water at all times.

## GUARANTEED ANALYSIS

Crude Protein, Min. ....	21.0%
Lysine, Min. ....	1.0%
Methionine, Min. ....	0.4%
Crude Fat, Min. ....	5.0%
Crude Fiber, Max. ....	4.5%
Calcium (Ca), Min./Max.....	0.9-1.4%
Phosphorus (P), Min. ....	0.6%
Salt (NaCl), Min./Max.....	0.2-0.7%
Vitamin A, Min. ....	5,000 IU per lb

## INGREDIENTS

Grain Products, Processed Grain By-Products, Plant Protein Products, Molasses Products, Calcium Carbonate, Dicalcium Phosphate, DL-Methionine, Salt, Extracted Citric Acid Presscake, Manganous Oxide, Manganous Sulfate, Zinc Oxide, Zinc Sulfate, Copper Sulfate, Calcium Iodate, Ferrous Sulfate, Vitamin A Supplement, Vitamin D3 Supplement, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Riboflavin Supplement, Niacin, d-Calcium Pantothenate, Thiamine Mononitrate, Vitamin B12 Supplement, Biotin, Pyridoxine Hydrochloride, Folic Acid, Choline Chloride, Sodium Selenite, Propionic Acid (A Preservative), L-Lysine, Dried Trichoderma reesei Fermentation Product, Dehydrated Aspergillus Niger Fermentation Product, d-alpha Tocopheryl Acetate (Source of Vitamin E).

## FEEDING DIRECTIONS

Feed continuously as the sole ration to broilers, turkeys, ducks and geese from the day the birds arrive until the desired finished weight is attained. Provide clean, fresh water at all times.

**Specialty ingredients in performance focused Pen Pals Chicken Products benefit your backyard flock by supporting production of wholesome, healthy and stress-free birds†.**

**Availa®\* zinc** – More readily available for absorption; important for immunity, reproduction, skin and claw integrity, muscles and eggshell quality (excludes Meat Maker)

**CitriStim®** – An ADM proprietary feed ingredient that may help birds strengthen their defense against health challenges by supporting and optimizing gut function, gut integrity, and body defense responses.



**Natural-source vitamin E** – For better bioavailability compared with synthetic vitamin E; also needed for protection against oxidative tissue damage and immune system function

**NSP enzyme** – Designed to enhance the digestibility of grain products which enables poultry to be more efficient

**Phytase** – An enzyme shown to increase phosphorus availability from plants and has a favorable impact on the environment due to less phosphorus excreted in manure; may facilitate release of additional feed nutrients

†Does not apply to Poultry Scratch Block or Scratch Grains



# Pen Pals Poultry Scratch Block 25-lb (70741AAA)



Some chickens will become aggressive and peck at other chickens. Often times this is a result of hot weather and crowded areas that do not provide enough floor space, feeder access or areas with ample fresh water. Once a chicken becomes aggressive, it can be difficult to change its social behavior. ADM has formulated a “busy” block that gives chickens something to peck, while benefiting from the nutrition provided. It is also suited for gamebirds.

Poultry Scratch Block (25-lb) is comprised of wholesome, high-quality grains (coarsely cracked corn, whole sorghum milo, whole wheat) and balanced sources of minerals and vitamins. It is an ideal “busy” block for free-choice supplementation for broilers and layers, especially when birds are confined.

## GUARANTEED ANALYSIS

Crude Protein, Min. ....	7.00%
Crude Fat, Min. ....	2.50%
Crude Fiber, Max. ....	4.00%
Calcium (Ca), Min./Max. ....	3.25-4.25%

## INGREDIENTS

Coarse Cracked Corn, Whole Sorghum, Whole Wheat, Wheat Middlings, Calcium Carbonate, Soybean Meal, Molasses Products, Calcium Hydroxide, Lignin Sulfate, Guar Gum, Vegetable Oil, Manganous Oxide, Manganese Sulfate, Zinc Oxide, Zinc Sulfate, Copper Sulfate, Calcium Iodate, Ferrous Sulfate, Sodium Propionate (a preservative), Vitamin A Supplement, Vitamin D3 Supplement, Vitamin E Supplement, Menadione Sodium Bisulfite Complex, Riboflavin Supplement, Niacin Supplement, Calcium Pantothenate, Thiamine Mononitrate, Vitamin B12 Supplement, Biotin, Pyridoxine Hydrochloride, Folic Acid.

## FEEDING DIRECTIONS

Provide free access to poultry and game bird as a supplement to the ration. Consumption will vary and is regulated by availability of natural scratch.

## Scratch Grains (80181AAA)

Scratch grain is comprised of a loose mixture of coarsely cracked corn and whole grains. When fed with complete chicken feed, Scratch Grain should be fed sparingly as a treat. Excessive feeding of Scratch Grain can reduce egg production and shell quality.



- A good quality mix of cracked corn and whole grains.
- Designed to be fed with poultry supplements to make complete rations.
- Can be fed 50/50 with Pen Pals Egg Maker Balancer plus free-choice oyster shell.

NET WT 50 LB (22.67 kg)

## Breed Selection

A variety of chicken breeds exist and each have characteristics that vary, distinguishing them by size, feather colors, number of toes, average weight and more. To keep things simple, chickens can be thought of in three categories of breeds such as:

- Egg Layers
- Fancy or Exotic
- Meat Birds or Broilers

### Popular breeds for:

#### Egg Layers

Egg laying chickens certainly catch the attention of those interested in raising chickens for their fresh eggs. A fresh egg typically will differ greatly from a store bought egg in how the egg stays together when cracked open, and the yolk of the egg will typically be a richer color of orange and will “stand” taller. While nearly every female chicken will lay eggs, how often and how many is a trait that varies from breed to breed. Some of the noted breeds for their egg laying capabilities include the Rhode Island Red, Barred Rock, Buff Orpington, New Hampshire Red and the Pearl White Leghorn.

#### Fancy

Fancy or exotic breeds of chickens offer unique characteristics in feather color, tall standing feather crest on their heads, number of toes, feather lengths and others. Generally these types of chickens will not be as good of egg layers and the males of the breeds typically are more desirable because of their unique and brilliant feather colors. Some of fancy or exotic breeds of chickens can include the Polish, Cochins and Sultans.

## Meat Birds

Some breeds of chickens are known for their fast growth rate and are raised for meat consumption. The Cornish X Rock, as an example, is a fast-growing chicken that reaches butchering weight typically in seven to nine weeks. This particular breed of bird requires very little room in the coop or on the field as they prefer to stay at the feeder most of the day.

Other breeds of birds are wonderful foraging breeds, meaning they like to range in the grass and fields looking for bugs and other delicacies. The Red Ranger and Dixie Rainbow are two ideal breeds for foraging meat birds. The butcher weight of these birds is obtained generally between 11 to 13 weeks, and many chicken growers prefer the taste and enjoy raising these breeds.



## Raising Chickens

Day one of raising newly hatched chicks is very important in that the chicks need to have a clean, properly set environment to thrive. Some of the basic components of what you will need on day one include a brooder, a heat lamp, food, water and ideally some wood shavings.

*It is important to note that you should always wash your hands with soap and water immediately after touching any chicken, their feed, waterer, feeder or other components the chickens have been around. Never touch your face, eyes, or mouth before thoroughly washing your hands. This is especially true and a concern for children, elderly or those with a compromised immune system.*

### Brooder

A brooder can be a cardboard box, a plastic tote, a wooden box or other material. A good brooder will have two feet high walls on all sides. Newly hatched chicks do not have their feathers developed so they need supplemental heat to stay warm. The high walls of the brooder will help maintain heat in the environment by preventing any breeze from crossing over the chicks.

From the first week to week 20, the chicks should have three inches of feeder space and one inch of waterer space per bird. This means for five newly hatched chicks, your feeder should be 15 inches long or round and your waterer should be at least five inches round or have five inches of room for your chicks to drink from. As your chicks get older, the three inches of feeder space can hold true but you may find a larger waterer will be necessary because of the amount of water the chickens will drink on a daily basis. You can learn a lot about your chickens' needs through regular observation.

For example, when using round feeders, you may notice chickens walking on top of each other to fight their way to a spot along the feeder. If this regularly occurs, you most likely need to get a larger feeder or perhaps an additional feeder or more to best accommodate the number of chickens you have.

## **Heat**

A heat lamp should be suspended over part of the brooder environment approximately two feet from the floor. The brooder should be big enough so that the chicks can get away from the heat if they get too warm. You can tell if chicks are too hot or too cold by looking in the brooder. If they remain under the range of the heat, they are a little too cold. If they are staying out of the heat range, they may be too hot. It is a good idea to line the bottom of the brooder environment with wood chips. This will give the chicks a solid footing to walk around on. As well, it will absorb their waste and help maintain a clean environment. The temperature at the floor level of the brooder, under the heat lamp, should be 98 degrees Fahrenheit. Each week as the chicks get older, they will require approximately five degrees less in heat temperature. This heat reduction can be accomplished by raising the heat lamp higher.



## **Feed**

From the first week to approximately 20 weeks of age, your chicks should be fed Pen Pals Starter-Grower feed. This starter feed has the ideal balance of essential nutrients to jumpstart your chicks on their way to a healthy life. At this point, the feeder should be kept full with food as the chicks will consume feed when they want it and leave it when they do not.

## **Water**

Water should always be available to the chicks and should be monitored to ensure no debris or waste has accumulated in the waterer.

Again, Pen Pals Starter-Grower will be used from week one to approximately week 20.

As your chicks grow you will notice the brooder getting more crowded. Again, within the first four weeks, the chicks will need a heat source of 98 degrees Fahrenheit the first week, 93 degrees the second week and so on with a five degree decrease each following week. If you are raising chicks in the winter months, you may want to keep a heat lamp over the chicks until all their feathers come in at approximately 12 to 16 weeks.

## **Housing**

As you consider moving chicks into their permanent coop, the coop itself needs to be thought of more as a solid source of protection from predators rather than a coop to provide the chicken simple comfort. The coop should be made of solid materials that can withstand the elements of cold, rain, snow, heat, and again predators. A good general rule-of-thumb when deciding how large the coop needs to be is that each chicken should have approximately two square feet of space inside the coop.

## Egg Laying Chickens

At approximately 20 weeks of age, your female chicken may start laying eggs. When this happens, you need to change the feed type to Pen Pals Egg Maker Complete feed. Pen Pals Egg Maker Complete will provide the chicken with all needed nutrients, including the sufficient mix of protein, fat and calcium. The egg shell is comprised from a sufficient intake of calcium. The early eggs your chickens lay may be small, or perhaps even soft when the sufficient amount of calcium and other nutrients are not ingested.

Again, the coop requirements for your laying hens should be strong enough to protect her from predators. The addition that you want to have in a coop for laying hens is a nesting area or nest box for the hen to lay her eggs in. A high priority characteristic of the nest box is that it be convenient for you to see and reach into the nest box to collect the eggs.



## Nest Boxes

Chicken coops can take on many designs and possess different features. For laying hens, the nesting area generally is a more private area so the laying hen can retreat and concentrate on laying her egg. In larger coops, the nest boxes may be elevated two feet or more off the ground so the hen feels safe and is on a different level than other chickens walking on the floor. In smaller chicken coops, a section of the coop may be more closed off from the general area of the coop so the laying hen has her own private area.



Nest boxes inside the coop can be made of wood or even buckets that are turned sideways! Generally, a hen will appreciate wood chips, straw, or a synthetic nesting pad to sit on. While this is not a strict requirement for the laying hen, per se, you will find that some sort of media for the egg to rest on will help ensure a cleaner egg. Eggs that have been left on the floor of the coop or in empty nest boxes generally will have dirt, mud or waste on them that was collected from the laying hen's feet.

The nest box does not have to be large and a general dimension for an adult hen to lay in can be as small as 12" x 12" x 12". If you use a raised nest box, make sure the nest box has a ramp or ledge the laying hen can perch on as this will make it easier for her to enter and exit the nest box.

Research has discovered the most uniform eggs and ideal size come from hens that reach their ideal body weight. The following is an ideal bodyweight guide for the females of those notable egg laying breeds mentioned previously:

Barred Rock – 7.5 lb

New Hampshire Red – 6.5 lb

Rhode Island Red – 6.5 lb

Pearl White Leghorn – 4.5 lb

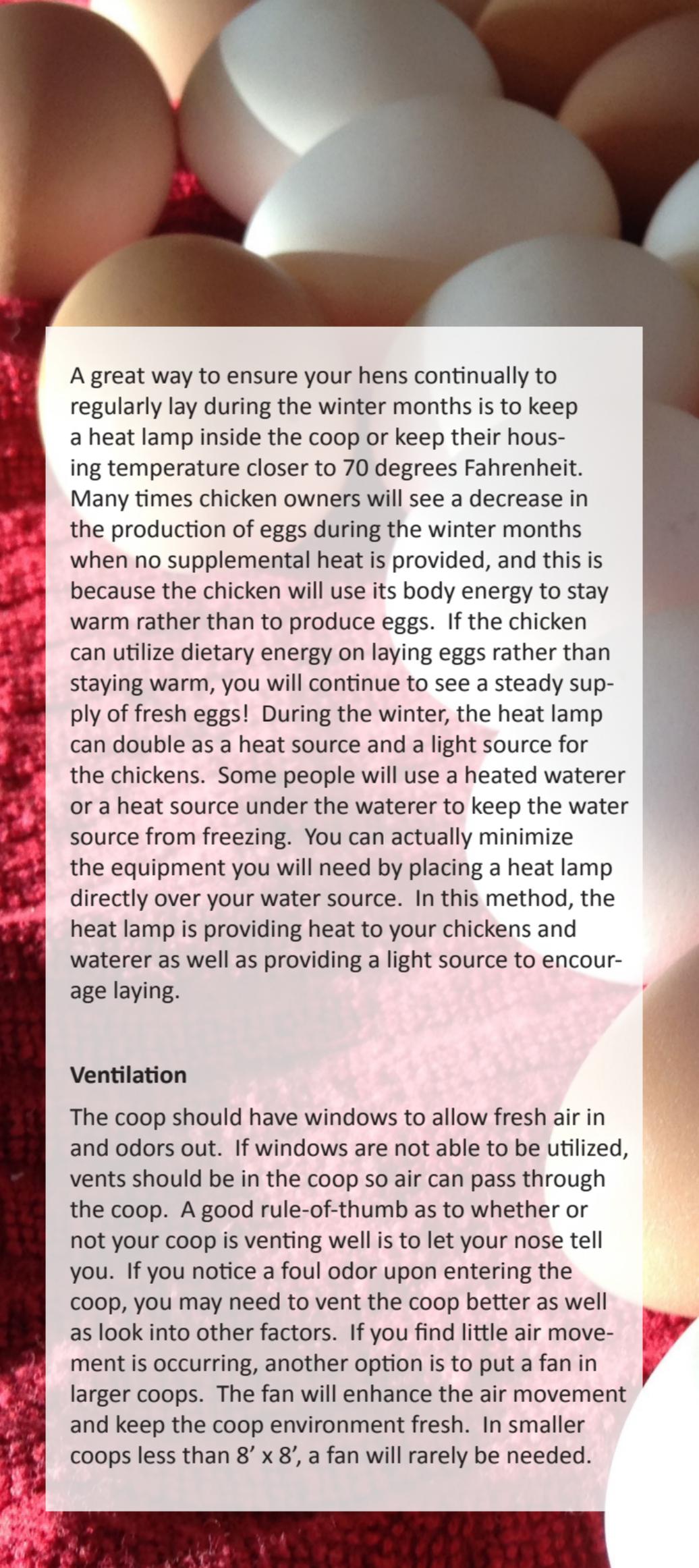
Buff Orpington – 8 lb



Each bird's ideal weight will vary from breed to breed. Ensuring your "girls" are getting the sufficient amount of feed is crucial for her to lay eggs. If you are continuously finding the chicken aggressively eating the food as it is presented, you may want to increase the number of feedings throughout the day.

### **Light**

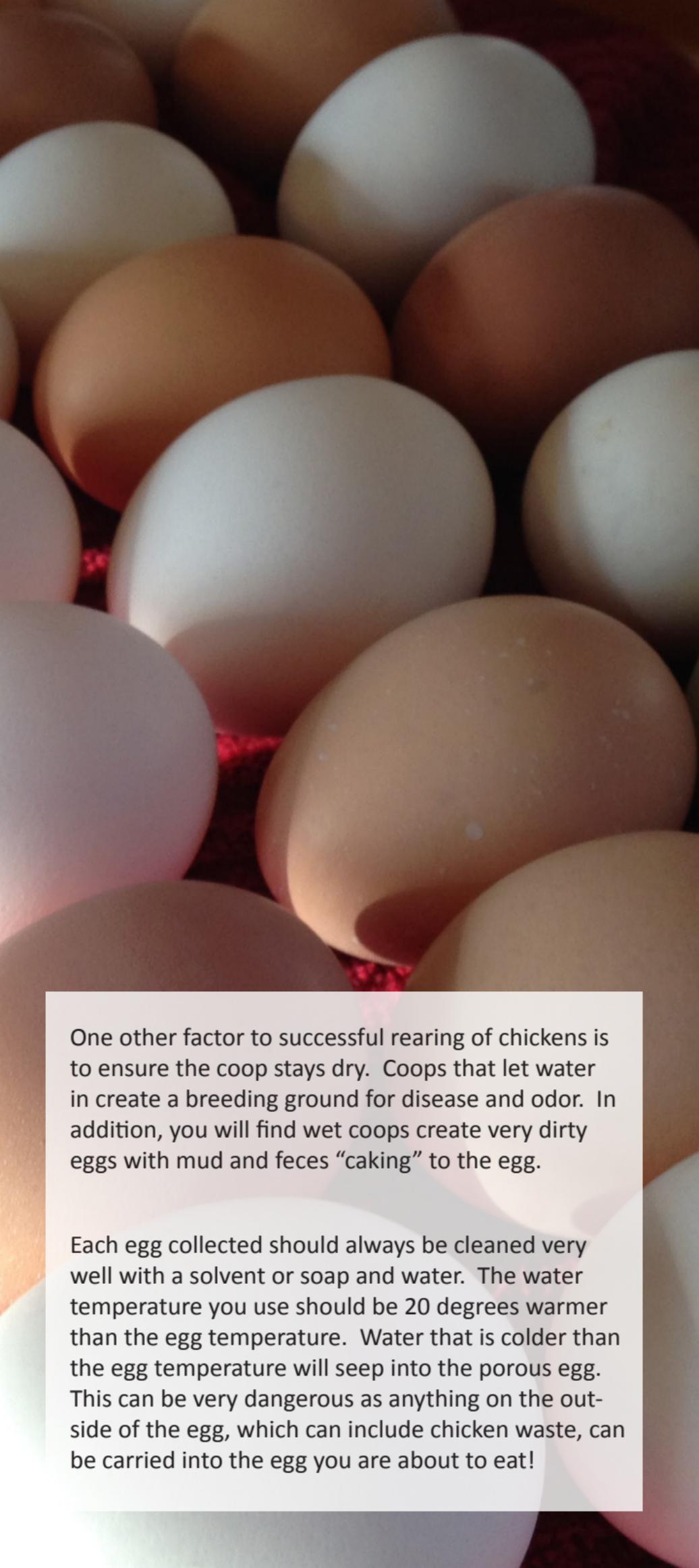
Light is another critical component to a chicken's laying cycle. Whether it is sunlight or artificial light, it is generally recommended that a laying hen be exposed to at least 12 hours of light per day. If you do not have electricity in your chicken coop, a solar powered low level light is a wonderful solution. Too bright of an artificial light can increase the probability of chickens pecking at each other. A low 10 to 20 watt light in a corner of the coop is plenty of light to suffice this requirement. A soft light rather than a brilliant light is preferred.



A great way to ensure your hens continually to regularly lay during the winter months is to keep a heat lamp inside the coop or keep their housing temperature closer to 70 degrees Fahrenheit. Many times chicken owners will see a decrease in the production of eggs during the winter months when no supplemental heat is provided, and this is because the chicken will use its body energy to stay warm rather than to produce eggs. If the chicken can utilize dietary energy on laying eggs rather than staying warm, you will continue to see a steady supply of fresh eggs! During the winter, the heat lamp can double as a heat source and a light source for the chickens. Some people will use a heated waterer or a heat source under the waterer to keep the water source from freezing. You can actually minimize the equipment you will need by placing a heat lamp directly over your water source. In this method, the heat lamp is providing heat to your chickens and waterer as well as providing a light source to encourage laying.

### **Ventilation**

The coop should have windows to allow fresh air in and odors out. If windows are not able to be utilized, vents should be in the coop so air can pass through the coop. A good rule-of-thumb as to whether or not your coop is venting well is to let your nose tell you. If you notice a foul odor upon entering the coop, you may need to vent the coop better as well as look into other factors. If you find little air movement is occurring, another option is to put a fan in larger coops. The fan will enhance the air movement and keep the coop environment fresh. In smaller coops less than 8' x 8', a fan will rarely be needed.



One other factor to successful rearing of chickens is to ensure the coop stays dry. Coops that let water in create a breeding ground for disease and odor. In addition, you will find wet coops create very dirty eggs with mud and feces “caking” to the egg.

Each egg collected should always be cleaned very well with a solvent or soap and water. The water temperature you use should be 20 degrees warmer than the egg temperature. Water that is colder than the egg temperature will seep into the porous egg. This can be very dangerous as anything on the outside of the egg, which can include chicken waste, can be carried into the egg you are about to eat!

## **Meat Birds**

Meat birds also need supplemental heat during the first four weeks or so of life. Of course, this may vary depending on the temperature outside. Cornish X Rock, or white broilers, will love to sit by the feeder all day long. Pen Pals Meat Maker can be fed to the chicks from week zero to week eight. These chickens should be processed within the eight to nine-week time frame as many will develop leg and organ problems beyond then because of their fast growing characteristics.

Meat birds of this nature do not require as much space. As adults, one to two square feet of space is plenty. White broilers will reach mature weight at approximately eight weeks of age. You can obtain a four-pound dressed weight bird of this breed in that eight-week time frame.

## **Hatching Your Own Chicks**

Once you have experience in raising purchased chicks, a natural progression may be the desire to hatch eggs from your flock. Hatching your own eggs is a very rewarding experience!

Incubators will range from those that hatch three eggs at a time to larger incubators that hatch several hundred eggs at time! The cost of these incubators can range from under \$15.00 to thousands of dollars. The incubators mimic the provisions of a mother hen. A mother hen will sit on her egg. She provides heat and moisture needed to develop the fertilized egg into a chick. This dedicated mother will sit on the egg for approximately 21 days until the chick is hatched from the egg.

When female chickens start sitting on eggs, they are considered a "broody" hen. A broody hen will generally stop laying eggs and instead use her body energy to develop laid eggs into chicks.





Keep in mind, even the best hatcheries do not typically have a 100% hatch rate; in other words, not all the eggs they put in the incubators will hatch. Hatchability varies by breed. As a general rule, if you get a 60% to 70% hatch rate, you are doing really well with your attempts! Again, the correct heat and moisture levels will dictate how well eggs hatch. Additionally, if your incubator does not have an automatic egg turner, you will need to manually turn the eggs often in the incubator every day. Turning the eggs will prevent the embryo from sticking to the side of the egg.

While inside the egg, the chick develops an egg tooth. This small, pointy part on the tip of their beak will allow them to peck out the top of the egg for their exit.

Keep in mind, if you have two or more breeds of chickens in your coop, you will need to separate them with their like rooster breed if you want uniform offspring, or pure breed offspring.

## Illness and Health

Owning chickens can be a lot of fun and a very rewarding experience, but it is important to always remember to protect yourself and your chicks against common diseases. Prevention of many diseases can be strengthened by always ensuring your chickens are in a dry, clean coop. Ideally, the chicken's coop should be free of rodents as they can transmit many diseases. Fresh bedding will help ensure a dry environment. Below are some common chicken related diseases.

### ***Salmonella***

*Salmonella* is a bacteria that can be shed from chicks, ducklings and other poultry. People can acquire *Salmonella* by eating contaminated food or from touching contaminated birds or their environment. People typically get sick from hand-to-mouth contact with the bird or environment. Washing hands extensively after being around poultry or their coop will drastically reduce the opportunity to become infected with *Salmonella*.

### **Coccidiosis**

Coccidia are protozoan parasites. Nearly every chicken yard has coccidia which can lay dormant until chickens are present. Severe coccidia may cause death to chickens. Chickens four to 16 weeks old are most commonly affected. Wet litter, poor nutrition and a stressed immune system are common triggers of coccidiosis. If birds are not vaccinated for coccidiosis, feeding them a medicated feed labeled for coccidiosis prevention is suggested.

### **Marek's Disease**

Lesions attacking the nervous system, organs and other tissues are characteristic of Marek's disease. Chickens 16 weeks of age or less are most susceptible. Vaccinations for the prevention of the disease are offered by most hatcheries at the time of order.

## **Additional Information/Resources**

### **American Poultry Association**

PO Box 306  
Burgettstown, PA 15021  
(724) 729-3459

### **US Poultry and Egg Association**

1530 Cooledge Road  
Tucker, Georgia 30084-7303  
(770) 493-9401

### **The Livestock Conservancy**

PO Box 477, 33 Hillsboro Street  
Pittsboro, NC 27312  
(919) 542-5704

### **American Feed Industry Association**

2101 Wilson Blvd., Suite 916  
Arlington, VA 22201  
(703) 524-0810

### **National FFA Center**

P.O. Box 68960, 6060 FFA Drive  
Indianapolis, IN 46268-0960  
(317) 802-6060

### **Centers for Disease Control and Prevention**

1600 Clifton Road  
Atlanta, GA 30329-4027  
800-CDC-INFO (800-232-4636)

### **ADM Animal Nutrition**

[www.backyardpoultrynutrition.com](http://www.backyardpoultrynutrition.com)  
(866) 666-7626

## Chicken Fun Facts

Fun Fact #1 – It takes 21 days for a chicken egg to hatch.

Fun Fact #2 – A rooster is not required for a female chicken to lay an egg. The egg will be an unfertilized egg. If you want your female chicken to lay eggs that you can hatch on your own with an incubator, then you will need a male chicken (rooster) present. Generally, one rooster will fertilize 10 female chickens.

Fun Fact #3 – Chickens ordered from hatcheries are sent to consumers via the US Postal Service.

Fun Fact #4 – Right before a chicken is hatched, it will consume the yolk inside the egg. This yolk will give the newly hatched chick enough food and hydration for approximately three days.

Fun Fact #5 – In the 1920s, the US Department of Agriculture printed ads encouraging citizens of the United States to own chickens as part of their “patriotic duty.”

Fun Fact #6 – A general rule-of-thumb in telling if your chicken will lay brown eggs or white eggs is by looking at its ear lobes. Dark lobes generally indicate a brown egg layer, while white lobes generally indicate a white egg layer.

Fun Fact #7 – The term “pecking order” comes from chickens’ social behavior with a dominance hierarchy. Because of this, older and younger chickens should not be put in the same coop.

Fun Fact #8 – Chickens are understood to make 30 types of vocalization with meanings varying from calling youngsters, alarm calls, and alerting other chickens to the location of food.

Fun Fact #9 – In 1928, the claim was made that if Herbert Hoover won the presidency there would be “a chicken in every pot and a car in every garage.”



# Customer Rewards

## Strut your stuff in awe

Earn rewards for feeding ADM Pen Pals Poultry feeds.

### Step #1 Buy Pen Pals Poultry Products & Collect Points

On each 50-lb bag of feed you buy, cut off the UPC to use towards awesome gear. Each UPC is equal to one (1) point.

### Step #2 Choose your Pen Pals Reward

Just make sure you have enough points for the items you choose.

### Step #3 Fill out the order form and mail it with UPCs

Fill in with your shipping info and reward selection, and mail with your UPCs.

Ask your dealer for a form or you can download it from **www.**



### Step #4 We mail your Pen Pals Rewards to you!



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# Pen Pals Rewards Program

## Get awesome Pen Pals® gear!

5 Points - Hand Towel



10 Points - \$5 Reward Coupon



25 Points - Apron



10 Points - T-shirt



15 Points - Stocking Cap



### QUALIFYING PRODUCTS

ADM Pen Pals product line, 50-lb bags ONLY:

- Pen Pals Chicken Starter/Grower
- Pen Pals Meat Maker
- Pen Pals Egg Maker
- Pen Pals Feather Maker™

