POULTRY

Housing:

Housing for your poultry need not be expensive, but it is important to provide protection from moisture, drafts and extremes in the weather. It must also give the birds adequate room, protection from other animals. Housing must have proper ventilation so that the birds will have enough fresh air but without drafts. Plans for coops can be found in most poultry books, internet websites or from your local extension office.

Bedding:

Every housing for chickens needs bedding to absorb the fecal material of the animals. This will help to keep the ammonia odor under control. Ammonia odor can cause chickens to have watery eyes and respiratory problems and poor health. Clean, dry shavings chopped hay or straw can be used for bedding. Cedar shavings should **never** be used as they are harmful to chickens and can cause problems in the digestive tract and respiratory system.

Nests:

An adequate number of nests with clean, dry bedding are important for laying hens. They can be individual or community nests. There should be 1 foot of nest for every 4 birds if using community nests. Nest should be 1 foot by 1 foot for individual nests. Community nest can be any size. A plastic or ceramic egg in the nesting box or area will encourage the hens to lay their eggs in the nesting box or common nest.

Roosts:

Roosts are not essential but can be given to birds. Birds for meat production should not be given roosts as it can cause breast blisters or injure the birds as they get bigger. For laying hens 6-8" of roost space is recommended. Roosts or perches should be made of 2 by 2 stock and rounded to prevent injuries.

Lighting:

Life cycles in nature are regulated by light. Changing day lengths determines when wild birds migrate, lay eggs and molt. Domestic birds respond in much the same way. A planned light program is a part of good management. Continuous light maximizes growth of meat chickens but can be harmful to egg production. Too much light too soon can cause birds to lay before they are ready resulting in higher than normal death rates. Growing pullets and laying hens should not have 24-hour light. Pullets can be left on natural light until they are ready to lay, then

they should receive 15-17 hours of light, as should older layers. If day length is not maintained egg production will decrease and birds will likely start to molt.

Feed:

Chicks need high protein 18%-24% feed. Medicated feed is to prevent coccidiosis which develops in the chicks at 6-8 weeks of life. Coccidiosis will wipe out a batch of chicks within days. The bacteria are carried through the air and settle in the ground. It is very common and takes intensive measures to remove.

By twelve weeks the chicks can be changed to a grower feed 18% to 24% without medication. By five months the chickens will begin laying eggs and need a layer mix with a protein content of 16% to 18%.

Grit is always needed by caged chickens but ranging hens appreciate access to grit also.

Oyster shell will boost the calcium level for the chickens. Calcium is used by the chickens to form the egg shell.

Some feed mixes include oyster shell and grit for a complete feed. Feed can be a crumble or pellets. People say the pellets are less wasteful with chickens. Crumbles are easier for the chickens to digest.

Hen Scratch is a combination of grains. The grains are usually whole wheat and cracked corn. Some scratch has whole Milo. Scratch is a low protein feed, 9%-11%. The carbs from the grain make it a nice Winter treat/"candy" to help your flock stay warm during the colder seasons.

Meat Birds need high protein feed through out their life. Keep the protein level 18% or higher.

Turkey poults, ducks, and geese need Turkey feed or Game Bird feed. These feed lack medication and are high in protein. These Birds stay on this feed for their entire life.

Equipment for the Coop:

Feeders come in either plastic or galvanized metal. The galvanized metal will last longer. The plastic feeders are easier to clean. As chicks, feeders are set on the floor of the brooder or the coop as they grow. The size of the feeder needed depends on the number of birds using the feeder. Feeders need to be hung about 6" from the floor of the coop for grown hens.

Waterers, just like the feeders, are either plastic or galvanized. As chicks, the birds drink a few ounces per day but as full-grown hens they need access to, at least, a gallon of clean water each day. Waterers are generally on the floor or on a plinth. There are automatic waters that hang and are connected to a water line. This allows for a continuous supply of clean water. Another type of hanging water is a bucket with a nipple at the bottom where the birds can reach up to have the water drip down their throats.

With freezing weather your water can will freeze. Chickens will need water. One way to ensure they get it is to carry water to the coop each day. There are heated waters which require electricity. You can heat the coop with a heat lamp to keep the water from freezing which require electricity.

<u>Caution:</u> Electricity, bedding and heat lamps are components that can result in a fire. Electricity and water can lead to electrical shock.

<u>Ducks and Geese:</u>

Brooding is much the same as chicks however ducks and geese need more room than chicks. Keep bedding dry at all times and 2" thick. The birds need enough heat and light to avoid piling. As stated before, your ducks and geese need a non-medicated starter feed or game feed. Place feed in a wide low pan. The water needs to be deep enough for the birds to clean their bills but not so large that the birds will get wet. Rocks in the ridge of the water will help. Also placing the water at the level of the bird's backs will help to keep them out of the water.

If the duckling or gosling get soaked, even partly, they will become chilled. A chilled duckling or gosling will die. The mother duck or goose would coat the baby's feather with her oil to keep the feathers dry. This oil gland on the babies will not be developed for several months.

<u>Turkey Poults:</u>

These turkey poults need help to learn to eat and drink. Placing a shiny object (marble) in the feed and in the water will help attract the birds. Giving the poult a drink from the water when you place them in the brooder also helps.

<u>Mixing Birds:</u>

Baby birds are susceptible to diseases carried by older birds. If possible do not mix birds of different ages. If you bring in new birds isolate them for a few weeks before placing them with your flock regardless of where they were obtained. When possible get birds from NPIP flocks (National Poultry Improvement Plan) and reputable breeders. You can acclimate your new birds to your existing flock by placing a wire cage within your chicken house with your new birds in it. Do this daily for a week till your existing flock is relaxed with the new birds.

<u>Egg Eating:</u>

Sometimes an egg will get broken in the nest and a hen will discover how good they taste. Once she discovers this fact she will look for broken eggs or break them herself. To eliminate this the hen must be located and removed from the flock. If this isn't possible, fill several eggs with Tabasco sauce and leave them for the hens to eat. This will usually eliminate the problem. Correcting factors that are causing the broken eggs is also important. These could include not enough nest, inadequate bedding, or not collecting eggs often enough.

<u>Feather Picking & Cannibalism:</u>

Both are bad habits that can develop in the brooder and carry into laying. The exact cause is not always known. Poor nutrition, overcrowding, overheating, not enough feeder and water space or lighting can be factors. At the first signs of picking, action needs to be taken to stop it. If bleeding starts the birds can pick each other apart and losses can be heavy. The problem can sometimes be corrected by providing more feed, water or floor space. Other things that can help are better ventilation, cutting back on light, or adding flakes of hay or greens

for the birds to pick through. Pine tar or an anti-picking agent applied to the birds is also effective.

Pasting Up:

Sometimes baby chicks have a problem with fecal matter collecting or sticking near the vent. This is known as pasting up or pasty-butt. If the chick's vent is not cleaned the chick will die. The fecal plug is not allowing the chick to pass more matter and could be infecting the chick with bacteria.

Causes of pasty-butt in young chicks are usually from shipping or the way they are being brooded. The problem usually shows up at a week from shipping. Chicks need to be kept at 95 degrees during their first week of life. Shipping can expose chicks to temps that are too hot or too cool. Brooder set ups can be too hot and too small to allow the chicks to regulate their own temp.

The fecal matter must be removed. Warm water will soften the plug and the plug will fall away. Do **NOT** pull the plug off as it is most likely attached to little feathers. The chick needs to be dried by drying and fluffing the feathers. A hair drier on low will do the job needed. Vaseline on the vent will help chicks with a recurring problem to sluff the plug. If you have several chicks with pasty-butt add a probiotic to their water and chick size grit to their pen so they will ingest the grit…. Continue to check your chicks daily to remove plugs till the problem is resolved.

Before the Baby Poultry Arrives:

The area where chicks will be kept should be cleaned and disinfected. After it has dried completely 3" to 4"of dry litter should be put down. Shavings, sawdust, chopped straw or hay are all good litters to use. (Cedar shaving is not usable for chicks or chickens). All equipment should be cleaned and disinfected and operating properly. The brooding area should be pre-heated. Feed and water should be placed out just before the arrival of the chicks and not under the heat lamp.

Brooding:

A temperature of 92 to 95f should be maintained for the first week. After the first week the temperature should be lowered 5 degrees each week until 6 weeks of age. At this time, they should no longer require heat unless the weather is cold. Brooder space needs to be increased with age. Observe the chicks to determine if the brooder is at the proper temperature. Chicks will be spread out if it is correct. Huddling means they are cold, away from the heat and panting means they are too warm. Chilling or overheating can cause respiratory, digestive and leg problems. Chicks will not thrive with a draft. Litter needs to be kept dry and adequate ventilation provided.

Are your Hens Layers or Non-Layers?:

Hens that are not laying should be removed from the flock. Laying may stop due to improper feed, water problems, lighting or age.

Hens do **not** need a rooster to lay eggs. Hens are born with a set number of eggs to lay once these eggs have been laid, the hen will not lay any more eggs.

Characteristics of a laying Hen

A bright red comb

A soft pliable abdomen

A large oval moist vent

3-4 finger spread between pubic bones and between pubic bones and keel

No molting or growing feathers

Characteristics of a Non-Laying Hen

A dull shriveled comb

A hard and often fat abdomen

A small dry vent

1-2 finger spread between pubic bones and between pubic bones and keel

Molting or growing feathers

Table Egg Care and Storage:

Eggs for the table should be collected frequently. Washing is not necessary unless eggs are dirty. The best conditions to store eggs are at 55F and 80-85% relative humidity but a refrigerator works just fine.

Egg quality declines as eggs get older. As an egg ages the white becomes runnier and the air cell enlarges. These changes are due to a loss of moisture and changes in the protein structure. These do not change the nutritional value of the egg but for best quality they should be used within two weeks.

If eggs need to be washed, they can be washed in warm water but an egg wash with sanitizer is better to use. Eggs should never be washed in cold water. Washing shouldn't be any longer then 2 or 3 minutes and should be followed by rapid drying and cooling. Steel wool, sandpaper or emery paper are useful for dry cleaning of eggs. Eggs can absorb off-flavors from other foods, such as onions, so they should be stored in egg cartons that are available at most feed stores.

Health Problems with Poultry

Mites, Flies, Fleas: Make sure wild birds can not enter the coop. Mites can be seen on the hens' skin and on their legs. The legs will look very scaly and flakey. The coop should be kept clean. To control mites and fleas wash coop then spray with Permethrin. Dust hens with Permethrin dust. Coat legs with petroleum oil to smother the mites.

For Flies: Hang fly tape where the hens cannot reach them or use fly bags outside of the coop. Keeping the bedding clean can also help.

Large roundworms

General Information:

The large roundworm is one of the most common worms of poultry. It occurs in both chickens and turkeys. Both male and female worms live in the central portion of the small intestine. The large roundworm may be 1 ½ to 3 inches long and is comparatively thick bodied. It is yellowish white in color.

The life cycle of the large roundworm is simple and direct. Each female worm produces a large number of eggs, about 5,000 a day. These eggs then pass from the host bird in an un-embryonated condition. Outside the bird, given favorable conditions

of moisture and warmth, these eggs will become embryonated and develop to an infective stage in about 10 days. If one of these eggs is swallowed by a chicken or turkey it can develop into an adult worm. The period of development varies with the age of the bird. In birds less then 3 months of age large roundworms reach maturity in about 30 days. In older birds, development requires about 50 days.

Large roundworms spread directly through the droppings of the birds. The eggs of this parasite may remain alive in litter or soil for many months. Research has shown that when growing chicks are infected with large roundworms, an outbreak of infectious bronchitis results in a higher mortality then would occur if the chicks were free of worms.

Signs of large roundworm infestation:

General signs include droopiness, emaciation and diarrhea. Deaths may occur, especially in younger birds, when worms block the intestines. Lesions are not apparent, but the worms are easily seen on postmortem examination of the intestines.

Prevention and Control of Large Roundworms:

1. Thorough cleaning between batches of birds to remove contaminated litter.
2. Management of ranges so they provide proper drainage and good cover. Dirty litter should be removed, frequently, and new litter put down. The litter is the sanitary system of the house. To keep it in good condition it is necessary to keep litter as dry as possible by frequent stirring.
3. Avoid overcrowding.
4. Keep wild birds, including pigeons, out of area. These birds serve as hosts to several worm parasites and can contaminate otherwise clean quarters.
5. Treating with a poultry wormer, Diatomaceous Earth and Oregano herb are all adequate ways to help prevent worms.

For Chickens:

Use a wormer for multiple worm infestations, usually large roundworms, cecal worms and tapeworms. Always follow package directions. Broilers can be wormed as often as necessary, starting at 4 weeks and allowing 2 weeks between treatments. For replacement stock, worm at 8 to 12 weeks and repeat every 30 days as needed.

For range birds a suggested program is to worm 3 weeks before housing, then at housing, and again 3 weeks after housing

For Turkeys:

If large roundworms are the only problem only treat for them. If other worms are involved use a combination wormer.