

# **THE WORD ON HEALTHY BIRDS WEBINAR**

## **QUESTIONS AND ANSWERS**

APHIS received hundreds of questions from webinar participants before and during the webinar and we thank participants for their interest.

It is important to note that the answers to these questions are general and meant to be educational. They are not intended to be diagnoses. You should consult with a veterinarian for a complete diagnosis and treatment for problems your birds may have.

Questions and answers are under these headings:

- Poultry Disease-Related Questions
- Getting Started
- Care and Handling
- General Information
- Coops and Free Range
- Feed
- Eggs

### **Poultry Disease-Related Questions**

1. **How are illnesses such as impacted or sour crop, egg binding, etc diagnosed?** Sour crop is a reference to a condition called crop mycosis that is caused by *Candida albicans* (a type of yeast). This causes thickening of the crop surface and may keep nutrients from being properly absorbed from the intestinal tract. It may lead to feed and fluids being retained in the crop, causing it to enlarge. This may occur after birds have been on antibiotics for a period of time. Copper sulfate at recommended levels is often used in water or feed to treat this condition. You can help prevent this by keeping the waterers and feeders clean and removing moldy and caked feed.

Egg binding or an egg bound bird is a condition in which the egg has formed in the shell gland, but the hen has been unable to expel it from the shell gland properly. Typically the hen may strain or assume a penguin type stance trying to lay the egg. This is a condition that needs immediate correction by removing the egg. Veterinary help may be needed to correct this condition.

2. **How is Marek's disease diagnosed?** The most common thing you will see is difficulty walking – typically one leg is dragging behind. Marek's disease may be seen in young birds but there may not be clinical signs until after 10 weeks of age, and it may not show up until well into the lay period. This

disease may also show itself in the form of tumors and in some cases skin lesions. There is no treatment for this disease but is preventable by buying chicks that have been vaccinated at the hatchery.

3. **After having what appears to be Marek's disease show up in a group of young birds, how should the flock be managed?** As with the previous question, the most common sign in the small flock will be a distinct lameness that will progress with time. This is caused by an enlargement of the nerve in the affected leg that will progress until the bird is unable to walk properly or eat and drink sufficiently. This is preventable by vaccinating day old chicks at the hatchery. If this has been a flock problem then a thorough cleanup of the brooding area – especially removal of feathers, feather dust and dander – is needed. Separating new chicks from older birds for the initial 2– 3 week brooding time will greatly reduce exposure during this critical time for exposure to Marek's Disease for young chicks.
4. **Are more backyard flocks being vaccinated for Marek's Disease now?** It is likely that more chicks are being vaccinated for Marek's Disease now because it is done at the hatchery. The only effective time to vaccinate for Marek's Disease is at one day of age.
5. **What should I know about pullorum *disease*?** Pullorum disease is an acute or chronic infectious bacterial disease caused by salmonella pullorum. It is transmitted to the day old chick through the egg of an infected hen. Almost all species of domestic poultry and game birds are susceptible. This is one of the first diseases of significance recognized in poultry. Also called Bacillary White Diarrhea (BWD), it can cause high mortality and limit poultry production. Common signs include death after hatching, weakness, droopiness and white diarrhea with pasty vents.

Control of this disease began with the development of the National Poultry Improvement Program (NPIP) in the 1930's. *NPIP* developed control programs for breeder and hatchery disseminated diseases. Breeder flocks are tested to assure a "Pullout Clean" status. Pullorum has been eradicated from commercial production stocks. Many small flock owners may be familiar with the pullorum test as it often conducted at fairs or shows prior to entry. Chicks should be purchased from hatcheries that participate in the NPIP Pullorum clean program. Commercial chicken and turkey producers have eliminated this disease by testing adult birds and eliminating disease carriers from breeding stock.

6. **What can you tell me about mycoplasma and coccidiosis?** Mycoplasma is a poultry disease most commonly associated with respiratory conditions. Both diseases may be transmitted by contact, but more importantly through the eggs to the chicks. Most serious of the mycoplasmas is *Mycoplasma gallisepticum* (MG). These diseases cause chronic respiratory diseases in chickens and poultry. Mycoplasma signs

such as snicking, coughing and sneezing can be alleviated with antibiotics but this will not eliminate MG from the flock. The flock will always be positive and new birds coming in will be affected by the disease when introduced to the flock.

Coccidia are among the most common diseases of poultry. The protozoan agent *is transmitted* to the birds *through contact with the litter and the ground*. Birds raised on wire or off the ground will have fewer problems with coccidia. As birds get older they will develop immunity to coccidial infection provided the conditions are not conducive for large amount of coccidial oocysts to develop. Most commonly, chicks and young birds are placed on some type of anticoccidial agent, such as amprolium, during the growing period to develop this immunity or limit exposure until adult immunity after 16 weeks. Cleaning and sanitation of the pens will reduce the exposure and incidence but will not prevent chickens from coccidia problems. It is important to understand, that “worming” birds does not treat or prevent coccidia, as they are a separate problem. Your veterinarian can tell you how to treat these diseases.

7. **Is there an affordable test for Salmonella enteritidis in small flocks?** There is not a specific blood test for Salmonella enteritidis (SE). Most testing involves environmental swabbing and culturing for Salmonella species. Recommendations can be made by your veterinarian, State veterinarian or animal health diagnostic laboratory. On a practical basis, SE is not a significant problem for small backyard flocks. The best thing a small flock owner can do to prevent SE is proper rodent (mice) control.
8. **What is the best way to deal with avian cholera (pasteurellosis) in backyard flocks?** Avian cholera, more commonly called Fowl Cholera is caused by the bacteria *Pasturella multacida*. This is characterized by high fever, mortality and sometimes swollen wattles. Once affected, chickens may transmit this to each other by pecking and picking and also may be transmitted in the house by rats or other mammals. Typically this is treated with sulfonamides or antibiotic medications.
9. **What are common illnesses that affect the wattle and feathers? How should they be treated?** Diseases affecting the wattle are generally non specific. Scabs on the wattle, such as brown or crusted scab-type lesions, may be from fowl pox. Fowl pox is transmitted by mosquitoes and affects the non-feathered parts of the bird such as the wattles and comb, and areas around the eyes and legs.

Feather problems tend to be picking or loss of feathers and are likely nutritional problems rather than infectious diseases. However, you should check to see if a lice or mite problem may be the cause. Usually in the fall, birds molt and they lose their feathers as they go out of egg production. Eventually new feathers are produced.

**10. What is the diagnosis/treatment when a hen's comb falls to one side?**

This may be normal as chickens have very specific comb characteristics depending upon the breed. In many breeds the comb normally falls to one side rather than stand straight up. Some breeds of laying hens even have different comb shapes depending upon the day and stage of the laying cycle.

**11. How common is "blackhead" among turkeys kept with chickens and are there breeds that are more susceptible to the disease?**

Blackhead (histomoniasis) is caused by the protozoa *Histomonas meleagridis*. Certain types of worms can transmit the protozoa to poultry. A proper worming program is critical to control this condition. Turkeys are very susceptible as are peacocks and pheasants. Chickens seem to be more resistant but on occasion will have this condition. Clean conditions, a worming program and reduction of earthworm habitats will reduce the incidence of blackhead. Specific treatment for individual birds affected may be available through prescription medication from your veterinarian.

**12. Please provide information regarding respiratory diseases and how they can be treated.**

Respiratory conditions such as sneezing, snicking or some type of cough are one of the most common calls veterinarians receive. Respiratory diseases can be caused by bacteria, viruses, and or by environmental issues. In small flocks the most common cause is usually *Mycoplasma* or MG. This can be treated with antibiotic medications but not eliminated (see question no. 6 on mycoplasma). Respiratory viruses such as bronchitis will typically cause short-term respiratory problems but will go away after a week or two. Exotic poultry diseases such as exotic Newcastle disease (END) or HPAI (highly pathogenic avian influenza) will have severe respiratory lesions, high infection rates and high mortality in the flock. Should you see these signs, report them to state officials for correct handling and response.

Other respiratory diseases such as laryngotracheitis, infectious coryza or other non-descript respiratory viruses may be seen in birds that have come from locations of high concentration such as auctions, flea markets, shows or fairs. Poor environmental conditions in the coop or house, including poor ventilation and high ammonia levels may also cause similar conditions with your chickens.

One of the best sources of information is your local extension agent. If your local office doesn't have a poultry specialist they can locate one for you.

This is a free service. For a list of extension agents see:

<http://www.csrees.usda.gov/Extension/>

**13. What vaccinations should 4-H Leaders recommend to their members for birds they are hatching and raising?** Make sure you are buying chicks that have been vaccinated at the hatchery for Marek's Disease if you are

purchasing by mail order. Unless they will be going to multiple shows, fairs or exhibits, other vaccinations for the small backyard flock are probably unnecessary. If they will be part of a large group, vaccinations for bronchitis and Newcastle disease should be considered. In certain high risk areas and situations, vaccination for fowl pox and laryngotracheitis may be beneficial, but for the typical backyard small flock, these are not needed.

14. **For small city flocks (3–5 birds) in a backyard, what vaccinations, shots, worming, etc. schedule should I have?** Birds bought at a hatchery should be vaccinated for Marek's disease. Birds need to be wormed with a general wormer around 7–8 weeks and repeated at 10 – 11 weeks of age. At 18 weeks, a more specific wormer effective against cecal worms should be given to birds prior to coming into production.
15. **Where can I find information on what and when to vaccinate backyard chickens?** You can check with your local extension agent. This website has useful information:  
[http://www.aragriculture.org/poultry/small\\_flock\\_information.htm](http://www.aragriculture.org/poultry/small_flock_information.htm) The University of Florida extension also has specific information on vaccination:  
<http://edis.ifas.ufl.edu/ps030>
16. **What is effective biosecurity to protect a backyard flock from VVIBD?** VVIBD (very virulent infectious bursa disease) and IBD (infectious bursa disease), affects the bird's immune system. The most effective protection of young chicks comes from a solid vaccination program in the parent breeders that provide antibodies in the yolk to the chick for the first 2–3 weeks of life. In the small backyard flock, chicks are not vaccinated. In larger flocks raised for long-term production, there may be some benefit to IBD vaccination but not for backyard flocks.
17. **How can we disinfect a backyard farm?** Most commercially available disinfectants will do a good job. The key to proper disinfection is not the specific product used but the proper cleaning and removal of all organic debris such as litter, manure, droppings and dust debris. Use of detergents and scrubbing will allow the disinfectant to properly do its job. After getting this material off the equipment, nest, coops, etc., then apply and let dry. The more time available without live birds the better in eliminating disease causing agents. Keep in mind that sunshine and time are excellent disinfectants if organic material that protects the disease agents is removed. The Biosecurity For Birds outreach campaign has a helpful card called Clean and Disinfecting Checklist:  
[http://www.aphis.usda.gov/publications/animal\\_health/content/printable\\_version/C&DChecklist-PA2026-FINALpdf.pdf](http://www.aphis.usda.gov/publications/animal_health/content/printable_version/C&DChecklist-PA2026-FINALpdf.pdf).

18. **What product is recommended to disinfect my house after I've cleaned out the litter and manure?** Most disinfectants will do a good job provided the organic material is removed (see question above about disinfecting). Organic material such as litter, dirt, dust and straw or nest material will inactivate even the best disinfectants. The longer the time without live birds will also help with the ability to disinfect and area.
19. **What is a safe distance to keep between species in mixed flock for biosecurity?** With an individual farm or backyard it is not practical to think that you will have an effective barrier to separate species. This recommendation refers to keeping birds, primarily wild waterfowl, separate from your birds. Your birds should not share open water sources such as ponds, streams and lakes with wild birds.
20. **I have a bird that acted lethargic and had balance problems. It was eating and drinking but ended up dying. What caused this?** There is not enough information to know. In the future, if birds die of non specific symptoms, your state poultry/animal diagnostic laboratory may be able to help determine more specific findings.
21. **Other than the basic cleanliness and protection, what general upkeep should be done for backyard chickens (medicines, supplements)?** If you keep the environment clean and dry, you will prevent many problems. Keep wild birds nests out of the house eaves and rafters and you will go a long way in controlling mites. You can prevent many intestinal problems by providing a standard worming program for young birds, keeping feeders and waterers clean and allowing feeders to be empty of caked and molded feed.
22. **What can be done when chickens have bugged out eyes?** This is a somewhat puzzling question, but it is probably caused by some type of respiratory problem such as a mycoplasma. It could also be swollen conjunctiva and eye discharge with diseases such as laryngotracheitis. Infectious coryza may cause swelling of the sinuses under the eye. You may want to check with your veterinarian.
23. **My chicken has a big bubble on the back of her neck. Should I take her to the veterinarian?** Yes, you should. From the question, it is assumed that this is not an open wound or puncture that may be abscessed. It may be some type of non-specific growth or tumor, but there is not enough information to say more.
24. **What does green poop mean?** This could be associated with diet or some type of enteritis or bacterial infection involving the intestine. Droppings should be semi-moist and formed with the white portion (uric acid) on top.

25. **Does a small backyard flock need to register with the NPIP?** Flocks become participants in the NPIP program generally for standardization of testing and requirements needed for the sale of chicks or hatching eggs. When you purchase chicks, definitely purchase from an NPIP participating hatchery for specific classifications. If you are not selling hatching eggs or chicks, the classifications have no advantage. If you have a small flock for personal use, there isn't a particular advantage to be an NPIP member. Useful information on disease information for all poultry owners is available through the many NPIP sites.
26. **How can I tell if a chicken is sick or has parasites?** External parasites generally cause mild or severe clinical signs such as feather damage and irritations. Signs of Internal parasites include pale coloration of the combs and wattles, diarrhea and weight loss.
27. **What is the best way to control parasites in our flocks?** Poultry can carry a large variety of external parasites on their bodies and they can be infested with a variety of internal parasites. Your veterinarian will be able to advise you about a suitable treatment that is specific for the parasites he or she observes.
28. **What is the best way to rid your poultry area of lice and mites and how can I keep them away using strong poisons?** Your veterinarian will be able to advise you on this.
29. **What are the necessary medical treatments for worming, and what vitamins are available to help them stay healthy throughout the year?** Your veterinarian will be able to advise you about worming.
30. **How do you get rid of fleas naturally without poisons?** Your veterinarian will be able to advise you about this.
31. **Where can we get information about bird diseases in our area?** One of the best resources is the poultry specialist at the local cooperative extension in your area. If your local office does not have a poultry specialist they can refer you to one. You can locate the cooperative extension at <http://www.csrees.usda.gov/Extension/>. Another excellent resource is the State Veterinarian for your state. Find a list of State veterinarians at [http://www.avma.org/disaster/state\\_veterinarians.asp](http://www.avma.org/disaster/state_veterinarians.asp)
32. **What is the number one disease that is seen in backyard poultry and small farms?** External and internal parasites (lice, mites, ticks, fleas, worms and coccidia) are the number one disease seen in backyard poultry. Also, the American Poultry Association has a list of poultry diseases (as well as other helpful information) at: <http://www.amerpoultryassn.com>  
<http://www.ca.uky.edu/smallflocks/Health.html>

**33. What are the signs and diagnosis of infectious diseases? How do you report and treat them?** Know the warning signs of bird diseases such as avian influenza (AI) or "bird flu" and exotic Newcastle disease or (END). While it may be hard to tell if your bird has one of these diseases, if you know the signs, you may be able to tell if something is wrong.

Avian influenza or bird flu can strike birds quickly without any signs of infection, and spread rapidly. Signs include the following: sudden death, lack of energy and appetite, decreased egg production, soft-shelled or misshapen eggs, swelling of the head, eyelids, comb, wattles, and hocks, purple discoloration wattles, combs and legs, nasal discharge (runny nose), coughing, sneezing, stumbling or falling down, diarrhea. For pictures go to: [http://www.aphis.usda.gov/animal\\_health/birdbiosecurity/AI/](http://www.aphis.usda.gov/animal_health/birdbiosecurity/AI/)

Another infectious disease is exotic Newcastle disease, with signs that include sudden death, green and watery diarrhea, sneezing, gasping for air, nasal discharge and coughing, decreased activity, tremors, drooping wings, twisting of head and neck, circling, complete stiffness, and swelling around the eyes and neck. For pictures see [http://www.aphis.usda.gov/animal\\_health/birdbiosecurity/end/](http://www.aphis.usda.gov/animal_health/birdbiosecurity/end/)

Early detection is important to prevent the spread of disease. If you suspect your birds may have AI or END, don't wait - report the signs to your veterinarian, cooperative extension office, the State veterinarian/state poultry or animal diagnostic laboratory or call USDA at 1-800-536-7593 for a local contact. State veterinarians can be found at: [http://www.avma.org/disaster/state\\_veterinarians.asp](http://www.avma.org/disaster/state_veterinarians.asp)

**34. What type of diseases do you have to watch out for in raising chickens?** There are a few major classes of diseases that commonly occur in small back yard flocks. These include Marek's disease, external and internal parasites, respiratory diseases, reproductive diseases, fowl pox, and nutritional problems. Owners also need to be aware of diseases that are exotic to the United States like exotic Newcastle disease or END and HPAI or highly pathogenic avian influenza. (add our BFB info on what to look for and where to reporting here)

**35. What are the most important safety tips for disease prevention and control?** Consistent biosecurity practices are the best way to prevent diseases such as AI and END. The following steps can help you keep your birds healthy:

- 1) Keep your distance: Isolate your birds from visitors and other birds.
- 2) Keep it clean: Prevent germs from spreading by cleaning shoes, tools and equipment.
- 3) Don't haul disease home: Also clean vehicles and cages.

- 4) Don't borrow disease from your neighbor: Avoid sharing tools and equipment with neighbors.
- 5) Know the warning signs of infectious bird diseases: Watch for early signs to prevent the spread of disease
- 6) Report sick birds: Report unusual signs of disease or unexpected deaths.
- 7) Making biosecurity a part of your daily routine while caring for your birds can decrease the chance of END or AI showing up on your doorstep.

36. **Where and how should I get dead birds tested and what are the signs of sickness?** You can call the poultry diagnostic laboratory for your state, or the state veterinarian for your state and they can tell you how to get dead birds tested. You can find a list of state veterinarians at [http://www.avma.org/disaster/state\\_veterinarians.asp](http://www.avma.org/disaster/state_veterinarians.asp). Please see the question above on the signs of infectious diseases or look at the Biosecurity For Birds website (<http://healthybirds.aphis.usda.gov>).

37. **Is it common to lose young chicks due to respiratory difficulties?** Yes, it is. A number of infectious agents/germs can cause respiratory difficulties in young chicks, for example, viruses, and bacteria. Ammonia, dust, other gases and factors associated with poor ventilation may act as contribute to respiratory difficulties.

### **Getting Started**

1. **How do I get started raising backyard poultry?** There is an excellent document titled "*Poultry For the Small Producer*", by the Oklahoma Cooperative Extension that you may find helpful. <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2116/ANSI-8202web.pdf>

You can also check with your local extension agent for information. There are excellent extension websites that offer information such as:

<http://www.extension.purdue.edu/extmedia/AS/AS-518.pdf>

[http://www.aragriculture.org/poultry/small\\_flock\\_information.htm](http://www.aragriculture.org/poultry/small_flock_information.htm) (this has many excellent links)

There may be a poultry meet up group in your area where you can connect with others raising backyard poultry. And, you can check publications such as Backyard Poultry, GRIT or Hobby Farms magazines.

2. **What constitutes a "small flock"?** A small flock is a group of birds/poultry. It could be just a couple of birds or it could be 100 birds or more. It's preferable not to mix species.

3. **What are the best sources of information on how to start a small urban egg laying flock for a two-adult family?** Your local extension office may be able to provide information for you specific to your locale. There are excellent extension websites that offer information such as:  
<http://www.extension.purdue.edu/extmedia/AS/AS-518.pdf>  
[http://www.aragriculture.org/poultry/small\\_flock\\_information.htm](http://www.aragriculture.org/poultry/small_flock_information.htm) (This has many excellent links.) There are also publications you can check such as Backyard Poultry, GRIT or Hobby Farms magazine.
4. **How does one choose the right breed?** Purdue University has excellent information about the various breeds at:  
<http://www.extension.purdue.edu/extmedia/AS/AS-518.pdf>
5. **What are some common signs of illness in baby chicks? How do I treat them?** Common signs of illness include shivering, runny nose, coughing, wheezing, diarrhea, enlarged abdomen, ruffled feathers, lack of coordination, labored breathing or watery eyes. Make sure they have heat to maintain their body temperature, water and feed appropriate for chicks. You can check with the hatchery where you purchased them or your feed store for more information.
6. **What do you suggest regarding predator control?** This fact sheet from the Oklahoma Cooperative Extension Service, titled "*Predators: Thieves in the Night*" should be helpful.  
<http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2111/ANSI-8204web.pdf>
7. **What are the municipal regulations that control poultry stations? Are they flexible?** Each municipality has its own regulations, so it is best to check with them. If others in your area are raising poultry, such as a meetup group or 4-H, they may be able to tell you about whether regulations are flexible.

### **Care and Handling**

1. **What is the most important factor for promoting health among poultry?**  
The most important thing you can do to promote health among your poultry is to get a good start by buying chicks from a reputable source. Give your birds a good clean environment with plenty of water and the right kind of food. Spend time with your birds each day so you will quickly be able to recognize if they are not feeling well or if something seems wrong. Catching things early is important.
2. **What are tips for coping with extreme heat in Arizona?** The best thing you can do is to make sure your birds have shade and plenty of water.

3. **Please discuss zoonotic diseases such as poultry/human, poultry/dog/goat/cat/ pets, children.** Zoonotic diseases are caused by infectious agents that can be transmitted between animals and humans. They can be caused by bacteria, parasites, or viruses. This is a link to the University of Florida Extension Service information on zoonotic diseases: <http://edis.ifas.ufl.edu/ps019>
  
4. **Should coops be warm and cozy in winter, and if so, what is the best method for insulating?** Keep in mind that chickens have been around longer than electricity, so you don't need to worry that they need to be kept warm. In most cases adding heat is not a recommended practice. If you do want to insulate your coop do *not* make it airtight. You need ventilation but you don't want drafts. Have the ventilation openings at the top, well above where the hens are roosting. Do not wrap the coop in plastic, and don't use styrofoam because the chickens will peck it and eat it.  
  
You can add 4 to 6 inches of extra bedding in the form of wood chips, aspen or pine wood shavings (do not use cedar as it is too strong for the birds' respiratory system), bark or leaves.
  
5. **What is the light requirement in winter?** Your hens need 14 to 16 hours of light to produce an egg. If you want a few more eggs, you may need to add a 40 watt light bulb on a timer.
  
6. **What is the best way to provide water in winter?** To keep water from freezing you can buy a heated waterer or heated waterer base, or make one yourself using a cookie tin and a 60 watt bulb. Even easier is to keep one waterer inside and change it with the frozen one each day.
  
7. **My broody hen is about to hatch some chicks. Do I need to rig up a heat lamp in our mild northern California climate for chicks?** Since your broody hen is sitting on her chicks, let nature take its course and let her finish the job of hatching and caring for the chicks.
  
8. **How soon should a mother hen and chicks be put back in with the flock?** Sometimes the broody hen takes care of things, and other times, the chicks can get picked on. To be on the safe side, keep the chicks separate until they are old enough to fend for themselves, about 16 weeks of age. The mother hen does not have to be kept with the baby chicks longer than a week. or so. If you want to keep the baby chicks in a brooder, you can separate them from the mother hen once they hatch and return the mother hen to the rest of the adult flock.

9. **What routine health care should a small flock (5 to 10 birds) have?** Check your birds at least once a week -- inspecting for fleas and lice, wounds or infection, and check to see if they are limping. Often chickens do not want to show weaknesses or illness because they don't want to lose their place in the pecking order, so keeping a close eye on them will help keep them healthy. If you need additional information on bird health, check with your local extension service. You can check the following website to find one in your area. <http://www.csrees.usda.gov/Extension/>
10. **What is the best way to introduce hens (or chicks) into an established flock?** New birds should be quarantined (kept separate from your other birds) for 30 days to minimize the risk of transmitting disease as well as lice or mites. Then slowly introduce the new birds to the rest of the flock. Ideally, you should have one pen next to the other at first so they can slowly get to know one another, then put them in one pen and let the pecking order re-establish itself.
11. **How much daily exercise do birds need?** If your birds are walking around and have fresh air that is fine.
12. **What can we do with a lonely female?** Chickens are social creatures and they prefer being with other chickens. You can add a few hens and watch them all thrive.
13. **What is the best method for breeding chickens?** Breeding is quite simple, you need a rooster and hens and a small pen. A good ratio is one rooster for every 10 hens.
14. **Is there a safe, non-toxic, inexpensive (non-fence) way to keep our chickens off our front porch?** You might have some luck with poultry netting. However, chickens can fly 6 to 8 feet unless their wings have been clipped. If you clip their wings they won't get up more than 3 feet.
15. **What causes loss of feathers in birds?** Molting, a natural process, will cause a loss of feathers.
16. **Do chickens act strangely when they molt?** Molting can be stressful. While they are molting they may have a protein deficiency, and they could stop laying during the molting process (about 3 weeks to a month generally in late summer or fall).

**17. Will moving chickens to fresh pastures regularly prevent disease?**

Birds on pasture have more chances for diseases than if they are in a predator-proof environment. In addition to contact with wild birds that may be carrying disease they can pick up parasites and worms.

**18. What are the best breeds for healthy low-maintenance birds; the best for a small flock; the best for egg laying and the best for young children to raise?**

One breed is probably not better than another breed to answer all the above questions. You should do some research to find one that best suits your needs. Feather-legged breeds may need more maintenance because the feathers are low on their legs. In terms of children, the breed doesn't really matter, if the chickens are handled enough so they are used to being touched, they should be fine with children.

**19. How can I stay "neighbor friendly" while raising backyard poultry?** The best way to stay neighbor friendly is to share factual information with your neighbor about raising poultry (and it might not hurt to share a few eggs from time to time!).

It will also help relations if your yard and chicken area are neat and clean. Use good husbandry practices and keep waterers and feeders clean and the coop sanitary. It will also help if your birds are not wandering onto neighbors' property, and don't keep roosters if you have neighbors nearby.

**20. How can I convince my husband that raising backyard poultry is practical, affordable and not a predator draw?** Do some homework and figure the cost of starting and maintaining the poultry you wish to raise. Predators are already in the area, they don't come because there are chickens. However, you will need to have secure a coop to protect against predators, and you will need a clean and sanitary coop to make sure rodents are not attracted to your area. If you travel you will need arrangements for the care and feeding of your poultry.

**21. What is the best way to stop a rooster from attacking its owner?**

The moment a rooster shows aggression toward you, you must nip it in the bud. Let the rooster know who is boss. The rooster is doing what the rooster is supposed to do, protecting his territory and his hens. You can use the soft end of a broom to keep him away or try a squirt gun. If you ignore him it will get worse, and if there are children in your household this could be dangerous.

22. **What can I do about fighting roosters?** If you have more than one rooster in a pen, you will have one alpha male at the top of the pecking order. Occasionally they will fight over a hen, food or their “job” of looking out for predators. If they are fighting all the time and you have injuries, blood, etc. You need to remove the fighter permanently.
23. **What type of chicken will make the best fryers?** Many people are returning to heritage breeds for cooking.

### **General Information**

1. **What is Biosecurity For Birds?** Biosecurity For Birds is USDA’s outreach and education campaign to help backyard poultry owners learn about infectious poultry diseases and ways they can protect their flock from these diseases. By using simple hygiene practices poultry owners can help keep their birds healthy.
2. **How do I market eggs and meat in Oklahoma?** You should check with your State Department of Agriculture. Many States have special programs for small farmers selling at farmers markets. The State Department of Agriculture link is <http://www.oda.state.ok.us/>
3. **How do we find our state's Low Path AI Response Plan?** Your State Department of Agriculture is the organization that develops your State’s Low Path AI Response Plan.
4. **Can you tell the sex of the chicken by the shape of the egg?** No, you can’t. However, the sex of a chicken can be determined by vent sexing. According to Joe Berry, of the Oklahoma Cooperative Extension, “Vent sexing by an experienced chick sexer can be done at one day of age. This technique is difficult and requires a great deal of experience. If a fast feathering gene has been introduced into the breeding flock, chicks can be sexed by observing the differences in the appearance of the primary wing feathers. The feathers on the wings of the female will be a little longer and in a different pattern than those on the males. Most chickens cannot be sexed in this manner.”

### **Coops and free range**

1. **What do you suggest for portable housing for a small flock?** You can use a portable chicken tractor (make your own or buy one). There are a number of websites that might be helpful in terms of making a coop and run

that is best for your circumstances. Chickens cannot protect themselves from predators so it is up to you to make sure they have secure housing.

2. **What is the best way to make a large movable run so the chickens can forage in different parts of the yard?** Try using light weight wood, PVC pipe and poultry netting. See web sites above for ideas.
3. **How far will chickens wander without a pen?** They can go quite far. If you train them where home/food/coop are that will help, but if you allow them to wander without being confined you will lose birds to predators and road traffic.
4. **What is the best material to use on the floor of a chicken coop i.e. wood shavings, sand, gravel, etc?** For the floor you can have dirt, concrete (easy to clean), or wood (wood with linoleum over it makes cleaning much easier). In the case of bedding, wood shavings and wood chips are excellent to use as bedding, just don't use cedar, as it is too strong for the birds' respiratory system. Make sure the wood has not been chemically treated. Many people choose to use sand or even hay.

### **Feed**

1. **What should I look for in a feed to maximize average daily gain?** You are looking for protein content – good layer feed should have 15% to 16% protein. Commercial feed is balanced and is all your birds really need.
2. **Can I give my backyard birds table scraps?** Table scraps given as an occasional treat are fine, but do not give them so many scraps that they refuse to eat their regular food in anticipation of getting the “treats.”
3. **Do free range birds need additional grit?** No, they are picking up plenty of grit out in the open.
4. **Do you have to provide commercial feed if your birds are allowed to free range and have access to quality scraps?** As discussed above, commercial feed is completely balanced, and you can provide it as free choice food. The problem with table scraps is you don't have a good idea of the nutritional value of the scraps or the nutritional consistency of what the birds are getting.
5. **What can I feed my chickens that will boost their immune system and keep them healthy while it is cold?** A balanced diet of commercial food will be sufficient.
6. **What is the most nutritional feed that we can make ourselves?** You should contact a poultry nutritionist about this or consult a poultry

specialist. You may also check poultry-related magazines for articles on this topic.

7. **Can poultry die from eating too much corn?** Too much corn can clog the crop. If you want to feed corn try cracked corn as it is easier for birds to digest.
8. **Can I give my chickens eggshells?** Some people grind eggshells finely as a source of calcium.

### **Eggs**

1. **I have no roosters on my property, so are the eggs still good if a hen has been sitting on them all day long?** Yes, just collect the eggs daily. If you can't collect the eggs until you get from work in the evening, the eggs laid that day that are under a broody hen should be just fine.
2. **Can I save eggs for the incubator? If so, how do I store them and for how long?** In order to have fertile eggs you must have a rooster living with hens. If you plan to incubate the eggs, do not wash them. Put them all in the incubator at the same time so they will hatch at the same time. Eggs can be stored at room temperature in a cool dry place while collecting enough eggs to incubate.
3. **What natural cure would you recommend for poopy butt hens?** You can mix scratch in with sand for the hens.
4. **What are safe handling guidelines for washing, storing and using my farm fresh eggs?** Wash the eggs soon after they are collected and refrigerate them.
5. **Are backyard eggs safer than commercial eggs?** There are no studies showing that they are safer. You should use safe handling guidelines (wash as soon as you collect them and refrigerate) with your backyard eggs, and thoroughly cook all eggs. This article by the Centers For Disease Control might be helpful: [http://www.cdc.gov/healthypets/pdf/intown\\_flocks.pdf](http://www.cdc.gov/healthypets/pdf/intown_flocks.pdf)
6. **What is a safe inexpensive way to package eggs?** Egg cartons are safe and inexpensive.
7. **What factors influence shell quality?** Calcium intake is the biggest contributor to shell quality.

