


# Developing Regulations for Keeping Urban Chickens

**Small and Backyard Flocks**

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There is growing interest in keeping chickens in urban areas in North America. Whether a family can keep poultry in the backyard depends on state, county, and city ordinances. Community regulations might also come into play—current regulations vary from city to city. The main benefit of a backyard flock stems from the human–animal bond, as well as the production of a food item, primarily eggs. However, many individuals have concerns related to public health and community well-being. These include the spread of disease, waste management, poultry pests, predators, noise, and odor. The validity of the proposed benefits and negative effects are not currently supported by any published research. Pollock et al. (2012) suggest that the issue be approached much like concerns over keeping dogs.

## Proposed Benefits

Raising chickens in an urban backyard is not much different from having a companion animal such as a cat or dog. In a recent USDA survey, Garber et al. (2007) note that the most common reason for having backyard flocks was for fun or as a hobby. Additional reasons included family tradition, lifestyle, and food production, as well as the desire to expose children to food production, general affection for birds, and insect control.

There is research to support the idea that improved emotional well-being results from keeping companion animals (Wells, 2009). Emotional benefits include increased social interaction and reduced feelings of loneliness, isolation, and depression. If backyard chickens are considered companion animals, keeping them will likely have the same positive effects.

Eggs are the main food item produced in backyard flocks. The local production allows families to have some control over their food production. Given the economies of scale, however, it is rarely possible for the keeper of a backyard flock to produce eggs at a lower cost than those available in the grocery store. Chickens can eat some kitchen scraps, but it is still necessary to feed them a complete feed in order to sustain egg production. When chickens are fed household waste, there is an environmental benefit to raising backyard chickens. An additional environmental effect is the supply of chicken manure, which, when properly handled, is a good garden fertilizer, reducing the need for commercial fertilizers.

When the chickens are allowed to roam in the yard, they may eat garden pests and weeds, serving as a biological control. Unfortunately, chicken foraging behavior can have negative impacts on the plants themselves.

Some believe that eggs produced at home are more nutritious than store-bought eggs, but the research does not support this belief (Anderson, 2011; Kasrten et al., 2010). Eggs, whatever the source, are an excellent source of protein.

## Fact or Fiction

### Source of Disease Transmission to Commercial Poultry Operations

Smith and Dunipace (2011) reviewed the literature on the role of backyard poultry flocks in past **avian influenza** outbreaks and concluded that the role is very small. They indicate that the small flock size and limited contact with commercial operations reduced the likelihood that backyard flocks are a risk to transmit disease to commercial poultry operations. They back up this opinion with several case studies. For example, in the 2004 outbreak of avian influenza (H7N3) in British Columbia, Canada, the odds of infection were 5.6 greater for commercial flocks (>1,000 birds) than for backyard flocks. In addition, backyard flocks were always discovered by surveillance of nearby backyard flocks after nearby commercial flocks had been infected. Similarly, in the 2002 avian influenza (H7N2) outbreak in Virginia, not a single backyard flock was reported to be infected.

## Public Health Issues

The public health issues of concern are the spread of infectious diseases from the birds to humans and food poisoning from consumption of food items produced (meat or eggs). There are a number of hypothetical means through which people can be exposed to poultry disease from backyard flocks. These include direct contact, waste handling, and egg consumption. There are a number of avian diseases that are zoonotic. The spread of these diseases, however, is primarily associated with other poultry and wild birds rather than with chickens. Avian influenza and salmonellosis are two exceptions. Avian influenza has received a lot of attention because of the outbreaks of avian influenza among humans in Asia, but the concerns are restricted to Asian backyard flocks. There has not been a single case of H5N1 (the strain of Asian avian influenza) anywhere in the the United States.

Salmonellosis and campylobacteriosis can pose an ongoing threat to human health in North America. A New Zealand study (Anderson et al., 2012) reported that campylobacter is common in backyard chicken flocks. However, because backyard poultry had campylobacter genotypes for the strains found in commercially produced poultry, it is not possible to distinguish the source of infection in human cases. As a result, backyard poultry, or their fecal material, are a potential source of campylobacter exposure in people. When dogs are kept in the same area as chickens, the dog may eat the fecal material and could hypothetically transmit salmonellosis to household members. While there have been a few cases of salmonellosis in humans keeping backyard flocks (<http://www.extension.org/pages/69059/human-salmonella-infections-linked-to-backyard-chickens#.UmfFI1NbwWQ>), salmonellosis is not typically a problem in properly maintained flocks.

On August 15, 2013, the Centers for Disease Control (CDC) reported 316 people from 37 states (<http://www.cdc.gov/salmonella/typhimurium-live-poultry-04-13/index.html>) were infected with *Salmonella typhimurium*, believed to be related to backyard poultry flocks. Of the 119 people with available information, 51% had been hospitalized. The majority of the sick were children 10 years of age or younger. Of those that got ill, 97% reported contact with live poultry in the week before their illness began. The majority purchased live poultry from agricultural feed stores. The CDC stressed the importance of hand washing after handling poultry. Again, salmonellosis is not a concern in well-maintained flocks. If bringing in a new flock of hens, it is best to raise the chicks yourself, after having purchased them from a clean flock.

## **Waste Management**

Proper manure management is essential in controlling disease risk, odors, and flies. Most concerns regarding poultry waste are related to the quantities produced on large-scale farms. Small-scale operations, as well as backyard flocks, can also contribute to environmental pollution if they have high bird density and poor manure management. Most city ordinances restrict the number of birds allowed in a backyard flock. It is also rare for urban centers to be situated near important water reservoirs. This dramatically reduces the risk of environmental pollution from backyard flocks. The weight of fresh manure output is about 115% of the total dry feed intake. So, to estimate the amount of manure a flock will produce, you can multiply the flock's total feed consumption and multiply by 1.15. (A hen typically eats a quarter pound of feed a day.) Fresh manure is 75% water, and some of the moisture will evaporate from manure accumulating in a poultry house. It is important to keep the manure dry. By keeping the litter dry, only about one-third of the calculated weight of the fresh manure will remain. Composting the used bedding produces an excellent fertilizer for vegetable or flower gardens.

## **Pest Populations**

The main pests of concern for poultry include external parasites such as mites, lice, bedbugs, fleas, and soft ticks. Additional pests of concern include darkling beetles, flies, moths, cockroaches, and rodents. There is very little research to reach any conclusions about the effects of pests on backyard flocks. Rodents, especially mice, will eat feed and contaminate it with salmonella. In addition to transmitting disease, rodents can also spread lice, fleas, and mites. Health risks from backyard flocks depend on the cleanliness and security of the chicken coop, as well as the nature of waste management and feed storage.

## **Predators**

Some areas have problems with raptors. The main land predators of concern include raccoons and coyotes, although neighborhood dogs can be a problem in some areas. If birds are housed in a coop, this will usually protect them from predators. Raccoons can be a problem, however, because they can reach into pens.

## **Noise**

Most city ordinances do not allow roosters because of the crowing. It is not feasible to prevent a rooster from crowing, and roosters will crow throughout the day. Some city ordinances allow for temporary keeping of roosters for breeding purposes, but that is rare.

Hens have also been accused of being a noise nuisance. A hen will squawk during egg-laying. The squawking can continue for up to five minutes, but varies considerably. The city of Pleasanton, California, recorded the noises from a squawking hen at a distance of two feet and obtained a 63 dBA. By comparison, dogs are considered a noise disturbance when barking exceeds 100 dBA (Coopala et al., 2006). Minimizing the number of hens allowed in a backyard flock will minimize the nuisance.

## **Odor**

Keeping chicken coops clean and properly disposing of waste will minimize any odors from a backyard poultry flock. Composting of used poultry bedding dramatically reduces any risks of odors. For more information on composting, view the University of Wyoming article "Backyard Composting: Simple, Small-

## Points to Consider

A large portion of the urban population has very little contact with food animals, purchasing their meat, eggs, and milk from the grocery store. This disconnection results in limited knowledge about how to care for livestock such as poultry. A survey by Madsen et al. (2013) identifies gaps in the disease prevention and biosecurity practices of backyard flocks.

Per a review of some of the current city ordinances related to backyard poultry flocks, the following questions need to be addressed in the establishment of new city ordinances.

- **What species of poultry will be allowed?** Most urban areas allow only chickens, though some do not restrict the kind of poultry that can be raised. Waterfowl can produce a lot of wet manure and tend to be more of an odor problem.
- **What is the maximum number of adult birds that a backyard can have?** Most ordinances allow between five and six.
  - What factors should you consider to limit the number of birds? Factors could include land size, for example.
  - Will there be exceptions for community flocks?
- **Are roosters allowed?** Most urban areas do not allow roosters because of the noise. Some city ordinances do allow roosters because roosters are required for breeding a poultry flock. Some allow roosters to be kept temporarily for breeding purposes.
- **Will a permit be required?** Several cities require flock owners to get a permit in order to keep chickens in the backyard, but permit requirements are rare. In communities that do require a permit, requirements differ on several key points.
  - Will there be a fee for a permit?
  - What does the application involve?
  - Do prospective flock owners have to get neighbor approval?
  - Will prospective owners be required to take a course before they can get a permit?
  - Will there be inspections of the facilities to verify correct application of the rules? And, if so, what are the consequences of violations?
  - How often does the permit need to be renewed?
- **Will there be coop restrictions?** These could include requirements that a coop be set back from neighboring properties. "Setback" regulations are very common, but not universal.
- **Will the chickens have to be tagged for identification?** This is rare, and in some places strongly opposed.

## Sources

Anderson, J., B.J. Horn and B.J. Gilpin. 2012. The prevalence and genetic diversity of *Campylobacter* spp. in domestic 'backyard' poultry in Canterbury, New Zealand. *Zoonoses Public Health* 59:52-60.

Anderson, K.E. 2011. Comparison of fatty acid, cholesterol, and vitamin A and E composition in eggs from hens housed in conventional cage and range production facilities. *Poultry Sci.* 90: 1600-1609.

City of Pleasanton. 2005. Planning commission staff report. Pleasanton, CA.

| <b>City of Adel<br/>Manual of Policy and Procedure</b> |                                  |                       |     |
|--|----------------------------------|-----------------------|-----|
| <b>Section:</b>  | 3. City Hall and City Operations |                       |     |
| <b>Title:</b>  | Urban Chicken and Fowl Policy    |                       |     |
| <b>Effective Date:</b>                                 | October 13, 2015                 | <b>Resolution No.</b> | N/A |
| <b>(Revisions)</b>                                     |                                  |                       |     |
| <b>Policy Number:</b>                                  | 3.11.01                          |                       |     |

### 1. PURPOSE

The purpose of this policy is to provide the steps and requirements needed for residents to keep urban chickens and other fowl on their property. This policy is designed to provide written consent of the Council regarding livestock within City limits (see Chapter 55.05 in the City of Adel Code of Ordinances).

### 2. DEFINITION

Fowl shall be defined as birds and livestock such as pigeons, pheasants, quail, chickens, and ducks which are of such type and nature that state and national associations exist. These associations establish norms for breeding, confining, and rearing.

### 3. POLICY

A. It is unlawful to keep, possess, or maintain fowl on any parcel of property located within the City limits, except in accordance with the following restrictions:

- 1) No such fowl shall be kept on the same lot or premises with any multiple dwelling without obtaining permission of the other tenant(s) and/or landlord.
- 2) No person, having the care of any fowl, domestic or nondomestic, shall permit the fowl to run at large in City limits as defined in Chapter 55.12 of the City of Adel Code of Ordinances.

B. This policy shall not be deemed to prohibit the keeping or maintaining of any fowl which was legally kept in the City limits as of October 12, 2015.

C. The approval of fowl per this policy is limited to the resident(s) requesting the approval.

D. All other City nuisance codes and policies shall remain in full force, including Chapter 55 of the City of Adel Code of Ordinances. The City reserves the right to revoke approval if this policy or other nuisance codes and policies are not followed.

#### 4. REQUIREMENTS

- A. Cages, hutches, coops, cotes, lofts, or other confinement shall be enclosures of sufficient size to house the number of fowl permitted by state or national standards. Set-backs may be required.
- B. On any parcel of land such fowl, as defined in Section 2, shall be no more than six (6) in total number, unless special approval is granted by the Code Compliance Officer and the City Administrator.
- C. Council approval is required when the number or type of fowl exceed the parameters as defined in sections 2 and 4.B.
- D. No fowl may be maintained, enclosed, or fenced in the front yard of a dwelling or within a dwelling.
- E. The young produced by the approved fowl, which exceed the number specified in section 4.B, shall be maintained with the parent for a period of approximately eight (8) weeks but no more than ten (10) weeks, unless by state or national standards a longer period is required.
- F. No roosters over eight (8) weeks old are permitted.
- G. No geese or guinea hens are permitted.
- H. Residents seeking approval of fowl per this policy shall sign-up at Adel City Hall with the Code Compliance Officer. Residents will be provided with a copy of this policy. Such sign-up will collect the following information from the resident:
  - 1) Name, address, and phone number
  - 2) Property owner's contact information (if different than applicant)
  - 3) Consent of property owner (if different than applicant)
  - 4) Type of fowl
  - 5) Number of fowl
  - 6) Description of fowl enclosure(s)
  - 7) Consent of contiguous neighbors

I. Approval shall be given by the Code Compliance Officer. Applicants may appeal to the Adel City Council if approval is denied by the Code Compliance Officer.

## **5. EXCEPTIONS**

Fowl maintained by the following entities for educational or exhibition purposes are exempt from the requirements of section four (4) of this policy:

- A. Schools
- B. Day care centers
- C. Vocational agricultural programs
- D. Public education programs
- E. Zoos
- F. State and county fairs
- G. Science centers
- H. Circuses
- I. Temporary exhibits or shows

## **6. KILLING OF FOWL BY DOMESTICATED PETS**

No dog, cat, or other domesticated pet which kills fowl off of the permitted parcel of land shall, for that reason alone, be considered a dangerous or aggressive animal or the City's responsibility to enforce its animal control provisions.