

4. Discussion of an amendment to Section 174.005 of the Palm Bay Code of Ordinances related to backyard chickens. (Councilman Langevin)



LEGISLATIVE MEMORANDUM

TO: Honorable Mayor and Members of the City Council

FROM: Lisa Frazier, AICP, Growth Management Director

THRU: Scott Morgan, Interim City Manager

DATE: April 3, 2025

RE: Discussion of an amendment to Section 174.005 of the Palm Bay Code of Ordinances related to backyard chickens. (Councilman Langevin)

SUMMARY:

A discussion for a potential textual amendment to the Code of Ordinances, Title XVII, Land Development Code, Chapter 174: Standards for Accessory, Temporary, and Other Uses and Structures, Section 174.005 Backyard Chickens, to modify language to increase the number of chickens which may be kept on single family lots in the RE, RS-1, RS-2, RS-3, and SRE Zoning Districts.

REQUESTING DEPARTMENTS:

City Council

FISCAL IMPACT:

Not Applicable

STAFF RECOMMENDATION:

Section 174.005 is not recommended for amendment at this time.

ATTACHMENT:

1. 174.005 Backyard Chickens Staff Report



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STAFF REPORT

LAND DEVELOPMENT DIVISION

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TOPIC

Backyard Chickens

CITY COUNCIL REGULAR MEETING DATE

April 3, 2025

POTENTIAL APPLICANT

City of Palm Bay

PROPERTY LOCATION/ADDRESS

Not Applicable

SUMMARY OF REQUEST

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BACKGROUND:

On February 20, 2025, the City Council requested staff recommendations with regard to the possibility of amending the Code of Ordinances for Title XVII, Land Development Code, Chapter 174: Standards for Accessory, Temporary, and Other Uses and Structures, Section 174.005 Backyard Chickens, to modify language to increase the number of chickens which may be kept on single family lots in the RE, RS-1, RS-2, RS-3, and SRE Zoning Districts.

HISTORY:

Backyard chickens is defined in **Section 171.001** of the Land Development Code as *“CHICKEN: A domestic fowl developed in a number of breeds for their eggs. A fowl is defined as a chicken by the University of Florida Extension Service. This definition shall not include ducks, geese, turkeys, pigeons or guinea.”*

The permitting of backyard chickens in single-family residential zoning was amended into the Code of Ordinances in 2013 (Ordinance 2013-10) as requested by the City of Palm Bay. At the time staff conducted extensive research to determine what the maximum number of chickens that a typical residential lot could support without causing nuisance, noise, or health concerns (**Attachment 1**). The resulting determination as presented was that 4 hens per residential yard was the recommendation as codified in **Section 174.005** below.

174.005 BACKYARD CHICKENS.

(A) No person shall keep or maintain in, on or upon any lot, building, premises or property any farm animal in any zoning category outside of the RR and GU districts except as provided for in this section or § [174.012](#) (Pigeons).

(B) Up to four (4) chickens may be kept on single family lots in the RE, RS-1, RS-2, RS-3, and SRE Zoning Districts subject to adherence to the following criteria:

(1) Hens only may be kept. Roosters are prohibited.

(2) Chickens must be caged at all times and cages/coops shall meet the criteria for animal cages and enclosures contained in § [174.002](#).

(3) Breeding of chickens is prohibited.

(4) Dead chickens shall be immediately removed from the premises and disposed of properly.

(5) The cage/coop and surrounding areas shall be clean and properly maintained to avoid the attraction of vermin, insects or predators.

(Ord. 2024-33, passed 9-19-24)

At the Regular Council Meeting held on August 6, 2020, Council made the request to increase the number of chickens from 4 to 13. Minutes from this meeting are presented as **Attachment 2**.

At the Regular Council Meeting held on February 20, 2025, it was proposed by Council that the city consider increasing the number of chickens permitted on residential lots from 4 to 8. The request was debated amongst council members, and it was then decided that staff would be directed to investigate the feasibility of an increase and provide recommendations to council.

ANALYSIS:

The city zoning code is based on, consistent with, related to and adopted to effectuate and implement the policies of the city comprehensive plan to protect, preserve and improve the public health, safety, and welfare of the inhabitants of the city.

In accordance with **Section 174.002 ACCESSORY USES AND STRUCTURES GENERAL REQUIREMENTS**. *(H) Animal enclosures or cages. Animal cages or enclosures accessory to residential uses shall be limited in size to fifteen (15) feet in length by ten (10) feet in width. They shall not exceed six (6) feet in height and shall provide a ten (10) foot side setback and a fifteen (15) foot rear setback.*

Per Florida Department of Agriculture and Consumer Services (FDACS), each chicken should have 3-4 square feet (sf) of coop floor space and 8-10 sf of run area each. For 10 chickens, this amounts to 110-140 sf of enclosed housing.

Section 174.002(H) of the LDC requires that all animal housing structures are located in the rear yard and must be at least 5 ft from any other structure and is limited to 150 sf in total area. The setbacks are established as buffers required to prevent animal waste from encroaching on surrounding properties and drainageways. Based on the required size of enclosure, coupled with the city's setback requirements, there are not many typical quarter-acre residential lots which could feasibly accommodate 10 chickens.

Additionally, a single hen can produce 17-20 dozen eggs per year. (Note: the production of eggs for sale would require FDACS permit and inspections.) Chickens are common vectors for the spread of salmonella and the Avian Flu both of which are readily spread through contact with the birds or their waste. The more chickens that are housed in a small area, the more likely contamination to humans, pets, and wildlife may occur.

OTHER MUNICIPALITY REGULATIONS:

BREVARD COUNTY: Sec. 62-2108. - Farm animals and fowl. In all single-family residential zones, on lots of at least one-half acre minimum, up to four chickens (no roosters or other fowl) may be permitted per one-half acre of land. Housing, such as coops, that is not considered to be a barn, stall or paddock is required and must meet the setback requirements for accessory structures in accordance with the zoning classification. All fowl are for the personal, non-commercial use of the occupants only. Breeding and slaughtering of any fowl is strictly prohibited.

CITY OF MELBOURNE: Only allows chickens as a conditional use in R-A residential zoning which has a minimum area of 1 acre

CITY OF SEBASTIAN: Sec. 18-29. - Keeping of fowl.

(a) Any person keeping fowl shall keep them in a pen, coop or enclosure meeting the requirements of section 18-27 of this article. No more than two such fowl may be kept on any single lot.

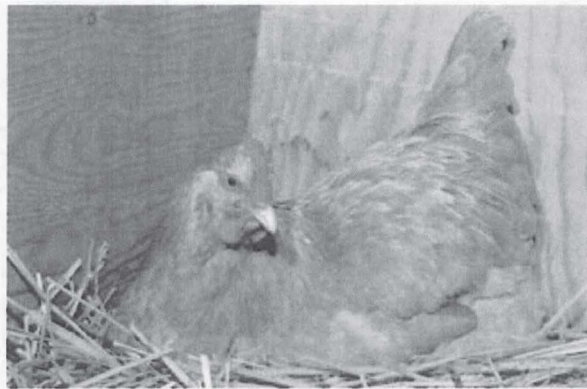
CITY OF TITUSVILLE: Sec. 5-86. - Certain animals restricted; permits for certain animals required. (5) Backyard chickens shall be permitted on a single-family properties subject to all regulations described below: a. For the purposes of this section, the terms "backyard chicken" or "chicken" refers to hens, or female chickens, only. It shall be unlawful to keep ducks, geese, turkeys, peafowl, roosters or male chickens, or any other fowl. b. No more than four (4) chickens shall be permitted on any lot or parcel. j. A permit is required.

*Most other area municipalities do not allow chickens within residential zoning at all.

STAFF RECOMMENDATION:

Section 174.005 is not recommended for amendment at this time.

BACKYARD CHICKENS ON SINGLE FAMILY LOTS



Growth Management Department

September 19, 2012

BACKGROUND

The keeping of chickens is considered an agricultural use under the terms of the City's Zoning Ordinance. The Zoning Ordinance defines agriculture as:

***AGRICULTURE.** The production, keeping or maintenance, for sale, lease or personal use, of plants and animals useful to man, including but not limited to, forages and sod crops; grains and seed crops; dairy animals and dairy products; poultry and poultry products; livestock including beef cattle, sheep, swine, horses, ponies, mules, or goats or any mutations or hybrids thereof, including the breeding and grazing of any or all of such animals; bees and apiary products; fur animals; trees and forest products; fruits of all kinds, vegetables; nursery, floral, ornamental and greenhouse products; and fish hatcheries.*

Chickens are defined as poultry by the United States Department of Agriculture and therefore, under both definitions, are considered an agricultural use.

The City of Palm Bay currently permits agricultural uses (including the keeping of chickens) within the RR, Rural Residential District and the GU, General Use Holding District. Both of those zoning categories are rural in nature and permit other agricultural activities as well. The lot sizes are designed to permit such agricultural uses without creating nuisance issues with adjacent lands normally.

Traditionally, cities have not permitted the keeping or raising of farm animals within primary residential areas. Recently, there has been a significant movement to change that tradition and several cities have amended their codes to permit some farm animals (such as chickens). Orlando recently set up a test case involving 25 properties to permit up to 3 hens to be kept on single family residential lots. Brevard County is in the process of considering amendments to their code to permit chickens. Other cities, such as Port St. Lucie, have turned down proposals to permit chickens on their single family lots.

The decision to permit or not permit the keeping of chickens in single family areas is a policy decision for City Council. Several items that should be considered are discussed in the remainder of this report.

Chickens versus other Farm Animals

Chickens are considered poultry by the United States Department of Agriculture. Also considered poultry are: turkeys, ducks, geese, pigeons and guineas (among other birds). The decision to permit chickens may open up the discussion of why other poultry classes are not permitted. Additionally, there are hundreds of species of chickens, some more domesticated than others.

While less likely, the decision to permit chickens within single family zoning categories crosses the separation between agricultural uses and single family neighborhoods and can lead to requests to keep goats, horses, pigs, ostriches, emus and similar animals (all of which has been requested from the Growth Management Department at one time or another). Without clear distinctions between such activities, the City is on less than solid decision making ground.

Diseases

The Centers for Disease Control and Prevention (CDC) reported an outbreak of salmonella that sickened 39 people in 15 states and is linked to handling poultry. Nine of those individuals were so sick they required hospitalization. The contaminated chicks and ducklings causing the outbreak have been traced to a mail-order hatchery. When handling eggs, is important to make certain contamination of the raw egg does not occur from dirty shells. However, if improperly cleaned, the removal of the protective coating on the egg may lead to bacterial contamination. A difficult choice for the hobbyist.

Avian influenza (AI) is a highly contagious disease of birds which can be devastating for poultry owners. It can be spread between different types of birds, including chickens. Fowl Pox is another disease sometimes found in chickens. While many commercial operations are aware of the many diseases impacting poultry, that is seldom the case for the casual backyard chicken farmer.

Additionally, it is very important that the coop and activity areas for the chickens be kept clean and neat to prevent disease or rodent issues from developing.

Self Sufficiency, Green Food Production and Other Benefits

In these lean economic times, many families are looking for ways to cut expenses while still enjoying nutritious and good tasting meals. Vegetable gardening, canning/preservation and now backyard chickens are just some of the ways citizens are looking at to provide alternatives to commercial, and expensive, food products.

However, the ability to harvest your own eggs generally is not without cost, requiring purchase of the chicks, erection of a chicken coop of some kind, provision of food and water, and occasional vet bills. By all accounts, it does appear that the quality of the eggs appears to improve through the backyard chicken process.

May provide benefits for backyard gardening through pest control and fertilizer production. Several extension service sites have warned about using raw chicken waste on vegetables, so that would be a concern.

Chickens are omnivores, so they will consume many types of kitchen scraps.

A little taste of country life.

Non-Governmental Restrictions

The vast majority of the single family areas within Palm Bay would not permit the keeping of chickens, even if the City changes the Zoning Code. Deed restrictions prohibiting poultry exist in almost all of the single family subdivisions, with the exception of some of the older platted areas in northeast Palm Bay. The Port Malabar subdivision lots have deed restrictions preventing the keeping of poultry on any single family lot. Typically, that language reads: "No animals, livestock or poultry of any kind shall be raised, bred or kept on any lot except that dogs and cats ...". The newer planned unit developments have similar restrictions. While the City does not enforce deed restrictions, we typically prefer to support those criteria to avoid confusion amongst property owners.

Nuisances

Most cities that permit chickens prohibit roosters due to the noise factor. Chickens are not silent, but typically do not create noise impacts to the neighbors.

The number of chickens has also been limited in most instances. This reduces the likelihood of nuisance impacts to neighbors also.

In some cases, requirements have been in effect that only permit chickens with a chicken coop, no free-ranging chickens. Chickens usually need to have their wings clipped to prevent them from flying over a fence. Almost all of the cities examined prohibit unconfined chickens (confined by a fence or within a cage).

Odor is also usually not an issue if the number of chickens is limited. However, cleanliness is important to be certain the area does not become attractive to rodents and other pest.

Other Issues

Chickens are attractive prey for many predators (hawks, raccoons, cats, fox and so on). Many communities require "predator resistant" coops and runs to minimize problems with predators. Placing chickens in single family residential areas may increase the activity of predators in the neighborhood unless protective measures are taken.

Most communities also prohibit the onsite slaughtering of chickens and require dead chickens to be bagged and disposed of properly. The other side of that issue is the fact that hens do not lay eggs forever, while they can live up to 15 years. The disposal of non-laying hens must be addressed in any ordinance change.

The raising of chickens is generally prohibited. So too is the sale of eggs.

Some residents may have chosen to live in a city rather a rural area to avoid contact with such activities. In their mind, this may be an alteration of the lifestyle they sought out.

Factors Affecting Egg Production in Backyard Chicken Flocks¹

J.P. Jacob, H.R. Wilson, R.D. Miles, G. D. Butcher, and F.B. Mather²

The laying cycle of a chicken flock usually covers a span of about 12 months. Egg production begins when the birds reach about 18-22 weeks of age, depending on the breed and season. Flock production rises sharply and reaches a peak of about 90%, 6-8 weeks later. Production then gradually declines to about 65% after 12 months of lay. A typical production curve for a laying flock, showing changes in the level of egg production and in egg weight, over time, is given in Figure 1.

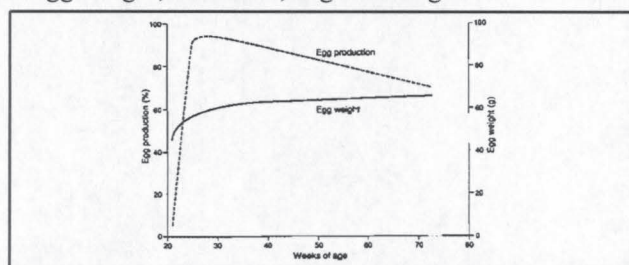


Figure 1.

There are many factors that can adversely affect egg production. Unraveling the cause of a sudden drop in egg production requires a thorough investigation into the history of the flock. Egg

production can be affected by such factors as feed consumption (quality and quantity), water intake, intensity and duration of light received, parasite infestation, disease, and numerous management and environmental factors.

Noninfectious Causes

Aging Hens

Chickens can live for many years and continue to lay eggs for many of these years. However, after two or three years many hens significantly decline in productivity (see Figure 2). This varies greatly from bird to bird. Good layers will lay for about 50 to 60 weeks and then have a rest period called a molt. Poorer layers and older hens will molt more often and lay less consistently. See Table 1.

Improper Nutrition

Laying chickens require a completely balanced diet to sustain maximum egg production over time. Inadequate nutrition can cause hens to stop laying. Inadequate levels of energy, protein

1. This document is FACT SHEET PS-35, one of a series of the Animal Science Department, Florida Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida. Original publication date April 1998. Reviewed March 2011. Visit the EDIS website at <http://edis.ifas.ufl.edu>.
2. Jacqueline P. Jacob, poultry extension coordinator, Henry R. Wilson, professor, Richard D. Miles, professor, Dairy and Poultry Sciences Department, and Gary Butcher, extension poultry veterinarian, Faculty of Veterinary Medicine, and F. Ben Mather, poultry extension specialist, Dairy and Poultry Sciences Department, Cooperative Extension Service, Institute of Food and Agricultural Sciences, University of Florida, Gainesville, 32611. The use of trade names in this publication is solely for the purpose of providing specific information. It is not a guarantee or warranty of the products named, and does not signify that they are approved to the exclusion of others of suitable composition.

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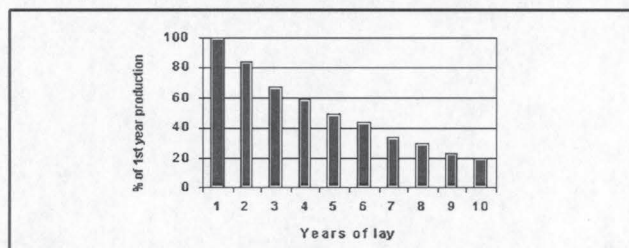


Figure 2.

or calcium can cause a drop in egg production. This is why it is so important to supply laying hens with a constant supply of nutritionally balanced layer food. Feeding whole grains, scratch feeds and table scraps will cause the birds diet to become imbalanced and inadequate.

Many times these imbalances can cause other problems like oviductal prolapse. Prolapse may occur when the bird is too fat and/or an egg is too large and the bird's reproductive tract is expelled with the egg. Prolapse usually causes permanent damage to the hen and is fatal in many cases.

Omission Of Feed Ingredients

Salt

Animals have an innate desire to consume salt. Feeding a salt-deficient diet will lead to increased feather pecking and a decline in egg production.

Most animal feeds will contain added salt, usually in the form of sodium chloride. Iodine is rarely added as a separate ingredient. Instead, iodized salt is routinely used. Cobalt iodized salt is often used in diets for swine and ruminants, and this can also be used without any problems for poultry. This type of salt is usually blue.

Sodium is an essential nutrient, playing a major role in maintaining body fluid volume, blood pH, and proper osmotic relationships. A continuously low intake of salt can cause a loss of appetite. Sodium deficiencies adversely affect utilization of dietary protein and energy, and interfere with reproductive performance.

Chlorine is also an essential nutrient. Hydrogen chloride (HCl) released from the true stomach (proventriculus) is important in digestion. Chlorine also plays a role in maintaining

osmotic balance in body fluids. Birds deficient in chlorine are more nervous, showing increased sensitivity to sudden noise.

Calcium

The egg shell is composed primarily of calcium carbonate. The pullet's requirement for calcium is relatively low during the growing period, but when the first eggs are produced, the need is increased at least four times, with practically all of the increase being used for the production of eggshells. Inadequate calcium consumption will result in decreased egg production and lower egg shell quality.

Hens store calcium in medullary bone, a specialized bone capable of rapid calcium turnover. As calcium stores are depleted, bones become brittle. In severe cases, hens are unable to stand. The condition is known as caged-layer fatigue. Birds on the ground or on litter floors recycle calcium and phosphorus through consumption of feces, and do not have caged-layer fatigue.

Calcium can be supplied in the diet as either ground limestone or oyster shell. Particle size affects calcium availability. Usually the larger the particle size, the longer the particle will be retained in the upper digestive tract. This means that the larger particles of the calcium source are released more slowly, and this may be important for the continuity of shell formation, especially in the dark period when birds do not ordinarily eat.

Periodically, dolomitic limestone is offered to the feed industry. However, dolomitic limestone (which is used in the steel industry) should never be used in poultry diets. Dolomitic limestone contains at least 10% magnesium, and this complexes with calcium or competes with calcium for absorption sites in the intestines. The consequence of feeding dolomitic limestone is induced calcium deficiency.

Young birds should not be fed a high calcium layer diet because the calcium/phosphorus ratio will be unbalanced, resulting in increased morbidity or mortality.

Vitamin D

Vitamin D is required for normal calcium absorption and utilization. If inadequate levels of vitamin D are fed, induced calcium deficiency quickly results and egg production decreases.

Feed grade vitamin D comes in two forms, D_2 and D_3 . In most animals, both are equally potent. In birds, however, D_3 is substantially more active than D_2 . In poultry diets, therefore, vitamin D must be supplied in the form of D_3 .

Protein

Dietary requirements for protein are actually requirements for the amino acids that constitute the protein. There are 22 amino acids in body proteins, and all are physiologically essential. Poultry cannot synthesize some of these, or cannot synthesize them rapidly enough to meet the metabolic requirement. Therefore, these amino acids must be supplied in the diet. Amino acid requirements vary considerably according to the productive state (i.e., growing, laying eggs, etc.), age, type, breed, and strain. Methionine is the amino acid most often deficient in laying rations.

When pullets begin laying, there is an increase in protein, vitamin and mineral requirements per day due to deposition in the egg. If dietary protein is too low or the amino acid requirements are not met, poor egg production and hatchability will occur.

Fat

Dietary fat is a source of energy and of linoleic acid, an essential fatty acid. A deficiency of linoleic acid will adversely affect egg production. Dietary fats also serve as "carriers" of fat-soluble vitamins, and some fat is necessary for absorption of vitamins. In fact, impairment of the absorption of fat-soluble vitamins (A, D, E, and K) is the most serious consequence of a dietary deficiency of fat.

Toxicoses

Salt

Although the salt requirement of birds is relatively low, adequate levels are essential, and excessive amounts are highly toxic and reduce egg production. Birds require a sensitive balance between necessary and toxic levels of salt. See Table 1.

Excess dietary salt intake readily causes wet droppings and wet litter. Several feed ingredients, such as fish meal, corn gluten meal, meat meal, whey and sunflower meal contain high levels of sodium. When such ingredients are used, the level of supplemental salt (NaCl) in the diet must be reduced.

Phosphorus

The nutritional role of phosphorus is closely related to that of calcium. Both are constituents of bone. The ratio of dietary calcium to phosphorus affects the absorption of both these elements; an excess of either one impedes absorption and can reduce egg production, shell quality and/or hatchability.

In addition to its function in bone, phosphorus plays a primary role in carbohydrate metabolism, is active in fat metabolism, and helps to regulate the acid-base balance of the body.

Vitamin D

Excess vitamin D_3 leads to increased calcium absorption resulting in hypercalcemia which may reduce egg production. Most animal species appear to be able to tolerate 10 times their vitamin D_3 requirement for long periods of time. For short periods of time, poultry can tolerate up to 100 times their requirement. An excess of vitamin D_3 in the diet, therefore, is unlikely.

Mycotoxins

Molds can produce mycotoxins which adversely affect egg production and general health. They can interfere with the absorption or metabolism of certain nutrients, depending on the particular mycotoxin. Apparent calcium and/or vitamin D_3 deficiencies can occur when mycotoxin contaminated feeds are given

to laying hens. In addition, some have hormonal effects which can cause a decline in egg production.

The major mycotoxin of concern with corn is aflatoxin, produced by the mold *Aspergillus flavus*. The mold infects corn both in the field and in storage. Aflatoxin fluoresces under ultraviolet light, so its presence can be detected by examining grain under "black light". Other mycotoxins sometimes associated with corn and other grains are zearalenone (F-2 toxin), ochratoxin, T-2 toxin, vomitoxin, and citrinin. More than 300 mycotoxins have been identified.

Botulism

Botulism is an acute intoxication caused by consumption of a neurotoxin produced by the bacterium *Clostridium botulinum*. It commonly occurs when birds consume decomposing carcasses, spoiled feed or other decaying organic materials. Ponds and other stagnant water sources are often areas of decaying material that may contain this toxin.

Other toxins

Numerous plants are toxic to varying degrees if plant parts or seeds are consumed by the bird. Production, hatchability, growth, and livability may be reduced. Examples of these plants include croton, nightshade, coffee weed, cotton seeds, chick peas, vetches, and many ornamentals. Other potential causes of problems include pesticides, herbicides, disinfectants, fertilizers, drugs, antibiotics, and other chemicals, including oils and antifreeze.

Anticoccidials

Anticoccidials (to prevent coccidiosis) are commonly used in diets for replacement pullets, meat birds and young breeding stock that are reared on litter floors. Anticoccidials are not given to commercial laying hens.

Nicarbazin

Nicarbazin is an anticoccidial drug that reduces reproductive performance when it's inadvertently added to layer or breeder diets at normal anticoccidial levels. The yolk membranes are weakened, resulting in mottling of the yolk. Nicarbazin fed to brown-egg layers turns their

eggshell white within 48 hours, although this is completely reversible when the product is withdrawn from the feed. Even low levels of nicarbazin can cause some loss in shell color, mottling of egg yolks (see Fact Sheet PS-24, "Egg Quality"), and a decline in hatchability.

Monensin

Monensin has been the most successful of the anticoccidials. Monensin, and other ionophore anticoccidials, have an adverse effect on egg production when used in conjunction with low protein diets.

Management Mistakes

Out of feed

If hens are out of feed for several hours, a decline in egg production will probably occur. The amount of decline will be related to the time without feed. Be sure that all the birds have access to an adequate supply of a complete feed which meets all their nutritional requirements.

Feed stored on the farm longer than two weeks may become moldy. If feed becomes wet it should be discarded. In addition, vitamin potency decreases with prolonged storage.

Out of water

Water is often taken for granted, and yet it is probably the most essential nutrient. Water is by far the single constituent of the body, and, in general, represents about 70% of total body weight. Access to water is very important, and a lack of water for several hours will probably cause a decline in egg production. Hens are more sensitive to a lack of water than a lack of feed.

The amount of water needed depends on environmental temperature and relative humidity, diet composition, and rate of egg production. It has been generally assumed that birds drink approximately twice as much water as the amount of feed consumed on a weight basis, but water intake varies greatly, especially in hot weather.

Inadequate daylength

Hens need about 14 hours of daylength to maintain egg production. The intensity of light should be sufficient to allow a person to read newsprint at bird level. The decreasing daylength during the Fall and shorter daylengths in the Winter would be expected to cause a severe decline, or even cessation, in egg production unless supplemental light is provided. When production ceases, the birds may also undergo a feather molt. Hens exposed to only natural light would be expected to resume egg production in the Spring.

High house temperatures

High environmental temperatures pose severe problems for all types of poultry. Feed consumption, egg production, egg size, and hatchability are all adversely affected under conditions of severe heat stress. Shade, ventilation, and a plentiful supply of cool water help reduce the adverse effects of heat stress.

Ectoparasites

An ectoparasite is a parasitic organism that feeds on the exterior of the body of the host.

Northern fowl mite

The northern fowl mite (*Ornithonyssus sylviarum*) is the most common of the poultry mites. Refer to the publication PS-10, ("Common Continuous External Parasites of Poultry"), for information on identification and control of Northern fowl mites.

Northern fowl mites are blood suckers and are irritating to poultry. Anemia occurs in heavily parasitized birds, reducing feed efficiency, egg production, and ability to withstand and overcome diseases.

Lice

Several species of chewing lice may be found on chickens, especially those in small flocks or on range. Refer to publication PS-10, ("Common Continuous External Parasites of Poultry"), for information on identification and control of lice.

Chicken lice feed on dry scales, feathers, or scabs on the skin. As lice crawl over the bird, their mouth parts and sharp claws scratch the skin. The constant irritation causes the bird to become nervous and behave abnormally, causing a general unthriftiness and unkempt appearance in the bird. Egg production in infested flocks may drop as much as 10%, although some heavy infestations have caused egg production to fall as much as 20%.

Fleas

Stick-tight fleas are sometimes a severe problem in home flocks and may be difficult to prevent or eradicate. The adult female flea attaches to the skin around the face and head, causing severe irritation and, in some cases, blindness. Refer to publication PS-10, ("Common Continuous External Parasites of Poultry"), for information on identification and control of stick-tight fleas.

Endoparasites

An endoparasite is a parasite that lives and feeds inside the host animal.

Heavy infestations of endoparasites can cause unthriftiness, poor feed efficiency, poor growth, reduced egg production, and mortality in severe infestations. Infected birds may also be more susceptible to various diseases and stresses.

Nematodes

Nematodes, or roundworms, are elongated, cylindrical, unsegmented endoparasites. There are many species of roundworms, each tending to infect a specific area of the gastrointestinal tract. Refer to publication PS-18, ("Nematode Parasites of Poultry"), for identification and control of nematodes.

Tapeworms

Tapeworms (cestodes) are white or yellowish ribbon-like segmented flat worms. They vary in size from 0.17 to 12 inches in length. Although tapeworms do not produce extensive lesions or damage to the intestines, they are nutritional competitors. A cestode does not digest its own food. Instead, it anchors itself to the inner wall of the bird's

intestines, letting its segmented body dangle in the flow of digested material, absorbing nutrients before they can be utilized by the host. A variety of commercially available anthelmintics will effectively and safely eliminate both nematodes and cestodes from poultry.

Diseases

Fowl Pox

Fowl pox is a viral disease of chickens characterized by scab-like lesions on the skin of the unfeathered body parts and/or on diphtheritic (wet) membranes lining the mouth or air passages. Infection with the fowl pox virus will cause the chickens to have poor growth, poor feed conversion and a precipitous fall in egg production. Fowl pox may affect any age bird. It is transmitted by direct contact with an infected chicken or by mosquitoes. Table 2.

For more information on fowl pox, refer to publication VM66, "Prevention and Control of Fowl Pox in Backyard Chicken Flocks".

Coccidiosis

Coccidiosis is a protozoan disease characterized by enteritis and diarrhea in poultry. Unlike the organisms which cause many other poultry diseases, coccidia are almost universally found wherever chickens are raised. Coccidiosis outbreaks vary from very mild to severe infections. See Table 2.

Individual strains of cocci attack birds differently, resulting in diverse symptoms. The overall symptoms may be one or more of the following: bloody droppings, high mortality, general droopiness, emaciation, a marked drop in feed consumption, diarrhea and a drop in egg production in layers.

It is common to add a coccidiostat in the feed of broilers. In addition, live vaccines are currently available.

Infectious bronchitis

Infectious bronchitis is a highly contagious respiratory disease. The disease is caused by a virus

which is moderately resistant, but can be destroyed by many common disinfectants.

Infectious bronchitis occurs only in chickens (Infectious bronchitis is different from Quail bronchitis which affects Bobwhite Quail). All ages of chickens are susceptible to infectious bronchitis. In laying hens it is characterized by respiratory signs (gasping, sneezing, coughing) and a marked decrease in egg production. Egg quality is also adversely affected. Low egg quality and shell irregularities (soft-shelled or mis-shapened) may persist long after an outbreak. Chickens that have had infectious bronchitis, especially during the first week of life, may never be good layers.

There is no effective treatment for infectious bronchitis, although broad spectrum antibiotics for 3 to 5 days may aid in controlling secondary bacterial infections. Vaccines can be used for prevention, but they are only effective if they contain the right serotypes of virus for a given area. Infectious bronchitis vaccine is often combined with Newcastle vaccine in the same vial.

Newcastle disease

Newcastle disease is caused by a virus. The viruses vary in pathogenicity and are classified as lentogenic (mildly virulent), mesogenic (moderately virulent), and velogenic (markedly virulent).

Newcastle disease is characterized by a sudden onset and rapid spread through the flock. In adult laying hens clinical signs can include depression, loss of appetite, decreased water consumption, and a dramatic decline in egg production. Production may drop to zero. Newcastle disease runs its course in 10 to 14 days, but the hens do not come back into full production for 5 to 6 weeks.

There is no treatment for Newcastle disease. Antibiotics can be given for 3 to 5 days to prevent secondary bacterial infections. Chickens and turkeys can be immunized against Newcastle disease by vaccination.

Avian influenza

Avian influenza is a viral disease affecting the respiratory, digestive and/or nervous systems of many species of birds. Avian influenza viruses are classified based on severity of disease, ranging from apathogenic to highly pathogenic. The mildly pathogenic form produces listlessness, respiratory signs (sneezing, coughing), and diarrhea. The level of mortality is usually low. The highly pathogenic form of avian influenza produces facial swelling, cyanosis, and dehydration with respiratory distress. Dark red/white spots (cyanosis/ischemia) develop on the legs and combs of chicks. Mortality can range from low to near 100%. The decrease in egg production is related to the severity of the disease and can be severe.

There is no specific treatment for avian influenza. Recovery is rather spontaneous. Birds slaughtered 7 days after infection often have no significant increase in condemnations.

Infected flocks will be quarantined by the State. Quarantine is continued until the flock is depopulated. The course of the disease is 10 to 14 days, but recovered birds continue to shed the avian influenza virus in feces for 3 or 4 weeks. Eggs from layers are safe to eat, but the shell should be washed and sanitized. The poultry litter or manure should be composted before application to cultivated lands.

For more information on avian influenza refer to publication PS-38, "Avian Influenza in Poultry".

Avian encephalomyelitis

Avian encephalomyelitis (epidemic tremors) is a viral disease usually affecting young poultry. It is characterized by incoordination and tremors, especially of the head and neck in chicks, and elevated mortality levels. Chicks that recover may later develop cataracts after sexual maturity. In affected hens, decreases in egg production and hatchability are noted.

Laying hens seldom show clinical signs when infection is going through the flock. However, good production records often reveal a slight drop in egg production (5 to 20%) lasting no more than two

weeks. In breeding flocks, a corresponding decrease in hatchability is also noted.

There is no effective treatment. All replacement breeder and layer pullets should be immunized.

Mycoplasma gallisepticum infection

Mycoplasma gallisepticum infection (chronic respiratory disease, PPLO infection, airsacculitis, MG) is characterized by respiratory distress (coughing, sneezing, snicks, rales, discharge from eyes and nose). Feed consumption and egg production decline in laying hens. Mortality is usually low but there may be many unthrifty birds.

The organism may be present in a flock and cause no disease until triggered by stress, e.g., changes in housing, management, nutrition, or weather.

Many broad spectrum antibiotics have been used for treatment and will suppress losses. However, relapses often occur when treatment is discontinued. Most antibiotics are given in feed or water, preferably in water. Tylosine and tetracyclines have been used extensively for treatment. Injectable antibiotics may be more effective if the disease is advanced and if the flock is small enough to be treated individually. FDA withdrawal periods for respective medications used must be strictly observed to avoid residual chemicals in the eggs and meat. Live and inactivated vaccines also are commonly used to reduce the adverse effects of the disease.

Fowl cholera

Fowl cholera is an infectious bacterial disease of poultry. With an acute outbreak, sudden unexpected deaths occur in the flock. Laying hens may be found dead on the nest. Sick birds show anorexia, depression, cyanosis, rales, discharge from eyes and nose, white watery or green mucoid diarrhea, and egg production is decreased.

As fowl cholera becomes chronic, chickens develop abscessed wattles and swelling of joints and foot pads. Cheesy pus may accumulate in the sinuses under the eyes.

Flocks can be treated with a sulfa drug. Sulfa drugs are not FDA approved for use in pullets older than 14 weeks or for commercial laying hens. Sulfa drugs cause residues in meat and eggs. Prolonged use of sulfa drugs is toxic and causes a decrease in production in laying hens. Antibiotics can be used, but require higher levels and longer medication to stop the outbreak.

Where fowl cholera is endemic, live and/or inactivated vaccines are recommended. Do not start vaccinating for fowl cholera until it becomes a problem on the farm and a diagnosis is confirmed.

Infectious coryza

Coryza is a respiratory disease of chickens. Common clinical signs include swelling and puffiness around the face and wattles, a thick sticky discharge with a characteristic offensive odor from the nostrils, labored breathing, and rales. There is a drop in feed and water consumption as well as egg production.

Sulfadimethoxine (Albon) is the preferred treatment for infectious coryza. If Albon fails or is not available, sulfamethazine, sulfamerazine, or erythromycin (Gallimycin) can be used as alternative treatments. The sulfa drugs are not FDA approved for pullets older than 14 weeks or for commercial laying hens.

A vaccine for infectious coryza is available. It is given subcutaneously (under the skin) on the back of the neck. Chicks are usually vaccinated four times, starting at 5 weeks of age (i.e., at 5, 9, 15, and 19 weeks with at least 4 weeks between injections). Vaccinate again at 10 months of age and twice yearly thereafter.

Other Problems To Consider

There are a variety of other problems which can cause an apparent drop in egg production. They include:

1. Predators and snakes consuming the eggs.
2. Egg-eating by hens in the flock.

3. Excessive egg breakage.
4. Hens which are able to run free hiding the eggs instead of laying in nests.

Summary

There are numerous factors which may adversely affect egg production in backyard chicken flocks. If a drop in egg production occurs, investigate the cause by answering questions that follow also refer to Table 1 and Table 2, sick and recently dead birds to a state diagnostic lab, and/or consult with your County Extension Agent or a veterinarian.

1. How old are the birds?
2. How much feed are the birds consuming daily?
3. Has the level of feed consumption changed lately?
4. Has there been a change in the type of feed used?
5. Is the feed moldy?
6. How much light do the birds receive daily? Has it changed?
7. What is the light source?
8. What is the condition of the poultry houses?
9. Are the birds getting enough clean water?
10. What is the condition of the birds?
11. How active are the birds?
12. What is shell quality like?
13. What is interior egg quality like?
14. Are there any signs of disease?
15. Are the birds crowded?
16. Are there any signs of parasites?
17. Do the birds have access to different plants?
18. Have any pesticides or herbicides been used in the area?

State Diagnostic Laboratories:

1) Live Oak Diagnostic Lab

PO Box Drawer O

912 Nobels Ferry Rd

Live Oak, FL 32060

tel: 904/362-1216

2) Kissimmee Diagnostic Lab

PO Box 460

Kissimmee, FL 32641

tel: 407/846-5200

Table 1.

Table 1. Non-infectious causes of reduced egg production.	
CAUSES OF DECLINE	SIGNS/SYMPTOMS
OMISSION OF INGREDIENTS	
Salt	Nervous flock, increased pecking, feathers in digestive tract
Calcium	Birds down in cages, increased incidence of shell-less eggs
Vitamin D ₃	Increased mortality from calcium depletion, increased shell-less eggs
Protein	Increased nervousness, increased mortality (peckouts), poor albumen quality, feather eating
Fat	Low body weight gains, drop in egg size
TOXICOSES	
Salt	Increased mortality due to urolithiasis, lowered feed intake
Phosphorus	Lower feed intake, soft bones, thin shells, increased shell-less eggs
Vitamin D ₃	Increased shell-less eggs, soft bones
Mycotoxins	Nervousness, mouth lesions, fatty livers, biliary hyperplasia in liver tissue, reduced feed intake, thin shell
Botulism	Weakness, limp neck, neck feathers easy to pull out, prostration
ANTICOCCIDIALS	
Nicarbazin	Shell-less eggs, loss of pigment of brown eggs, lowered hatch, of fertile eggs
Monensin	Reduced feed consumption, birds lack coordination
MANAGEMENT MISTAKES	
Out of feed	Nervous flock, decreased feed consumption
Out of water	Blue combs, birds gathered around waterers
Inadequate daylength	Unusual pattern of egg production
High ambient temperature	Reduced egg size, reduced feed consumption, increased water consumption, panting
ECTOPARASITES	
Northern fowl mite	Nervousness, finding mites on birds (usually around the cloaca)

Table 1.

Lice	Nervousness, weight loss, reduced feed intake
Stick-tight fleas	Fleas embedded in the fleshy parts of the chickens's head around the eyes, ulceration and irritation of skin around the eyes
ENDOPARASITES	
<i>Nematodes (roundworms)</i>	Unthriftiness, poor feed efficiency, increased mortality (in severe infestations)
<i>Cestodes (tapeworms)</i>	General unthriftiness, dry and unkempt feathers, hearty appetite but weight loss

Table 2.

Table 2. Typical diagnostic signs associated with common diseases and conditions which can cause a drop in egg production.	
DISEASE	SIGNS
Fowl pox	- scab-like lesions on the unfeathered body parts (especially face and comb)
Coccidiosis	- characteristic gross lesions in the intestinal tract - higher mortality in some cases - bloody droppings
Infectious bronchitis	- coughing, sneezing, and rales - egg production drops markedly (by as much as 50%). - soft-shelled or misshapen eggs - watery egg white - poor pigmentation of brown-shelled eggs
Newcastle disease	Mild form: Acute form: - reduction in feed and water consumption- respiratory distress - dramatic drop in egg production- twisted neck - decreased shell quality - increased mortality
Avian influenza	Mildly pathogenic form: Highly pathogenic form: - listlessness- facial swelling - sneezing, coughing- dark red/white spots on legs and combs - diarrhea- respiratory distress

Table 2.

Avian encephalomyelitis	<ul style="list-style-type: none">- seldom show clinical signs- slight, transient drop in egg production
<i>Mycoplasma gallisepticum</i>	<ul style="list-style-type: none">- coughing, sneezing, snicks, rales, nasal and ocular discharge- decrease in feed consumption and egg production
Fowl cholera	<ul style="list-style-type: none">- sudden unexpected deaths- reduction in feed consumption- swollen wattles- nasal and ocular discharge- cyanosis of head- white water or green mucoid diarrhea
Infectious coryza	<ul style="list-style-type: none">- swelling and puffiness around the face and wattles- thick, foul-smelling nasal discharge- labored breathing- decrease in feed and water consumption

ATTACHMENT 2

2/21/25

Good afternoon, Mayor and Council.

At last night's meeting, Councilman Johnson requested the minutes from the Council meeting in which chickens were discussed.

Quick summary: At the Regular Council Meeting held on August 6, 2020, Councilman Jeff Bailey made the request to increase the number of chickens from 4 to 13. After lengthy discussion, the item was continued to October 1, 2020, with a workshop to be held prior to that date. No workshop was held, and the item was later withdrawn prior to the final hearing on October 1st. The video no longer exists as it has met its 2-year retention.

7. Ordinance 2020-50, amending the Code of Ordinances, Chapter 185, Zoning Code, Subchapter 'Supplementary District Regulations', by increasing the maximum number of chickens permitted on single family lots; and including provisions for urban farm animals permitted on developed single family lots (Case T-16-2020, City of Palm Bay), first reading.

The Planning and Zoning Board recommended that the request be denied.

The City Attorney read the ordinance in caption only. The public hearing was opened. Councilman Bailey presented the request to Council. He said that this was an important part of sustainability should there be a food shortage and also created a healthier lifestyle. Increasing the number of chickens still allowed a family to have enough to continue producing eggs should a few be slaughtered for food, death by natural causes, or killed by predators. There would not be the immediate need to replenish the chickens. Mr. Bailey said that having two (2) goats or two (2) sheep kept them happier, calmer and quieter.

Mayor Capote asked about areas that were zoned for these types of animals. He was hesitant in allowing chickens and goats throughout the entire City. Mr. Bradley said that in 2013, Council approved an ordinance permitting up to four (4) chickens in almost all of the single-family zoning districts. Goats, sheep and the like were only allowed in RR (Rural Residential District) and GU (General Use Holding District) zonings.

Individuals submitted virtual comments supporting the request.

Joe Laughlin, resident, said that during the onset of COVID-19, there was a nationwide shortage of supplies, including eggs and meat. He said this ordinance allowed the residents to provide for their families. He said that four (4) chickens typically produced 3-4 eggs per day which was not enough for a family of 3-4 people.

Bill Battin, resident, commented on how expensive it was to feed and care for these animals. He expressed concern if animals were neglected. If there was a six-foot fence, no one would be able to see the condition of the animals. He believed in everyone being able to have livestock, but said it had to be done responsibly.

Mr. Bailey asked Mr. Laughlin to address the space requirements and feed concerns. Mr. Laughlin said that if the chickens free-range throughout the backyard, they would eat bugs, lizards, etc. and it would cut down on the cost of feed. If kept in the coop all of the time, a lot more feed would be needed. Sheep would need to be fed with hay as they did not do well with St. Augustine grass.

Mr. Anderson asked if the current ordinance required chickens to be kept in the coop at all times. Mr. Bradley confirmed same and said that language was not amended in this proposed ordinance. Mr. Anderson questioned if the goats and sheep could roam freely. Mr. Bradley said the ordinance did not state that they must be in a specific area, but that they had to be within a fenced area on the property.

Mr. Santiago asked if goats could jump higher than six (6) feet. Mr. Bradley was unsure. Mr. Santiago said that when the initial ordinance for four (4) chickens was brought forth, a main concern was health. He asked if any research had been done on the effects of a person's health. Mr. Bradley said a previous Growth Management Director had done research on same in 2013 and he would provide the report to Council.

Mayor Capote asked if a community survey had been performed. Mr. Bradley answered in the negative.

Mr. Bailey asked Mr. Laughlin to address the sanitary issues. Mr. Laughlin said that chickens were widely used to provide natural sanitization after cows, sheep and goats were in an area. He said that goats could jump and the rule of thumb was if a golden retriever could jump it, then a goat could do so as well.

The public hearing was closed.

Motion by Mr. Bailey, seconded by Mr. Anderson, to approve Ordinance 2020-50.

Due to an additional public comment, the public hearing was reopened. Mr. Bailey withdrew his motion and Mr. Anderson withdrew his second to the motion.

Alfred Agarie, resident, said he had been a farmer for many years and the City did not need this type of situation. He understood the necessity for residents, but a survey was definitely needed. He said the smell was horrible that came with these types of animals.

The public hearing was closed.

Motion by Mr. Bailey, seconded by Mr. Anderson, to approve Ordinance 2020-50.

Mr. Bailey said the fertilizer that was created by the chickens was helpful to the environment. He added that the chickens would eat the bugs that would potentially be harmful to a garden. He felt that it may be good option to permit the chickens to roam freely within the fenced area. He said if a survey was done, he wanted to provide as many facts as possible.

Mr. Anderson felt the chickens were not an issue but preferred no more than six (6) or eight (8). However, he said that goats and sheep could become very loud, but felt a rooster should also be permitted. He said that there should be an acreage requirement.

Deputy Mayor Johnson said that the Center for Disease Control (CDC) expressed concern on its website about these types of animals spreading disease. He asked if anyone had reached out to the CDC for comment. Mr. Anderson said the CDC recently issued a statement advising not to kiss the chickens as it could lead to the spread of disease. Deputy Mayor Johnson asked if any other cities allowed 10-13 chickens, as well as goats and sheep.

Mayor Capote said that back in 2013, there was an immense amount of information provided to Council. He felt that a survey should have gone out to the residents and both the pros and cons be presented to Council. Mr. Santiago felt this was being rushed through without a lot of information. He understood the need to survive, but no one should ever allow the current climate to dictate their lives; it should be the vision of a better life to lead into a more hopeful future.

Mayor Capote asked if Councilman Bailey wanted to table the item or for Council to vote on the motion. Mr. Bailey understood that the goats and sheep were a concern. He asked if Council would agree to separating the issues. Mayor Capote felt it should all be tabled and possibly hold a workshop. Mr. Bailey said he was hoping to at least get the chickens approved tonight but was agreeable to a workshop. He provided further comments on the issue.

Mr. Anderson withdrew his second to the motion.

Mr. Bailey wanted to have a workshop as soon as possible, preferably between September and beginning of October.

Motion by Mr. Bailey, seconded by Mr. Anderson, to table the item to October 1, 2020. Motion carried with members voting as follows: Mayor Capote, Yea; Deputy Mayor Johnson, Yea; Councilman Santiago, Yea; Councilman Bailey, Yea; Councilman Anderson, Yea.



STAFF REPORT

LAND DEVELOPMENT DIVISION

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Prepared by

Kimberly Haigler, Senior Planner

TOPIC

Backyard Chickens

CITY COUNCIL REGULAR MEETING DATE

April 3, 2025

POTENTIAL APPLICANT

City of Palm Bay

PROPERTY LOCATION/ADDRESS

Not Applicable

SUMMARY OF REQUEST

A discussion for a potential textual amendment to the Code of Ordinances, Title XVII, Land Development Code, Chapter 174: Standards for Accessory, Temporary, and Other Uses and Structures, Section 174.005 Backyard Chickens, to modify language to increase the number of chickens which may be kept on single family lots in the RE, RS-1, RS-2, RS-3, and SRE Zoning Districts.

BACKGROUND:

On February 20, 2025, the City Council requested staff recommendations with regard to the possibility of amending the Code of Ordinances for Title XVII, Land Development Code, Chapter 174: Standards for Accessory, Temporary, and Other Uses and Structures, Section 174.005 Backyard Chickens, to modify language to increase the number of chickens which may be kept on single family lots in the RE, RS-1, RS-2, RS-3, and SRE Zoning Districts.

HISTORY:

Backyard chickens is defined in **Section 171.001** of the Land Development Code as *“CHICKEN: A domestic fowl developed in a number of breeds for their eggs. A fowl is defined as a chicken by the University of Florida Extension Service. This definition shall not include ducks, geese, turkeys, pigeons or guinea.”*

The permitting of backyard chickens in single-family residential zoning was amended into the Code of Ordinances in 2013 (Ordinance 2013-10) as requested by the City of Palm Bay. At the time staff conducted extensive research to determine what the maximum number of chickens that a typical residential lot could support without causing nuisance, noise, or health concerns (**Attachment 1**). The resulting determination as presented was that 4 hens per residential yard was the recommendation as codified in **Section 174.005** below.

174.005 BACKYARD CHICKENS.

(A) No person shall keep or maintain in, on or upon any lot, building, premises or property any farm animal in any zoning category outside of the RR and GU districts except as provided for in this section or § [174.012](#) (Pigeons).

(B) Up to four (4) chickens may be kept on single family lots in the RE, RS-1, RS-2, RS-3, and SRE Zoning Districts subject to adherence to the following criteria:

(1) Hens only may be kept. Roosters are prohibited.

(2) Chickens must be caged at all times and cages/coops shall meet the criteria for animal cages and enclosures contained in § [174.002](#).

(3) Breeding of chickens is prohibited.

(4) Dead chickens shall be immediately removed from the premises and disposed of properly.

(5) The cage/coop and surrounding areas shall be clean and properly maintained to avoid the attraction of vermin, insects or predators.

(Ord. 2024-33, passed 9-19-24)

At the Regular Council Meeting held on August 6, 2020, Council made the request to increase the number of chickens from 4 to 13. Minutes from this meeting are presented as **Attachment 2**.

At the Regular Council Meeting held on February 20, 2025, it was proposed by Council that the city consider increasing the number of chickens permitted on residential lots from 4 to 8. The request was debated amongst council members, and it was then decided that staff would be directed to investigate the feasibility of an increase and provide recommendations to council.

ANALYSIS:

The city zoning code is based on, consistent with, related to and adopted to effectuate and implement the policies of the city comprehensive plan to protect, preserve and improve the public health, safety, and welfare of the inhabitants of the city.

In accordance with **Section 174.002 ACCESSORY USES AND STRUCTURES GENERAL REQUIREMENTS.** *(H) Animal enclosures or cages. Animal cages or enclosures accessory to residential uses shall be limited in size to fifteen (15) feet in length by ten (10) feet in width. They shall not exceed six (6) feet in height and shall provide a ten (10) foot side setback and a fifteen (15) foot rear setback.*

Per Florida Department of Agriculture and Consumer Services (FDACS), each chicken should have 3-4 square feet (sf) of coop floor space and 8-10 sf of run area each. For 10 chickens, this amounts to 110-140 sf of enclosed housing.

Section 174.002(H) of the LDC requires that all animal housing structures are located in the rear yard and must be at least 5 ft from any other structure and is limited to 150 sf in total area. The setbacks are established as buffers required to prevent animal waste from encroaching on surrounding properties and drainageways. Based on the required size of enclosure, coupled with the city's setback requirements, there are not many typical quarter-acre residential lots which could feasibly accommodate 10 chickens.

Additionally, a single hen can produce 17-20 dozen eggs per year. (Note: the production of eggs for sale would require FDACS permit and inspections.) Chickens are common vectors for the spread of salmonella and the Avian Flu both of which are readily spread through contact with the birds or their waste. The more chickens that are housed in a small area, the more likely contamination to humans, pets, and wildlife may occur.

OTHER MUNICIPALITY REGULATIONS:

BREVARD COUNTY: Sec. 62-2108. - Farm animals and fowl. In all single-family residential zones, on lots of at least one-half acre minimum, up to four chickens (no roosters or other fowl) may be permitted per one-half acre of land. Housing, such as coops, that is not considered to be a barn, stall or paddock is required and must meet the setback requirements for accessory structures in accordance with the zoning classification. All fowl are for the personal, non-commercial use of the occupants only. Breeding and slaughtering of any fowl is strictly prohibited.

CITY OF MELBOURNE: Only allows chickens as a conditional use in R-A residential zoning which has a minimum area of 1 acre

CITY OF SEBASTIAN: Sec. 18-29. - Keeping of fowl.

(a)Any person keeping fowl shall keep them in a pen, coop or enclosure meeting the requirements of section 18-27 of this article. No more than two such fowl may be kept on any single lot.

CITY OF TITUSVILLE: Sec. 5-86. - Certain animals restricted; permits for certain animals required. (5) Backyard chickens shall be permitted on a single-family properties subject to all regulations described below: a. For the purposes of this section, the terms "backyard chicken" or "chicken" refers to hens, or female chickens, only. It shall be unlawful to keep ducks, geese, turkeys, peafowl, roosters or male chickens, or any other fowl. b. No more than four (4) chickens shall be permitted on any lot or parcel. j. A permit is required.

*Most other area municipalities do not allow chickens within residential zoning at all.

STAFF RECOMMENDATION:

Section 174.005 is not recommended for amendment at this time.

BACKYARD CHICKENS ON SINGLE FAMILY LOTS



Growth Management Department

September 19, 2012

BACKGROUND

The keeping of chickens is considered an agricultural use under the terms of the City's Zoning Ordinance. The Zoning Ordinance defines agriculture as:

***AGRICULTURE.** The production, keeping or maintenance, for sale, lease or personal use, of plants and animals useful to man, including but not limited to, forages and sod crops; grains and seed crops; dairy animals and dairy products; poultry and poultry products; livestock including beef cattle, sheep, swine, horses, ponies, mules, or goats or any mutations or hybrids thereof, including the breeding and grazing of any or all of such animals; bees and apiary products; fur animals; trees and forest products; fruits of all kinds, vegetables; nursery, floral, ornamental and greenhouse products; and fish hatcheries.*

Chickens are defined as poultry by the United States Department of Agriculture and therefore, under both definitions, are considered an agricultural use.

The City of Palm Bay currently permits agricultural uses (including the keeping of chickens) within the RR, Rural Residential District and the GU, General Use Holding District. Both of those zoning categories are rural in nature and permit other agricultural activities as well. The lot sizes are designed to permit such agricultural uses without creating nuisance issues with adjacent lands normally.

Traditionally, cities have not permitted the keeping or raising of farm animals within primary residential areas. Recently, there has been a significant movement to change that tradition and several cities have amended their codes to permit some farm animals (such as chickens). Orlando recently set up a test case involving 25 properties to permit up to 3 hens to be kept on single family residential lots. Brevard County is in the process of considering amendments to their code to permit chickens. Other cities, such as Port St. Lucie, have turned down proposals to permit chickens on their single family lots.

The decision to permit or not permit the keeping of chickens in single family areas is a policy decision for City Council. Several items that should be considered are discussed in the remainder of this report.

Chickens versus other Farm Animals

Chickens are considered poultry by the United States Department of Agriculture. Also considered poultry are: turkeys, ducks, geese, pigeons and guineas (among other birds). The decision to permit chickens may open up the discussion of why other poultry classes are not permitted. Additionally, there are hundreds of species of chickens, some more domesticated than others.

While less likely, the decision to permit chickens within single family zoning categories crosses the separation between agricultural uses and single family neighborhoods and can lead to requests to keep goats, horses, pigs, ostriches, emus and similar animals (all of which has been requested from the Growth Management Department at one time or another). Without clear distinctions between such activities, the City is on less than solid decision making ground.

Diseases

The Centers for Disease Control and Prevention (CDC) reported an outbreak of salmonella that sickened 39 people in 15 states and is linked to handling poultry. Nine of those individuals were so sick they required hospitalization. The contaminated chicks and ducklings causing the outbreak have been traced to a mail-order hatchery. When handling eggs, is important to make certain contamination of the raw egg does not occur from dirty shells. However, if improperly cleaned, the removal of the protective coating on the egg may lead to bacterial contamination. A difficult choice for the hobbyist.

Avian influenza (AI) is a highly contagious disease of birds which can be devastating for poultry owners. It can be spread between different types of birds, including chickens. Fowl Pox is another disease sometimes found in chickens. While many commercial operations are aware of the many diseases impacting poultry, that is seldom the case for the casual backyard chicken farmer.

Additionally, it is very important that the coop and activity areas for the chickens be kept clean and neat to prevent disease or rodent issues from developing.

Self Sufficiency, Green Food Production and Other Benefits

In these lean economic times, many families are looking for ways to cut expenses while still enjoying nutritious and good tasting meals. Vegetable gardening, canning/preservation and now backyard chickens are just some of the ways citizens are looking at to provide alternatives to commercial, and expensive, food products.

However, the ability to harvest your own eggs generally is not without cost, requiring purchase of the chicks, erection of a chicken coop of some kind, provision of food and water, and occasional vet bills. By all accounts, it does appear that the quality of the eggs appears to improve through the backyard chicken process.

May provide benefits for backyard gardening through pest control and fertilizer production. Several extension service sites have warned about using raw chicken waste on vegetables, so that would be a concern.

Chickens are omnivores, so they will consume many types of kitchen scraps.

A little taste of country life.

Non-Governmental Restrictions

The vast majority of the single family areas within Palm Bay would not permit the keeping of chickens, even if the City changes the Zoning Code. Deed restrictions prohibiting poultry exist in almost all of the single family subdivisions, with the exception of some of the older platted areas in northeast Palm Bay. The Port Malabar subdivision lots have deed restrictions preventing the keeping of poultry on any single family lot. Typically, that language reads: "No animals, livestock or poultry of any kind shall be raised, bred or kept on any lot except that dogs and cats ...". The newer planned unit developments have similar restrictions. While the City does not enforce deed restrictions, we typically prefer to support those criteria to avoid confusion amongst property owners.

Nuisances

Most cities that permit chickens prohibit roosters due to the noise factor. Chickens are not silent, but typically do not create noise impacts to the neighbors.

The number of chickens has also been limited in most instances. This reduces the likelihood of nuisance impacts to neighbors also.

In some cases, requirements have been in effect that only permit chickens with a chicken coop, no free-ranging chickens. Chickens usually need to have their wings clipped to prevent them from flying over a fence. Almost all of the cities examined prohibit unconfined chickens (confined by a fence or within a cage).

Odor is also usually not an issue if the number of chickens is limited. However, cleanliness is important to be certain the area does not become attractive to rodents and other pest.

Other Issues

Chickens are attractive prey for many predators (hawks, raccoons, cats, fox and so on). Many communities require "predator resistant" coops and runs to minimize problems with predators. Placing chickens in single family residential areas may increase the activity of predators in the neighborhood unless protective measures are taken.

Most communities also prohibit the onsite slaughtering of chickens and require dead chickens to be bagged and disposed of properly. The other side of that issue is the fact that hens do not lay eggs forever, while they can live up to 15 years. The disposal of non-laying hens must be addressed in any ordinance change.

The raising of chickens is generally prohibited. So too is the sale of eggs.

Some residents may have chosen to live in a city rather a rural area to avoid contact with such activities. In their mind, this may be an alteration of the lifestyle they sought out.

Factors Affecting Egg Production in Backyard Chicken Flocks¹

J.P. Jacob, H.R. Wilson, R.D. Miles, G. D. Butcher, and F.B. Mather²

The laying cycle of a chicken flock usually covers a span of about 12 months. Egg production begins when the birds reach about 18-22 weeks of age, depending on the breed and season. Flock production rises sharply and reaches a peak of about 90%, 6-8 weeks later. Production then gradually declines to about 65% after 12 months of lay. A typical production curve for a laying flock, showing changes in the level of egg production and in egg weight, over time, is given in Figure 1.

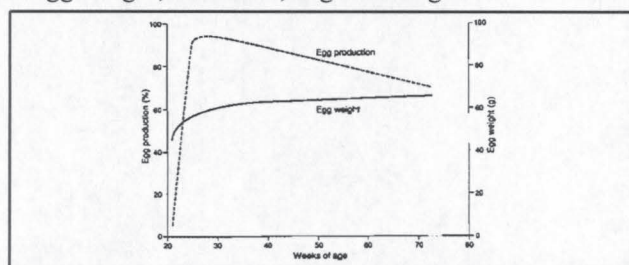


Figure 1.

There are many factors that can adversely affect egg production. Unraveling the cause of a sudden drop in egg production requires a thorough investigation into the history of the flock. Egg

production can be affected by such factors as feed consumption (quality and quantity), water intake, intensity and duration of light received, parasite infestation, disease, and numerous management and environmental factors.

Noninfectious Causes

Aging Hens

Chickens can live for many years and continue to lay eggs for many of these years. However, after two or three years many hens significantly decline in productivity (see Figure 2). This varies greatly from bird to bird. Good layers will lay for about 50 to 60 weeks and then have a rest period called a molt. Poorer layers and older hens will molt more often and lay less consistently. See Table 1.

Improper Nutrition

Laying chickens require a completely balanced diet to sustain maximum egg production over time. Inadequate nutrition can cause hens to stop laying. Inadequate levels of energy, protein

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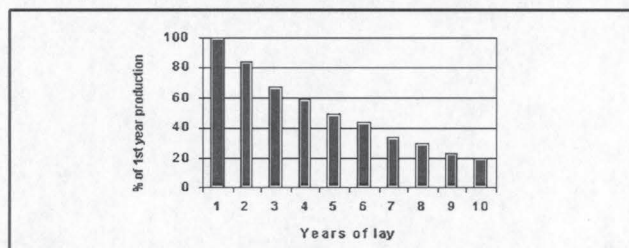


Figure 2.

or calcium can cause a drop in egg production. This is why it is so important to supply laying hens with a constant supply of nutritionally balanced layer food. Feeding whole grains, scratch feeds and table scraps will cause the birds' diet to become imbalanced and inadequate.

Many times these imbalances can cause other problems like oviductal prolapse. Prolapse may occur when the bird is too fat and/or an egg is too large and the bird's reproductive tract is expelled with the egg. Prolapse usually causes permanent damage to the hen and is fatal in many cases.

Omission Of Feed Ingredients

Salt

Animals have an innate desire to consume salt. Feeding a salt-deficient diet will lead to increased feather pecking and a decline in egg production.

Most animal feeds will contain added salt, usually in the form of sodium chloride. Iodine is rarely added as a separate ingredient. Instead, iodized salt is routinely used. Cobalt iodized salt is often used in diets for swine and ruminants, and this can also be used without any problems for poultry. This type of salt is usually blue.

Sodium is an essential nutrient, playing a major role in maintaining body fluid volume, blood pH, and proper osmotic relationships. A continuously low intake of salt can cause a loss of appetite. Sodium deficiencies adversely affect utilization of dietary protein and energy, and interfere with reproductive performance.

Chlorine is also an essential nutrient. Hydrogen chloride (HCl) released from the true stomach (proventriculus) is important in digestion. Chlorine also plays a role in maintaining

osmotic balance in body fluids. Birds deficient in chlorine are more nervous, showing increased sensitivity to sudden noise.

Calcium

The egg shell is composed primarily of calcium carbonate. The pullet's requirement for calcium is relatively low during the growing period, but when the first eggs are produced, the need is increased at least four times, with practically all of the increase being used for the production of eggshells. Inadequate calcium consumption will result in decreased egg production and lower egg shell quality.

Hens store calcium in medullary bone, a specialized bone capable of rapid calcium turnover. As calcium stores are depleted, bones become brittle. In severe cases, hens are unable to stand. The condition is known as caged-layer fatigue. Birds on the ground or on litter floors recycle calcium and phosphorus through consumption of feces, and do not have caged-layer fatigue.

Calcium can be supplied in the diet as either ground limestone or oyster shell. Particle size affects calcium availability. Usually the larger the particle size, the longer the particle will be retained in the upper digestive tract. This means that the larger particles of the calcium source are released more slowly, and this may be important for the continuity of shell formation, especially in the dark period when birds do not ordinarily eat.

Periodically, dolomitic limestone is offered to the feed industry. However, dolomitic limestone (which is used in the steel industry) should never be used in poultry diets. Dolomitic limestone contains at least 10% magnesium, and this complexes with calcium or competes with calcium for absorption sites in the intestines. The consequence of feeding dolomitic limestone is induced calcium deficiency.

Young birds should not be fed a high calcium layer diet because the calcium/phosphorus ratio will be unbalanced, resulting in increased morbidity or mortality.

Vitamin D

Vitamin D is required for normal calcium absorption and utilization. If inadequate levels of vitamin D are fed, induced calcium deficiency quickly results and egg production decreases.

Feed grade vitamin D comes in two forms, D_2 and D_3 . In most animals, both are equally potent. In birds, however, D_3 is substantially more active than D_2 . In poultry diets, therefore, vitamin D must be supplied in the form of D_3 .

Protein

Dietary requirements for protein are actually requirements for the amino acids that constitute the protein. There are 22 amino acids in body proteins, and all are physiologically essential. Poultry cannot synthesize some of these, or cannot synthesize them rapidly enough to meet the metabolic requirement. Therefore, these amino acids must be supplied in the diet. Amino acid requirements vary considerably according to the productive state (i.e., growing, laying eggs, etc.), age, type, breed, and strain. Methionine is the amino acid most often deficient in laying rations.

When pullets begin laying, there is an increase in protein, vitamin and mineral requirements per day due to deposition in the egg. If dietary protein is too low or the amino acid requirements are not met, poor egg production and hatchability will occur.

Fat

Dietary fat is a source of energy and of linoleic acid, an essential fatty acid. A deficiency of linoleic acid will adversely affect egg production. Dietary fats also serve as "carriers" of fat-soluble vitamins, and some fat is necessary for absorption of vitamins. In fact, impairment of the absorption of fat-soluble vitamins (A, D, E, and K) is the most serious consequence of a dietary deficiency of fat.

Toxicoses

Salt

Although the salt requirement of birds is relatively low, adequate levels are essential, and excessive amounts are highly toxic and reduce egg production. Birds require a sensitive balance between necessary and toxic levels of salt. See Table 1.

Excess dietary salt intake readily causes wet droppings and wet litter. Several feed ingredients, such as fish meal, corn gluten meal, meat meal, whey and sunflower meal contain high levels of sodium. When such ingredients are used, the level of supplemental salt (NaCl) in the diet must be reduced.

Phosphorus

The nutritional role of phosphorus is closely related to that of calcium. Both are constituents of bone. The ratio of dietary calcium to phosphorus affects the absorption of both these elements; an excess of either one impedes absorption and can reduce egg production, shell quality and/or hatchability.

In addition to its function in bone, phosphorus plays a primary role in carbohydrate metabolism, is active in fat metabolism, and helps to regulate the acid-base balance of the body.

Vitamin D

Excess vitamin D_3 leads to increased calcium absorption resulting in hypercalcemia which may reduce egg production. Most animal species appear to be able to tolerate 10 times their vitamin D_3 requirement for long periods of time. For short periods of time, poultry can tolerate up to 100 times their requirement. An excess of vitamin D_3 in the diet, therefore, is unlikely.

Mycotoxins

Molds can produce mycotoxins which adversely affect egg production and general health. They can interfere with the absorption or metabolism of certain nutrients, depending on the particular mycotoxin. Apparent calcium and/or vitamin D_3 deficiencies can occur when mycotoxin contaminated feeds are given

to laying hens. In addition, some have hormonal effects which can cause a decline in egg production.

The major mycotoxin of concern with corn is aflatoxin, produced by the mold *Aspergillus flavus*. The mold infects corn both in the field and in storage. Aflatoxin fluoresces under ultraviolet light, so its presence can be detected by examining grain under "black light". Other mycotoxins sometimes associated with corn and other grains are zearalenone (F-2 toxin), ochratoxin, T-2 toxin, vomitoxin, and citrinin. More than 300 mycotoxins have been identified.

Botulism

Botulism is an acute intoxication caused by consumption of a neurotoxin produced by the bacterium *Clostridium botulinum*. It commonly occurs when birds consume decomposing carcasses, spoiled feed or other decaying organic materials. Ponds and other stagnant water sources are often areas of decaying material that may contain this toxin.

Other toxins

Numerous plants are toxic to varying degrees if plant parts or seeds are consumed by the bird. Production, hatchability, growth, and livability may be reduced. Examples of these plants include croton, nightshade, coffee weed, cotton seeds, chick peas, vetches, and many ornamentals. Other potential causes of problems include pesticides, herbicides, disinfectants, fertilizers, drugs, antibiotics, and other chemicals, including oils and antifreeze.

Anticoccidials

Anticoccidials (to prevent coccidiosis) are commonly used in diets for replacement pullets, meat birds and young breeding stock that are reared on litter floors. Anticoccidials are not given to commercial laying hens.

Nicarbazin

Nicarbazin is an anticoccidial drug that reduces reproductive performance when it's inadvertently added to layer or breeder diets at normal anticoccidial levels. The yolk membranes are weakened, resulting in mottling of the yolk. Nicarbazin fed to brown-egg layers turns their

eggshell white within 48 hours, although this is completely reversible when the product is withdrawn from the feed. Even low levels of nicarbazin can cause some loss in shell color, mottling of egg yolks (see Fact Sheet PS-24, "Egg Quality"), and a decline in hatchability.

Monensin

Monensin has been the most successful of the anticoccidials. Monensin, and other ionophore anticoccidials, have an adverse effect on egg production when used in conjunction with low protein diets.

Management Mistakes

Out of feed

If hens are out of feed for several hours, a decline in egg production will probably occur. The amount of decline will be related to the time without feed. Be sure that all the birds have access to an adequate supply of a complete feed which meets all their nutritional requirements.

Feed stored on the farm longer than two weeks may become moldy. If feed becomes wet it should be discarded. In addition, vitamin potency decreases with prolonged storage.

Out of water

Water is often taken for granted, and yet it is probably the most essential nutrient. Water is by far the single constituent of the body, and, in general, represents about 70% of total body weight. Access to water is very important, and a lack of water for several hours will probably cause a decline in egg production. Hens are more sensitive to a lack of water than a lack of feed.

The amount of water needed depends on environmental temperature and relative humidity, diet composition, and rate of egg production. It has been generally assumed that birds drink approximately twice as much water as the amount of feed consumed on a weight basis, but water intake varies greatly, especially in hot weather.

Inadequate daylength

Hens need about 14 hours of daylength to maintain egg production. The intensity of light should be sufficient to allow a person to read newsprint at bird level. The decreasing daylength during the Fall and shorter daylengths in the Winter would be expected to cause a severe decline, or even cessation, in egg production unless supplemental light is provided. When production ceases, the birds may also undergo a feather molt. Hens exposed to only natural light would be expected to resume egg production in the Spring.

High house temperatures

High environmental temperatures pose severe problems for all types of poultry. Feed consumption, egg production, egg size, and hatchability are all adversely affected under conditions of severe heat stress. Shade, ventilation, and a plentiful supply of cool water help reduce the adverse effects of heat stress.

Ectoparasites

An ectoparasite is a parasitic organism that feeds on the exterior of the body of the host.

Northern fowl mite

The northern fowl mite (*Ornithonyssus sylviarum*) is the most common of the poultry mites. Refer to the publication PS-10, ("Common Continuous External Parasites of Poultry"), for information on identification and control of Northern fowl mites.

Northern fowl mites are blood suckers and are irritating to poultry. Anemia occurs in heavily parasitized birds, reducing feed efficiency, egg production, and ability to withstand and overcome diseases.

Lice

Several species of chewing lice may be found on chickens, especially those in small flocks or on range. Refer to publication PS-10, ("Common Continuous External Parasites of Poultry"), for information on identification and control of lice.

Chicken lice feed on dry scales, feathers, or scabs on the skin. As lice crawl over the bird, their mouth parts and sharp claws scratch the skin. The constant irritation causes the bird to become nervous and behave abnormally, causing a general unthriftiness and unkempt appearance in the bird. Egg production in infested flocks may drop as much as 10%, although some heavy infestations have caused egg production to fall as much as 20%.

Fleas

Stick-tight fleas are sometimes a severe problem in home flocks and may be difficult to prevent or eradicate. The adult female flea attaches to the skin around the face and head, causing severe irritation and, in some cases, blindness. Refer to publication PS-10, ("Common Continuous External Parasites of Poultry"), for information on identification and control of stick-tight fleas.

Endoparasites

An endoparasite is a parasite that lives and feeds inside the host animal.

Heavy infestations of endoparasites can cause unthriftiness, poor feed efficiency, poor growth, reduced egg production, and mortality in severe infestations. Infected birds may also be more susceptible to various diseases and stresses.

Nematodes

Nematodes, or roundworms, are elongated, cylindrical, unsegmented endoparasites. There are many species of roundworms, each tending to infect a specific area of the gastrointestinal tract. Refer to publication PS-18, ("Nematode Parasites of Poultry"), for identification and control of nematodes.

Tapeworms

Tapeworms (cestodes) are white or yellowish ribbon-like segmented flat worms. They vary in size from 0.17 to 12 inches in length. Although tapeworms do not produce extensive lesions or damage to the intestines, they are nutritional competitors. A cestode does not digest its own food. Instead, it anchors itself to the inner wall of the bird's

intestines, letting its segmented body dangle in the flow of digested material, absorbing nutrients before they can be utilized by the host. A variety of commercially available anthelmintics will effectively and safely eliminate both nematodes and cestodes from poultry.

Diseases

Fowl Pox

Fowl pox is a viral disease of chickens characterized by scab-like lesions on the skin of the unfeathered body parts and/or on diphtheritic (wet) membranes lining the mouth or air passages. Infection with the fowl pox virus will cause the chickens to have poor growth, poor feed conversion and a precipitous fall in egg production. Fowl pox may affect any age bird. It is transmitted by direct contact with an infected chicken or by mosquitoes. Table 2.

For more information on fowl pox, refer to publication VM66, "Prevention and Control of Fowl Pox in Backyard Chicken Flocks".

Coccidiosis

Coccidiosis is a protozoan disease characterized by enteritis and diarrhea in poultry. Unlike the organisms which cause many other poultry diseases, coccidia are almost universally found wherever chickens are raised. Coccidiosis outbreaks vary from very mild to severe infections. See Table 2.

Individual strains of cocci attack birds differently, resulting in diverse symptoms. The overall symptoms may be one or more of the following: bloody droppings, high mortality, general droopiness, emaciation, a marked drop in feed consumption, diarrhea and a drop in egg production in layers.

It is common to add a coccidiostat in the feed of broilers. In addition, live vaccines are currently available.

Infectious bronchitis

Infectious bronchitis is a highly contagious respiratory disease. The disease is caused by a virus

which is moderately resistant, but can be destroyed by many common disinfectants.

Infectious bronchitis occurs only in chickens (Infectious bronchitis is different from Quail bronchitis which affects Bobwhite Quail). All ages of chickens are susceptible to infectious bronchitis. In laying hens it is characterized by respiratory signs (gasping, sneezing, coughing) and a marked decrease in egg production. Egg quality is also adversely affected. Low egg quality and shell irregularities (soft-shelled or mis-shapened) may persist long after an outbreak. Chickens that have had infectious bronchitis, especially during the first week of life, may never be good layers.

There is no effective treatment for infectious bronchitis, although broad spectrum antibiotics for 3 to 5 days may aid in controlling secondary bacterial infections. Vaccines can be used for prevention, but they are only effective if they contain the right serotypes of virus for a given area. Infectious bronchitis vaccine is often combined with Newcastle vaccine in the same vial.

Newcastle disease

Newcastle disease is caused by a virus. The viruses vary in pathogenicity and are classified as lentogenic (mildly virulent), mesogenic (moderately virulent), and velogenic (markedly virulent).

Newcastle disease is characterized by a sudden onset and rapid spread through the flock. In adult laying hens clinical signs can include depression, loss of appetite, decreased water consumption, and a dramatic decline in egg production. Production may drop to zero. Newcastle disease runs its course in 10 to 14 days, but the hens do not come back into full production for 5 to 6 weeks.

There is no treatment for Newcastle disease. Antibiotics can be given for 3 to 5 days to prevent secondary bacterial infections. Chickens and turkeys can be immunized against Newcastle disease by vaccination.

Avian influenza

Avian influenza is a viral disease affecting the respiratory, digestive and/or nervous systems of many species of birds. Avian influenza viruses are classified based on severity of disease, ranging from apathogenic to highly pathogenic. The mildly pathogenic form produces listlessness, respiratory signs (sneezing, coughing), and diarrhea. The level of mortality is usually low. The highly pathogenic form of avian influenza produces facial swelling, cyanosis, and dehydration with respiratory distress. Dark red/white spots (cyanosis/ischemia) develop on the legs and combs of chicks. Mortality can range from low to near 100%. The decrease in egg production is related to the severity of the disease and can be severe.

There is no specific treatment for avian influenza. Recovery is rather spontaneous. Birds slaughtered 7 days after infection often have no significant increase in condemnations.

Infected flocks will be quarantined by the State. Quarantine is continued until the flock is depopulated. The course of the disease is 10 to 14 days, but recovered birds continue to shed the avian influenza virus in feces for 3 or 4 weeks. Eggs from layers are safe to eat, but the shell should be washed and sanitized. The poultry litter or manure should be composted before application to cultivated lands.

For more information on avian influenza refer to publication PS-38, "Avian Influenza in Poultry".

Avian encephalomyelitis

Avian encephalomyelitis (epidemic tremors) is a viral disease usually affecting young poultry. It is characterized by incoordination and tremors, especially of the head and neck in chicks, and elevated mortality levels. Chicks that recover may later develop cataracts after sexual maturity. In affected hens, decreases in egg production and hatchability are noted.

Laying hens seldom show clinical signs when infection is going through the flock. However, good production records often reveal a slight drop in egg production (5 to 20%) lasting no more than two

weeks. In breeding flocks, a corresponding decrease in hatchability is also noted.

There is no effective treatment. All replacement breeder and layer pullets should be immunized.

Mycoplasma gallisepticum infection

Mycoplasma gallisepticum infection (chronic respiratory disease, PPLO infection, airsacculitis, MG) is characterized by respiratory distress (coughing, sneezing, snicks, rales, discharge from eyes and nose). Feed consumption and egg production decline in laying hens. Mortality is usually low but there may be many unthrifty birds.

The organism may be present in a flock and cause no disease until triggered by stress, e.g., changes in housing, management, nutrition, or weather.

Many broad spectrum antibiotics have been used for treatment and will suppress losses. However, relapses often occur when treatment is discontinued. Most antibiotics are given in feed or water, preferably in water. Tylosine and tetracyclines have been used extensively for treatment. Injectable antibiotics may be more effective if the disease is advanced and if the flock is small enough to be treated individually. FDA withdrawal periods for respective medications used must be strictly observed to avoid residual chemicals in the eggs and meat. Live and inactivated vaccines also are commonly used to reduce the adverse effects of the disease.

Fowl cholera

Fowl cholera is an infectious bacterial disease of poultry. With an acute outbreak, sudden unexpected deaths occur in the flock. Laying hens may be found dead on the nest. Sick birds show anorexia, depression, cyanosis, rales, discharge from eyes and nose, white watery or green mucoid diarrhea, and egg production is decreased.

As fowl cholera becomes chronic, chickens develop abscessed wattles and swelling of joints and foot pads. Cheesy pus may accumulate in the sinuses under the eyes.

Flocks can be treated with a sulfa drug. Sulfa drugs are not FDA approved for use in pullets older than 14 weeks or for commercial laying hens. Sulfa drugs cause residues in meat and eggs. Prolonged use of sulfa drugs is toxic and causes a decrease in production in laying hens. Antibiotics can be used, but require higher levels and longer medication to stop the outbreak.

Where fowl cholera is endemic, live and/or inactivated vaccines are recommended. Do not start vaccinating for fowl cholera until it becomes a problem on the farm and a diagnosis is confirmed.

Infectious coryza

Coryza is a respiratory disease of chickens. Common clinical signs include swelling and puffiness around the face and wattles, a thick sticky discharge with a characteristic offensive odor from the nostrils, labored breathing, and rales. There is a drop in feed and water consumption as well as egg production.

Sulfadimethoxine (Albon) is the preferred treatment for infectious coryza. If Albon fails or is not available, sulfamethazine, sulfamerazine, or erythromycin (Gallimycin) can be used as alternative treatments. The sulfa drugs are not FDA approved for pullets older than 14 weeks or for commercial laying hens.

A vaccine for infectious coryza is available. It is given subcutaneously (under the skin) on the back of the neck. Chicks are usually vaccinated four times, starting at 5 weeks of age (i.e., at 5, 9, 15, and 19 weeks with at least 4 weeks between injections). Vaccinate again at 10 months of age and twice yearly thereafter.

Other Problems To Consider

There are a variety of other problems which can cause an apparent drop in egg production. They include:

1. Predators and snakes consuming the eggs.
2. Egg-eating by hens in the flock.

3. Excessive egg breakage.
4. Hens which are able to run free hiding the eggs instead of laying in nests.

Summary

There are numerous factors which may adversely affect egg production in backyard chicken flocks. If a drop in egg production occurs, investigate the cause by answering questions that follow also refer to Table 1 and Table 2, sick and recently dead birds to a state diagnostic lab, and/or consult with your County Extension Agent or a veterinarian.

1. How old are the birds?
2. How much feed are the birds consuming daily?
3. Has the level of feed consumption changed lately?
4. Has there been a change in the type of feed used?
5. Is the feed moldy?
6. How much light do the birds receive daily? Has it changed?
7. What is the light source?
8. What is the condition of the poultry houses?
9. Are the birds getting enough clean water?
10. What is the condition of the birds?
11. How active are the birds?
12. What is shell quality like?
13. What is interior egg quality like?
14. Are there any signs of disease?
15. Are the birds crowded?
16. Are there any signs of parasites?
17. Do the birds have access to different plants?
18. Have any pesticides or herbicides been used in the area?

State Diagnostic Laboratories:

1) Live Oak Diagnostic Lab

PO Box Drawer O

912 Nobels Ferry Rd

Live Oak, FL 32060

tel: 904/362-1216

2) Kissimmee Diagnostic Lab

PO Box 460

Kissimmee, FL 32641

tel: 407/846-5200

Table 1.

Table 1. Non-infectious causes of reduced egg production.	
CAUSES OF DECLINE	SIGNS/SYMPTOMS
OMISSION OF INGREDIENTS	
Salt	Nervous flock, increased pecking, feathers in digestive tract
Calcium	Birds down in cages, increased incidence of shell-less eggs
Vitamin D ₃	Increased mortality from calcium depletion, increased shell-less eggs
Protein	Increased nervousness, increased mortality (peckouts), poor albumen quality, feather eating
Fat	Low body weight gains, drop in egg size
TOXICOSES	
Salt	Increased mortality due to urolithiasis, lowered feed intake
Phosphorus	Lower feed intake, soft bones, thin shells, increased shell-less eggs
Vitamin D ₃	Increased shell-less eggs, soft bones
Mycotoxins	Nervousness, mouth lesions, fatty livers, biliary hyperplasia in liver tissue, reduced feed intake, thin shell
Botulism	Weakness, limp neck, neck feathers easy to pull out, prostration
ANTICOCCIDIALS	
Nicarbazin	Shell-less eggs, loss of pigment of brown eggs, lowered hatch, of fertile eggs
Monensin	Reduced feed consumption, birds lack coordination
MANAGEMENT MISTAKES	
Out of feed	Nervous flock, decreased feed consumption
Out of water	Blue combs, birds gathered around waterers
Inadequate daylength	Unusual pattern of egg production
High ambient temperature	Reduced egg size, reduced feed consumption, increased water consumption, panting
ECTOPARASITES	
Northern fowl mite	Nervousness, finding mites on birds (usually around the cloaca)

Table 1.

Lice	Nervousness, weight loss, reduced feed intake
Stick-tight fleas	Fleas embedded in the fleshy parts of the chickens's head around the eyes, ulceration and irritation of skin around the eyes
ENDOPARASITES	
<i>Nematodes (roundworms)</i>	Unthriftiness, poor feed efficiency, increased mortality (in severe infestations)
<i>Cestodes (tapeworms)</i>	General unthriftiness, dry and unkempt feathers, hearty appetite but weight loss

Table 2.

Table 2. Typical diagnostic signs associated with common diseases and conditions which can cause a drop in egg production.	
DISEASE	SIGNS
Fowl pox	- scab-like lesions on the unfeathered body parts (especially face and comb)
Coccidiosis	- characteristic gross lesions in the intestinal tract - higher mortality in some cases - bloody droppings
Infectious bronchitis	- coughing, sneezing, and rales - egg production drops markedly (by as much as 50%). - soft-shelled or misshapen eggs - watery egg white - poor pigmentation of brown-shelled eggs
Newcastle disease	Mild form: Acute form: - reduction in feed and water consumption- respiratory distress - dramatic drop in egg production- twisted neck - decreased shell quality - increased mortality
Avian influenza	Mildly pathogenic form: Highly pathogenic form: - listlessness- facial swelling - sneezing, coughing- dark red/white spots on legs and combs - diarrhea- respiratory distress

Table 2.

Avian encephalomyelitis	<ul style="list-style-type: none">- seldom show clinical signs- slight, transient drop in egg production
<i>Mycoplasma gallisepticum</i>	<ul style="list-style-type: none">- coughing, sneezing, snicks, rales, nasal and ocular discharge- decrease in feed consumption and egg production
Fowl cholera	<ul style="list-style-type: none">- sudden unexpected deaths- reduction in feed consumption- swollen wattles- nasal and ocular discharge- cyanosis of head- white water or green mucoid diarrhea
Infectious coryza	<ul style="list-style-type: none">- swelling and puffiness around the face and wattles- thick, foul-smelling nasal discharge- labored breathing- decrease in feed and water consumption

ATTACHMENT 2

2/21/25

Good afternoon, Mayor and Council.

At last night's meeting, Councilman Johnson requested the minutes from the Council meeting in which chickens were discussed.

Quick summary: At the Regular Council Meeting held on August 6, 2020, Councilman Jeff Bailey made the request to increase the number of chickens from 4 to 13. After lengthy discussion, the item was continued to October 1, 2020, with a workshop to be held prior to that date. No workshop was held, and the item was later withdrawn prior to the final hearing on October 1st. The video no longer exists as it has met its 2-year retention.

7. Ordinance 2020-50, amending the Code of Ordinances, Chapter 185, Zoning Code, Subchapter 'Supplementary District Regulations', by increasing the maximum number of chickens permitted on single family lots; and including provisions for urban farm animals permitted on developed single family lots (Case T-16-2020, City of Palm Bay), first reading.

The Planning and Zoning Board recommended that the request be denied.

The City Attorney read the ordinance in caption only. The public hearing was opened. Councilman Bailey presented the request to Council. He said that this was an important part of sustainability should there be a food shortage and also created a healthier lifestyle. Increasing the number of chickens still allowed a family to have enough to continue producing eggs should a few be slaughtered for food, death by natural causes, or killed by predators. There would not be the immediate need to replenish the chickens. Mr. Bailey said that having two (2) goats or two (2) sheep kept them happier, calmer and quieter.

Mayor Capote asked about areas that were zoned for these types of animals. He was hesitant in allowing chickens and goats throughout the entire City. Mr. Bradley said that in 2013, Council approved an ordinance permitting up to four (4) chickens in almost all of the single-family zoning districts. Goats, sheep and the like were only allowed in RR (Rural Residential District) and GU (General Use Holding District) zonings.

Individuals submitted virtual comments supporting the request.

Joe Laughlin, resident, said that during the onset of COVID-19, there was a nationwide shortage of supplies, including eggs and meat. He said this ordinance allowed the residents to provide for their families. He said that four (4) chickens typically produced 3-4 eggs per day which was not enough for a family of 3-4 people.

Bill Battin, resident, commented on how expensive it was to feed and care for these animals. He expressed concern if animals were neglected. If there was a six-foot fence, no one would be able to see the condition of the animals. He believed in everyone being able to have livestock, but said it had to be done responsibly.

Mr. Bailey asked Mr. Laughlin to address the space requirements and feed concerns. Mr. Laughlin said that if the chickens free-range throughout the backyard, they would eat bugs, lizards, etc. and it would cut down on the cost of feed. If kept in the coop all of the time, a lot more feed would be needed. Sheep would need to be fed with hay as they did not do well with St. Augustine grass.

Mr. Anderson asked if the current ordinance required chickens to be kept in the coop at all times. Mr. Bradley confirmed same and said that language was not amended in this proposed ordinance. Mr. Anderson questioned if the goats and sheep could roam freely. Mr. Bradley said the ordinance did not state that they must be in a specific area, but that they had to be within a fenced area on the property.

Mr. Santiago asked if goats could jump higher than six (6) feet. Mr. Bradley was unsure. Mr. Santiago said that when the initial ordinance for four (4) chickens was brought forth, a main concern was health. He asked if any research had been done on the effects of a person's health. Mr. Bradley said a previous Growth Management Director had done research on same in 2013 and he would provide the report to Council.

Mayor Capote asked if a community survey had been performed. Mr. Bradley answered in the negative.

Mr. Bailey asked Mr. Laughlin to address the sanitary issues. Mr. Laughlin said that chickens were widely used to provide natural sanitization after cows, sheep and goats were in an area. He said that goats could jump and the rule of thumb was if a golden retriever could jump it, then a goat could do so as well.

The public hearing was closed.

Motion by Mr. Bailey, seconded by Mr. Anderson, to approve Ordinance 2020-50.

Due to an additional public comment, the public hearing was reopened. Mr. Bailey withdrew his motion and Mr. Anderson withdrew his second to the motion.

Alfred Agarie, resident, said he had been a farmer for many years and the City did not need this type of situation. He understood the necessity for residents, but a survey was definitely needed. He said the smell was horrible that came with these types of animals.

The public hearing was closed.

Motion by Mr. Bailey, seconded by Mr. Anderson, to approve Ordinance 2020-50.

Mr. Bailey said the fertilizer that was created by the chickens was helpful to the environment. He added that the chickens would eat the bugs that would potentially be harmful to a garden. He felt that it may be good option to permit the chickens to roam freely within the fenced area. He said if a survey was done, he wanted to provide as many facts as possible.

Mr. Anderson felt the chickens were not an issue but preferred no more than six (6) or eight (8). However, he said that goats and sheep could become very loud, but felt a rooster should also be permitted. He said that there should be an acreage requirement.

Deputy Mayor Johnson said that the Center for Disease Control (CDC) expressed concern on its website about these types of animals spreading disease. He asked if anyone had reached out to the CDC for comment. Mr. Anderson said the CDC recently issued a statement advising not to kiss the chickens as it could lead to the spread of disease. Deputy Mayor Johnson asked if any other cities allowed 10-13 chickens, as well as goats and sheep.

Mayor Capote said that back in 2013, there was an immense amount of information provided to Council. He felt that a survey should have gone out to the residents and both the pros and cons be presented to Council. Mr. Santiago felt this was being rushed through without a lot of information. He understood the need to survive, but no one should ever allow the current climate to dictate their lives; it should be the vision of a better life to lead into a more hopeful future.

Mayor Capote asked if Councilman Bailey wanted to table the item or for Council to vote on the motion. Mr. Bailey understood that the goats and sheep were a concern. He asked if Council would agree to separating the issues. Mayor Capote felt it should all be tabled and possibly hold a workshop. Mr. Bailey said he was hoping to at least get the chickens approved tonight but was agreeable to a workshop. He provided further comments on the issue.

Mr. Anderson withdrew his second to the motion.

Mr. Bailey wanted to have a workshop as soon as possible, preferably between September and beginning of October.

Motion by Mr. Bailey, seconded by Mr. Anderson, to table the item to October 1, 2020. Motion carried with members voting as follows: Mayor Capote, Yea; Deputy Mayor Johnson, Yea; Councilman Santiago, Yea; Councilman Bailey, Yea; Councilman Anderson, Yea.