Housing & Space Requirements

Chickens in the Backyard Workshop
Springfield, MO
February 26, 2011

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Overview

- Plan before you build
- Space needs
- Housing types
- Predator protection
- Storage
- Flooring
- Lighting
- Ventilation
- Water & feed
- Nests & roosts
Before You Build

- Maximum of 6 hens; no roosters
- Shall only be located to the rear of the dwelling
- Setback distances
  - At least 3 feet from the property line
  - At least 25 feet from another residence, business, school or church
- Odors not detectable at the property line
- Housing must be clean, dry, odor-free, neat & sanitary at all times
  - Zoning Ordinance Subsection 1-1331
  - City Code Section 18-24
Before You Build

- Check with your neighbors first
  - Show them what you plan to build
  - Make it look attractive or inconspicuous

- Decide type of housing
  - Build new
  - Acquire and refurbish
  - Buy kit and assemble
  - Buy finished unit

- Ordinance enforcement
  - City of Springfield’s Building Development Services Dept.
    417-864-1010
## Chicken Data Summary

<table>
<thead>
<tr>
<th></th>
<th>Floor area per bird (indoors)</th>
<th>Floor area per bird (outdoors)</th>
<th>Feeder space per bird</th>
<th>Feed needs per bird</th>
<th>Roost space per bird</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Chicks</strong></td>
<td></td>
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<tr>
<td>0-4 weeks</td>
<td>0.5 sq. ft.</td>
<td>8 sq. ft.</td>
<td>1.5”-2.0”</td>
<td>0.25 lb./day (85-90 lbs./yr)</td>
<td>6”; spaced 12” o.c.</td>
</tr>
<tr>
<td>4-8 weeks</td>
<td>1 sq. ft.</td>
<td>10 sq. ft.</td>
<td>2.5”</td>
<td>0.3 lb./day (100-110 lbs./yr)</td>
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<tr>
<td>8-12 weeks</td>
<td>2 sq. ft.</td>
<td></td>
<td>3.5”</td>
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<tr>
<td><strong>Layers</strong></td>
<td></td>
<td></td>
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<tr>
<td>Light breeds</td>
<td>3 sq. ft.</td>
<td></td>
<td>4.0”</td>
<td>0.25 lb./day (85-90 lbs./yr)</td>
<td>8”; spaced 12”-14” o.c.</td>
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<tr>
<td>Heavy breeds</td>
<td>4 sq. ft.</td>
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<td>5.0”</td>
<td>0.3 lb./day (100-110 lbs./yr)</td>
<td>9”; spaced 12”-14” o.c.</td>
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<td><strong>Water needs per bird</strong></td>
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<td><strong>Chicks</strong></td>
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<td>0-4 weeks</td>
<td>1.5-2 oz./day</td>
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<td><strong>Layers</strong></td>
<td></td>
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<tr>
<td>Cool weather (70°F)</td>
<td>8-10 oz./day</td>
<td>10-14 oz./day</td>
<td>14-16 oz./day</td>
<td>¼ lb./day + litter</td>
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<td>Warm weather (80°F)</td>
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<td>Hot weather (&gt;90°F)</td>
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Housing Types

Definitions:

- Brooders = for raising chicks
- Henhouse, with or without outside runs = for birds only
- Chicken tractors = bottomless movable pens with housing
- Chicken coop = large enough for humans to enter

Housing should be clean, dry, draft-free, comfortable year-round

Larger spaces lessen odor, flies, disease

Use pressure-treated lumber for wood in contact with ground
Brooders

Photo credit: www.backyardchickens.com

Photo credit: http://chickensoncamera.com
Henhouses
Henhouses
Henhouse for 6 Birds

Graphic courtesy of Purina Mills, Inc.
Chicken Tractor

- Bottomless, portable shelter-pen that fits over garden beds
- Many designs
- Most commonly used with fruit & vegetable production
- Popular among sustainable production enthusiasts
Chicken Tractor

- **Advantages**
  - Can be moved very easily
  - Insect control
  - Source of fertilizer
  - Used in urban areas

- **Disadvantages**
  - Ground can become barren
  - Semi-labor intensive
  - Not made for a large amount of poultry
Predator Protection

- **Daytime threats**
  - Dogs (#1), cats, foxes, hawks, coyotes
- **Night-time threats**
  - Cats, raccoons, possums, owls, rodents
- Predators are reluctant to travel across open territory
- Have as little tree cover as possible; poultry have a sixth sense in open air
Secure coop door latches at night
Staple heavy wire screening to inside of windows & vents
Use screened outdoor runs

1/4" hardware cloth
Chicken wire
Predator Protection

- Bury wire fencing 6-12” deep in ground
Storage for Feed, Bedding, Manure (for 6 layers)

- **Feed**
  - 2 lbs./day = Fifteen 50-lb. bags/year

- **Bedding**
  - Shavings = 9 lbs./cu.ft.
  - Need 6 cu.ft. to cover 24 sq. ft. floor 3” deep

- **Manure**
  - Excreted at 75% moisture; weighs 60 lbs./cu.ft.
  - Shavings absorb 2 lbs. (1 quart) water per 1 lb. bedding
  - No more than 3 cu. ft. stored, in fully-enclosed structure with a roof or lid
Brooder Requirements

- Made of many different materials
- Home until sufficiently feathered
- Most critical stage of growth
- First weeks determine long-term survival & development
- Check your chicks at least twice per day
- Space = 1 square foot per bird
- Heat
  - 2 heat lamps (in case one burns out)
  - 95°F for week 1; then decrease 5°F per week to 70°F (need thermostat)
Brooder Requirements

- **Litter**
  - 3 inches of clean dry litter (*No sawdust, cedar or newspaper*)
  - Keep litter **dry & clean** around water & feed

- **Water**
  - clean & fill daily

- **Feeders**
  - Place near heat, but not directly underneath source
  - Fresh food in front of chicks at all times

- **Delivery Day**
  - Brooder should be up and running 24 hr before chicks arrive
  - Have them sent overnight
  - Show each bird water source
Henhouse Flooring

- ¾” exterior-grade plywood or concrete
- 3” deep absorbent litter that is clean, mold-free, dry, but not dusty
  - Pine shavings, rice hulls, chopped straw, shredded newspaper, peanut shells, ground corn cobs
  - Hardwood shavings can produce mold
  - Cedar shavings mat and enhance odors
- Stir litter to keep it from packing
- Replace wet litter with dry to reduce odors
- Move waterers regularly to prevent wet areas
Lighting

- Laying hens need adequate light year-round
  - Hens molt and quit laying with decreased hours of light
  - Intensity affects cannibalism, aggression, feed & water intake
  - Photo period affects reproductive & egg production cycles, total feed intake & growth rate
- Maximize production with 14-16 hours of “daylight”
  - Provide two (one is spare) 15-25 watt light bulbs on timer
  - Birds will usually lay one egg every 25 hours
Ventilation

- Place windows on the south side of the henhouse
  - Ensures light and warmth during winter
  - Use slanted window sills to discourage roosting
- Place vents on the south or east side
  - Chickens cannot sweat; they start to pant around 95°F
  - Ensures proper ventilation in summer months
  - Dampness & ammonia odor indicate lack of ventilation
- Insulate roof and walls
  - Reduces summer heat gain
  - Reduces moisture accumulation
Water

- Water supply constant, clean & fresh
  - Water intake varies greatly with weather
  - White buckets stay cooler than colored buckets

- Waterer placement
  - Bottom of waterer at bird’s back height
  - Within 15 feet of feeders
  - Place in shade in warm weather for bird comfort

Photo credit: www.cacklehatchery.com
Water

- 5-gallon bucket atop the pen will gravity-feed a bell waterer
  - Mesh screen across top
  - Attach to pen
- Hoses can feed nipple waterers
Feeders

- **Hanging System**
  - Raise and lower to bird height
  - Outer lip level with bird’s back
  - Keeps feed clean; prevents spillage & spoilage

- **Trough Feeder Systems**
  - Chickens more susceptible to disease
  - Taken out of pen before moving
  - More chickens can feed at once
Nests

- Provide one nest for every 4-5 hens
- 12” x 12” in size
- Wood, metal or plastic
- Place on W or E wall for south-facing coop
- Landing board on front for easier entrance/exit
- Provide bedding to prevent egg breakage

Photo credit: www.cacklehatchery.com
Roosts

- Allow 8” to 9” of roost space per bird
- Space roosts 12-14” apart
- 1½” dowels or 2x2” lumber works well
- May have to teach birds to use roosts
Resources

- Web: extension.missouri.edu/publications
  - G8350 Managing a Family Chicken Flock
    extension.missouri.edu/explorepdf/agguides/poultry/g08350.pdf
  - G8351 Brooding and Growing Chicks
    extension.missouri.edu/explorepdf/agguides/poultry/g08351.pdf

- University of MO Extension – Webster County
  - Phone: 417-859-2044
  - Web: extension.missouri.edu/webster/backyardchickens
Questions?

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Program Complaint Information
To file a program complaint you may contact any of the following:

University of Missouri
- MU Extension AA/EEO Office
  109 F. Whitten Hall, Columbia, MO 65211
- MU Human Resources Office
  130 Heinkel Bldg, Columbia, MO 65211

USDA
- Office of Civil Rights, Director
  Room 326-W, Whitten Building
  14th and Independence Ave., SW
  Washington, DC 20250-9410

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