

Housing & Space Requirements

Chickens in the Backyard Workshop
Springfield, MO
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UNIVERSITY OF MISSOURI
Extension

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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 1

- 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 2

- 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

| | | Floor area per bird (indoors) | Floor area per bird (outdoors) | Feeder space per bird | Feed needs per bird | Roost space per bird |
|--------|---------------------|-------------------------------|--------------------------------|-----------------------|---|---------------------------|
| Chicks | 0-4 weeks | 0.5 sq. ft. | | 1.5'-2.0' | | |
| | 4-8 weeks | 1 sq. ft. | | 2.5' | | |
| | 8-12 weeks | 2 sq. ft. | | 3.5' | | |
| Layers | Light breeds | 3 sq. ft. | 8 sq. ft. | 4.0' | 0.25 lb./day (85-90 lbs./yr) 0.3 lb./day (100-110 lbs./yr) | 8"-spaced 12"-14" o.c. |
| | Heavy breeds | 4 sq. ft. | 10 sq. ft. | 5.0' | | 9"-spaced 12"-14" o.c. |
| | | Water needs per bird | | Waste per bird | | |
| Chicks | 0-4 weeks | 1.5-2 oz./day | | | | |
| | 4-8 weeks | 4 oz./day | | | | |
| | 8-12 weeks | 6-8 oz./day | | | | |
| Layers | Cool weather (70°F) | 8-10 oz./day | | ¼ lb./day + litter | | |
| | Warm weather (80°F) | 10-14 oz./day | | | | |
| | Hot weather (>90°F) | 14-16 oz./day | | | | |

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

The images show various brooder setups. The first is a white plastic tub with a heat lamp and several chicks. The second is a cardboard box filled with straw bedding, with a chick visible. The third is another white plastic tub with a heat lamp and chicks. The fourth shows two white plastic tubs with heat lamps and chicks.

Henhouses

The images show different types of henhouses. The first is a wire mesh cage. The second is a wooden raised coop. The third is a wooden coop with a ramp. The fourth is a wooden coop with a ramp.

Henhouses

The images show different styles of henhouses. The first is a white wooden house with a ramp. The second is a white wooden house with a ramp. The third is a white wooden house with a ramp. The fourth is a yellow and green tent-like structure.

Henhouse for 6 Birds

The diagram shows the front and side views of a henhouse for 6 birds. Key dimensions include: overall height of 48", width of 64", and a depth of 48". It includes construction notes such as 'Use 1/2 plywood roof sheathing', '1 1/2\"

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

The images show different designs of chicken tractors. The first is a wooden frame with wire mesh. The second is a wooden frame with wire mesh. The third is a wooden frame with wire mesh.

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

The images show different designs of chicken tractors. The first is a wooden frame with wire mesh. The second is a wooden frame with wire mesh.

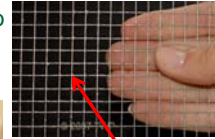
Predator Protection 1

- 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



Predator Protection 2

- 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

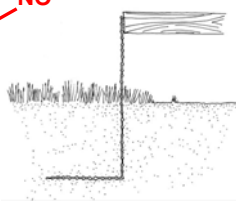
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Predator Protection 3

- Bury wire fencing 6-12" deep in ground



Dust-bathing chickens



YES

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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



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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)



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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

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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

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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

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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

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Water

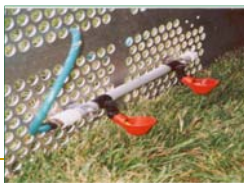
- Water supply constant, clean & fresh
 - Water intake varies greatly with weather
 - White buckets stay cooler than colored buckets
- Waterer placement
 - Bottom of waterer at bird's back height
 - Within 15 feet of feeders
 - Place in shade in warm weather for bird comfort



Photo credit: www.cacohatchery.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



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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



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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.chickenbarn.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



Photo credit: www.chickenbarn.com

Photo credit: <http://9f.com>

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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

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Questions?

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- 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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