
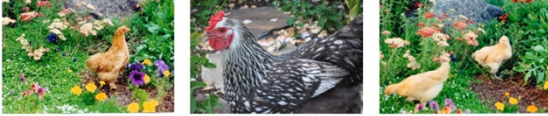


University of California  
Agriculture and Natural Resources



UCCE Master Gardener Program  
Monterey and Santa Cruz Counties

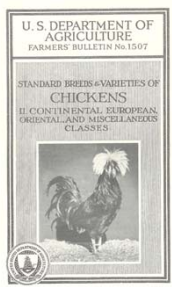




## Chix in the city, Hens in the hood

Candice McLaren

### An overview of Backyard Chicken Raising

- Spring time
- Class, breed, variety
- How do I decide?
- Food and shelter
- Chick care ( oh they grow up so fast!)
- Keeping the girls healthy and happy
- Questions

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### Spring time!

- Spring is time for chicks (and ducks and bunnies)
- Sold in local farm and feed stores
- Most chicks these days are sexed in the hatchery and sold as potential hens.
- Shipped as day olds from Hatcheries or you can also get pullets from some.



Buff Orpington chick and hen and black copper maran chick



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### Spring time!

- Always be ready to bring home the new ones with housing and feed set up
- Remember just like kittens and dogs, they do grow up and get much bigger.
- Many end up at the local shelters- which becomes a good place to find an older bird.
- Only buy as many as your coop can hold







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### Good Gardening practices to protect your hens and you. (after all you want to eat the eggs)

- Eliminate the use of pesticides. Hens love to eat your bugs, earwigs, snails, and anything that moves!
- Eliminate the use of herbicides. Hens will eat a lot of weeds, grass clippings, and vegetable trimmings.

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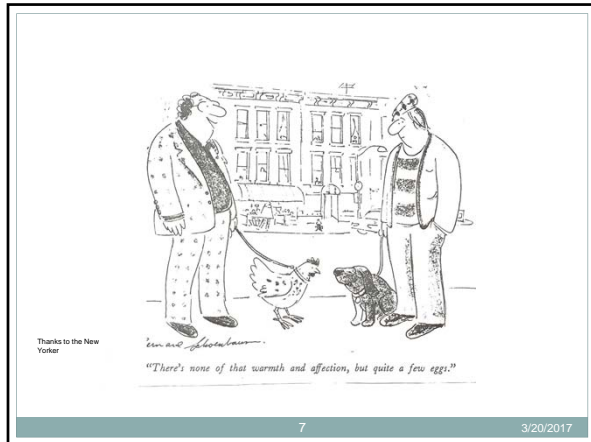
### Why keep hens???

- They have lots of personality! (really)
- Raising hens give you eggs. (for a while anyway!)
- Hens make manure for your garden.
- Hens will eat your leftovers (and your garden if you let them!)
- Hens are fun and they make really GREAT pets!







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### Chickens, an overview



Wild chicken in Kauai late '90s

- **Species:** all domesticated chickens belong to the same species, *Gallus gallus domesticus*
- Chickens have been domesticated for tens of thousands of years starting with red jungle fowl in Southeastern Asia- Vietnam, India, China.
- For Fun Reading: **Why did the chicken cross the world?** The epic saga of the bird that powers civilization by Andrew Lawler

Photo from Extra Extraordinary chickens, Stephen Green-Armytage

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### Chickens, an overview

- **Class:** Tells you where in the world the bird came from. Large breed and bantams are subdivided into a number of classes that indicate their place of origin
- **Breed:** Tells you the genetic type of the bird. There are hundreds of different breeds.
- **Variety:** Tells you the color pattern but could be the feather placement or comb style.
- **Strain:** any breed or variety that has been line-bred for a number of years, and which reproduce uniform characteristics with marked regularity.
- Does this remind you of the scientific classification of plants? genus and species?

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### Breed selection that meets your needs

**Laying breeds:**

- Hens lay a large number of eggs- average 250-280 eggs first year
- Begin laying around 5 months of age
- They have small bodies- Mediterranean breeds, leghorn, higher stung, (could be called nervous) Safeway laying hens
- They are not inclined to brood. (Broody hens don't lay)

**Meat Breeds- Fryers( 5-6 lbs), Broilers and Roasters, (7-10 lbs)**

- Chickens grow and feather quickly- typically white feathers for clean picking
- They weigh 5-6 pounds by week 7 and in 3 more weeks can weigh 7-10lbs.
- White Plymouth Rock ,Brahma, and Cornish breeds
- They are broad breasted

**Dual Purpose- the best of both, eggs and meat (then no more eggs)**

**Unless you bought a straight run group of chicks**

- Most are in the American and English classification
- Most lay brown eggs, about 250 a year
- Large bodied, hardy, calmer
- Plymouth Rock, Red Sex Link, Orpington, Rhode Island Red

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### Chickens- a breed for everyone!

- **American Class – 13 breeds from the United States and Canada.**
  - Most are large and lay brown eggs.
  - Plymouth Rock, Dominique, Wyandotte, Java, Rhode Island Red, Rhode Island White, Buckeye, Chantecler, Jersey Giant, Lamona, New Hampshire, Holland, and Delaware and Holland.
- **Asiatic Class – 3 breeds and all from China**
  - Large, mostly feathered legs, and lay brown eggs
  - Cochin, Langshan, Brahma



**Continental Class: 11 breeds**



The Continental Class contains large-sized chicken breeds of Continental European origins, excluding however, birds originating in the Mediterranean region. The breeds included in this class are mostly sprightly birds, the Faverolles being the most prominent exception. The ten breeds in the Continental Class hail from four countries, Belgium, France, Germany, and the Netherlands.

Hamburg, Campine, Lakenvelder, Polish, Houdan, Crevecoeur, La Fleche, Faverolle, Welsummer, and Barnevelde, Marans,

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### Chickens- a breed for everyone!

- **English Class**  
This class is made up of breeds that originated in the United Kingdom and Australia. Pink skin is a characteristic sported by the breeds of this class, and all but the Redcap are heavier birds that lay brown eggs  
Dorking, Redcap, Cornish, Orpington, Sussex, and Australorp
- **Mediterranean Class:**  
All members of this class possess white earlobes and tend to be productive layers of white eggs.  
In general they are flighty, and exceptional free-range birds; with both evasion and foraging skills. The beginnings of all the breeds of this class center around the Mediterranean region, Italy and Spain.

Leghorn, Minorca, Spanish, Andalusian, Ancona, Sicilian Buttercup, Catalana

Photos from Extra Extraordinary chickens, Stephen Green-Armytage

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### Chickens, a breed for everyone!

**Ornamental Breeds:** bred for their unique qualities and shown in exhibition  
Must meet the Standard – American Poultry Association Standard of Perfection  
Frizzle, Modern Game, Plymouth Rock,

**Bantams:** small versions of most breeds.  
The following breeds are in bantam only and are typically used for exhibition or pets only  
Belgian d'Anvers  
Belgian d'Uccle  
Frizzles, Japanese, Seabrights, and Silkies




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### Chickens- a breed for everyone!


- **Game Class:**  
Modern Game, Old English Game.
- **Oriental Class:**  
Shamo, Sumatra, Malay, Cubalaya, Phoenix, Yokohama, Aseel, Phoenix
- **All other Standard Breeds:**  
Sultan, Frizzle, Naked Neck, Araucana, and Ameraucana.




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### Hens that lay brown eggs

#### Silver Laced Wyandotte



The Silver Laced Wyandotte is a rose comb, clean legged variety that originated in the U.S. This friendly bird lays about 200 or more brown eggs a year and is known for being a good cold weather layer. While they do go broody, this makes the Wyandotte excellent mothers around the farm. This breed is also recognized for its ability to quickly put meat on, which make them a wonderful **dual purpose** bird. The silver laced color is the "original" Wyandotte, which all of the other color varieties were bred from.

Egg Color - Great producer of large brown eggs.  
Purpose - Dual  
Weight - Male 8.5 lb. Female 6.5 lb


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### Hens that lay brown eggs

#### Delaware




The Delaware was first developed in the United States in the 1940's and is an ideal **dual purpose** bird. Its rapid growth and white feathers make it a great heritage breed to raise for producing meat.

Egg color - Good producer of brown eggs  
Purpose- Dual  
Weight: Female-6.5 lb. Male-8.5 lb


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### Hens that lay brown eggs

#### Barred Plymouth Rock




The Barred Rock is a single comb, clean legged variety that originated in the U.S. Friendly disposition & cold hardy.

Egg color - Good producer of large brown eggs.  
Purpose-Dual  
Weight: Female-7.5 lb. Male-9.5 lb.


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### Hens that lay brown eggs

#### Buff Orpington



The Orpington which originated in the U.S. is a single comb, clean legged variety which weighs between 8-10 lbs. Buff coloration. They are a docile bird with a good disposition, good dual purpose bird.

Egg color - Good producer of Brown Eggs  
Purpose - Dual  
Weight: Male- 8 lb. Female 7 lb.


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### Goldie, the BEST Buff Orpington of all time!


They are a docile bird with a good disposition,



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### Hens that lay brown eggs

#### Jersey Giant




The Jersey Giant weighs in as the largest purebred chicken in the world. A Jersey Giant capon can reach twenty pounds. Unfortunately, it takes six months for the Jersey Giant to grow its giant skeleton and another three months before it has sufficient bulk for butchering. Their slow maturation rate make them unviable for commercial meat production. Jersey Giants lay three extra-large, brown eggs a week. They will brood chicks; however, their massive size often leads to crushed eggs or chicks. In spite of their size, Jersey Giants fit well into a small farm setting. They have a hardy constitution for cold.

<http://chickenbreedlist.com/Marans.html>

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### Hens that lay brown eggs

#### New Hampshire



The New Hampshire is a single comb, clean legged variety which originated in the U.S. Hardy in heat & cold but combs subject to frostbite.


Egg color - Good producer of light to medium brown eggs  
 Purpose - Dual  
 Weight: Female- 6.5 lb. Male 8.5 lb.



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### Hens that lay brown eggs

#### Silver Laced Wyandotte



The Silver Laced Wyandotte is a rose comb, clean legged variety that originated in the U.S. This friendly bird lays about 200 or more brown eggs a year and is known for being a good cold weather layer. While they do go broody, this makes the Wyandotte excellent mothers around the farm. This breed is also recognized for its ability to quickly put meat on, which make them a wonderful dual purpose bird. The silver laced color is the "original" Wyandotte, which all of the other color varieties were bred from.


Egg Color - Great producer of large brown eggs.  
 Purpose - Dual  
 Weight - Male 8.5 lb. Female 6.5 lb



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### Hens that lay brown eggs

#### Black Sex- link



An old reliable hybrid cross between a Barred Rock hen & a Rhode Island Red cock. The Black Sex-link is a balanced hen that not only turns out the eggs, but since this breed is a bit larger than our other hybrids, they can be utilized for a dual purpose. It is a very popular brown egg layer that is gentler breed than the Red Sex-link, however not as efficient.

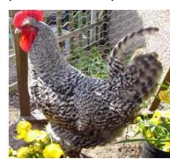
Egg color - Produces large brown eggs with egg production approximately 250+ per year  
 Purpose - Layer  
 Weight: Females 5 to 5.5 lbs.



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### Hens that lay REALLY DARK (chocolate) brown eggs

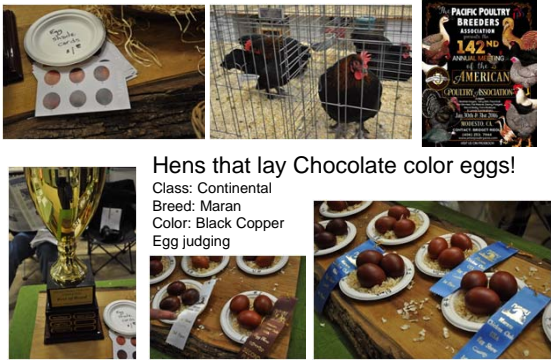
#### Marans



Marans lay three eggs a week. Poultry people prize Marans for the dark brown or chocolate colored eggs. Ian Fleming, the creator of the James Bond novels helped popularize the eggs and the breed by making their eggs the favorite of 007. Raised in a damp region of France, Marans tolerate wet conditions well. However, they run the risk of frostbite as do all breeds with large comb or wattles. The poultry world often overlooks the meat producing capabilities of the Marans. Marans grow quickly and produce a succulent, fine-textured, white meat.

<http://chickenbreedlist.com/Marans.html>

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**Hens that lay Chocolate color eggs!**  
 Class: Continental  
 Breed: Maran  
 Color: Black Copper  
 Egg judging

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**Hens that lay white eggs**

**Brown Leghorn**

The best egg laying heritage breed of chicken. The Leghorn is a single comb, clean legged variety that originated in Italy. Hardy, but combs subject to frostbite in extreme cold weather areas. Leghorns are a flighty breed, very nervous and non broody. Males have Red-Orange hackle feathers, black-green under body & tail. The females color is not as distinguished as the male, however they are still very beautiful.

Egg color - Excellent producer of large white eggs  
 Purpose - Layer  
 Weight: Female- 4.5 lb. Male 6 lb.




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**Hens that lay white eggs**

**Black Minorca**

Comes in a single comb or rose comb variety, both clean legged. Originated in Spain. Excellent hot weather variety, but combs can be subject to frostbite in extreme cold.




Egg color - Producer of white eggs  
 Weight: Female-7.5 lb. Male-9 lb.



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**Hens that lay colored eggs**

**Ameraucana**




The Ameraucana is a pea comb, clean legged variety that originated in the U.S. Good disposition, non-aggressive & very cold hardy.

Egg color - Very good producer of blue & blue-green eggs  
 Purpose-Dual  
 Weight: Female-5.5 lb. Male-6.5 lb.




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**The details**

- Chick care
- The brooder
- Water and food
- Where to place the coop, the run.
- Design of the coop
- Cleaning of the coop
- Water and feed for pullets and hens
- First year of a hen
- What to do when your girls get sick




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### Bringing home the babies

Be prepared- have your brooder ready before you bring the chicks home. Can be a cardboard box, Rubbermaid clear box, or a real brooder purchased from a hatchery or farm supply.

Use a thermometer inside the brooder with the heat lamp so that you know where to position the lamp to keep the temperature constant. Raise up the lamp each week to keep the proper temperature.



Days of age	Brooding Temperature (F)
1-7	90-95
8-14	85-90
15-21	80-85
22-28	75-80
29-35	70-75
36-42	70



At one week, chicks will have feathers on wings, and by 5 weeks should be fully feathered out.

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### Handy thermometer for Brooder

Stick'm Ups Thermometer Model AT120 by the Time and Temperature Company. Purchased at Mountain Feed. \$4.99

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### Brooder drawing showing the proper heat for chicks

Figure 1. Brooding area temperature is important.


Drawing from Purdue Extension Knowledge to Go

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### Chick brooder kit



View LargerBrooder Starter KitFor projects just needing brooding equipment. Includes (1) single lamp brooder w/ guard, (1) 250 watt infrared heat bulb, (1) brooder thermometer, 30 ft. roll of draft protection shield, (1) 1 gal. waterer, (2) reel feeders, (2) large plastic jars w/ no drown fountains and a book on raising poultry.



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### Water and Feed for chicks

Size appropriate for the brooder and number of chicks. Switch to larger size when you put hens outside.




Plastic quart size water and 28 opening feeder

Galvanized water and feeders

Reversible all plastic water/feeder



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### Feeders and waterers


Provide enough feeder space to allow most of your birds to eat at the same time.

- Feeders**
  - Hang feeders or raise off the ground/floor.
  - Purchase a feeder with a lid, it will keep feed dry and cleaner.
- Waterers**
  - Always provide clean, fresh water. Change as needed. Place it where it won't heat up.
  - Place it off the ground to keep the water cleaner. Chickens scratch in all directions!


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### Feed for chicks, pullets and hens

Many start their chicks out on chick starter or lay crumbles as it provides enough protein for growth. If you are raising broilers, you may want to use higher protein for fast growth.



Feed	Protein	Age of bird
Chick starter	20-22%	0-6 weeks
Pullet grower	14-16%	6-20 weeks
Lay feed	15-18%	20 weeks on





Lettuce and greens are good but be careful not to let them eat too much. (diarrhea)

Feed schedule from University of California, Cooperative Extension, Suburban Rancher for feeding chickens leaflet 2919


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### Chick and hen scratch should be used as treats. It's like chips and candy

Hen scratch is coarse ground

Chick scratch is finely ground  
Cracked corn, whole wheat and milo.



Oyster shell or grit is needed by laying hens.

Thanks to General Feed & Seed for allowing me to photograph products

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### How to make the transition from your house to theirs

Baby chicks can be placed outside on a nice warm day with someone watching them. If your fully enclosed and run is ready, place them in there but bring them inside before it gets cold.

Chicks should be fully feathered before living outside.

If you get your chicks in March and April, at 6 weeks of age and fully feathered, the weather should be warm enough to put out in their new house.

First week you may need to put them on the roosts.




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### Housing requirements for when the chicks leave their nice warm house (yours) to the outside.

The chicken coop- a place where your hens can be kept comfortable in all kinds of weather. This is where they sleep and hang out when it rains or is windy.

- Construction should be solid, tight, and well ventilated. Should have a roof and wire floor. Protect your girls from dogs, coyotes, raccoons, skunks, and birds of prey.
- Provides protection from predators in the design of doors, windows, roof and floor. Night time wildlife in the cities is a real issue.
- Provide space for roosts, - plan on about 10" per bird 2" dia. poles for roosts. Several heights and 10" apart.
- Egg/nest boxes, 1 box for every 4-5 hens.
- Allow 3 square feet per chicken.





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### Housing requirements for chickens

The chicken run or yard- attached to the chicken coop that allows access to the outside world.

- Recommend that it be fully enclosed top and bottom, secured.
- Should have water and feed.
- Provide straw or weed trimmings for scratching around.
- Can be as large as you want. Keeps chickens from your garden.
- Location, location, location. Check with your City about any set backs. Do your neighbors like chickens?


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Chicken coop pictures from the BackYardChickens.com


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Cynthia Jordan's coop and fully enclosed run




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Chicken Coop at Costco



Could hold up to 6 hens, 4 might be more comfortable with space.  
3 egg boxes




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**Egg boxes or nests**

Egg boxes should be part of the coop design. Some designs allow access to the egg box from outside the coop.


- Provide access to egg boxes starting at 18 to 20 weeks ( 126-140 days).
- Medium size birds like Leghorns can use 12" x 12" x 12" box.
- Larger breed bird such as Rhode Island Red use a 14" x 14" x 14" box
- Provide straw inside the box and keep the egg boxes clean
- Don't allow birds to sleep in boxes .



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When a chick is a pullet then a hen

- Female chicks are called pullets when they are fully feathered and under 1 year of age.
- Pullets start laying between 16 and 25 weeks. Sunset's first batch of pullets started laying at 150 days ( April chicks, September eggs)
- Pullets are called hens after 1 year old.
- Pullets start out laying smaller eggs and as they get older will produce a larger egg.



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**How many hens should I get???**

- Chickens are social animals, get at least 2 chicks/hens.
- Base your chick/hen purchase on how many eggs you want. How many in your family will want eggs everyday? (everyone will when they first start)
- 3 hens can produce 2 eggs a day for the first year, some figure 1 hen can lay an egg every 1-4 days. Some days every girl will lay.
- Pullets start laying between 16 and 25 weeks. Sunset's first batch of pullets started laying at 150 days ( April chicks, September eggs)
- Egg production peaks between 1-2 years.
- Don't overcrowd your chicken coop or yard.
- Don't forget- those cute little chicks will soon be much larger hens.

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**The first year of a hen**



Hens need about 14 hours of daylight to produce eggs. (they do not need a rooster to lay eggs)  
Hens lay eggs on about a 25 hour cycle.

As a hen start laying eggs she will lose body color (bleaching) as her pigment goes into the yolk color.

Egg yolks get their color from Xanthophyll, a natural yellow-orange pigment in green plants and yellow corn. It also colors the skin and legs.

Some feeds will affect yolk color and produce darker yolks.

The first year a hen will not molt (replace feathers) but reduced sunlight in the winter months may reduce the number of eggs that she lays.

In the late summer/fall of their 2<sup>nd</sup> year hens will begin to molt and will reduce or stop laying so that they can produce new feathers.

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### What a hen really needs

Hens need about 14 hours of daylight to produce eggs. (they do not need a rooster to lay eggs)


The first year they will not molt (replace feathers) but reduced sunlight in the winter months may reduce the number of eggs that they lay.

Spring and summer bring longer days and production should pick up the 2<sup>nd</sup> year up until fall.

In the late summer/fall of their 2<sup>nd</sup> year they will begin to molt and will reduce or stop laying so that they can produce new feathers.

2<sup>nd</sup> winter hens may decide to stop laying but will usually start back up in the spring/summer.

Always keep your coop clean and your girls will stay healthy



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### Spa time for hens

- Hens love to take dust baths.
- Use dry, loose dirt in shallow bowls or holes.
- Usually in full sun, and warm weather.
- Hens use wings and legs to whip up dust onto body and under wings. Turn side to side and even rest on their sides.
- Dust particles discourage pests (mites and lice)
- Hens shake off and preen
- Uses her beak to pull preening oil from the base of her tail.
- Replaces old oiled feathers with new oil.




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### Recipe for spa bath (real dirt works fine too!)

- 1 part fine sand.
- 1 part fireplace or wood stove ashes.
- 1 part garden soil (not potting soil, nothing with fertilizers).
- 1 part diatomaceous earth (100% food grade quality, not the swimming pool kind).
- Mix together and fill a wood frame box 2/3 full.
- Place on the ground, in a sunny dry spot.
- Add more mixture as it gets used up.




Recipe by Kristina Mercedes Urquhart from "The Anatomy of a Dust Bath" Chickens Magazine, Summer 2011

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### What to do with sick chickens

- How do you know the girls are not feeling well?
- Ruffled feathers.
- Quite, moves away from the flock.
- Changes in comb/waddle color. (turns purple, darker)
- Sneezing.
- Abnormal stool.
- Loss of appetite.
- Visible mites.
- Remove sick hen from flock, treat individually



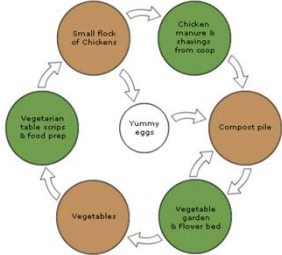
Refer to "The chicken Health Handbook" by Gail Damerow.  
Call a local vet

Dr. Hilary Stern, DVM  
Animal Hospital of Soquel

For the Birds  
1136 South De Anza Blvd., Suite D  
San Jose, California 95129  
Keep the hen house clean, change nest box straw, and floor straw  
Keep informed about Avian Influenza (the bird flu)

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### Backyard chickens- a complete recycling circle for a Gardener!



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### Wrap up

- Chicken breeds, varieties, egg shell color
- Big, little, egg laying hen, or meat, or show
- chicks or young pullets
- New chick care, brooder, water, feed
- Coop design, egg boxes, roosts,
- Chicken runs
- Pullets to hens
- Gardening Practices



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