

Gardening With Chickens



PBS WISCONSIN
GARDEN & LANDSCAPE EXPO
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Questions to Consider



- Purpose
 - Egg, Meat or Both
 - Companionship, Show
 - Preserve history/heritage breeds
- Regulations
- Neighbors
- Housing
 - Inside? Outside? Free Range? Space?
 - Region of hot summers?
 - Cold winters?
- Space
- How Many
- Costs
- Waste Management
- Breed(s)



Local Regulations



Be A Good Citizen – Check First!

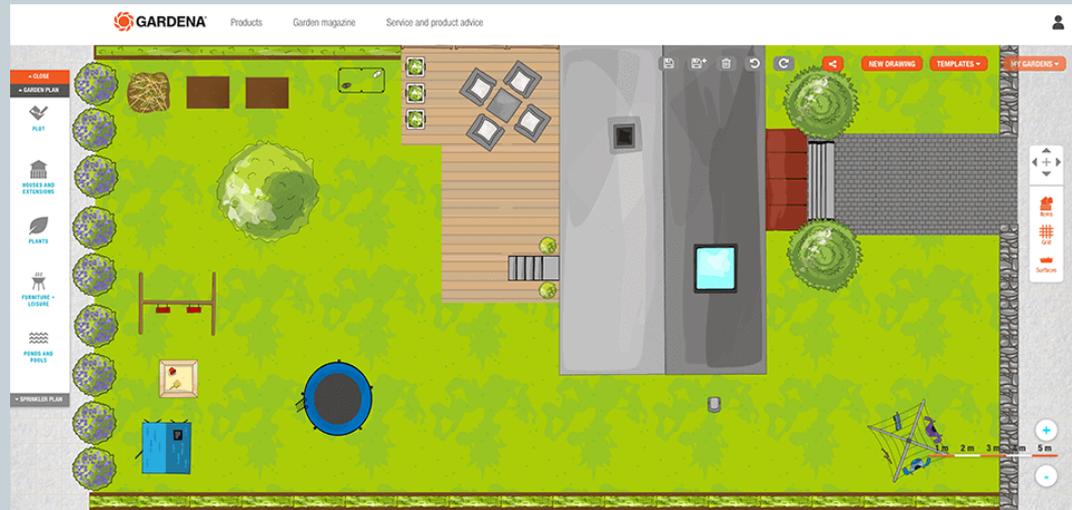
- City Regulations
- Township/County Regulations
- Subdivision Covenants
- Neighbors



Yard Plan



- Existing Elements – trees, house
- Garden Features – paths, water, lawn, fence
- Wish List – coop, chicken run, orchard, garden, raised beds, etc.
- Concerns
 - Privacy
 - Standing Water
 - View + or -
- Sun Exposure
 - Full Sun
 - Partial Sun/Shade
 - Full Shade
 - Throughout each season



Definition of Terms

- Terms:

- Chick
- Pullet/Hen
- Cockerel/Rooster
- Game Hen/Cornish Hen
- Broiler/Fryer/Roaster
- Baking Hen/Stewing Hen
- Broody



- Terms:

- Classes
 - ✦ American
 - ✦ English
 - ✦ Asiatic
 - ✦ Mediterranean
 - ✦ Continental
- Classifications
 - ✦ White/Brown Egg Layer
 - ✦ Cochin
 - ✦ Bantam
 - ✦ Old English
 - ✦ Exotics/Rare
 - ✦ Heavy
 - ✦ Meat



Life Span



- **Chickens may live 10-15 years.**
 - Most do not live out their full natural life.
 - Meat birds are usually 8-12 weeks.
 - Egg layers 2-3 years or until production declines.
- **Begin laying**
 - At 20 to 24 weeks. (pullet eggs)
 - Should be laying “normal” size eggs by 32 weeks.
- **Molting**
 - Hens molt about every 12-18 months.
 - Molting is usually a 2-3 month process.
- **Egg production is best the first year.**
 - It decreases little by little after that.
 - If raising for eggs replace hens with pullets every two or three years.



General Information



- **Skin Color**

- Most chickens have white or yellow skin; some have black.
- Check your breed, if this matters to you.

- **Egg Color**

- **Brown:** Australorp, Sex-Links, Brahma, Buckeye, Cochin, Cornish, Delaware, Dominique, Faverolle, Jersey Giant, Langshan, Marans, New Hampshire, Orpington, Plymouth Rock, Rhode Island Red, Wyandotte
- **White:** Campine, Dorking, LaFleche, Lamona, Leghorn, Polish, Buttercup, Silkie, Sultan, Yokohama
- **Tinted:** Hamburg, Lakenvelder, Old English Game
- **Colored:** Araucana, Ameraucana, Easter Egger, Maran



General Information



- **How Many?**

- Chickens are social birds, keep at least 2!
- Estimate 1 egg layer per family member, more if you eat a lot of eggs or choose a dual purpose breed.

- **Avoid Stress**

- Adding new birds causes stress
- Pecking order
- Dogs, new people, chasing, kids, etc. can cause stress
- May stop laying



Breeds



- **Egg**

- **Primarily Mediterranean Breeds** - nervous, flighty, small, squawky and hyperactive, but mature quickly.

- **Meat**

- **Primarily English breeds.** Meaty breasts, white feathers and fast maturing.
 - ✦ Broiler/fryer - White Cornish and White Plymouth Rock or New Hampshire.
 - ✦ Hybrids – Cornish Cross, etc.
 - ✦ Non Hybrid – Australorp, Orpington, Red Rangers, Cornish
 - ✦ Pastured – For pasture choose a slower growing heritage breed. Black Broiler, Red Broiler etc. vs. Cornish Cross

- **Dual Purpose**

- **Primarily American Breeds and some English.**
 - ✦ Nearly all are brown egg layers, yet are meaty enough to eat.
 - ✦ Rhode Island Red, Plymouth Rock, Delaware, New Hampshire



Breeds



- **Hybrids**

- Make good dual purpose chickens.

- **Pets**

- They are smart, affectionate, and can be taught to do tricks.
 - ✦ Easy to tame breeds are: Silkies, Cochins, Brahmas, Naked Necks and Belgian D'Uccles.
 - ✦ Mostly likely not a flighty Leghorn. Mediterranean class just want to lay eggs & not be your friend.

- **Bantams**

- Take up less space than full-size birds.



Other Poultry

- Other Poultry

- Turkey

- ✦ larger

- Duck

- ✦ don't dig
- ✦ water
- ✦ messy
- ✦ more trainable
- ✦ good egg layers

- Guinea Fowl

- ✦ more aggressive insect eaters
- ✦ noisier
- ✦ guardians



Costs

By the Numbers



- Initial Bird
- Housing
- Fencing
- Feed
 - 84 lbs./bird/year - less if free range, pastured or given scraps *
 - Average feed cost +/- \$40/bird/year
- Pay Back
 - 200-250 eggs @\$2.50-\$5.00/dozen
 - ✦ Feed cost of \$1.40-\$2.00/dozen
 - Stew Hen
 - Entertainment
 - Organic Pest Control
 - Manure/Fertilizer

* Ohio State University



Food and Water



- **Water** – fresh water always accessible!
- **Food** - omnivores
 - Continuous supply – chickens don't overeat
 - Oyster shell and grit
 - Leftovers and garden scraps
- **Avoid Feeding**
 - Nightshades, potato peels, rhubarb leaves, coffee grounds
- **Poisonous Ornamentals**
 - Usually won't try to eat
- ***Pesticides/Weed Control***



Benefits



Permaculture - Symbiosis

The garden stocks the kitchen, the kitchen scraps go to the compost, the compost feeds the chickens, the chicken manure fertilizes the garden, and the garden stocks the kitchen again.

Chickens will devour most any insect that moves!



Benefits



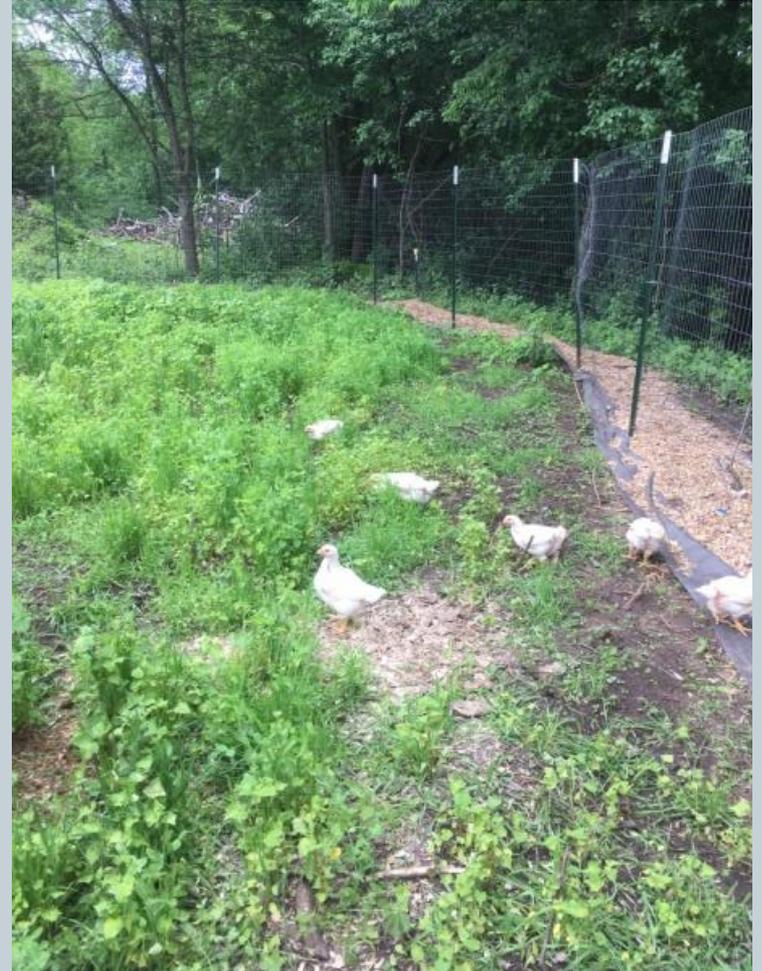
- Eggs
- Meat
- Weed Seeds
 - 2" deep into soil
 - Nicely mulched beds - Beware
- Organic Pest Control
 - Insects – Colorado potato beetles, larvae, grasshoppers, slugs, Japanese beetles, squash bugs, snails, aphids, cockroaches, grubs, termites, ticks and other nasty crawlies
 - Scratch into the soil for insects and larvae



Benefits



- **Manure Fertilizer** – more later
- **Year-End Garden Clean Up**
- **Compost Mixer** – next slide



Benefits

Chickens to Compost VS. Composting Chicken Manure



Chickens to Compost

- Food source for chickens
- Scratching helps oxygenate the composting materials



Composting Chicken Manure

- Manure – phosphorus, potassium, calcium, magnesium, copper and sulfur.
- Manure - Too much of a good thing
- Potent – high in nitrogen and ammonia
- Can pollute waterways/contamination

Coop - Housing



- **Region/Climate** – Cold winters? Frostbite? Hot summers?
 - Ventilation in hot weather. Remove excess moisture.
 - Insulation and/or enough birds for colder climate
- **Access** – **YOU and YOUR FLOCK**
 - Food, Food Storage, and Water
 - ✦ Feeders - hang, floor, pan, wall
 - Eggs
 - Cleaning
- **Size** – Square Feet versus Cubic Feet
 - Confined – Heavy 10 sq. ft., Light 8 sq. ft., Bantam 5 sq. ft. – Per Bird
 - Free Range – Heavy 5 sq ft., Light 3 sq ft., Bantam 2 sq. ft. – Per Bird
- **Lighting**
- **Flooring** – wood, concrete, dirt
- **Protection**
 - Predators
 - Weather



Coop – Housing



- **Nesting Boxes**

- Ease of access – you and hens
- How many – one for every 4 to 5 hens
- Size – 12” x 12”
- Litter - herbs

- **Roosts**

- How much
 - ✦ 12”-18” vertical separation
 - ✦ 12” horizontal separation
- Placement
- Size
 - ✦ 2’ from floor
 - ✦ 12” stair step
 - ✦ 1”-2” diameter - 2X2, old ladder, tree branches
 - ✦ DO NOT use metal pipe



Management - Garden Fencing



Two Views Keep Them In OR Keep Them Out

- Fence the Garden or Raised Beds
- Perimeter Fence
- Height
 - ✦ Chickens
 - ✦ Predators
 - Ground – dog, raccoon, fox, fisher, mink, weasel
 - Air – eagles, hawks
- Materials
- Beauty
- Trellis



- Remember – Chickens Can Fly – sort of

Flock Management – Garden Fencing



- Deep Litter
- Portable Pens (confined ranging)
- Pens and Tunnels (confined ranging)
- Free Range
- Full Time (confined pen)
- Shade Cloth
- Bird Netting



Flock Management – Garden Fencing



- **Deep Litter**

- 50% of manure is deposited during the night

- **Bedding**

- ✦ Hay
- ✦ Grass Clippings
- ✦ Leaves
- ✦ Straw
- ✦ Wood Shavings
- ✦ Herbs – deter mites

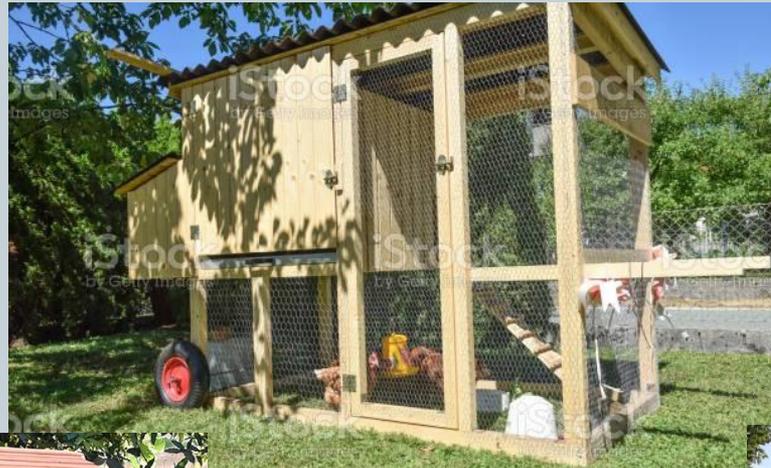


Flock Management – Garden Fencing



Confined Ranging

- Portable Pens – chicken tractors



Flock Management – Garden Fencing



Confined Ranging

- Pens and Tunnels

- Chicken wire

- ✦ Metal
- ✦ Framing
- ✦ Chew proof

- Poultry netting

- ✦ Plastic
- ✦ Lighter
- ✦ Predators may chew

- Shade



Flock Management – Garden Fencing



- **Free Range**

- Not as much manure
- Tick and pest prevention
- Well balanced diet
- Less supplements
- Dog for protection
- Protect your shrubs and bushes



Flock Management – Garden Fencing



- Full Time (confined pen)
- Shade Cloth
- Bird Netting



Chicken Manure – Pros and Cons



PROS

- **Fertilizer**

- 80 to 130 pounds of manure per year, per bird*
- Fresh chicken manure is about 1.5% nitrogen
- 8-10 weeks from 1 hen provides enough nitrogen for approx. 100 sq. ft



*Ohio State University and Hawaii Cooperative Extension Service

Chicken Manure – Pros and Cons



PROS

- **Compost**
 - Close to ideal C/N Ratio 30:1
 - 13 Plant Nutrients:
 - ✦ NPK - nitrogen, phosphorous, potassium
 - ✦ calcium and magnesium
 - ✦ sulfur and manganese
 - ✦ copper and zinc
 - ✦ chlorine and boron
 - ✦ iron and molybdenum
 - Organic Matter – shavings, hay, straw



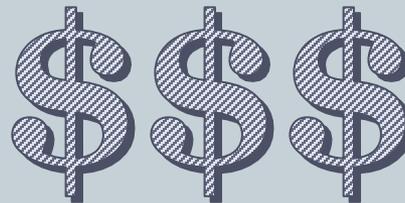
Chicken Manure – Pros and Cons



PROS

- **Value**

- Purchase fertilizer at \$10-\$30/pound.
- Each bird =’s \$20-\$75 of nitrogen fertilizer value
- \$40/bird for food = 200-250 eggs + \$20-\$75 fertilizer + rich compost



Chicken Manure – Pros and Cons



CONS

- **Waste**
 - Watch your step
 - 80-130 pounds of solid waste/bird/year
- **Nitrogen**
 - Too much of a good thing
 - ✦ Grow mostly leaves, not fruit well, nitrogen burn
 - Mix manure in asap, water it, compost
 - ✦ To prevent nitrogen loss into the air



Chicken Manure – Pros and Cons



CONS

- **Pathogens**

- Fresh manure - 1.5% nitrogen
- Overwinter
- Expose to sunlight, oxygen, freezing temps, or let manure dry
- GAP practices

- **Creepy Crawlies**

- Rodent
- Flies
- Sealed containers
- Keep things clean



Chicken Treats



- Radishes – raw
- Beets – raw or cooked
- Berries – fresh or dried
- Brussels Sprouts – raw or cooked
- Carrots – raw or cooked
- Corn
- Cranberries - fresh or dried
- Grapes
- Green beans – raw or cooked
- Hard-boiled eggs
- Oatmeal
- Peas – fresh or frozen
- Popcorn – air popped, no salt or butter
- Raisins
- Sunflower Seeds
- Sweet Potato
- Tomatoes/Cherry Tomatoes
- Walnuts
- Herbs:
 - Basil
 - Cinnamon
 - Oregano
 - Parsley
 - Sage
 - Thyme

Homemade Chicken Treats



• Ingredients

- 2 cups of scratch grains
- 1 cup of old-fashioned oats
- 1 cup feed supplement
- 1/2 cup cornmeal
- 1/2 cup whole wheat flour
- 1/2 cup crushed egg shell (or oyster shell)
- 1 teaspoon cinnamon
- 3 eggs
- 1/2 cup molasses
- 1/2 cup coconut oil, slightly warmed so it's liquid
- 1/4 cup of wheat germ oil



• Instructions

1. Preheat oven to 375 degrees.
2. Mix all the dry ingredients together.
3. Make a shallow well in the dry ingredients and add in the wet ingredients.
4. In a circular motion, stir from the center until all of the dry ingredients are mixed well. It should have a thick sticky texture.
5. Press the mixture into your pan (any pan will work, really). Use a spoon handle and make a hole in the batter large enough to put a hanger through if you aren't using a donut pan.
6. Bake for 30 minutes.
7. The time is based on small biscuits, you will need to adapt the time if you are using a larger pan.
8. Once cool, tie a hanging ribbon through the hole and suspend from the roof of their indoor cage.

Stuffed Pumpkin Treats for Chickens



- 1 medium-sized pumpkin, cut in half
- 16 oz. cooked pumpkin purée or one can pumpkin purée—not pie filling
- 1/2 cup oatmeal
- 1/2 cup mealworms
- 1/4 cup flax seed
- 1/4 cup sunflower seeds
- Handful of fresh herbs, chopped — reserve a few sprigs for garnish if desired
- You can also add raisins or any other dry treats to the mix.



- Scoop out the guts and some of the pumpkin flesh. Save the pumpkin shells. Cut up the long strings of guts. Place the goop on a foil-lined baking sheet. Roast at 325 degrees F for 20 minutes.
- Mix all the ingredients together in a large bowl. Pour/scoop into the hollowed out pumpkin halves.

Credits and Contact Information



- **Resources**

- The Backyard Homestead – by Gail Damerow
- Backyard Poultry
- Chickens (Tending a Small-Scale Flock) – by Sue Weaver
- Cackle Hatchery – Lebanon, MO
- McMurray Hatchery – Webster City, IA
- Mother Earth News
- Community Chickens



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