Backyard Chicken Coop

by robbloberfest on September 14, 2007

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http://www.instructables.com/id/Backyard-Chicken-Coop/
**Backyard Chicken Coop**

I made this little chicken barn a few years ago to house 3-5 laying hens in my back yard. I'm in town and had to design a "pretty" one to keep people from having a chicken coup (ha ha). This one was inspired by some Kansas barns I've seen. I spent about $40 when fully completed. Chicken wire, some 2x4s and damaged siding were the costs. Damaged siding is half price at my local lumber store. Other things used were scrap wood from old bathroom cabinets, leftover hardware, paint, and wood from house projects, and lot of scraps and hardware from a condemned house down the street (I got permission to take things before they bulldozed it.) Shingles were given by my neighbor leftover from roofing his garage.

There are some basic rules for designing and running a good healthy chicken shack:
1. Adequate floor space per bird.
2. Dry with good ventilation.
3. Temperature control.
4. Predator protection.
5. Keep it clean + fresh water/food = happy & healthy birds.

Many towns actually allow up to 5 chickens but no roosters. Check local rules on this if you plan to build. If you do get chickens in town, be courteous to the non-chicken majority so the rest of the city chicken people don't get punished through politics and zoning.

I submitted pictures of this coop to someone who was working on a coops book a while ago and they included a picture in "Chicken Coops, 45 Building Plans for Housing Your Flock." By Judy Pangman

Sources for my chicken knowledge:
* "Building Chicken Coops" Gail Damerow
* The City Chicken, [http://home.centurytel.net/thecitychicken/](http://home.centurytel.net/thecitychicken/)

I recently posted another coop, a chicken outhouse with a beer can roof at [diylife.com](http://diylife.com)

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**Image Notes**
1. Guard Puppy. Rule four "predator protection."
2. This fence really helps well to keep out the predators in town.

**step 1: Floor Space, Framing, and Nest Boxes**

My floor space includes the exterior run. I knew I wanted 3 heavy egg layers, so from the charts I used 10 square feet per bird rule. There are different suggestions in different books/guides; this link has a pretty good chart: [Small Scale Poultry Housing](http://www.feathersite.com/Poultry/BRKPoultryPage.html)

I built this 18" off the ground to create a shady part of the pen underneath the coop.

The floor is 2x4s framed like a little porch 3 feet by 4 feet sitting on 4x4s attached with many 3" screws.

The walls are just under 4' tall and I used 3" screws to put together the 2x4s. 4' walls are a good dimension because siding and plywood come in 4'x8' sheets.

I framed in next boxes here. I think a rule is one box per 3-5 laying birds. They like dark, comfy places to lay. Making the boxes the size of a 12" dust pan works great when cleaning the coop. Lots/all books suggest elevated boxes, but these floor boxes have worked great for three years now.

Avoid treated lumber inside the coop or where they perch; the toxic stuff can affect the birds (ie. sickness/death)

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**step 2: Roof**

I don't have many step by step pics for this so you'll have to use your skills to fill in the gaps.

I cut 2x4s with angles to make three sets of rafters and attached them with three inch screws. I screwed down some old cabinet wood across the rafters to make the roof, leaving a little 4” hole near the center peak for a cupola. Then I shingled the roof leaving the center peak hole open. The cupola is made like a little bird house that sits over the vent hole. Use a hole saw to make holes in it’s sides and staple window screen on the inside to keep out the critters. Attach it with 3” screws.

This helps meet rule #2.

Dry with good ventilation.

**step 3: Walls**

Cut the siding to fit the framing and attach with nails. Use a jigsaw to cut out doors and other openings; save the cutouts for building the doors. Keep the following in mind while designing walls:

- Make openings for windows; this is important for summer heat control.
- Build walls tight to keep out wind and drafts; this is important for winter cold control.

This is a standard chicken coop rule: Have good ventilation but no drafts.
Image Notes
1. He thinks it's for him.

Image Notes
1. I added some boards under here to fill in the space between the rafters.
step 4: Doors

A main door for you to access the coop and a small chicken door are the only doors really needed. But I added cabinet doors, a nest box door, chicken door and a main door on this thing. Hinges were from old bath and kitchen cabinets.

The main door is made with old porch flooring. Boards were attached diagonally to the siding cutout with nails; then I used the jigsaw to clean it up around the outside. This made a more old fashioned looking door. The nails will stick out the back side, bend them over or cut them and grind the stubs smooth.

The other doors were made directly from the siding material and some trim wood. I just attached hinges and handles with some trim around the edges. The trim is important to close the gap from where the saw cut the siding. I added some plastic near the top to shed rain over the cabinet doors.
**step 5: Finishing Touches**

Add the roost perch for night-night time. Make a perch out of a 2x4 with the edges rounded a bit. Under the perch make a place for the poop to gather. This roost area is usually the only place that gets poop inside my coop and makes cleaning easy. (Don’t use treated wood!)

When I finished the coop, it ended up being very heavy; so I attached some boards to the bottom and used a hand truck to wheel it (with help) to its home location.

The run/pen can be made easily with 2x2s and 2x4s as seen in the pic below. I enclosed the top of the run to keep the hawks out. I later added a matching run on the opposite side when I added some more hens.

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**Image Notes**

1. I later changed this to a flatter perch.
2. The whole perch assembly comes out for cleaning. It just sits on some brackets.
Image Notes
1. This underside is also covered with poultry wire as part of the run.

http://www.instructables.com/id/Backyard-Chicken-Coop/
bodach says:
Very cool; this will help me finish before my chooks arrive.

737swove says:
Thanks! Pretty much exactly what I was looking for.

hedgenettle says:
awesome! thanks so much!

altomic says:
chickens are a great way to get rid of piles of dirt.

I moved in to a place that had a pile of dirt the size of a family car.

I put chicken wire around it and added my 6 chickens.

those chickens scratched at that pile of dirt for about 3 months until there was nothing left.

awang8 says:
Maybe... But chickens are also a great way to get rid of your grand prized, lovingly watered, well maintanted lawn's grass!

bziganti says:
how did you make the steps on the coop?

robbtoberfest says:
That's a 1x6 board with little pieces of bullnose molding for the steps. The hinged door also has the molding for steps.

LuciKnows says:
Very nice looking, and nice clear instructions on the building. We are about to start raising Guinea's out here on the edge of nowhere and have decided to gut an old camper and use it as the primary house. Cold weather here is a primary concern - it gets to -40°F in the winter. We'd rather wait until we slaughter the birds before freezing them. Mostly, we want bug control and eggs. Again, nice looking coop!

smokehill says:
For all you small chicken & duck farmers out there, I'd like to pass something along. We're down to just a few chickens so I'm not going to build this for myself, but hate to have my little brainstorm go to waste.

Back when we had about a dozen or more separate chicken pens, it was a real chore to go in and out of each one, feeding and watering. The auto-waterers were a help, but my wife still went into each pen to feed every day, since just dumping a huge batch of food in there meant that mice and wild birds ate a lot of it. This was a particular pain in the winter, since the gates and latches would freeze, and she'd have to carry an ax handle and a propane torch during really icy weather.

My plan, back then, was to just take some PVC pipe, about 1.5" or 2" diameter, and make individual chutes, wired to the chain link fence, so we could pour some scoops of feed down the chute into the food bowl. To keep rainwater from pouring down the chute, I was going to put a 90-degree fitting on the upper (outside) end, and point it downward except when scooping the food down the chute: flip the angle joint upward, pour in the feed, then turn it facing downward again.

Might not even need to glue these joints, just force-fit them.

This approach might be handy for other animals, too.
Good luck -- and maybe if someone tries this we'll see an Instructable here someday.

JanH1961 says:  
Feb 15, 2009, 12:24 PM  REPLY
I just wanted to add on this - have used a similar principle in a barn where the feed was stored in an upper loft and large pvc was strapped to the corner to funnel the feed into the horse's feeder. Up top there was a funnel that was moved from pipe to pipe as we fed. It worked very well and stood up to horses - so scaled down for chickens there's no reason this wouldn't work. You could even use "caps" attached to each one to be fancy and keep rain out.

jennatom says:  
Dec 23, 2008, 4:17 PM  REPLY
Wow! I am a newbie to the backyard chicken game but you all have provided some great information! Especially smokehill and jaydeechick. I found a lot of good information on this blog, but I have not found how to keep my water unfrozen without electricity. I didn't build the coop with electricity (I'm not an electrician!) Please help.

robbtoberfest says:  
Dec 23, 2008, 6:34 PM  REPLY
This solar guy Gary is working on a solar stock tank, a little big for chickens but maybe it can generate some ideas. I'm thinking a solar powered pump with an underground 50 gallon drum that circulates into a bowl and back into the tank with a charcoal filter on the return. The ground should keep the water mostly thawed and the circulation in the bowl with the underground water should keep things open. I've been trying to think of a simple solution to this for a while, so far I just break the ice in the rubber bowl every day and refill it; that at least forces me to get out in the cold and check on the birds during the worst days of winter.

DMER12 says:  
Sep 11, 2008, 4:48 PM  REPLY
Well i've had a chicken for about a month now. and it has lost all its fuzzy hair and has all feathers.. and its closing in on winter soon wich means cold weather. and my mom isnt happy about it being in my house and wants me to get rid of it.. wich i dont want to. Is it possable for it to stay outside? I was thinking of building a coupe that looks like a mini house but is big enough to support the birds and have room.. does any one know how to keep it warm? so that it wont die? or is it a bad idea to put the chicken outside in that temp in the first place.. and by the way. i live in Pennsylvannia so we get snow. plz reply i need help

headache2000 says:  
Dec 18, 2008, 7:31 PM  REPLY
I'd insulate the building to but a heat lamp will keep it warm if building is closed up. I lived in Alaska and had chicken You can keep water thawed by using an auto type heating pad like you might use on your battery or transmission. It is applied with auto type silicone.

robbtoberfest says:  
Sep 11, 2008, 10:08 PM  REPLY
You'll probably need to put that bird out soon to get it acclimated to the cooling weather. A lone chicken might not keep too warm though; check out the cold hardiness of the breed. A dog house would work and give it some running around room. Get one of those rubber bowls for water (at a farm type store) so you can kick out the blocks of ice. I stack little ice walls for fun every winter with ice blocks. A light bulb in the chicken house acts like a heater and keeps the eggs coming during shorter winter days. That's all I have, I'm no expert, just four years of chicken experience.

14yroldfarmer says:  
Sep 21, 2008, 11:43 AM  REPLY
plz help me people i really dont know what to do and the coop is like 4 foot by 5 foot but idk what to do about nest or roosts for the chickens...

WileECoyote says:  
Sep 15, 2007, 8:06 PM  REPLY
It looks nice but I think that you are now obligated to build a doghouse version for the dog.

14yroldfarmer says:  
Sep 21, 2008, 11:11 AM  REPLY
ok i joined FFA and got 5 new baby chiks...i am building coop but dont know what i need for it plz help me =(

14yroldfarmer says:  
Sep 21, 2008, 11:04 AM  REPLY
ok i joined FFA and got 5 new baby chiks...i am building coop but dont know what i need for it plz help me =(
shmacky26 says:
just out of curiosity, how much does an average chicken cost? Do you save alot of money on eggs after you buy the feed and keep up on the work? Do you have to get them shots and also how long do they live/produce eggs?

smokehill says:
Most poultry is sold very young, in batches, but buying a young laying hen from a farmer or hobbyist shouldn't cost more than a few bucks as long as it isn't some fancy model. If you only eat a few eggs a week it might not make sense, but if you have a family (or lots of friends), or do a lot of baking, you might actually save a few bucks. It gets a bit complicated, since I think you have to have at least one rooster around for the hens to lay eggs ... but clearly it makes more sense for a small group of people to share the cost & the work, which isn't all that much if you have an area where they can run loose during the day.

Since we lose most of our chickens to hawks & falcons, their lifespan is somewhat shorter. My gut feeling is that a chicken should live ten yrs if nothing goes wrong, but may only lay well for half of that; some farmers just eat them when the production goes down.

The more chickens you have, the less work "per chicken." Throwing feed & filling the water container is about the same for twenty as for one.

They don't get shots, but almost everyone uses medicated feed. I think it's almost unavoidable.

spatcher says:
Correct me if I am wrong but, you only need a rooster if you are planning on raising chicks. I believe hens will lay eggs without a rooster and that the eggs will only be infertile. Yes?

smokehill says:
Yes, you're right. I should have pointed that out more clearly than I did. Hens will lay without roosters around, but the eggs will be infertile and the hens will lay FAR fewer eggs. Also, if egg production is important, you have to feed them laying mash. According to my wife, any brand other than the BIG name brand at the feed store is a waste of money. I won't mention the name, but your feed store guy will know. If you can let the chickens graze around on their own, it probably improves the quality/flavor of the eggs -- or at least that's our general impression. It certainly will cut down the amount of feed you need.

Letting them graze around a bit will also keep some of the bugs down, also, though they refuse to eat ticks at all. Guineas are the only bird that cut down the amount of feed you need.

robbtoberfest says:
Not to be negative, but the rooster thing doesn't seem to hold up in my chicken experience. My six birds lay 3 to 5 eggs a day during most of the year; I don't see how that would get much better with a rooster.

smokehill says:
Heh heh --- I have to start reading more carefully. Somehow I misread "My six birds lay 3 to 5 eggs a day" to mean that EACH of them produced 3-5 eggs a day ... An egg a day per hen is considered very good production, so your birds are doing about 50-80% of that, and would only produce another egg or two a day at top production -- probably not worth keeping a rooster for that, though it would probably raise your average.

Roosters are, however, a large pain in the butt, and I wouldn't have them without some good reason. It'd be interesting, though, to see if introducing a rooster would raise your average over time. From a practical standpoint, adding a couple of hens would do the same thing and avoid the rooster ambushes and general omeriness.

For big production farmers, where upping the production means thousands of eggs a day, a rooster or two nearby is very worthwhile.

We only kept a couple of hundred birds, at most, and couldn't give away all the eggs we didn't break, but if we had been in the egg business even raising the production 10 or 15% would have been profitable.

jaydeechick says:
Just to clarify something before I make a comment. I am from Australia and I totally understand that things are sometimes different between Australia and the States. That said....

My husband is the manager of a poultry farm (if i had my way, all chickens would be free range, but thats not the way things are). He was in charge of over 300,000 chickens. Roosters have NOTHING to do with egg production. A hen who has never been in contact with a rooster will lay eggs.

The breed of your chickens will be a factor in the rate of egg production. The breeds with the fastest laying cycle will lay an egg every 26 hours. That is the quickest cycle. Obviously their diet will contribute to their frequency. The major factor however, is light. The hours of light in a day will dramatically effect the quantity of eggs you get from your chickens. The chicken farm has the artificial lights on for upto 16.5 hours a day.

At their peak, under extreme peak conditions, the farm had a lay rate of 96% for 7 weeks straight. Meaning that 96% of the 300,000 chickens would lay an egg everyday for those 49 days. This was due to ideal feeding and watering conditions, optimum lighting and temperature contral. No Rooster ever survived long at the farm. They merely cost the boss money on wasted food and water.

Chickens DO NOT lay FAR FEWER eggs because of a lack of roosters!!

For your average back yard chicken family, a lay rate of 50% - 83% is pretty good. And seriously most people who have a few chickens in their backyard usually do for more reasons than eggs. The chickens are great at composting food scraps, their droppings are great on the garden, and yes the eggs do taste really great.
Hope this helps to clarify a few things.

smokehill says:
Aug 17, 2008. 6:40 PM  REPLY

Thanks -- interesting to hear from a pro at the chicken game. If we ever start increasing our chicken "herd" it's nice to know we don't need roosters around except for breeding. I've known some really great hens over the years, but I've seen very few roosters that I didn't want to kill on sight. About as good as rooster personalities ever get is "tolerable." And usually even those get pretty rotten with hens -- I can't count the hens they've killed when breeding them, and all my chicken "first aid" was learned from trying to save hens that had been half-kill by roosters.

We did have two banty roosters that weren't too bad -- one of them would even sit on eggs & hatch them. The rest of our roosters mostly wound up as doggy treats. The retrievers get pretty bored with pigeons after a while, and something interesting & different like a chicken really gets their enthusiasm for training up.

As far as differences between the US & Australia -- perhaps we could start a whole new Urban Legend by speculating on whether hens turn their eggs clockwise in the Northern Hemisphere and counter-clockwise Down Under ....

smokehill says:
Jan 15, 2008. 12:34 AM  REPLY

I'm surprised to hear that. Since we've always had roosters, I can't speak from personal experience, but all the chicken farmers I've known have told us that having at least one rooster is essential for max egg production.

However, unless you just like them as pets, our inclination is to keep absolutely the minimum number of roosters around since they are hard on the hens ... and can often be really unpleasant critters to have around because of the crowing and (occasionally) tendency to be aggressive with people. I've been spured a few times, and even had a couple of roosters that would wait to ambush you. Those died young. Just like with drakes, thinning the males is a good idea. Since we trained hunting retrievers at the time, we'd just take the roosters & drakes down to the pond and shoot them for the dogs to retrieve.

Since I don't personally pick eggs, I'm no expert -- but 3-5 eggs a day per bird seems like a really impressive average.

roadnate says:
Oct 13, 2008. 5:52 PM  REPLY

Jayydeechick is absolutely correct, the presence of a rooster has no impact on egg production. It is a commonly held misconception. Rooster or no rooster, given the same environmental and chicken-y conditions, you will have the exact same egg production.

smokehill says:
Oct 13, 2008. 8:38 PM  REPLY

Yeah, apparently I was under a misconception, and a pretty common one. Almost every one I know that raises chickens -- granted, all "hobby" breeders, not commercial -- have heard about the rooster requirement for years, from old farmers, and we all figured they knew what they were talking about.

I suspect the big commercial chicken operations don't keep a few roosters around, since agriculture has gotten so scientific, but I don't really know any serious breeders, or egg farmers.

robbtoberfest says:
Jan 14, 2008. 8:38 AM  REPLY

Right on, no roosters required for eggs unless you want chicks. But I did learn this winter how important a light is to artificially lengthen the day for egg production. This is the first year I didn't have a light in the coop for the winter; young and old birds quit laying for two months.

spatcher says:
Jan 14, 2008. 1:37 PM  REPLY

Thanx! I am planning on getting involved in the spring but have been doing lots of reading. Was aware of the light but another thing to be aware of is depending where you live, it is a good idea to use 2X4's for perches' Installing them sideways so that the chicken sits on the flat side. That will prevent frostbite to the feet if your weather is such.

smokehill says:
Jan 14, 2008. 3:54 PM  REPLY

That might help keep their feet warm, but if you have some of those feather-footed chickens it might worsen the problem they have with getting petrified balls of chicken feces stuck to their feet. A real pain to clean up with scissors, etc. Cochins are one breed like that, I believe ... and they're decent layers as I recall.

We used 2x2's for perching rails. They always bowed in the middle, but if you rotate them a bit now and then you can minimize that.

One idea I always had, but never actually utilized, was an improvement to the feeding & watering. We had about 8-10 different chain link chicken yards (to separate types for breeding, and keep the big chickens from picking on the little ones), and it was a pain to go in and out for the daily feed & water. It occurred to me that you could take some PVC pipe that would fit in the chain link (two-inch) gaps, rig up a funnel, using PVC pipe fittings, and dump the feed down the plastic "chute" to end up in the feed pan. You'd have to rig up some cover to keep rain out, and probably secure the whole thing with bungee cords, but it might save a lot of time. A similar pipe could serve for filling the water dish, also, if you don't use one of those specialty water containers.

That said, there is, however, a lot to be said for having daily close contact with your chickens so that when you do need to handle them they don't panic. With the right approach, they can become very tame and will stand on your feet waiting for attention, or will fly up and land on your arm or shoulder, just to visit (assuming you permit them to do it). A lot of this just depends on whether you want to have a friendly relationship with your birds, or are just in it for eggs with a minimum effort.

For really brutal weather, we had a few infrared heat lamps on extension cords, and placed them in weatherproof areas. If you're raising something like the Frizzle chickens, whose feathers (highly modified by man) are lousy insulators, this may be the only way of getting them thru a tough cold period.

http://www.instructables.com/id/Backyard-Chicken-Coop/
I had a neighbor who did the same thing 16 feet from the corner of the fence which was 8 feet from my mother's bedroom window. We live about half a block from the river and at 3:00AM the raccoons and possums would come up from the river after the chickens. The neighbor had 3 dogs which they left outside during the night. The scenario was the chickens would start screaming, the dogs would start barking and then things might settle down after 20 to 30 minutes. 20 to 30 minutes later the same thing again. My mother was dying of cancer but the neighbors refused to do anything about the problem. Even just moving the chicken coop to the side of the house where their bedrooms were located would have helped. Code enforcement finally made then get rid of the chickens because keeping farm animals inside the city limits was against the law. We sued our neighbors for disturbing the peace of a dying cancer patient. Although my mother died during the trial we now own the property where our neighbors lived and would suggest that if you live near enough to other people where they might be disturbed that you think twice about the ultimate consequences before growing your breakfast and dinner ingredients.

Cranky, cranky, why would you sue about that? Did you sue the dog owners and animal control about the other animals too. From my experience with raccoons, it seems the chickens would all be injured and dead within a week. All cities have ords, but many towns allow up to five hens. It is courteous though to contact neighbors and coordinate with them about getting feathered pets, even if they are legal to keep.

Raising layer hens is rewarding in the way that gardening is rewarding. Bear in mind that, unlike a tomato, chickens are touchy about environment and stress. Select the breed that suits your climate the best. This is crucial.

Age, diet, and light are all factors which greatly affect the level of egg production to be expected by your hens. Naturally, younger hens lay fewer, smaller eggs initially which increases over time. There is nothing that can be done about this. The super small eggs are called "pee-wees" and go up to jumbo. Grade is a separate thing altogether from size (which is based on weight). Don't expect every egg to be a winner because you will have some that are inedible. Some eggs may have blood, no yolk, watery albumin, no shell, or, if you have a rooster strutting about, an embryo.

Layer diet is EXTREMELY important. If you do not have your layers ingest enough calcium then egg production will grind to a halt. You don't have to be an experienced nutritionist to deal with this, however. Your local MFA sells layer diet. Feed only layer diet. Your birds will eat more in the winter and less in the summer. Likewise, expect production to drop during very cold months and very warm months.

Average production for a layer hen ranges from no eggs to five eggs per week. Those that choose to graze their hens will see smaller birds with production on the lower end of the scale while those who feed layer diet could see larger birds with production approaching 75%.

Light and body size affects molting. Molting is the gradual loss and regrowth of feathers. Hens stop all laying during a molt. Being that there is no way of controlling light in a private setting it stands to reason that you can expect to be without eggs until your flock stops a molt. Just be prepared for it.

Lastly, always be on the lookout for diseases. Many backyard flocks are exposed to wild birds which could bring diseases such as west nile, ILT, avian influenza, fowl pox, and especially coccidiosis. Pay especially close attention if you live near a poultry farm or other people with backyard flocks. If you know someone with a flock try to minimize your contact with their birds and vice versa. Just one disease could destroy all the hard work you just put into keeping a happy, healthy flock.

Hope that helped some of you. Don't hesitate to send me questions about anything relating to animal agriculture if you feel the inkling.

http://www.instructables.com/id/Backyard-Chicken-Coop/
ayam says:  
Thanks for your comments Solarin. I've newly got chickens. Is it possible to feed them rabbit droppings?

jthernandez says:  
what color should a chicken coop be? I am buying a coop and unsure on the color.... any suggestions??

robbtoberfest says:  
I think whatever you want. I would avoid black or other dark colors to avoid too much heat build-up. The ones for sale in catalogs always seem to be natural wood color. Make it fun.

jthernandez says:  
thanks, I guess Red would be out. I wonder why barns are red??

amandasteele says:  
I am curious about the laying mash thing. Chickens are supposed to lay eggs, why the mash and can you make it yourself?

robbtoberfest says:  
I buy layer crumbs from the feed store. It's all formulated with the calcium and other stuff so I don't need to pay such close attention to the diet. If you let the birds eat grass and bugs and supplement with the layer feed, that works out pretty well. I'm sure there are ways to make feed mix, but I'm just too lazy to add that extra effort.

medusaorange says:  
How many years will the hens keep producing the eggs?

robbtoberfest says:  
They peak around 2 or 3 years, but can lay for much longer at a reduced rate.

view all 67 comments