



# **An Eggcellent Guide to Backyard Hens**

**A Zine by  
Adam Dirks and Lorraine Johnson**

There's a town in Belgium and another one in France that offer residents free backyard chickens as a way to manage kitchen waste without overburdening garbage dumps. These towns recognize that chickens are compact, two-legged, live composters that turn food scraps into rich, nutrient-packed garden fertilizer.

A number of nursing homes in England have introduced flocks of chickens for residents to look after, because chickens and their endearing antics make people happy.

In Brooklyn, you can visit a flock of urban hens that live on a rooftop farm. In New York City, there are chickens in community gardens. There's a city in Minnesota that's considering allowing roosters in the city for 48 hours every two weeks—for conjugal visits.

As of March 2018, a backyard hen pilot project has been launched in four Toronto wards. Residents in these wards can register to keep up to four hens for the duration of a three-year experiment to see if hens, coops, and neighbours can coexist peaceably in the urban environment.

It's impossible to predict how many Torontonians in those four wards will take advantage of the pilot, but for those who are considering an adventure in backyard hen keeping, read on!



#### SELECTED RESOURCES for Backyard Hen Keepers in Toronto

##### WEBSITES:

- [www.backyardchickens.com](http://www.backyardchickens.com): Along with excellent information on all topics related to backyard hens, this site also has a very active discussion forum.

- [www.themodernhomestead.us/article/Poultry.html](http://www.themodernhomestead.us/article/Poultry.html). The Modern Homestead site has a very thorough section on poultry.
- [www.torontochickens.com](http://www.torontochickens.com). A local site dedicated to information for Toronto's backyard hen keepers.
- <http://www.urbanchickens.net>. The Urban Chicken Network Blog

##### BOOKS:

*The Chicken Encyclopedia*, by Gail Damerow  
*Reinventing the Chicken Coop*, by Kevin McElroy and Matthew Wolpe  
*Storey's Guide to Raising Chickens*, by Gail Damerow  
*Storey's Illustrated Guide to Poultry Breeds*, by Carol Ekarius  
*Happy Hens & Fresh Eggs*, by Signe Langford (Douglas & McIntyre, 2015)  
*City Chicks: Keeping Micro-flocks of Laying Hens as Garden Helpers, Compost Makers, Bio-recyclers and Local Food Suppliers*, by Patricia Foreman  
*Raising Chickens for Dummies*, by Kimberly Willis with Rob Ludlow  
*Building Chicken Coops for Dummies*, by Todd Brock, Dave Zook, and Rob Ludlow  
*The Chicken Health Handbook*, by Gail Damerow

##### BLOGS:

[www.mikethechickenvet.wordpress.com](http://www.mikethechickenvet.wordpress.com): An excellent source of information from an Ontario-based veterinarian who specializes in chickens.

##### VETERINARIANS:

Animal Hospital of High Park  
[3194 Dundas St W, Toronto, ON M6P 2A3](http://3194DundasStW.Toronto.ON.M6P.2A3)  
[416-763-4200](http://416-763-4200)  
Amherst Veterinary Hospital  
[3206 Eglinton Avenue East, Toronto, Ontario](http://3206EglintonAvenueEast.Toronto.Ontario)  
[416-261-3322](http://416-261-3322)  
South Etobicoke Animal Hospital  
[741 The Queensway, Etobicoke, ON M8Z 1M8](http://741TheQueensway.Etobicoke.ON.M8Z.1M8)  
[647-493-7960](http://647-493-7960)  
Links Road Animal and Bird Clinic  
[41 The Links Rd, North York, ON M2P 1T7](http://41TheLinksRd.NorthYork.ON.M2P.1T7)  
[416-223-1165](http://416-223-1165)  
Greenwood Park Animal Hospital  
[1041 Gerrard St E, Toronto ON M4M 1Z6](http://1041GerrardStE.Toronto.ON.M4M.1Z6)  
[416-778-6666](http://416-778-6666)



## Benefits of Backyard Hens





## Benefits of Backyard Hens

(aka why hens are the best!)

**Congratulations!** You have begun the journey of a lifetime. Being an urban hen keeper is a huge step in dismantling industrial food systems, participating in Toronto's growing urban agriculture, and building food sovereignty. Here's just a handful of eggcellent facts and benefits regarding backyard hens.

Hens have very distinct and unique personalities. They have a strong social nature and are able to remember and recognize more than 100 individual chickens, and humans. Chickens experience REM sleep, which means they enter a dream state. I wonder what chickens dream about? When visiting your coop make sure your outfit matches: chickens have full-colour vision and oh they will be judging!

Homegrown eggs have 7 times the beta-Carotene, 3 times the Vitamin E, 6 times the Vitamin D, 2 times the Omega 3s, and only  $\frac{1}{3}$  of the cholesterol and  $\frac{1}{4}$  of the saturated fats of a store-bought egg! Whoa! Also, industrial poultry producers use arsenic compounds to speed growth, raise feed efficiency, and boost egg production; let's not eat poison!

Lessen your impact on landfills; feed hens most of your kitchen scraps! In return they will give you eggs and eggcellent fertilizer. A city in Belgium gave three hens to more than 2,000 families in order to drastically reduce the city's waste removal costs!

Chickens have a very sophisticated social behaviour with a dominance hierarchy in which higher individuals dominate subordinate individuals. This is where the term pecking order comes from.

Chickens perform complex communication. They perform over 30 types of vocalization, with meanings varying from calling youngsters, to alerting others to the whereabouts of food. Mother hens talk to their babies in the womb, beginning to teach calls to her chicks before they even hatch.

Dinosaurs (Tyrannosaurus-Rex) share a common ancestry with birds and most closely with chickens. Having backyard hens is about the closest you can get to raising dinosaurs. Which is scary considering there are more chickens on earth than humans.

**Be Radical:** The average size of a Canadian farm is more than 778 acres. Each year the number of farms operating below 500,000 dollars decrease as larger million-dollar operations increase. These goliaths swallow up smaller competing farms and local business. I like to think of these mega farms as a dangerously introduced non-native pest; slowly eating up smaller local farms and destroying the farmiversity (diversity) of small farm communities. Land that was once cared for and treated with different practices gets converted into a single use, single-model operation. Cheaper and cheaper goods make food prices unrealistic; it's hard to find a product today that reflects its actual cost.

This industrialized system of farming has failed.

We know that we must return to a smaller system that utilizes more farmers and more growers. We are in a green renaissance with small farms on the rise and backyards that are providing cities with food. Growing knowledge of past generations has been lost as fertile lands were betrayed for profit. We all need to share and grow as a community. Every plant we grow together, every hen raised in an urban coop is a leap away from factory farms and battery chickens.

It doesn't matter if you have 4 hens in your backyard or a couple hundred in a field; by keeping chickens you are helping dismantle a corrupt food system and giving hope to a new, more sustainable and ethical future.







Biology, Breed, Behaviour



## **Chicken Speed Dating**

Every hen has its own personality, but some breeds might have certain traits that work best for you. In the spring you are always able to find farmers getting rid of their older birds for a new flock. You can get a beautiful 2-year old hen for free or a couple of loonies and give it a second chance. She may still lay eggs consistently for another couple of years.

Chickens are very social animals with a rigid social structure. Keeping just one hen isn't healthy, but having 2 to 4 birds will allow your hens to thrive within their instinctual social structure.

You should use this handy guide to find the perfect bird for you. Get ready to be amazed by how many different breeds of hens there are!

## **EGG COLOUR**

### WHITE, LIGHT, OR CREAM

Andalusians, Campines, Egyptian Fayoumis, Faverolles, Frizzles, Hamburgs, Lakenvelders, Leghorns, Polishes, Sebrights, Sicilian Buttercups, Silkies, Vorwerks, White Faced Black Spanish

### BROWN

Australorps, Brahmas, Cochins, Dominiques, Javas, New Hampshire Reds, Orpingtons, Plymouth Rocks, Rhode Island Reds, Rhode Island Whites, Russian Orloffs, Sexlinks, Sussex, Wyandottes

### BLUE, GREEN, OR PINK

Easter Eggers, (Also: Ameraucanas & Araucanas)

### DARK BROWN OR SPECKLED

Barnevelders, Marans, Welsummers

## **NOISE LEVEL**

### EXCEPTIONALLY QUIET

Barnevelders, Brahmas, Cochins, Faverolles, Orpingtons, Wyandottes

### TALKATIVE/PERSONABLE

Plymouth Rocks, New Hampshire Reds, Easter Eggers

### NOISY

Black Sexlinks, Campines, Egyptian Fayoumis, Lakenvelders, Leghorns, Rhode Island Reds, Vorwerks, White Faced Black Spanish

## **EXCELLENT EGG LAYERS**

(5-7 eggs per week)

### EXCEPTIONALLY FRIENDLY

Plymouth Rocks, New Hampshire Reds

### FRIENDLY

Australorps, Easter Eggers, Rhode Island Whites, Sexlinks

### MOSTLY FRIENDLY

Rhode Island Reds

### FLIGHTY

Leghorns

## **GOOD EGG LAYERS**

(4-5 eggs per week)

### EXCEPTIONALLY FRIENDLY

Orpingtons, Wyandottes

### FRIENDLY

Dominiques, Sussex, Welsummers

### MOSTLY FRIENDLY

Andalusians, Javas, Marans

### FLIGHTY

Campines, Egyptian Fayoumis, Hamburgs, Lakenvelders, Vorwerks, White Faced Black Spanish

## **DECENT LAYERS**

(3-4 eggs per week)

### EXCEPTIONALLY FRIENDLY

Brahmas, Cochins, Russian Orloffs

### FRIENDLY

Barnevelders, Faverolles

### FLIGHTY

Sicilian Buttercups

## **POOR LAYERS**

(1-3 eggs per week)

### EXCEPTIONALLY FRIENDLY

Frizzles, Polishes, Silkies

### FLIGHTY

Sebrights

## **COMMON/POPULAR**

Australorps, Easter Eggers, Leghorns, Orpingtons, Plymouth Rocks, Rhode Island Reds, Sexlinks, Sussex, Wyandotte





# Coop Design





## **Coop design!**

**“Regard it as just as desirable to build a chicken house as it is to build a cathedral.” Frank Lloyd Wright**

There is no one way to build a coop but there are tricks for making your coop the perfect safe home for every season.

**Shade or Sun:** Choose a part of the yard that will provide shade during the summer and will get light during the winter. Chickens can die of heat exhaustion and they will be thankful for any relief from the summer sun.

**The Coop:** Make sure to have a minimum of 4 square feet per hen. Install a window or a plexiglass panel that will bring daylight into your coop. Hens are very in-tune with the sun, which dictates most of their daily activity. The structure should be waterproof and needs to be properly vented. Ventilation is very important; it removes dampness and humidity, cools the coop and helps remove ammonia fumes. Openings at the top and bottom of the coop on opposite ends will allow for natural airflow. Ventilate during winter! Moisture from cooped hens is more dangerous than cold nights. Your coop should also have a large opening or a door for easy cleaning and access to the inside of the coop.

Elevate the coop off the ground. This creates more run space and provides the hens with a protected, weatherproof area. Inside the coop, use bedding to control moisture and smell. For bedding, use pine shavings. I have also used garlic skins from a garlic peeling factory--free with natural pest control built in!

**Nesting boxes:** This is where your hen will lay eggs. Think bathroom stalls--hens want their privacy! Nesting boxes should be 12” by 12” boxes that are accessible from outside the coop. We recommend building the nesting boxes as an attachment to the coop. This helps save valuable indoor space and keeps your hens from roosting and pooping on their nesting boxes.

**Roosting sticks:** In nature hens sleep high off the ground in trees--outta sight and reach of predators. Make sure to have at least 8” of perching space per hen. Stagger the roosts so your

hens don't poop on each other. Use a 2x2 or 2x4 on its side or a large broom handle, and wrap it with a tire inner tube to help alleviate foot problems.

**The Run:** This is your chickens’ safe outdoor space. You should have about 10 square feet per bird and a run that you can access to clean and gather your super fertilizer. Use hardware mesh (chicken wire--wrongly named--is useless because raccoons can tear through it) and bury the hardware mesh at least 6 inches into the ground, with an apron out away from the coop, to keep any predators from digging into your run. Wood chips are the most recommended ground cover for your run; keep adding more and more as the wood chips decompose, and every 6 months clean out the wood chips and add them to your compost. You will have amazing, nutrient-dense living soil.

**Dust Bath:** An essential part of every run is a dust bath! Dust baths are containers full of sand, peat moss, wood ash, or dried dirt mixed with Diatomaceous Earth (a naturally occurring, soft, siliceous sedimentary rock) that your hens will frolic in. Getting dirty is how your hens stay clean. As they dust themselves, the DE kills any mites, fleas, or insects hiding in the hens’ feathers or on their skins. This is the number one way to keep birds healthy.

**Coop Door:** Closing the coop door at night is essential. It’s the only way to be 100% sure that predators can't get in under the cover of darkness. Making a system that is easy for you will save lots of time. Adam is currently working on building an automated light-activated coop door which will allow more freedom and flexibility for urban hen keepers. Hens will naturally go into the coop at dusk, but it is crucial that the coop door be closed securely!







KEEP IT DRY FREE FROM GLASS METAL BONES PAPER ETC.



Snack Time!



## Snack Time!

**Water:** Hens need access to fresh water at all times. Traditional galvanized or bucket waterers get extremely dirty, promote algae growth and have to be constantly cleaned and refilled. Choosing to go with a nipple-based watering system will eliminate almost all of these problems. It is also easier to connect the water to a rain catchment system and supplement the water with apple cider vinegar (1 tablespoon per gallon does miracles for hen health).

**Feed:** Chickens will eat almost anything. Buying supplemented feed helps to make sure that your birds are getting the proper ratio of protein to nutrients. Your hens' diet is going to change based on the breed.

**All hybrids and crosses** have been designed to lay up to 300 eggs a year. This is the maximum output that a hen's body can handle, and with such a high demand we have bred a bird that can only survive with a formulated feed. Limit the snack amount to 10 % or less of diet.

**Dual purpose and heritage breeds** lay between 150-240 eggs a year. The demand is not as intense on their body and they can handle a diet made up of a lot more kitchen scraps and snacks.

**Formulated Feed** comes in a few different styles and sizes:

**Starters:** Starter feed is a protein-dense variety of chicken feed designed to meet the dietary requirements of baby chicks

**Growers:** The dietary requirements for a chicken between 6 to 20 weeks old is very different from a baby chick. Grower feed contains a protein content that is between 16-18% but has less calcium than regular layer feed

**Layers Mash:** Layer feed is a balance of protein, calcium and other vitamins and minerals that encourages egg laying in your hens. Layer feed contains similar levels of protein to grower feed, around 16-18%; however, it also has extra calcium to ensure that their eggshells are strong.

**Scratch:** a mix of cracked grains that usually consists of wheat, corn, oats, sunflower seeds, millet and various other seeds. It is used as a snack and can also help raise your hen's body temperature during the winter.

**Oyster shells** are also a great source of calcium. Your hens know what their bodies need and will eat the proper amount of oyster shells for optimal health. You can also feed your hens eggshells for calcium; smash eggshells to a powder so the chickens don't associate them with the eggs.

**Snacks:** Snacks are important because they add diversity, nutrients, and are cheaper than feed. Your birds will eat almost anything; but there are a few snacks to make sure to avoid: raw green potato peels, salted foods, citrus, dried or uncooked beans, avocado skins and pits, raw eggs, sugar, candy, chocolate.

**Get Creative:** Call up local juice restaurants and see if they have discarded wheat grass mats; ask your neighbours if they would like to feed the hens some of their own kitchen scraps; collect slugs and invasive protein-rich insects from your garden. Hang broccoli from a string or throw a whole pumpkin in the coop. Snacks are a great way to keep your hens busy, engaged, and active .

**Feed and Pests:** Properly managing your feed system is the number one solution to keep your coop pest free. Do not feed your hens more snacks than they can consume in a single "pecking". I recommend against using traditional bucket style feeders as they are very accessible to rodents and your hens will throw/spill half the feed you give them. Using a PVC system will save feed and make it nearly impossible for rodents to access the feed.







The Four Season Hen



## The Four Seasons

Chickens behave quite differently during the seasons, but there are tricks with coop design, feed, and light that will make seasonal transitions easier for you and your birds.

**Spring:** Longer days mean happier hens and more eggs (from March to July will be when you consistently get the most eggs). This is also a very wet time of year, so make sure that you keep your run nice and dry for your birds. Puddles, mud, and wet feet aren't good. Once the temperature starts to raise above 5 or 8 degrees C regularly you can start taking down all your winter infrastructure. Allow the hens to help you in your garden duties: let them dig, turn over, and forage for as many bugs as they can find.

**Summer:** Ventilation! Ventilation! Ventilation! Airflow will keep fresh cool air flowing through your coop. Offering shade in the run is also very important. Your hens will need access to fresh water at all times. Flies love the hot and humid summer. Make sure to lay fresh wood chips in your run weekly. Freeze berries for your hens as a creative and nutritious summertime snack.

**Fall:** Remove vegetation around coop to allow more sunlight. Start checking your water heaters and make sure you have enough grains (scratch mix) and feed for the winter. Some of your birds may start molting so make sure to provide lots of water and a higher protein feed so their new feathers come in nice and thick.

**Winter:** Most hens can withstand quite cold temperatures. We have had nights of -40 C and our birds have done just fine. Use thick plastic or bubble wrap to cover and insulate as much of the coop and run as possible. This will block any strong winds and drafts and will also keep blowing snow out of your run. Cover the coop in insulating materials. We constructed a tarp cover using wool scraps from a local artist, and wrapped that around the entire coop to help catch and hold the chickens' body warmth.

The other important thing is ventilation: your hens can withstand dry -40 C but will die in a damp -5 C environment. Airflow through the coop during the winter is very important; it helps get rid of the

dampness that can cause frostbite and death. Keep the vent away from where the birds are roosting; roosts up high mean that most of the heat will rise to where the birds are.

Providing fresh water is also more difficult during the winter. You will have to construct a small water heater to keep the water from freezing. If you take a cinder-block with an incandescent bulb 100W or less and place a ceramic tile or container on top; the radiant heat from the light-bulb will keep your water thawed all winter. Bird bath heaters also work great.

Do not use heat lamps! Chickens are amazingly resilient and grow thick down feathers as the weather gets colder; they will adapt. The problem with heaters in the coop is that your hens will not grow the same down coat, they will become reliant on an external heat source; and when you lose power in a big ice storm, the sudden and drastic change in temperature can kill your entire flock.

Use food as your heat source. Cracked corn is super high in fat and if fed before roosting will drastically raise a chicken's body temperature. We like to make a mix of black oil sunflower seeds, cracked corn, wheat and oat grains, and also provide warm oatmeal or mix their pelleted feed with hot water to make a nutrient-dense porridge. This is a great way to keep your birds super happy during the winter.





# Urban Hen Troubleshooting





## **Pests, Predators and Weird Behaviours**

In Toronto, we are surrounded by a diverse amount of wildlife who may want to make a snack of your hens. Having a predator-proof coop is the only sure way to keep your birds safe. Set an alarm clock on your phone so that you will not forget to put your birds away at dusk (or get an automatic door). Make sure that feed and snacks are inaccessible to wild birds, squirrels, and rats; this will not only help you save feed, but will lessen the chance that pests such as rats and raccoons will be attracted to your coop.

**Coyotes and Foxes-** They will not be a problem everywhere in Toronto, but if you know they are around you will need to take precautions. Most of these animals will be more active at night (not always) so making sure you can close any access points to the coop is important. The run should be made from heavy welded 1 inch wire and have a skirt of wire or wood to keep both animals from digging in.

**Raccoons, Possums, and Skunks-** Very common Toronto wildlife. Skunks will rarely bother chickens; they will be most interested in feed or eggs so eliminate access to either. Possums and Raccoons will go after your hens. They are nocturnal, so as long as you have a predator proof mesh (not chicken wire) and close your Coop door every night they should be fine.

**Rats, Squirrels, and Mice-** These vermin are usually the biggest concern for neighbours when you first get a Coop. First step is to eliminate access to chicken feed. Make sure to only feed your hens the amount of kitchen scraps that they will eat in one pecking. Make a kitchen scrap box/feeder that you can cover with a lid. Building a PVC type feeder will keep your hens from spilling feed on the ground (big attractant of vermin). You can be proactive by keeping a preset trap in a cardboard box around the coop. A lid for the feed that gets put on at night is also highly suggested.

A clean, well-maintained coop that has waste removed frequently, and is cleaned regularly with a vinegar solution, leaves little chance of getting an infestation of mites and other pests. The small work of cleaning a coop will save you from hours and hours of work dealing with an infestation...and if that doesn't sound easy enough, chickens will also clean and "shower themselves" in dust baths.

**Dust Bath:** a mixture of sand, dried dirt, peat, and diatomaceous earth (DE) that your hens will roll around in to clean themselves and feathers.

Chickens love dust bathing and a proper dust-bath will help get rid of almost all insect pests. I mix equal parts DE with sand or very dry dirt; this mixture has the added benefit of the DE which will kill, by microscopically slicing, any pests that might be on your birds. This is the number one solution to healthy hens.

**Poultry lice, mites, and fleas:** Poultry lice and mites are only looking to feed on your chickens and will not live on you or any of your pets. Luckily, all of these pests are easy to identify: look under feathers and butt fluff for anything small and moving. Lice look like straw-coloured grains of rice straw; fleas are thin and have a hard exterior; and mites will lay small eggs along the base of the feathers or burrow under scales. All of these can be exterminated with a thorough coop cleaning and DE dusting, along with dusting each individual bird with DE. You will have to do this again in two weeks to break the cycle of egg laying!

**Bumblefoot:** is an infection caused by the staphylococcus bacteria which enters the chicken's system through a cut, scratch, injury or a chafed area on its foot. You may notice a swelling redness or a bubble of pus around the infected area. Soaking the hens foot in epsom salt and using an antibiotic cream regularly for a few days will clear things up. A few things that cause bumblefoot are jumping down from roosts that are too high, roost sticks that are rough and splintered, or having a dirty coop.

**Egg Binding:** Egg binding happens when an egg gets stuck in a hen's oviduct. This can be a fatal problem if not taken care of immediately. Signs are a loss of appetite, and/or disinterest in drinking, irregular walking, sitting frequently, and shaking. First give your hen extra calcium in liquid form. Then submerge them in a warm bath for 15 mins to help relax their muscles. Create a nest in a dark environment to promote egg laying. If there is no change or passed egg after a few hours make sure to bring your hen to the vet.

**Broody Hens:** A broody hen is a chicken that has decided to sit on and hatch eggs. Broody hens are extremely motherly and will only leave the nest once a day. If this carries on for a long time your hens health will deteriorate. Make sure to collect eggs regularly and to replace any eggs she sits on with ice cubes to cool her body temperature and make it less comfortable to be in the nesting box.