

Raising Rabbits in Colonies

Taking a more natural, low maintenance approach to rabbit breeding



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Introduction

Rabbits – simple, enchanting and fascinating creatures that not only make great pets but also happen to be a highly nutritious source of meat. This book is intended to teach you about how you can save yourself considerable time and money by raising your rabbits in a more natural setting (i.e. a colony or moveable tractor) instead of in hutches or cages. But first, let's get to know rabbits a little better as a whole.



Rabbits are mammals and fall in the order of lagomorphs (meaning “hare-shaped”) with the scientific name *Oryctolagus cuniculus*. This terrestrial herbivore ranges from small to medium in size on the grand scheme of animals. A lot of people often mistake them to fall under rodentia but they have several distinct features that differentiate them: one is the pair of peg-like incisors that they have in the upper jaw; another is their feces -- a solid, round and soft black pellet which is full of vitamins.

Now let's get to know a little more about what makes a rabbit a rabbit. Usually the most distinct characteristics of a rabbit are their ears, teeth, whiskers and nose. Let's start with the nose, which although cute and wiggly, plays a powerful role in survival. That tiny **nose** has a powerful sense of smell which helps rabbits sense predators. A rabbit has 100 million olfactory receptors (compared to a dog which has 220 million) and will smell danger long before you or I can see, smell or hear it.

Aside from a keen sense of smell, they have excellent **eyesight** too. That's not just due to the fact that they eat a lot of carrots, but because their eyes are positioned laterally. This gives them a panoramic view around the body, allowing them the ability to watch out for predators without moving around. Unlike human beings, rabbits are eight times more sensitive to light, and they become most active at sunset because it is the optimal time of day for rabbits to see. They too have double retinal system rods and cones in the eyes. Even with their great eyesight, they do have a downfall: they are unable to see the small area below their mouth. Therefore their sensitive lips and whiskers help adapt for the shortcoming.

But just because they can see all around their bodies and calculate an escape path as they watch the potential danger approaching, does not mean that they can focus as well as humans or have the same depth perception. The natural reaction for a rabbit when it sees something suddenly move in the distance is to get outta there quick!

A rabbits' **ears**, nearly as distinctive as those of Mickey Mouse, are excellent at gathering sound waves. The auditory system of a rabbit allows it to compensate for its limited vision. The large ears are able to detect the way sound waves bounce off of objects around the rabbit, rather like sonar. This not only helps identify predators nearby, but also keeps a rabbit from running into things around it despite the objects being a bit out of focus.

Unfortunately, you will often see people lifting rabbits by their ears in cartoons. This is something which should absolutely NEVER be done because you will likely injure the rabbit. Their ears are very sensitive and fragile, and the ears are also used to help regulate the body temperature of the rabbit.

Finally, let's discuss the rabbit's **teeth**. What we know about them is that their teeth grow continuously, also known as open-rooted. The upper and lower incisors work like that of a chisel. These can grow 10-12 centimeters per year and rabbits must be given twigs to gnaw on so that they can wear these teeth down. Eating problems and health issues may arise when the teeth don't align. The misalignment and extreme overgrowth of a rabbit's teeth is known as malocclusion and it is often a genetic problem. For this reason, rabbits that are prone to tooth problems should not be used for breeding stock. This undesirable trait can lead to serious health problems if not treated and will continue to be passed from generation to generation.

Rabbits are one of the most common pets that parents buy for their children, along with fish, hamsters and turtles. This may be because children are easily attracted to rabbits and have a great time playing with them. But anyone who has actually taken care of rabbits for a while knows that this task is no joke and they are not the best choice for small children; just as dogs and cats generally require far more care than parents often think about.

Rabbits, especially medium-, large- or giant-sized breeds, can be very difficult to hold and handle. The wrong approach by a human could not only cause the handler injuries like bloody and painful scratches and scrapes, but could also result in serious injury or death of the rabbit. The rabbit's spine is very easily broken, and picking up a rabbit without fully supporting its weight in your hands can be dangerous for both parties involved. Larger breeds can also be more aggressive and dominant, making them harder to hold.

Pros and Cons of Raising Rabbits in Colonies

In biology, we define a “colony” as a community of animals or living organisms of one kind residing close together. There are several good reasons to raise rabbits in colonies but ultimately, you have to decide for yourself what is going to be most feasible for your homestead, how much time and money you have to invest in your rabbitry and whether you have a suitable area for a colony already.

- 👉 Since rabbits are sociable beings, a rabbit colony is often the best way for them to live, to maintain a happy demeanor and overall health.
- 👉 A colony also tends to be **less work** to build. Once you’ve got a secure pen built, your does will dig the burrows themselves (assuming they are on a dirt floor instead of concrete) where they will live and give birth. In many cases where the rabbits are living outdoors and making their own tunnels, nesting boxes are not even necessary because the rabbits won’t use them anyway.
- 👉 A colony is usually **easier to clean** over time. If the rabbit colony is outdoors or if you are using a rabbit tractor, there is very little cleanup required at all. In an indoor colony with a concrete floor, you’ll need to clean a bit more often; but it will still not be as intense as scrubbing out a bunch of cages every couple of weeks.
- 👉 Your rabbits will be living in a more **natural environment**. Yes, they may become a bit less docile and catching them can become more complicated...but if you’re not raising factory farm rabbits, it’s likely the more humane way to proceed.
- 👉 Rabbits are also able to better acclimate themselves during **temperature extremes** (both highs and lows) when burrowed into the ground. Just like rabbits in the wild, they can stay cooler underground in the summer and will put on lots of extra fur in the winter to stay warm, even with snow on the ground.

- 👉 But there are risks because **disease** will often spread quickly. You must always continue to monitor each rabbit every day for signs of illness. It is also more difficult to recognize if a rabbit has stopped eating or drinking since they share food and water receptacles.
- 👉 You must also plan for your **bucks** to live in a separate pen or in cages, isolated from the rest of the herd. Otherwise overpopulation is likely to occur. But generally, if let your buck out into the colony of females for a couple of days to socialize, he will do his best to fertilize all the ladies, and then you just put him away again. This will allow you to still know which buck has sired new kits without any guesswork.
- 👉 You may also run into complications with does **fighting** – but generally they all work these things out on their own. If the fighting is incessant, you may need to eliminate the more aggressive doe(s) from the herd – but that’s something which you would likely do if they were living in cages as well.
- 👉 Record keeping can be much more complicated, especially if your buck(s) get along well with the herd and you just allow them all to live in one big colony together.
- 👉 And of course, **predators** may be more of an issue because your rabbits are living on the ground. But you should still be able to protect them in most circumstances from large predators that walk or fly, and then keep a close eye out for the slithering type.

So what do you need to know and do in order to start raising your rabbits in colonies? That question will be answered in the following pages of this book. I will discuss raising rabbits in different types of colonies and other considerations that go with it. This also includes topics such as raising them indoors or outdoors, and how to construct a proper colony. Of course we should not forget the basic thing that keeps them alive, water and food, as well as some tips on preventing escapes, other rabbit problems and especially protection from predators.

Chapter 1: Types of Structures for Colony Raising

Before we talk about specifics of raising your rabbits in a colony, such as extreme temperatures and protection from predators, let's discuss a few basic types of structures that can be used for colony raising. There are basically two types of colonies: indoor and outdoor.



Rabbit breeders seem to have a hard time deciding which type of structure is best to use for their rabbits. People who are living in areas that experience a lot of inclement weather like extreme heat or extreme cold are the ones who usually have the hardest time choosing between the two types of colony. As the name would suggest, an indoor colony, is located inside a house, building, barn or other structure. An outdoor colony, on the other hand, is a colony found outside, somewhere within a field, prairie, forest, yard, etc.

How you plan to manage your rabbit colonies will depend on you. Other rabbit growers go for making two colonies, one indoor and another outdoor and some merge the two, leaving the rabbits indoors during really hot summer days and the coldest days of the years, but allowing them outdoors during good weather. Ultimately the choice will not only come down to what sort of space and housing you have available, but what works best for you when it comes to construction, keeping your rabbits safe and convenience.

Test your clever and artistic mind about how you want your colonies to be managed and you're sure to come up with something fantastic. There is no wrong or right way to build a colony, as long as the rabbits cannot escape and predators do not get in. Some like to keep things really simple, and other will try to build something elaborate. Consider your time constraints, abilities and available resources before you get started. And you can always add on to, expand, renovate or otherwise change and improve your colony later on.

Indoor Colonies

People living in areas where there is a lot of snow or where daily temperatures drop well below freezing (under 20°F) often times opt for an indoor colony. They worry that if rabbits are exposed to extreme cold they might not be able to cope, but those living in extremely warm and humid climates also need to be concerned about the welfare of their rabbits. The same risks that would be relevant in caged housing or hutches applies to rabbits living in an indoor colony, especially if they are on concrete floors. The rabbit does not have the ability to escape the temperature extremes, so you the breeder must determine what is going to be suitable for your rabbits and when they need assistance to maintain great health.

When rabbits colonies are placed inside a house, barn or other building, (i.e. somewhere indoors), you'll feel more secure that they are protected from climate change. But always remember that **ventilation and insulation** are important for your indoor colony to remain habitable. Once rabbits

are placed in an enclosed area without ventilation and power is lost, your rabbits will suffocate. So if you decide to make an indoor colony for rabbits, make sure to have proper ventilation or an automatic backup generator if your power should go out from time to time. Ventilation is also important to ensure that smells do not build up and that fresh air is always coming into the colony.

Sometimes people will choose to use an air conditioner and/or heater to control temperature changes but this is generally not necessary, will probably cost you a small fortune and may make your rabbits sick in the long run if the fans or vents are not placed properly (so that it never blows directly on the rabbits). If you just keep things simple and natural, you will usually be able to meet the needs of your rabbits and keep them from getting stressed about the changing situation.

How your indoor colony is arranged will depend on your own liking and convenience. When you have a **concrete slab** for your rabbits, you can add hay to make it more comfortable for them or a litter box to control the odor. Concrete is generally the easiest to clean because you can pressure wash or hose and scrub it down (never with the rabbits nearby since pressure washing particles fly all over the place which could spread disease if you have any bacteria or infections laying dormant in there.)

If your ground is **soil**, then you have to secure the bottom to prevent your rabbit from escaping. This may require burying fencing, creating a trench filled with hay bales or other methods you discover yourself.

Another thing you will want to consider in hot climates is **insulating your ceiling/roof**. This controls the heat that will enter your colony. The absorption of heat depends on the material that you use in making or constructing the roof for your colony. One example would be when using a metal roof, into which heat is quickly absorbed. Therefore it needs to be insulated well. Ventilators and fans are usually placed on the roof or attic to move out the heat. These are the things that need to be considered in order to make a safe, temperature controlled indoor colony for rabbits. Insulation will also help to keep warmth in the colony during the coldest weather.

👉 **Advantages**

- Usually easier to secure from predators
- Do not expose your rabbits to as many elements of nature (such as rain, snow, sleet, etc)
- May already have a structure on your property that is well suited for the job (horse stables or barn stalls are very popular for this)
- The likelihood of your rabbits escaping is generally a bit lower.

👉 **Disadvantages**

- High cost of building a new structure if none exists
- Probability of poor ventilation and insulation when breeders do not study or have enough information about it, as this can greatly affect the life of the rabbits.

Now let's take a look at a few rabbit colonies in action to give you some ideas of what you can do yourself if you are interested in building an indoor rabbit colony. These examples are only meant to give you inspiration and in no way suggest that these are the perfect or only ways to get the job done.

Example Indoor Colonies

In this rabbitry, the owner went from a 10-hole cage setup on his back patio to a very basic colony setup...and finally a much nicer and more suitable, permanent setup. This was the original cage rabbitry which was sufficient and contained to keep predators away.



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As you'll notice, the new very basic colony setup takes up a only a bit more space versus the cages, but the rabbits have a lot more space to roam freely. The ground is covered with wood chips and various old pet carriers have been used to provide "den" space for the rabbits. Carriers are a fairly popular choice for burrows.



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Below is the overview of the newly finished colony. The long channel on the left is the nest box. Irrigation tubes for tunneling seen in the before photo are still in place but have been covered in hay to make them look more natural. And the box with the wire mesh at the front of the colony will be where feed and water are placed. The white piping on the fence is an automatic watering system which is fed from a rain barrel nearby. The hope is that the rabbits will get up on the box while eating, begin to release droppings through this wire and a worm bin can be set into this open space. Of course, one will need to pay close attention to urine levels if this becomes the bathroom spot so that the worms do not die.



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Below you can more clearly see the nest boxes. There are dividers inside the box to give the does and kits privacy, but the bottom of the entire box is open so clean up is easier and all droppings just go right down to the ground.



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Some people will decide to optimize available space and raise rabbits and chickens in the same building, with rabbits mounted up on a wall or suspended from the ceiling. The chickens are free to roam on the ground and one just has to put boards on top of the rabbit cages to prevent the chicken droppings from falling down on your rabbits. This is actually two colonies next to each other, one for does and one for bucks. This doesn't allow rabbits quite as much space to move around as many other colonies, but it still allows them to be far more active than if they would be in regular cages. You can even make it multi-layered, as they have done here, so that the rabbits can climb up on top of the boxes within the colony or into other loft areas.

Obviously this doesn't allow for a huge number of chickens or rabbits if the space is shared but if you start with a larger building with intentions of expanding it out at some point (or get a second one), you'll have no worries. You do need to be concerned about the spread of coccidiosis, though. Giving your rabbits water with a bit of apple cider vinegar in it has been said to prevent coccidiosis from breeding and therefore keeps rabbits healthy.



Source: [SurvivalistBoards](#)

You may also want to consider the possibility of having both an indoor and an outdoor colony for your rabbits. Something that is joined by either a small or a large door that can be closed at night to offer protect from predators would be optimal. And chances are, your rabbits will be found outdoors more often than you think, even in rain or snow. You obviously just need to make sure they cannot escape from either area.

The folks at [Fallen Timbers Farm](#) in Collinsville, OK, have done just that. Here you can see part of their indoor colony which also uses small pet carriers and a few more traditional nest boxes for their rabbits which are Holland Lops. As you can see, they've covered the walls of the pen with chicken wire and the floor with hay.



The rabbits are free to come and go from the indoor to the outdoor sections. And as you can see, the outdoor area is also quite simple with few embellishments. Naturally if the outdoor area is not shaded most of the day, you will need to install something that gives the rabbits a bit of shade from the sun to prevent heat stroke.



Outdoor Colonies

Now that we've had a look at indoor colonies and analyzed a few examples, let's take a closer look at the other alternative. Outdoor colonies, sometimes referred to as natural method raising, keeps your rabbits closer to the environment. Many people in Europe have decided to raise rabbits in this way, to make it more comfortable for the rabbits, as well as easier on the owner and it was commonly used hundreds of years ago, before anyone had the thought of raising rabbits in cages. You'll be able to save time



and resources, since you will let nature act on the rabbits waste, and no longer need resources used with indoor colonies like insulators, heaters, and so on.

Outdoor colonies provide rabbits with fresh air, allowing them to feel almost as if they are living in the wild, and giving them freedom to dig and burrow (which most rabbits love to do). You don't even need to mow inside an outdoor colony if you've got regular grass growing there because the rabbits will love to hide in it as well as benefit from the shade it provides. They may even mow some of it down for you

However, you have to make sure when you fence your colony that you use preventative measures to keep your rabbits from digging their way out. In order to keep your rabbits safely inside the colony, you need to install fencing that goes down under the ground at least 3 feet, cover the ground with something like chain link fencing with dirt over it or find other ways to prevent the rabbits from burrowing. Otherwise the rabbits will quickly dig tunnels and escape.

It is also wise to periodically check the **perimeter** of your colony and surrounding area to be sure that no does have managed to burrow out of the colony. They may manage to dig under your fencing from time to time, or find a way through, so you've just got to always be on the lookout for escapees – and be making sure that no predators are able to locate these holes and find their way into the colony.

Will the rabbits run away when they tunnel out? Probably not. But it defeats the purpose of building the colony if your rabbits are hopping all over the place as they please. You may have a rabbit or two that just refuses to be confined and seems to escape everything even when all the other rabbits stay put. If that is the case, you'll either have to decide if the escape artist is just having fun and causing no harm, or if you need to remove him from the herd.

You will also need to add some smaller gauge wire (hardware cloth or chicken mesh perhaps) along the bottom 6-12 inches of the colony perimeter to prevent small kits from escaping once they become mobile. If not, you will need to constantly be counting and keeping track of the kits to make sure none of them wander off too far and find themselves in trouble.

Because your outdoor colony is likely just going to be in the yard or on dirt, the does will dig **burrows** (called warrens) to kindle in. These are generally set at rather shallow depths under the surface, and

may cave in from time to time when you walk over them...especially if the ground is soft from a lot of rain.

If you are concerned about the ability to check on your litters, keep track of births and to have more control over the kits, you will probably want to consider laying down wire across the entire expanse of your colony floor (assuming you have only dirt) and creating **artificial warrens** for your rabbits. This involves laying drainage pipes (at least 6 inches in diameter) which lead to a nest box which is at least partially underground. You can either dig down to lay the pipes, or put them on top of the ground, then cover them with dirt. Use the typical dimensions of the nest box (Medium breeds at least 16" x 10 1/2" x 10" and Large breeds 20" x 11 1/2" x 10") but just construct it to be a closeable box instead of partially open. You can create a nest box which can be opened on the side or top so that you can easy access the kits and clean the area as needed. Large plastic tote buckets with lids can be converted for nesting boxes.

The other alternative is to have everything above ground, which still requires covering the ground to prevent digging, but you simply use totes, boxes, crates and other similar items for the rabbits to find shelter, keep food and water dry and kindle in. You might also build something like a hutch with a ramp for the rabbits to climb up and down for shelter and feeding purposes.

If the buck lives in the colony with the does full time, he will fertilize the doe again immediately after kindling and you will have another litter in about 30 days.

If you live in an area with lots of owls, hawks or other birds of prey, you will need to consider a covering for the area because your rabbits will quickly be picked off by these **predators**. Do not believe that your rabbits are too large to be taken. My neighbors had two 14 pound rabbits snatched from their yard one night after their rabbits managed to break out of their hutches. We assume it was large hawks because we live in a small village and have never seen foxes or anything like that in town...and we've seen the hawks take large chickens and geese in the past.

Another issue which one must keep in mind in an outdoor colony is the capability of controlling **extremes of climates**. In many cases, your rabbits will burrow down into the ground during the hottest of days and be fine. But always be sure ample shade is provided to keep your rabbits from heating up. In the same respect, even people in Alaska use outdoor colonies for their rabbits, using the snow to provide insulation for their rabbit warrens. If you have kits being born at temps over 80°F or below -20°F, it is wise to remove them from the elements and bring them indoors somewhere. You can either bring the mother doe along for the ride or just return the kits to her 1-2 times a day for feedings.

When selecting a site for your colony, be sure that any **vegetation** located inside or bordering along the colony is safe for your rabbits to eat. They will gnaw on trees, eat grasses growing in that area and just otherwise taste test everything. It is in their nature to chew and gnaw on things, so if you do not want something to be eaten, you need to protect it with hardware cloth or some other sort of mesh to deter the rabbits.

Example Outdoor Colonies

This breeder (with about 5 rabbits) has decided to use part of an outdoor stall to raise his rabbits. Chain link fencing works well to keep junior and adult rabbits in (and many predators out) but consideration must be made for smaller kits when they become active.



© [Static Rabbitry](#)

© [Static Rabbitry](#)

Below you can see the rudimentary covered area of this colony which provides shelter during storms, as well as keeps food and water from being quickly contaminated. Naturally you'd likely want to cover this up with hay to make it more visually appealing – and if the rabbits start chewing on it, cover the edges with hardware cloth.



Continuing with the same colony, if you look under the ramp, you will find this stall for the rabbits to nest in or otherwise escape the elements when the weather gets really nasty.



Here you can actually see an example of a tunnel built by a doe. As you will notice, it's quite expansive.



Let's take a look at another colony which you can find at Harvest Moon Rabbitry. <http://www.pet-rabbit.net/firms.com/housing.htm> The following colonies are for Flemish Giant rabbits which are raised for meat, and the pens range in size from 20x20 feet to ½ acre.

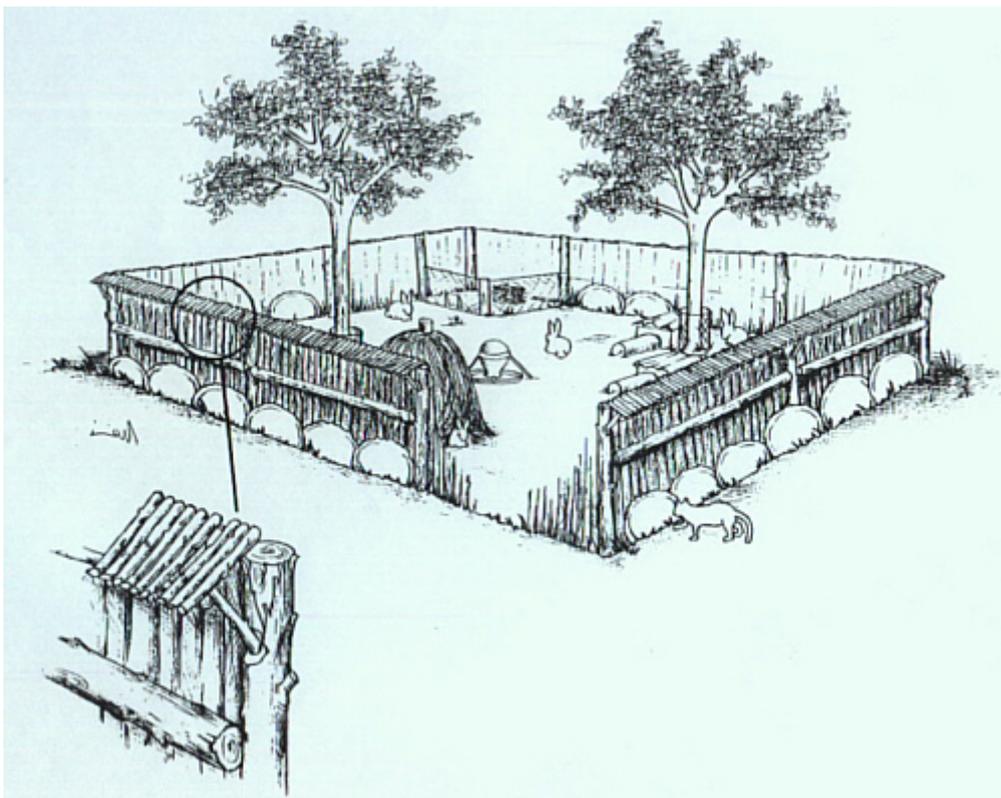


You'll notice that all of the colonies are wide open spaces and a hutch has been provided in each one. Food and water are found here as well as plenty of bedding for the rabbit to retreat into. Electric wires run along the top of each pen and the family farm dog keeps other predators at bay.



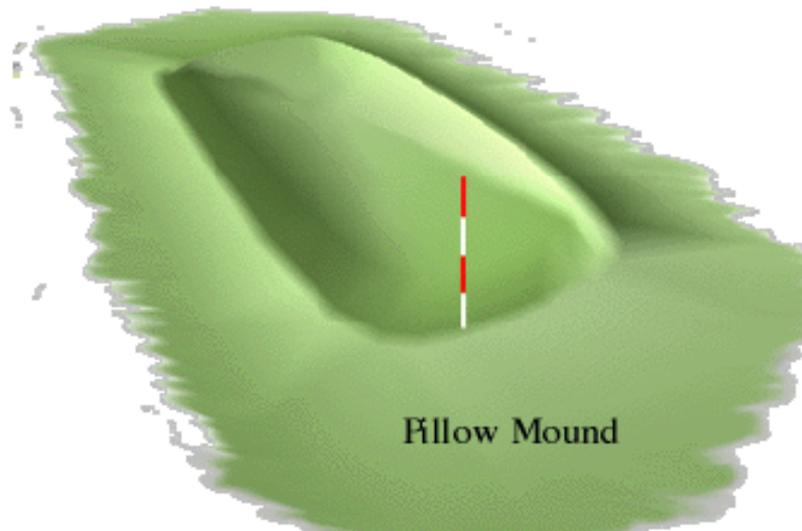
To explore something entirely different which was devised by Finzi A. and Amici A. of Tuscia University in 1988, take a look at this completely self-contained area for free-range rabbit raising. It draws on concepts developed during colonial times, allowing the rabbits to eat what is raised within the confines of these walls (3 does are raised in 1000 ft² or 100m² along with their young). The hay stack covers the entrance to the burrow and prevents rains from filling up the rabbit tunnels. In the far corner, the little fenced area is where rabbits are given food and water. When the rabbits approach, the gate can be closed behind them, making it far easier to catch the rabbits. Along the edge of the fence, you will also notice that the roof hangs over to keep small predators like cats from jumping over.

The number of rabbits in the space is kept low to keep resources such as the grains being grown from being depleted. But if you are feeding primarily pellets or using food sources outside the colony, you could certainly raise more rabbits in the same space. Or increase the size of the colony if needed. And if you are breeding all three does at the same time, you'd still get about 30 rabbits from each breeding cycle.



© FAO.org. Finzi and Amici

Taking another look at a rabbit warren from the past, a pillow mound like the one shown below was often used during post-medieval times. Around 2000 of them are still scattered throughout England and Wales. These low, flat-topped mounds are generally 10-20 meters long, 5-10 meters wide and up to a meter high. They might also be surrounded by a shallow ditch which would provide water and help to keep the rabbits in. There was also often a fence put up around the mound and ditch to keep our predators. These mounds were actually believed to be burial mounds for many years, until a few excavations were done.



Here you can see a pillow mound in nature. It's that rounded mass, in the top middle part of the photo. Under this mound, you will typically find several artificial runs and nests. Or the rabbits might just have had to build their own tunnels if no artificial warrens were built.



Generally there will be holes to the burrows all over the mound, which are virtually unseen in the images here. A net would then be placed over the holes and the trapper would wait for the rabbits to come out.

But some of the fancier pillow mounds actually had a place to trap the rabbits when it was time for them to be eaten. Typically, dogs or ferrets were released into the tunnels and they herded/scared the rabbits toward a pit at the end. This sunken area, looking something like the one below, kept the rabbits contained until they could be collected.



Again, these types of structures were used by wealthy land owners in England because rabbits were not native to the area. Rabbits were introduced to the UK by the Normans, sometime after 1066, and were farmed for their fur and meat. But only those with a lot of money and land could afford to build the warrens for the rabbits to keep them fed, protected from predators and sheltered from the adverse weather.

If you travel through the countryside in England, you may see these square-shaped pillow mounds from afar. The land owners would often place them within view of well-traveled paths so that visitors would know that they were raising rabbit and therefore the guest would be enjoying a good meal since only aristocrats could afford to keep them.

Chapter 2: Key Factors In Your Rabbit Colony

Rabbits are fairly simple creatures, so as long as they are in a safe living environment which protects them from predators, gives them room to romp and socialize, and a place to obtain fresh food and water, they will flourish.

As previously mentioned, rabbits do not handle weather extremes well, especially when it comes to summer heat, therefore temperature control is a factor when selecting the site and space for your rabbitry.

We've already looked at the basic types of structures that can be used to house your rabbits, but let's also take a look at some of the additional factors you should keep in mind when building a rabbit colony or tractor.

Location



In most instances, you do not want your colonies to be too far away from your home. You want to be aware of intruders should there be any uninvited guests, and you need to be checking in on and caring for the rabbits on a daily basis. Rabbits still need feed and fresh water even in a colony or tractor. Therefore it's not really practical to have your rabbitry be located really far away from your home, unless you plan on getting a private keeper for your rabbits!

When selecting an indoor colony location, give a lot of consideration to the structures you already have. Horse stables or other animal pens are a great place to start but you will want to make sure that they have been thoroughly cleaned and are free of bacteria and disease. Coccidiosis is one barnyard disease which can be passed along by almost all of your small livestock.

An area with at least a small amount of **shade** is useful for both indoor and (especially) outdoor colonies. Without some sort of shade, your rabbits are going to be at serious risk of heat stroke. If you have large trees to provide shade throughout the day, this is best. But you can also use tarps, sun sails, build a roof or any number of other things to provide shade for your rabbits.

As mentioned before, it is also extremely crucial that anything contained within your colony, whether indoors or outdoors, be edible for your rabbits. That does not mean that they should be eating it – just that it's not going to kill them right off the bat. No poisonous grass, trees, plants, fruits, flowers, etc. Most rabbits can also be persuaded to keep their gnawing efforts on acceptable items as long as you provide plenty of good twigs for them to use instead.

How Much Space Do You Need?

The size of the colony needed will of course have some correlation to the number of rabbits you intend to raise. For whatever reason, rabbits seem to prefer a space which is rectangular versus square. That doesn't mean they can't be happy in a square pen; but their natural instincts to run and hide are easier to fulfill when the space has a long axis.

If you're building a colony in an existing barn, you may already have stalls you can use. Or you may want to add one for your rabbits. Typically a small box stall (around 7'x10') or standing stall (approx. 5'x12') will suffice for around 6 does, 2 bucks and the litters they produce. If you are using something smaller, you will want to add structures going up the walls or towers and hutches for them to expand in to. This vertical space will give them places to claim as their own and spread out even though the floor space is limited.

Colony Furnishings

I'm laughing while typing such a silly heading for this, but it's really the best way to describe the various elements in your rabbitry that are placed there to give your colony a larger feeling for your rabbits – or to make the space more practical for them.

Rabbits generally enjoy some sort of built-in platforms and will jump into shelves, cupboards or other types of furniture for entertainment or to hide. Plus they can help you provide additional space for your rabbits in an otherwise small colony area. These furnishings may also become of interest in territorial disputes, but the rabbits will certainly appreciate having something high to reach. The only thing you should be really mindful about when adding furniture is the type of finish used on it, because rabbits are prone to chewing and you don't want to end up poisoning them. Exposed wood is likely to be chewed on, so you will need to cover anything you don't want destroyed with hardware cloth. Also provide lots of twigs for the rabbits to chew on and you will generally see them focusing their chewing on the twigs instead of whatever else they find laying around.

Large rubber feed tubs, pet carriers, standard nesting boxes, crates and other similar heavy plastic boxes will also work well in the colony as nests and cannot usually be chewed. Some people also just use plastic bins or build boxes for the rabbits to hide in as well as use for kindling.

You might also consider natural things like logs (a hollowed out one is fun if you can find one) or drainage tubing (like that used for French drains) which can be used as tunnels to hide in. Place hay or straw over the furniture and tops of tunnels to help them blend into the colony and make them more appealing to your rabbits.

As I've mentioned in the previous chapter, some more ingenious human colony builders have actually elected to construct **artificial tunnels and burrows** for the rabbits to keep them contained and easy to find. First chain link fencing was placed across the ground (if you are going to try this concept in an indoor colony with concrete below, it the fencing wouldn't be necessary) and then used long drainage pipes feeding into an top-opening box which is to be used for kindling. This way the kits can always be found and checked on, and prevents your rabbits from creating a tunneling

network that could lead to escapes or cave-ins should you walk across a nest build fairly close to the surface.

The Colony Floor

We already have discussed the topic on spaces, and we already know that the more space and surface area the better because this allows rabbits to roam around freely and exercise, especially when there is a number of them in one colony.

In most cases (aside from tractors which will be discussed later), your colony will have solid floors. This reduces the prevalence of sore hocks because rabbits are not sitting on thin wires all day which wears on the feet, but it may also help to keep your rabbits contained. When rabbits are in an outdoor colony, we may not have much problem because it is their natural habitat to be on ground where they can dig and burrow. If you are outdoors, you can always remove soiled areas with a shovel, and/or bury them.

In indoor settings, though, your flooring may often be **concrete**. In order to really maintain a decent level of cleanliness, concrete floors are best, especially in an indoor situation. But you may decide that a protective floor covering is desired over the concrete, to allow for easier cleaning and to keep the floors from getting so cold in the winter.

Some breeders use **rubber mats** to line the concrete which can be easily pulled out, hosed down, disinfected and then replaced in the colony. Rugs, acrylic plastic chair mats, tile board or a regular sheet of plywood covered with contact shelving paper may also be used.

One thing we should make sure of is that the rabbits do not try to eat the solid flooring or coverings. Be sure to provide them with plenty of twigs to gnaw on, or other things to hold their interest such as toilet paper rolls stuffed with hay or food/hay dangling from strings, objects to dart into, things to climb and so on. Floorings can be sprawled with hay to make everything look more natural and provide something for rabbits to nibble on when they get the urge – but make sure it is changed regularly to keep soiled materials out of the colony.

Cleaning the Colony

Cleaning is an easy task, despite previous notions that it needs hard work. If you want happy and healthy rabbits (which means less prevalence of illness and disease in your rabbitry), it doesn't cost you too much effort to make sure that they get to live in a clean and happy home.

For the most part, the only portion of the colony that you really need to worry about cleaning is where the rabbits defecate. In



most instances, the rabbits will select an area that will become the toilet, and you only need to remove these droppings or bury them. Of course, once you've removed the droppings you can use them in your garden, sell them as is or feed them to worms.

If you like, you can set up a **litter box** for the rabbits which you can (hopefully) train them to use. In a rabbit's litter pan, you can use any product as you want, from aspen shavings to shredded newspaper to just an empty cardboard box. If you prefer to use commercial products, which tends to get expensive if you have a lot of rabbits, you might choose Carefresh, pelleted wood products such as FireMaster wood stove pellets, WoodyPet, Mountain Cat, Feline Pine and Horse Stall Bedding brands. The commercial products are very absorbent and can control odor very well but that does not mean that you should empty the droppings any less often. You also need to watch out that the rabbits do not eat the litter that you have chosen to use. Hay can also be sprinkled over the top of the litter box to encourage them to use it.

NEVER use clumping cat litter as this is deadly to your rabbits when inhaled or swallowed. Clay cat litter is also not recommended because it is too dusty and this may in turn cause problems. Cedar and pine shavings that contain toxic oils are a big NO as well.

If the materials you use in the litter box are something like newspaper shreds, you can actually dump everything into your worm bin (if you are raising worms) although you do need to be careful about the amount of urine you feed your worms as it can kill them. Washing off the droppings and paper is one alternative to remove some of the urine – or use a litter pan with a screen or wire mesh layer so that the urine runs down into the bottom and can be poured out while the droppings stay up top to be used in the garden or given to the worms.

As I mentioned in the examples of indoor colonies, some more ingenious breeders even set up an area for the rabbits to defecate and put the worms directly underneath. They found that their rabbits were pooping close to the feeding area and just placed the food on top of the worm bins. Obviously, if you do something like this, you will need to keep an eye on nitrate levels from rabbit urine. It would really be better if you had a channel which would funnel the urine into a bucket that you can pour out, and the droppings are dumped into the nearby worm bins.

You will need to keep some **cages** on hand for cleaning so that you have access to everything without risking bunny escapes or rabbits hopping through cleaners. Or you can use an additional colony or temporary pen like a small dog run. Obviously you don't need one cage for each rabbit during that time but can put multiples in a single cage. Just don't accidentally pair up your males and females unless you're looking to have new litters soon.

One important thing to keep in mind with cleaning the colony is that harsh chemicals and cleaners are going to harm your rabbits. By now, you should have already known that rabbits are sensitive beings that need proper care. White vinegar is your safest choice as a cleaning agent, but just make sure that you rinse well and/or give everything plenty of time to dry out because those tiny noses are sensitive. Many people use diluted bleach to clean but you've got to make sure the area is well ventilated for both yourself and your rabbits when you are cleaning. Plus the wetter you get things, the longer it's going to take to dry out and the longer you will need to keep the rabbits out of or away from the colony. Sunlight is also fantastic at killing germs and bacteria – so if you can, leave your various nests or furnishings out in the sun for a while to dry off.

Usually if a kit dies within a burrow, the doe will bring it out for you to dispose of. She does not want to keep it inside the nest with the other healthy offspring. If an adult rabbit should die within the burrow, it will usually be pushed out to the entrance shortly after death. This means you don't need to dig up the burrows or go through anything major to make sure that the burrow continue to be free of remains.

Feed & Water

There are a couple of methods one can take to keep your rabbits fed and watered; but many people just use the same basic methods in the colony as in cages or hutches (feeders, waterers, bowls, crocks, etc) . Usually you will have a designated eating and watering area, which you may choose to cover and put inside a hutch that the rabbits can access on their own. This keeps the food clean and dry, while also providing a good way for you to grab the rabbits when they come to eat.

Even if your rabbits are eating fresh grass, herbs, vegetables, etc that you are growing for them in or around the colony, a diet of at least 60% pellets (either purchased or homemade feed) is recommended to maintain growth rates and nutrition levels.

If your rabbits are not accustomed to eating fresh greens and vegetables, you must make sure to slowly introduce them to the new diet over several weeks time. Any new vegetables, fruits or other things you introduce must also be done in the same way, very gradually and with a constant eye on the situation to make sure that it doesn't make your rabbits sick.

You can **plant a garden** within your colony for your rabbits and give them the option to graze at will. Alfalfa, timothy, clover and various herbs are easy to grow. You can either do rotations within multiple colonies to allow crops to grow back (you can get up to 8 harvests of alfalfa each year in warm climates) or put the crops in transportable tubs to be moved in for the rabbits. Naturally, you can also grow the crops elsewhere, dry them as hay and feed them, or feed the greens fresh. Vegetables can also be grown in a patch of your own garden and your rabbits will happily consume all the carrot greens you can give them while you enjoy the carrots (which are not all that healthy for rabbits) yourself.



Rabbits will eat everything down to the roots within the colony fairly quickly if you have many of them in there. So if you don't want them eating it (or they shouldn't be eating it) you need to put wire mesh around it, move it out or build the colony elsewhere. This includes toxic plants. Don't assume that the rabbits will be smart enough to know what will make them sick.

Breeding in Colonies

Rabbit mating is quite a complex system although there are some aspects that may be more or less similar to other living organisms. The dominant males exhibit polygamy while those lower-status ones are often involved in monogamous breeding relationships. This rings a bell mostly because this situation could also be linked even to human beings.

In a colony where there is a mix of does and bucks, you might be wondering how the mating system goes about. When rabbits are ready to mate, they signal this by marking inanimate objects while giving off odoriferous substances through their chin glands. This process is what is known to be as “chinning”. It’s pretty obvious why the term came to be right?

Dominance exists both in males and females and social rank is mostly based on group aggression. Even though there are dominant females, males still have greater mobility and more aggression. The bucks are dominant mostly because they need to fight each other to get a hold of the females. There are a few factors that determine the social hierarchy of males: the size of their patrol area, the number of females that cross into or visit his area, and the distance that he travels on a daily basis.



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Rabbit reproduction is quite an impressive feat that has been famed due to the strong ecological niche it has carved out, thanks to the rapid rate at which they can reproduce. It is amazing how quickly does can be impregnated, even after it has just kindled. Talk about rapid reproduction rate. They are capable of reproduction at 3-4 months of age, can produce 4-7 litters a year (or more) and, as previously mentioned, can be continuously impregnated for 6-8 months. Female rabbits or “does” ovulate at that time when they are being copulated which is quite unique, especially because most

living things like humans ovulate at a certain time of the month or, allow me to say, “by schedule”.

A gestation cycle averages about 31 days and can vary anywhere between 29 to 35 days and a litter can compose of 2 to up to 12 rabbits, comparable to dogs and other animals.

The females will usually dig out **nesting burrows** where the young are born before they kindle. Does will visit their burrows daily for more or less 4 weeks to allow the young to suckle. These burrows are isolated parts of a colony for security reasons. Like most mothers, they too feel the need to defend the nest. Urine and fecal droppings are used to deter invaders. Does are like single mothers and raise the young without any help from the buck.

If you choose to use to cover the ground (or the does cannot actually dig into the ground) nesting boxes or artificial burrows will need to be provided for the does to kindle in. Nesting boxes should be added to the colony about 3 days before kindling is expected. If they are constantly left in the colony, they may become a designated toilet for the rabbits so it’s not recommended that you leave them in all the time.

If you choose to build artificial tunnels and burrows for your rabbits, they will naturally have access to the nests all the time. But you should clean out any used nesting materials from time to time if you have accessible nests.

To prevent uncontrolled breeding in your colonies and allow you to fully control the genetic development of your herd, it is highly recommended that you keep the does and bucks separated. You will have far more does in your herd than bucks, so you can either keep a couple of cages for the bucks or create a separate smaller colony for them. If they do not have access to the ladies, they generally will not make so many dominance plays at each other and constantly fight...but it may be that they just refuse to get along and need to be separated.

In addition, you may also choose to keep the pregnant doe out of the colony until she gives birth and weans the kits at about 4 weeks of age. Again , this is an issue of being able to control the situation, keep an eye on the kits, have access to take measurements and provide assistance if necessary and so on.

Chapter 4: Common Problems When Raising Rabbits in Colonies

Temperature Extremes

Like any other warm-blooded animal, temperature plays a critical role in survival. The **normal body temperature** of a rabbit is slightly elevated to that of a human, ranging from 102-103°F. But because of their furry coats and inability to sweat, they prefer cooler temperatures in the **mid to low sixties** to really feel most comfortable and thrive. In this comfort zone, rabbits will often reproduce more efficiently and gain weight the fastest. But when temperatures rise outside of the 60-65°F range, rabbits will generally end up consuming less food, and the food that they do eat often is converted to energy so that they can remove heat from their bodies.

Rabbits are far better suited to survive in cold weather than hot. They are warm-blooded animals, but many wild rabbits live in climates with snowy, cold winters with temperatures below freezing without problem. Proper shelter is crucial in adverse weather conditions, as well as continuing to provide a steady source of food and water.

Knowing how to take care of rabbits during the extremes of temperature gives you an upper hand. This also allows you to manage your rabbits very well during hot and cold weather; making both you and your rabbit happy and ensuring that everyone comes through climate changes successfully.

Extreme Cold

During cold seasons, you need to consider the most important needs of your rabbits like food, water and shelter. You may see your rabbits out frolicking in the snow (if you happen to receive any of that frozen precipitation), but they need to have a well established burrow or sheltered area for them to retreat to should the weather get really unfavorable – and to replenish their energy levels.

Provide plenty of extra insulation for the rabbits to nest in, such as hay or straw. You may also want to provide some boxes or tunnels for the rabbits to burrow into to stay warm on extremely cold days (below 20°F) if they cannot get underground. Because your rabbits will be exposed to the cooling temperatures, they should put on thick winter coats which will help keep them warm. And in most cases, the indoor facilities will often stay warm enough just based on the heat of the rabbits inside and a light or two left burning.



© Harvest Moon Rabbitry

If your rabbits are **kindling in cold weather**, be certain that the nesting box is nearly full of nesting material so that the kits can be fully covered with pulled fur, hay and straw while they are in their furless stage. In extreme conditions with kits (below freezing), you may want to consider bringing the kits inside until they are a couple of weeks old. The mother doe only needs access to nurse them twice a day during the first week and if they are being kept warm inside a garage or house, the chances of survival are much higher.



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You can also provide extra hay and straw for rabbits in an outdoor colony so that they can use the straw to keep wind from whipping down into their tunnels. If you've provided them with a hutch of some sort, fill it generously with hay for them to burrow into and don't make the opening too large. You should also leave the opening facing away from prevailing winds. This prevents warmth from escaping and cold blasts from entering the hutch. Generally kits born in an outdoor colony during the winter will survive just fine in their underground nests, assuming there were no other health problems.

Providing adequate amount of **water and food** to your rabbits is crucial during the winter. Rabbits generally tend to increase their activity level in the cooler weather, plus they consume more food so that they can regulate body temperature. Because your water supply may freeze, you will likely need to replace water bottles or bowls/crocks 2-3 times a day – and sometimes even more often. When your rabbits have access to fresh snow, they will often prefer to eat the snow instead of drinking from bottled or bowled water sources.

If you are using an automatic watering system, you may want to look into purchasing a heated cord which is often used for plumbing lines to prevent freezing during the winter. You can run this along the watering system to keep it from freezing and then only need to worry about your main water source. There are also heated cords of this nature available from rabbit supply houses, as well as devices that can be installed on your water bottles to keep the water from freezing.

Your colony, whether indoor, outdoor, or a tractor, should still remain as well protected from the elements as possible. Rabbits should not remain wet all the time and it is usually better if rain and snow do not fall directly into your entire colony. A wet rabbit cannot properly regulate its body temperature and illnesses and deaths result. Generally a covering over the top of the colony is sufficient, as rabbits in the wild also learn to live in the wind, snow and rain. But the chances for survival will be greater if they are sheltered at least partially from the elements.

You may also need to step up security measures against predators during cold winter months, as the natural food supply begins to dwindle. Your rabbitry will look like a buffet to a hawk or fox that has been wandering around in the snow for hours looking for unsuspecting critters to pounce on.

Extreme Heat

As temperatures rise above 80-85 degrees Fahrenheit, your rabbits are at risk. Without protection from the sun and heat, rabbits are likely to experience problems and can suffer from heat stroke or heat shock which is often deadly. Rabbits should always have shaded areas to retreat to, and direct sunlight can be quite deadly to them; especially if they cannot escape it. Ventilation and air circulation are also crucial so if your indoor colony is not getting decent airflow, think about installing a fan. But do not let it blow directly on the rabbits so they don't end up with snuffles.



Also keep in mind that as spring approaches and there are constant changes in the weather, your rabbits are likely to start shedding before the last major frost is gone. So make sure that you keep an eye on your rabbits during these fluctuations, and remove extra bedding over the day if necessary to prevent them from burrowing into something too warm.

Rabbits do not sweat like humans. In fact, if you ever see your rabbit panting or appearing to sweat in hot weather, it is in serious trouble and must be cooled down. Rabbits regulate their body temperature through the ears, via the tiny veins that run close to the surface of the ear. That is why there is generally not much fur on the ears, so heat can escape through the blood as it passes through the thin ears. Rabbits with smaller ears are at higher risk of overheating in temperatures over 80°F.

It is also normal for reproduction to considerably slow down during warm months, especially if it remains over 85° for 4 days or more. The bucks begin to have fertility issues at that point.

Water is also important during hot weather to keep your rabbit hydrated. Rabbits will naturally consume more water as well as food during warm periods so that they can regulate body temperature. Place ice cubes in water bowls or bottles...or place frozen water bottles into the colony for the rabbits to lay on or next to. Just make sure they don't start eating the bottles or lids.

Make sure that **food** remains dry and clean. During high humidity days, the feed may become damp and in turn may start to mold or mildew. This can be toxic to your rabbits, causing illness or even death. You can also feed your rabbits a few frozen vegetables so that they are remaining well fed while also helping themselves stay cool.

It is also important to keep the **stress level** of your rabbits as low as possible at this point. Don't handle them unless it is necessary and keep other animals away from the colony as well.

Heat stroke most often occurs at temperatures over 92°F and pregnant, overweight or easily excitable rabbits are most at risk. Once a rabbit experiences heat stroke, the kidneys shut down, the brain swells and the rabbit could die in the long run.

A few signs of heat stroke are:

- blue lips, tongues & ears
- increased heart & breathing rates
- wet nose & mouth
- frothy, blood-tinged discharge from mouth
- panting heavily
- Confusion
- Lethargy
- convulsions

One must react very quickly if you suspect your rabbit is overheating by cooling the rabbit down as best you can.

- One method (which is the least stressful for the rabbit) is to place a cool, wet towel over the rabbit to moisten its fur.
- You can also mist the rabbit with water or drip it over the rabbit's body and rub the water into the fur, trying to moisten the skin.
- Misting the rabbit's ears or holding a wet cloth to them will also help.
- Another method is to place the rabbit in COOL (never cold) water. Be sure to hold the rabbit's head up out of the water because it may not be able to do so itself. Your rabbit will need to be quite docile for this to work smoothly; otherwise both you and the rabbit may wind up with injuries.

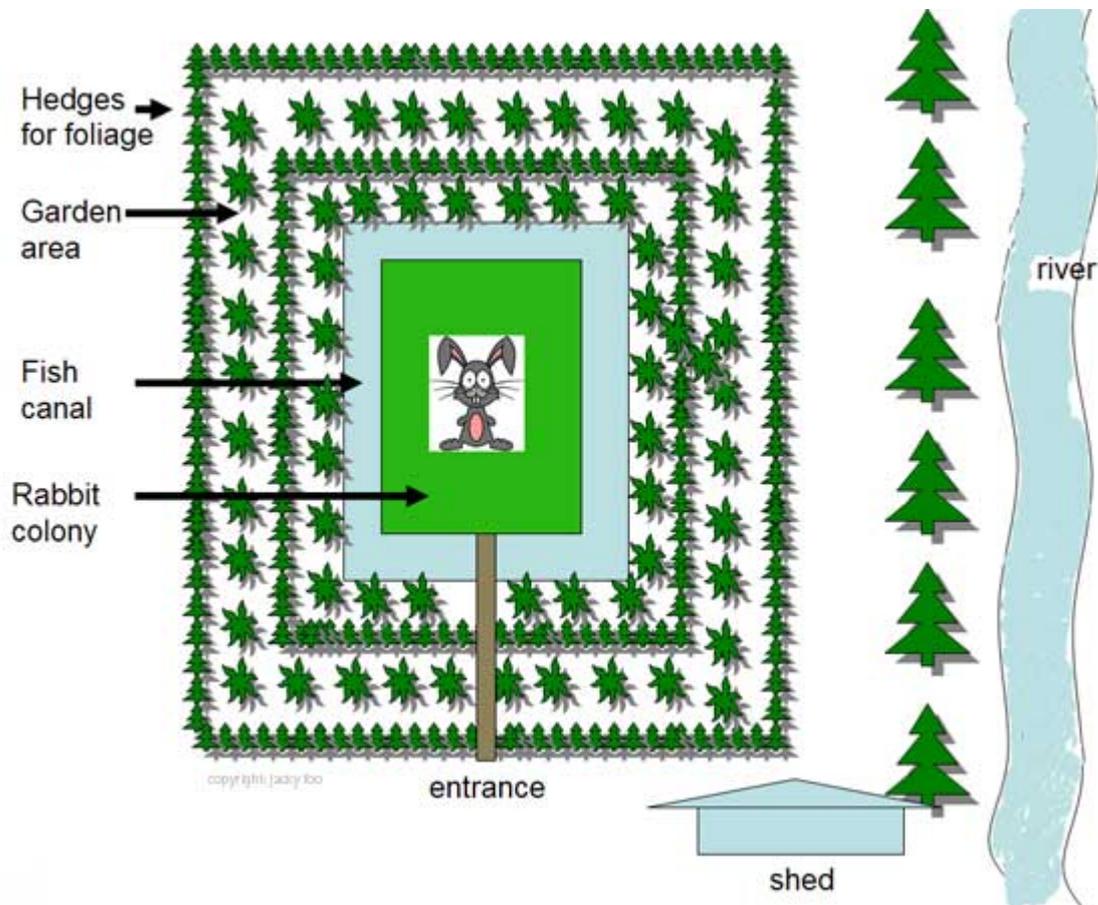
Rabbit Escape Artists

A few ideas to keep rabbits inside the colony have already been discussed throughout this book, from covering the floor of your colony and building artificial warrens, to adding 6-12 inches of hardware cloth along the bottom part of your colony fence to keep small kits inside. But what about rabbits that still manage to find a way out of the confines of your colony due to hours of persistence and digging?

If you're only experiencing troubles from one particular rabbit, you might just choose to eliminate that rabbit from the herd. But if it becomes an issue that you experience with many of the rabbits or you just don't want to build an artificial warren, you might want to think about taking a more traditional and historical bit of advice from rabbitries of the past. Many historical sites in Britain which were found to be raising rabbits for meat included a **moat** around the colony to keep them from escaping. Rabbits typically do not like water or swimming, so they will not cross a moat. Adding a fence beyond the moat will help deter predators.

Naturally, the moat has to be rather substantial (at least 3-4 feet deep) and 3-4 feet wide, and surround the entire colony to essentially make it into an island. For most people I don't imagine this is going to be a likely alternative, but if you happen to have a natural spring or small river on your property already, you may be able to create some sort of offshoot from that, allowing the water to be constantly refilled and perhaps even create a good fishing area for you.

Something along these lines might even be appropriate with some careful planning and execution, which includes not only the opportunity to raise rabbits confined within a moat, but the moat is stocked with fish, your garden space surrounds that and expands from there. Once again, I know it's fairly extravagant, but rather practical and sustainable if you have the water source nearby.



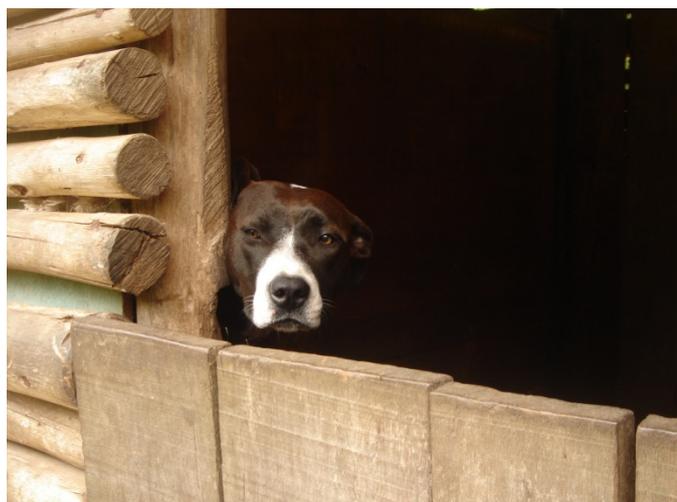
Source: [Africa Rural Connect Contest](#)

Protecting Rabbits from Predators

Bunnies are in danger when it comes to predators and have many natural enemies, being fairly low on the food chain. Many bigger and mightier animals are always out to get them so it's best that you know what you have to deal with and what you have to do to keep your herd safe from harm.

You may directly associate predators to wild animals. Let's say for example, the raccoons, weasels, hawks and eagles out there that are just waiting to get the perfect chance to pounce. And while these

are certainly a problem, you also need to pay close attention to the **household pets** living under your own roof, or those in the neighborhood. Cats, dogs, and even pet snakes and rats can be a problem for your rabbits. You may think that just because you consider them part of the family, they will learn



to know to respect your rabbits and leave them alone. But if you have that understanding or that notion, it may cause you some problems.

Aside from the fact that you have to protect your rabbits from wild animals, you should also protect them from the “other members” of your family. All these common household pets mentioned will prey on your rabbits if given the chance. Deep down inside, they are still wild animals and when they look at your rabbits, they see tiny helpless creatures that cannot easily defend themselves. In the eyes of a predator, docile bunnies in contained space are like a meal served on a silver platter. With all these possible dangers that are lurking, we should always make it a point to keep our rabbits safe.



Before you take any other measures of security, you must first check that the housing or colony that you have built for the rabbits are stable. **Sturdy housing** is the best form of protection that you can offer. When your colony is not strong enough to withstand attacks, your rabbits will be in constant danger. Predators that are eyeing on your rabbits could slip through small holes, pry back boards or find other ways to break into your colony or housing that is not durable or robust enough. Plus the same ways predators get in, often also allow rabbits to get out.

Despite what some others may think, rabbits are not all that helpless. They have several defense mechanisms of their own. In the wild, a rabbit’s coloring usually blends in with the surroundings, making it a little harder for them to be seen. Rabbits can also remain motionless so predators don’t easily spot them. They can also run quite fast, have a long gait, and a very good sense of hearing (as I’ve mentioned before). Anyone who’s ever tried to catch a rabbit on the run knows that it’s not a simple task. Another defense rabbits have is their ability to burrow, so they will often dash underground where predators do not have easy access. Lastly, little as they may be, rabbits possess very sharp claws and strong hind legs that come in handy when kicking.

Another way to protect your herd is to cover or put a roof over the exposed upper opening of your outdoor colony if birds of prey or animals that can leap high fences are an issue. Netting will usually last temporarily (a couple of seasons up to a year), but not through too many storms or heavy snow. Chain link fencing stretched across the opening is usually a good defense. Or you can build a true roof to not only provide protection from predators but provide shade and keep out weather as well.

Uncontrolled Breeding

As you probably already know, rabbits have a reputation of breeding uncontrollably. And if you allow them the chance, your does will be pregnant before you can turn around twice. It has already been mentioned that rabbits have a very quick reproductive cycle and there are only a few days of the year where they are not fertile. Some does may even get pregnant twice, carrying one litter in each horn of her uterus. Rabbits can breed nearly continuously, going from one litter to the next without

any break. Is this healthy for your rabbits? No. And most of the time you do not want or need that many rabbits at once.

The easiest way to control your rabbits' rate of reproduction is simply to put them in separate colonies; does in one colony and bucks in another or in cages. You can either then remove a doe from the herd and mate her privately with the buck, or just allow the buck into the colony at certain times to fertilize as many does as he can until you catch him again.

The majority of serious breeders will stick to a breeding schedule and also remove the does before they kindle so that they have complete control over the kits and the doe should assistance be needed. Others simply make sure that their nesting areas are accessible with artificial burrows (discussed further in chapter 2).

If you decide to keep your does and bucks in the same colony and they live happily ever after, it is going to be rather difficult to maintain records about sires and dams. If you're raising for yourself or as a hobby, this probably won't be a problem. If you are trying to sell your rabbits with a pedigree, a colony may not be the choice for you. Even when you are keeping the does and bucks separated the majority of the time, you may have trouble identifying them. Careful ear tagging would be required and you should then only put in one buck at a time, at least a week apart, so that you can better identify the sire. But again, this will not be as exact and obvious as it was while breeding in cages.

Rabbit Fights

As was briefly mentioned before in previous parts of this book, rabbits are among the many animals that are territorial. Most rabbits, males especially, like to have their own territory and space. So it may not come as a surprise to see your rabbits fight each other. Also when they see a new member added to the colony, they feel threatened that their space has been invaded and this situation usually erupts into a rabbit fight.

Rabbits tend to fight for dominance. If say you have one "bossy" rabbit and the others tend to be passive, this may not give you much of a headache, but two or more "bossy" rabbits together is something else. Your best solution for this is to keep rabbits in different cages for a while, although you have to keep these cages close together. You can do this for a few days before **re-introducing** them. Start by re-introducing the fighting rabbits in a place or spot that is both unfamiliar to them. From there, observe how these two react to one another. If his proves to be unsuccessful, you will either have to keep on trying, or simple eliminate the genetically weaker of the two.

Another instance when bunnies fight is when they are about to mate. If the male mounts a female and she does not mind at all, that mating will probably be over quickly. But if the doe is aggressive and decides to put up a fight, you must prepare yourself as it is going to be a lengthy task requiring a lot of patience and perseverance.

Introducing New Rabbits

In most cases, you are probably going to be using the products of your own herd to continue your line of rabbits. But it may occur that you need to bring in some new blood and therefore have to introduce a new rabbit or two.

First and foremost, quarantine any new animal (or one that has gone off somewhere like a rabbit show or to a vet) for at least 2 weeks before bringing it close to your existing herd. Always wash your hands between touching the new rabbit(s) and your old rabbits. This is to ensure that any diseases or bacteria that the new rabbit may have leave your body before you end up spreading it to your entire herd.

Once the quarantine has passed, here is what you do:

1. Place the new bunny in a cage within the colony. While a new bunny is inside a cage, and the cage inside the colony, this allows the rabbits to get to know each other through the cage and start mixing their scents too. Try this for several days, but do not forget to give the caged bunny its exercise.
2. The next step now is to spend several minutes rubbing and petting each bunny so that scents get transferred. This way the next one you rub picks up the scent from the previous one and so on. Make sure you rub your fingers all the way through the fur down to the skin. Do this about two times and then you can start mixing them together.
3. Now you're going to need a small confined space to really make sure the rabbits get to know each other. A small dog run, bathtub or a table will work. The problem with just letting the rabbit loose in the colony is that if a big fight develops you may not be able to catch the new rabbit quickly enough and/or get it to safety. Get some additional hands if you use a table to keep the rabbits from hopping off the table. Place the new rabbit and your most dominant rabbit on the table together. If bunnies ignore each other, just let them be and continue to observe for 30 minutes. If that time passes with no fights, you're probably going to be fine.
4. If the rabbits start to fight, separate them right away. Try this routine again, working up from 10 minute increments until they can stand to be near each other for at least half an hour.
5. When the rabbits get along in the confined space, they can be joined in the same area or colony.
6. If you notice fights erupting within the colony, you may have to actually clean the colony, the litter boxes, the floor and the rest to remove as much scent as possible.
7. When you see that they may start a fight again, give them about 10 seconds to see how the fight develops. They may just be establishing their places in the colony. But if the fighting escalates, separate them again and try to introduce them once again. Giving a treat to distract the rabbits will usually help to stop the fighting.

You can repeat these techniques until the fighting has completely stopped and they seem to be getting along well with everyone. It usually takes some time but "Patience is a virtue." Often times, the larger the herd is, the easier it is to add another one in.

Never let fights go in indefinitely. Rabbits can cause serious harm to each other if left to their own devices. The chances of them just working it out on their own are very slim, because one rabbit will likely end up maiming or killing the other rabbit.

Chapter 5: Rabbit Tractors or Pastured Rabbits

Raising rabbits on pasture is a concept which has really become increasingly popular, thanks in large part to Daniel Salatin of [Polyface Farms](#). His pastured rabbits and other livestock have made Polyface Farms and the Salatin farms practically a household name for homesteaders and hobby farmers – especially if you’ve seen Food Inc.



© [Grady Phelan](#)

According to Daniel Salatin’s methods, you need a fairly large amount of space to truly pasture rabbits or you will quickly run out of fresh greens that have not yet been

touched. The Salatin method recommends moving your rabbits at least once daily (two or three times a day is even better), with no repeats of the same space within a 12 month period.

If you search the internet for pastured rabbits, you are likely to find a couple of places that claim to have pastured rabbits, but that actually raise their rabbits in individual cages and bring them fresh greens twice a day, which they cut themselves with a scythe. They also create some of their own hays and buy local hay and feed pellets from a nearby mill. But that’s not the kind of pasturing we’re going to be discussing here. I mean the real deal –putting your rabbits out in tractor on the field, moving it around a couple times a day so they can pick and choose their favorites and supplementing with feed to keep them healthy and growth on track.

You will also likely find some breeders who don’t have the space to move their rabbits around constantly, but instead choose to rotate their rabbits on top of raised beds each growing season, replenishing the soil in grow bed underneath the tractor as the rabbit droppings decompose. This doesn’t provide the rabbits with food to graze on unless you are growing crops in the beds specifically for the rabbits.

Why pasture rabbits?

For one, it allows rabbits to live in a more natural environment and consume fresh greens on demand with very little interaction from you, the breeder. The rabbits are able to exercise freely, participate in their own natural behaviors and improve their overall quality of life. You don’t need to bring them the food, chop it up for them or hang it from the ceiling, you just pull the tractor to a slightly different location and let the rabbits make their selections. And because they are contained in a tractor, you also don’t need to spend hours chase down the rabbits when it’s time to mate or slaughter.

Nitrogen in rabbit manure goes directly onto the soil, and less is lost as ammonia gas as opposed to composting the manure. Of course there is some loss in the field, but if the soil is absorbent, not waterlogged or extra dry, or in direct sun, the nitrogen loss is minimized. The fertility of the manure boosts the production of the pasture (which can create more food for the rabbits), and because the

rabbits are applying the manure where you've indicated they should (by placing the tractor there), you don't need to move the droppings, create compost from them or anything else.

You probably already know that rabbit meat is extremely healthy for you and a great source of protein with little fat or cholesterol. Rabbits raised on pasture produce more meat and meat of nicer quality, with more omega-3 fatty acids in the limited amount of fat contained in the carcass. There is reason to believe that rabbits raised on pastured foods actually contain more vitamins and minerals than those on a strictly pellet diet.

Did you know that studies have been done on beef and poultry that reveal that free range animals which consume fresh green plants are actually better for you? The compounds found in fresh green plants add vitamins and minerals (CLAs, carotenes, etc) that simply can't be created in the meat any other way. Now no one has done any studies yet regarding this impact with rabbits, but I would assume that there is also a noticeable difference in the levels of vitamins and minerals. And anything not being force-fed unnecessary antibiotics and feed based on corn plus animal by-products sounds far more appetizing and healthy to me.

Construction

The type of movable hutch on the ground that is typically associated with pasturing rabbits is called a Morant hutch. Many people use a similar style of hutch for chickens, although a chicken tractor rarely has a bottom in it. Unfortunately with rabbits, that is not such a wise choice because most (but not all) rabbits will dig. That means you will probably either find them down in a tunnel somewhere or simply far away from where they are supposed to be.

When building a rabbit tractor, you generally want to avoid floors made completely of wire mesh because you can cause damage to sensitive rabbit feet which may result in infection or worse (if left untreated). It also usually will not provide enough support for your rabbits to stand on when you move the tractor around. That means you've either got to build an area for them to stand on when you move the pen (and hope they stay there) or remove the rabbits when you move the pen. Neither seems like the best alternative to me.

Most rabbit tractors have wooden slat floors but it is generally a good idea to provide one space that is solid flooring, such as that within the covered part of the tractor, so the rabbits don't have to sit on the slats all day long. You can also cover the wood with a removable rubber mat for easier cleanup – but make sure your rabbits don't think it's a snack. You can also use a piece of flat cardboard or an untreated straw mat as an alternative. These can also double as an item to chew on. If and when cardboard mats get messy, simply throw them away and replace with a new one. It's as easy as that.

Your rabbits will also tend to pick one corner of the tractor as the toilet, much like when raised in cages. Scrubbing and scraping will generally clean up anything that hangs on. Naturally, you're not going to be doing a whole lot of cleaning or shoveling of rabbit manure since it's going to be falling directly to the ground, and should be fairly nicely distributed over the area where they are grazing. This means easy cleanup, easy fertilizing and easy feeding combined into one simple box.



© Grady Phelan

The rabbit pens at Polyface Farms are 3'x8' and about 2' high. They are designed to house 10 rabbits at a time, but usually are used for one litter at a time, whether that be only 7 rabbits or 11+. The frame is constructed from 2x2's with chicken mesh sides (see the note about chicken mesh and raccoons in the Predators section below).

The roof is made from corrugated aluminum roofing, which is admittedly expensive but extremely durable, and can be re-used for decades.

The bottom of the pen is constructed with long thin wooden slats running the 8' length of the pen with a reinforcing cross bar on top of the slats in the middle of the pen. The slats are spaced 1.5"-2" apart. This keeps rabbits from escaping through the slats, but sometimes may restrict the amount of pasture they are able to consume.

What is critical when building your tractor if you use slats, is that the slats run parallel to the long sides of the pen and that the pen is always moved in the direction the slats run. Rabbits will only feed on the grasses and other greens with tips that point upwards. They prefer to start at the tip and nibble down to the roots. But if it's laying flat or bent down, the rabbits will completely ignore the greens. Therefore it's only critical how you build the tractor, but also how you place it.

[Weathertop Farm](#) uses pens that are 8'x8' and about 2' high, divided down the middle for two litters of 7-10 rabbits each.

The north, east, and west sides of the pens, along with the top are covered with roofing. The south side is covered with 1" chicken wire. The top of the north side is permanently propped open an inch or two for ventilation.

Some of the pens have a couple feet of open (with chicken wire of course) space on top and sides at the south ends (as seen in the photo to the right), but this is not really a necessary feature. The top lid is separated into two sections, each hinged along the center so that they can be propped open to access the cage. A piece of wood that pivots loosely on a nail is turned up to prop open the lids.



© Weathertop Farm

As you can see in this photo above (and photos in the Examples section), Weathertop Farm uses wire mesh, supported in the middle and on the sides for the bottoms of their tractors. This is then reinforced in the corners with 2x4" wire where rabbits generally tend to dig.

Rabbit Tractor Examples

With the basic information about what a rabbit tractor needs to provide for your rabbits and how to go about raising your rabbits within a tractor, let's take a look at a few more examples that will hopefully provide you with inspiration for your own potential rabbit tractor.

Although the Salatin's don't have much information about their rabbit tractors online themselves, one of their apprentices wrote a blog about his life and experiences while working at Polyface Farms which was quite informative. <http://polyfaceapprentice.blogspot.com/2009/02/hare-pen.html>

Yankee Acres (<http://yankeeacres.com>) has created some really useful posts about their own [rabbit tractor](#), which looks pretty great I have to admit. You can also read more about their own rabbit colony experience there.

The have chosen to use flat strips of aluminum (.75" wide, .125" thick, 72" long) to construct the bottom of the tractor where the rabbits graze, which certainly would last longer than wood. The aluminum is anchored around the edges and in the middle to keep it from sagging under the weight of the rabbits when the tractor is moved.

The orange bucket is their watering system which feeds down to the little red dish. The roof is a piece of latticed PVC that they had laying around which looks pretty nice, is durable and also keeps some sunlight out without weighing a ton.



I really like the hay box they have created inside the covered part of the tractor and the flooring they used. The hay box is 2"x2" fencing wire attached to wood, in a sort of manger fashion. They found this was the best size to keep the rabbits out of hay box but didn't make the hay too difficult to get out.



If you have some metal working skills, you might want to go for a more robust tractor that will last for a while. The white bottle on top is a waterer. I don't have exact measurements here, but I would guess this tractor is about 10 feet long total, and 3-4 feet wide. This would be appropriate for a growing litter. Notice the wheels are mounted to a handle, which when you flip it out to be pulled, it pushes the wheels into the ground to lift the tractor.



Source: Cuniculture.info

This is another very similar tractor to the one above, but it is a double tractor, so it can hold males on one side and females on the other – or whatever combination is practical for your herd. Two waterers this time, one for each side, and a hutch at each end as well.

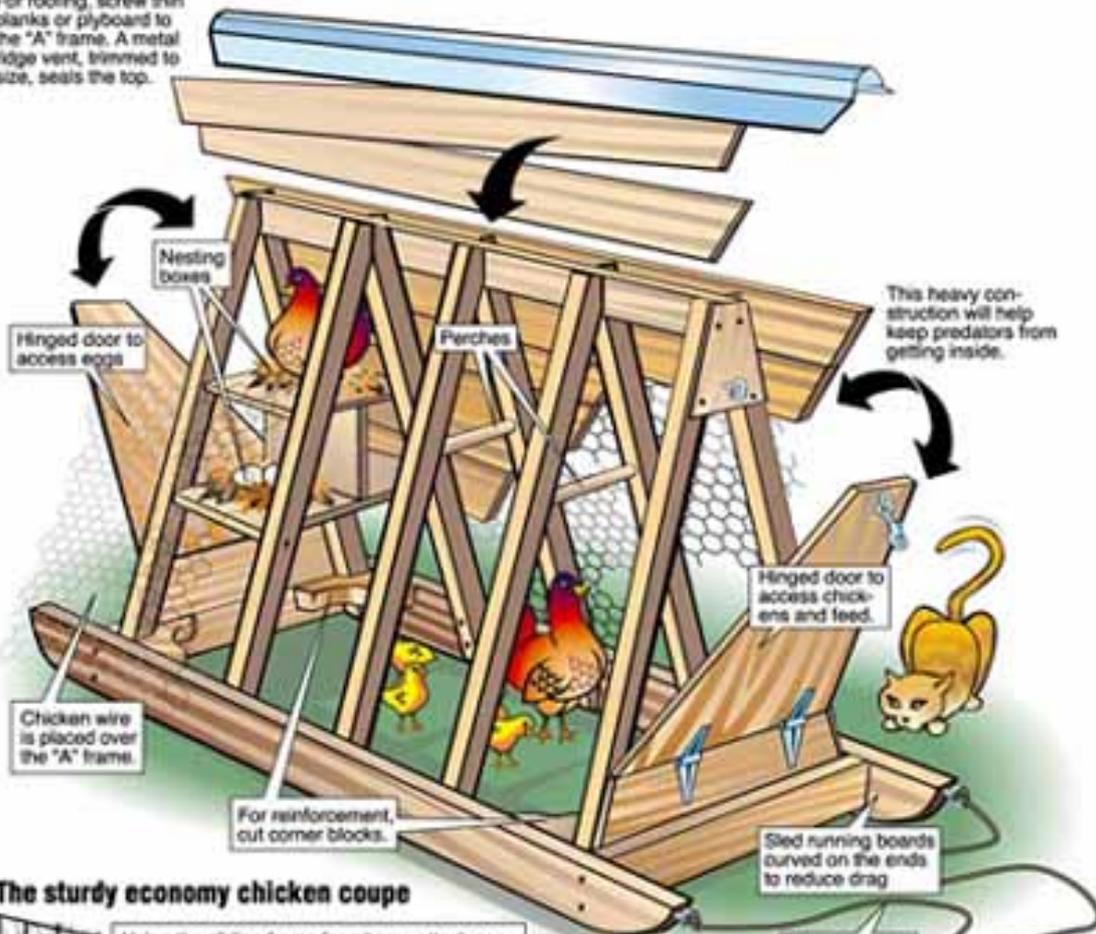


Source: Cuniculture.info

Not only does this construction have a decent amount of space, the upper sections being convertible to nesting areas and sleeping quarters that are fairly well protected, but the skids are also fairly practical for moving it around.

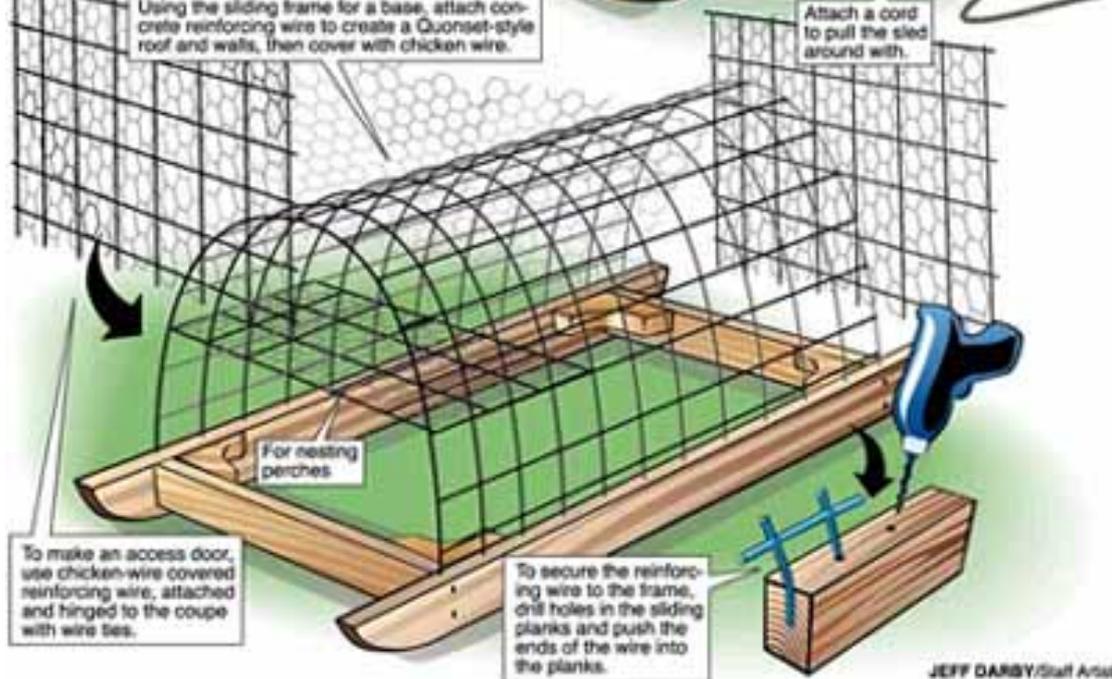
The Cadillac poultry ark

For roofing, screw thin planks or plywood to the "A" frame. A metal ridge vent, trimmed to size, seals the top.



The sturdy economy chicken coupe

Using the sliding frame for a base, attach concrete reinforcing wire to create a Quonset-style roof and walls, then cover with chicken wire.



JEFF DARBY/Staff Artist

Source: <http://www.al.com/specialreport/mobileregister/?arc.html>

www.raisingrabbitsebook.com

Construction Help

I've tried to put together a few places that have plans on how to build your own rabbit tractor but they are not easy to find. Most people will take inspiration from mobile chicken coops and just omit the roost. One of the easiest ways to find information is simply to look for rabbit tractor, chicken tractor or chicken ark in google or your favorite search engine.

- A SARE grant recipient, Gail Adamoschek has written a grant study called "Pastured Rabbit Cage Development," which not only tests 5 designs and their modifications but gives detailed instructions on how to build the best rabbit tractor that they could develop out of cattle panels and 4"x4" lumber. Unfortunately, there are no photos. <http://mysare.sare.org/MySare/ProjectReport.aspx?do=viewRept&pn=FNE01-354&y=2002&t=1>. Contact info: Gail Adamoschek, coordinator, 130 Indian Dr., Sprakers, NY 12166; 518-673-2185; sgadam@telenet.net
- Little Avalon's rabbit tractor: <http://little-avalon.blogspot.com/2011/04/rabbit-tractor-is-finished.html>
- Weathertop Farm's Rabbit Pens: <http://www.weathertopfarm.com/id69.html>
- Great images from Cuniculture.Info (in French)
- Old Otter Holler Farm's animal tractor: http://oohf.typepad.com/old_otter_holler_farm/2010/06/rabbit-tractors.html
- For an A-frame look: <http://boingboing.net/2008/11/12/chicken-tractor-desi.html>
- Another A-Frame coop with a roost running along the top of the entire frame, which is 5feet wide at the bottom and 6 feet long. This would only need to be extended in length for a litter of rabbits. http://www.organicgardening.com/sites/all/themes/zen/og/pdf/coop_plans.pdf
- A tutorial to turn old pallets into a chicken tractor with video – which can fairly easily be modified for rabbits instead: <http://www.instructables.com/id/Turn-Old-Pallets-Into-A-Chicken-Tractor/>
- A ton of inspiration can be found at BackyardChickens.com

Make it Mobile

In order to make your rabbit tractor mobile, you are going to need handles on one end (or some place on the tractor that it can easily be grabbed) and some sort of wheels so that it can be rolled easily instead of dragged (the latter of which is going to be nearly impossible with 10 rabbits inside on bumpy ground).

A lot of people use lawnmower wheels, but I have also seen a few with small bicycle wheels and even inflatable wheels for a large dolly. Make the decision about the type of wheels you want to use based on what you have laying around, how level your terrain is (ie are there are lot of mole hills, bumps and other obstacles that will require some effort to drive something over) and how large your tractor ends up being.

You also need to put some thought into the number of wheels you're going to need on the tractor. Most only have two, but if the tractor is particularly long, 4 may be more practical.

At Polyface Farms, the chicken and rabbit tractors use a modified dolly construction and wheels on one end to move them around. They have constructed their own wide dolly which is slipped under the edge of the tractor and tilted back so it rests on the wheels at the other end. Then you just push or pull it to the fresh pasture.

Weathertop Farm is using this same construction to move their pens around.

If you have trouble pulling the tractor, a rope mounted to the corners may also help you keep it on the dolly.



© [Weathertop Farm](#)

If you don't think that construction will work for you, there are certainly other options. For example, the following chicken tractor uses larger inflatable tires which are attached directly to the frame of the tractor (which is quite substantial in size).



© [SmallFarmSK.com](#)

This first image to the right shows the wheel mounted to the tractor, with the tractor on the ground. The tire assembly is rotated by 90 degrees, lifting the pen and allowing it to be pulled with little resistance and a manageable weight.

Then we can see the board has been rotated and the tractor is up off of the ground. The picture below shows the pen lifted with the wheels in the 'drive' position. The plank secured to the chicken tractor frame has a pin on it that the wheel assembly rotates around. To secure the wheel assembly in the drive position a pin is placed through both boards near the top of the setup.



© SmallFarmSK.com



smallfarmsk.com

© SmallFarmSK.com

This is a similar design below, where the wheel is mounted on a 2"x4". When in the stationary position, the boards are angled (as seen in this first close up image).



Source: BackyardChickens.com

Then when you are ready to move the tractor, they set to a vertical position and are locked into the brackets seen clearly above with pins.



Source: BackyardChickens.com

Breeding

It is generally wise to have at least 3 tractors: does, bucks and growing kits/juniors. You can also take the growing litter into a colony somewhere or place them large cages until butchering or selling. Remember, at about 3 months of age, the rabbits will need to be separated by sex to prevent uncontrolled breeding and dominance fighting.

When the does are ready to give birth, it's best to remove them from the pasture and put them into cages or an artificial colony setting. This allows the best chance of survival for the kits as well as careful control and overseeing of the litter by you.

The kits and mother doe should generally be kept indoors together for five weeks after birth. Then when the kits are five weeks old, the mother doe can be put back on the pasture. Kits are usually more susceptible to coccidiosis between 5-7 weeks of age, and should be kept isolated indoors for at least one more week. Many people add a little apple cider vinegar to the water supply to help kill off coccidiosis before they can spread and cause problems.

The reason that you want to move the mother way from the kits at about week 5 (they generally wean themselves at about week 4), is to reduce the amount of stress the kits experience. Being removed from the mother and put on the pasture with new food sources and surroundings are two big changes for rabbits. So you want to break this up to give the rabbits time to adjust. After about a week alone, the litter is put together in a pen on grass.

How to Pasture Rabbits

If your rabbits have been fed mainly pellets up to this point, you need to **ease them into eating fresh greens** all the time. The best way to do this is probably to feed them grass from the pasture where you will soon have them, starting with a handful or two a day and then working up to as much as they want.

This process of transitioning should take **several weeks time**. Or if you can get your rabbits out on the pasture just as new greens start popping up, they should be able to handle grazing as much as they want by late spring. They just need some time for their intestinal flora to adapt.



© <http://yankeeacres.com>

The rabbit tractors should be **moved at least once a day** and can actually be moved more often than that if you have the time for it. If you can manage it, Daniel Salatin recommends that the rabbit tractor should not be put on the same patch of ground more often than once every 12 months – or at the most once every 6 months. This is to break the cycle of disease – coccidiosis in particular. Even for a small operation, that's a significant space requirement.

As mentioned before, you should always move the pen in the same direction that the longest pieces run. This allows the grass to stick up between the slats. Rabbits will not eat the greens if they are laying down or bent down.

Pasture can supply 25-40% of the rabbits' dietary needs but it is still necessary to **feed your rabbits pellets** throughout the year to maintain proper nutrition and growth levels. Non-medicated alfalfa pellets are one option. Rabbits will eat clover and other high protein greens from the field, but actually prefer stalk-like plants like beet greens, comfrey and other plants with developed stalks, including green rye and winter wheat.

During the winter months, rabbits will enjoy eating root crops that you purchase or grow yourself, such as carrots, parsnips, rutabagas, etc. They can also be fed hay in the winter months if nothing else is available.

Be careful of pasturing your rabbits in areas that wild rabbits and hares frequent. Parasites such as Tularemia and Giardiasis are prevalent in a lot of areas and are easily passed from hares to your rabbits. Your local health department or hunting organizations should be able to help you inform yourself about what diseases in your area you need to be concerned about if you cannot find the information you are seeking online.

You will also need to make sure that cattle have not recently grazed there. Cow patties and manure are liable to contain organisms which can make your rabbits very sick.

Predators

The "rabbit tractor" needs to be heavy enough that predators cannot tip it over and the wire mesh should be strong enough that raccoons cannot tear it. Chicken wire is not the best option, and a 1x2" mesh or chain link fencing will allow a raccoon to stick its entire arm into the tractor. Unfortunately, all they need is a paw inside to get the rabbit's interest. If the rabbit comes near, the raccoon will grab it and certainly be able to do some serious damage to the rabbit before you are able to intervene.

Because it is difficult to completely safeguard your rabbits inside tractors, those who live in areas with high numbers of predators (owls, hawks, foxes, wolves, coyote, stray or roaming dogs, etc) should consider bringing the rabbits into an enclosed building at night (such as a colony setting or large cages) so that they are not confused with dinner for wild animals.

Resources

Colony Raising Rabbits Yahoo Group

<http://pets.groups.yahoo.com/group/colonyraisingrabbits>

A semi-active group of people interested in raising rabbits in colonies of all experience levels.



Rabbits Forum at Homesteading Today

<http://www.homesteadingtoday.com/forumdisplay.php?f=14>

A very active forum about raising rabbits, with a few colony specific threads thrown in.



Backyard Herds Forum

<http://www.backyardherds.com/forum/index.php>

A fairly active community of rabbit breeders, with a bit of information about raising rabbits in colonies as well as other resources about raising rabbits.