

Raising Rabbits

Information on General Care,
Feeding, Housing, and Breeding

This is a compilation of guides (Basic Care, Housing, Feeding, and Breeding) that were written as basic information sheets for those tending rabbits. There are many ways to raise rabbits and while everything written here is based on over a decade of experience and hours of research on university studies of rabbit health and behavior, as well as research done in the ways that large commercial and show breeders tend their herd, the information should be used with discretion. The way in which I raise my rabbits is not the end-all-be-all method.

The first section is basic care information meant for pet owners. It is the absolute most basic information that you should have for tending rabbits. The next sections—Housing, Feeding, and Breeding—are more in depth, but if you would like to really get into rabbits and have a firm grasp on proper care for show animals or commercial production, more research should be done. I have included more resources on the back page, including some really great books.

If you have any questions about anything that is in this booklet or would like information that is not covered, do not hesitate to contact me. There are also many other breeders who would love to help a new breeders. If you would like help finding an experienced breeder in your breed or a breed you are wanting to get into, I can help you get in contact with someone. The best way to learn about what to look for in a breed is to have a breeder show you what is good and what is bad on an actual rabbits.

For More Information:

- *The ARBA Official Guide to Raising Better Rabbits and Cavies* (It is cheaper to buy a youth membership to the ARBA—which includes this book and a year subscription to Domestic Rabbits magazine—than buy the book on its own)
- *Raising Rabbits the Modern Way* by Bob Bennett
- *Storey's Guide to Raising Rabbits* by Bob Bennett
- *Rabbit Housing* by Bob Bennett
- *Rabbit Production* by Peter R. Cheeke, Nephi M. Patton, Steven D. Lukefahr, and James I. McNitt
- *About Bunny Colors* by Ellyn Eddy
- www.rabbitsmarties.com (record keeping documents)

Supply Companies:

- Klubertanz Equipment
- KW Cages
- Bass Equipment
- Martins Cages (local company that comes to rabbit shows)
- Bogan Cages (local company that comes to rabbit shows)
- Grays Cages (local company that comes to rabbit shows)
- Global Pedigree Project (rabbit pedigree website)
- Evans Software
(advanced rabbit pedigree and record keeping software)

Basic Rabbit Care

Housing

Your rabbit's adult weight should be the biggest factor in choosing a cage size. Bigger is always better, as this is where your rabbit will spend most of its time. Cages should have a wire bottom, so that the animal is not sitting in its own mess. Contrary to popular belief, rabbits are more likely to get "sore hocks" from a solid bottomed cage, as they end up sitting in their own urine, which causes the sores. Outdoor rabbits must be housed in a manner that they can get out of the wind and rain, such as in a wooden hutch with an enclosed section. The hutch must also allow for adequate ventilation.

Rabbits must be housed separately. Rabbits are solitary animals, and, while they may get along when young, once they become mature, both males and females will fight. Females can and will become pregnant at a very early age and, if housed with the male, will become pregnant again as soon as she gives birth.

Feeding

Rabbits should be fed a good quality pelleted feed. **Pelleted feeds are complete nutrition for you rabbit.** A quality pelleted feed can be purchased from a feed store or Tractor Supply Co. store. The best feed is a feed that you can get as fresh as possible. Do not buy feed with anything other than plain pellets in it, as the other stuff is basically junk food for your rabbit. Corn should be avoided as an ingredient in any amount. Protein should be between 16% and 18%. Your rabbit should be given as much feed as it will consume in a day, which will be no more than one ounce per pound of body-weight as an adult.

Hay, in loose form or as cubes (which reduces mess by a huge amount), can be given, but is not necessary. It is very enjoyable to a rabbit to eat hay and it also helps to prevent some digestive problems. Your rabbit can be fed as much hay as it wants either placed on the cage floor (where it may be wasted) or in a hay

Rabbitry Income

Year _____

Date	Purchaser	Item	Amount
		Total:	

quickly without water. A small heated bowl can also be used if the cord is kept out of reach of the rabbit.

I have never come across a rabbit that likes a toy from a pet shop. They are expensive and usually go untouched. The best toys are plastic baby keys, shower curtain rings linked together, paper towel rolls, and cardboard boxes. It is not fair to leave you rabbit alone in a cage all day with nothing to do. Hay also provides something for your rabbit to do.

General Care

Your rabbit’s cage should be cleaned at least weekly. **Ammonia can quickly kill a rabbit. Clean cages and proper ventilation are imperative to your rabbit’s health.** Do not allow urine or feces to build up in the cage or the pan below the cage. Make it a point to clean it as often as possible. In the summer, the cage must be cleaned more often. Pine pellets or pine shavings can be placed in the tray to absorb urine and spilled water. Besides removing urine and feces, all bowls, bottles, and toys must be cleaned weekly.

Rabbits can tolerate cold well, but heat can be deadly. In the summer, when temperatures get above 85 degrees, you can place a frozen 2-liter bottle full of water in the cage for your rabbit to lie up against to stay cool. In winter, outside rabbits should have an enclosed box stuffed with straw for insulation.

Rabbits do not require much grooming. Your rabbit will shed twice yearly like a dog or cat. At this time you should brush you rabbit or wet your hand and pet the rabbit to get the loose hairs off. Nails should be trimmed monthly. **Nails that are allowed to get too long will painfully break off.**

Handling

While rabbit are not dogs or cats, they can still be very friendly pets. Rabbits are naturally prey animals and become scared extremely easily. For the first few days, your rabbit should be left alone to become accustomed to its surrounding. Gentle petting

and handling can then begin in short session. As you approach the area where your rabbit is kept, begin talking softly so that your appearance does not startle it. **Rabbits should be held so that their whole body is supported, especially their back feet.** Rabbit have brittle bones and can easily break their back while struggling or if their back end is allowed to dangle. Small children should not be allowed to carry rabbits, as, if the rabbit is dropped, it will likely be hurt.

Rabbit Housing

Cage Size

Rabbits should be housed in the biggest cage that you can afford or have space for. With that being said, this is not possible or practical in a commercial setting, so certain size guidelines should be followed. The ARBA suggests .75 square feet per pound of body weight for bucks and dry does. Does with litters should be housed in a cage with one square foot per pound of the doe's weight. The following chart has the guidelines that I use as bare minimums, but more space is definitely better.

	Single Animals	Does with Litters
Up to 4 pounds	18"x24"	24"x24"
4-7 pounds	24"x24"	24"x30"
7-11 pounds	24"x30"	24"x36"
11+ pounds	24"x36"	24"x48"

These are the absolute smallest cages that should be used.

The given measurements do not have to be used, but these are standard sizes sold by cage companies and 24" deep is better than 30" deep (which is also a standard size) because it is easier to reach the back of. For example, 30"x30" could easily be used ra-

Rabbitry Expenses

Year: _____

Date	Where Spent	Item and Quantity	Amount
		Total:	

Doe Production Record

Doe's Name _____ Ear # _____ Doe's DOB _____

Date Bred	Buck's Ear #	Date Born	Number of Kits Born			Number Weaned
			Total	Living	DOA	
Ear Numbers of Kits		General Notes about Litter (Health, Quality, Kits Kept,				

Doe's Name _____ Ear # _____ Doe's DOB _____

Date Bred	Buck's Ear #	Date Born	Number of Kits Born			Number Weaned
			Total	Living	DOA	
Ear Numbers of Kits		General Notes about Litter (Health, Quality, Kits Kept,				

Doe's Name _____ Ear # _____ Doe's DOB _____

Date Bred	Buck's Ear #	Date Born	Number of Kits Born			Number Weaned
			Total	Living	DOA	
Ear Numbers of Kits		General Notes about Litter (Health, Quality, Kits Kept, Colors, Etc.)				

ther than 24"x36", but it will be harder to reach the back of the cage. The more space that an animal has, the more it will move around. This will mean having animals with better muscling and firmer flesh condition. Also, animals that are overweight will have trouble breeding. Bucks will not want to service does and does will have fat around their ovaries that prevent them from conceiving.

Cage Material

The absolute best material to build rabbit cages out of is galvanized welded wire. The top and sides should be 2"x1" wire (although smaller is fine) and floors should be 1"x1/2". Chicken wire and hardware cloth should NOT be used, as they are not strong enough and if used on the floor, the small gauge will cut the rabbit's feet. The wire should be galvanized after welding (GAW) as it is thicker and will last forever. Galvanized before welding wire (GBW) will work, but it will need replaced sooner. Wire should be at least 16 gauge, but 14 is better, especially for floors as it prevents the floor from sagging and is smoother.

While it is often thought that wire floors cause sore hocks, this is a myth. Rabbits are more likely to get sore hocks on solid bottomed floors. Wire floor are infinitely more sanitary, while on solid floors, animals are often sitting in their own waste. The moisture and bacteria from their own waste are what cause the sores on the bottoms of rabbits' feet, not wire. However, floors made of wire that is too thin of a gauge or that is rusty or rough can cause sore hocks. Thus, it is imperative that the proper equipment is used.

Breeds with very thin fur on their feet (like rex furred breeds) may have problems with wire floors, but this trait should be something that breeders are trying to correct and animals that get sore hocks on wire should be culled to improve the gene pool.

Wood does nothing but harbor germs and breed disease, so wood should be avoided at all costs. If wood must be used, it should be sealed with safe paint and sanitized multiple times a

year. Diluted bleach or vinegar should be used to thoroughly scrub the wood and then rinsed multiple times. After, it should be dried in the sun.

Cage Placement

Rabbits have very sensitive respiratory systems, so ventilation is of the utmost importance. Rabbits can adapt well to cold as long as they are out of drafts and the elements. On the other hand, rabbits will quickly overheat and die.

Rabbits kept in the house are safe from the weather and temperature changes, but ventilation can easily become an issue. If you can smell the ammonia from your rabbits' urine, there is not enough ventilation (this is true of rabbits kept both inside and out). This can be remedied by cleaning cages more often, using something such as pine pellets in the dropping pan, and running a fan in a window to draw out the air.

Rabbits kept outside in wooden hutches should be placed in the shade. The shade will help to protect them from the heat. If the droppings fall straight to the ground, the urine will soak into the ground (unless there is a drainage problem) and there should not be a ventilation problem. Rabbits must have an enclosed place to get out of the elements that can be stuffed with hay or straw in the winter. The top of the hutch should be wooden and at most three of the sides. At least the front should be wire, but having the front and sides wire would be best.

Rabbits in all wire cages kept outside should be in some sort of building. This could be a garage, shed with windows and vents, or pole building with a solid roof and back. If the cages have pans, they must be cleaned at least once a week, more is better. Placing pine pellets, pine shavings, or peat moss in the pans will also help with ammonia. If the building is enclosed, such as a garage or shed, windows should be open at all times (even winter) and ideally a fan will be running to draw air out of the building. Cages where droppings fall to the ground should have either dirt floors or have a layer of pine or peat moss placed on the ground

The record keeping documents found on the following pages are the basic records that should be kept. Records can be kept in this booklet, on a separate sheet of paper, or on the computer. Other records that are helpful to keep are buck breeding records, records of show wins, and feed conversion records.

Record keeping is an extremely important aspect of raising rabbits. Tracking how well a doe produces makes it easier to make decisions about which does are worth keeping and which should be moved on. Keeping track of income and expenses allows you to see if you are making a profit. All medications given should be closely monitored for withdrawal time and to ensure that treatments are effective

check regularly for kits out of the nest, as they will likely not be able to get back in easily. Make sure that they have a step back into the nest.

It is day 31 and my doe has not kindled.

Whatever you do, do not remove the box! A rabbit's gestation period is 28-35 days, so she still has plenty of time. Just to be safe, it is best not to remove the box until day 37 after breeding. The worst thing is to assume a doe isn't bred and then lose the whole litter because you took the box out and she had then on the wire.

Something went wrong and all of the kits died.

There is a very steep learning curve to raising rabbits, so loss is common. The best thing that you can do is assess the situation and figure out what went wrong so that the mistake is not repeated. Unless the doe lost the litter because of a health problem, she can be immediately rebred.

that is changed out weekly to absorb urine. As long as the rabbits are in a structure that keeps out rain/snow and wind, you rabbit does not need anything special in their cages unless it gets to about 10 degrees. At this point, you can offer a box with straw or hay, although they will probably play with it instead.

Cage Accessories

Rabbits are fairly easy to raise, but having the proper equipment makes it easier. Rabbits need a bowl or bottle for water, a bowl for feed, and possibly a toy or two. Bottles are superior to bowls in that they cannot be dumped or soiled and have a larger capacity. While the bowls are slightly easier to drink out of, the bottles have many advantages. Many breeders use bottles while the weather is above freezing, and then switch to bowls in winter, as they are easier to get the ice out of. Another advantage of bowls in the winter is that the rabbit can break the ice to get to the liquid water or simply lick the ice if the water freezes. During the winter, rabbits should have fresh, warm water at least three times a day, if not more.

Rabbits can be fed out of almost anything. Dollar store bowls are a cheap way to go, but can be chewed and dumped. Special plastic crocks that attach securely to the cage are a good way to go, but can be chewed. My personal favorite way of feeding rabbits is with J-feeders. These metal feeders can be placed inside the cage or a hole can be cut in the wire to allow the feeder to be filled from the outside. They hold a large amount of feed for litters and grow outs and cannot be chewed. A good J-feeder will last forever.

Many people also provide their rabbits with toys. Toys keep rabbits occupied so that they do not get bored and start destroying things in their cages like bowls or develop bad behaviors, such as fur chewing. Things such as paper towel rolls, baby keys, and shower curtain rings make excellent toys. Toys sold at pet stores are generally very expensive and I have never had a rabbit that will play with them.

All cage accessories should be cleaned at least monthly. Everything can be taken out of the cages and soaked in a bucket with diluted bleach or vinegar. Rinse well and air dry before returning to the cage. Anything that is cracked, chipped, sharp, or a possible choking hazard should not be placed in a rabbit's cage.

Feeding Rabbits

Rabbits, like horses, are hindgut fermenters. They do not have multiple stomachs and are not ruminants (like goats or sheep), and thus have very sensitive digestive systems. The most important part of your feeding program is finding something that works and sticking with it. Every time you switch feeds or feeding programs, you are basically starting over, as you will likely lose any condition that you have on your animals.

Water

The most important nutrient for any animal is water. Water builds cells and removes waste and toxins. Animals should have constant access to fresh, clean water. Water should always be available and any water that has sat for more than 24 hours should be replaced with fresh water.

Water can be offered in bowls or bottles. Bowls are easier for animals to drink from, but can easily be dumped or soiled. Young animals may get into the bowl and dirty the water or a bowl may be dumped, leaving the animal without water. Water in a bowl that is not changed multiple times a day and the bowl washed regularly is an invitation to disease. Bottles, while slightly more work for an animal to use, keep the water clean. Also, most bottles can hold more water than a bowl and cannot be moved or soiled. Animals that do not know how to drink out of a bottle can be trained to do so by placing a small amount of jam on the tip of the water spout to encourage it to lick the spout.

Feed Options

chance of reaching their full potential. If you only have one doe, you can still try to save the smaller ones. If there is only one or two unfed kits, flip the doe and allow them extra nursing time. If there are a few un-nursed kits, take out the most fed ones and place them in another nest box. Leave them out for a feeding or two and then the others will be strong enough to get their share of the milk.

My doe is attacking or killing the kits.

First, make sure that she is really hurting them or if she is just jumping into the box after you check them. Some does like to check on the kits after you've had them. If she is really hurting them, remove the nest box. The kits should be kept out of the doe's cage and only brought to her twice a day (morning and evening) for her to nurse them. She should be in such discomfort from the pressure from her milk, that she jumps right into the box and nurses them to release the pressure. If the doe is so aggressive that she attacks the kits before she nurses, you will have to flip her and let the kits nurse while she is restrained. Aggression and bad mothering are genetic, so do not keep any kits from the litter. The does will likely be bad mothers themselves and the bucks will produce daughters that are poor mothers.

It's cold out and I am worried about the kits freezing.

Rabbits are very hardy creatures that tolerate cold much better than heat. Generally, if it is above freezing, don't even worry about the babies. If there are fewer than four and it is below freezing, bring the nest box in and bring it out for the doe to nurse twice daily. If there are more than four, I would not worry about them being cold until about the single digits, then bring them in. If the doe has built a good nest and your rabbits are kept out of the wind and rain, there is no reason to worry until it is below freezing. When you do have to worry is when the kits begin to jump out of the nest. If it is below freezing around the time the kits are about to jump out of the nest, line the cage with hay and

Your doe should not be in the nest! She will crush the kits. She should jump in to nurse and then leave. A kit is not being fed if it is wrinkled and does not have a round stomach. A fed kit will have a shiny coat. A doe's milk may not come in for 24 hours after kindling and a kit can go 48 hours without being fed, so don't panic. If you are worried about your kits, you can have someone flip the doe and let the kits nurse but keep a hand over the kits so that they does not fall off of the doe. Sometimes a doe will simply not lactate (produce milk). If this happens, you can try to hand raise the kits. Unfortunately, rabbits are very hard to hand raise, so chances are that you will lose them. Thus, hand raising should be an absolute last step. If it comes to hand raising kits, call me. Rather, it is better to try to foster the kits to another doe that has similarly aged kits. This is why it is always best to breed two does at a time or breed at the same time as a friend. Most does will readily foster another doe's kits. To do this, take out the box of the doe who will be fostering the kits. Place the kits to be fostered in the box and let them mix around with the other kits. After about 15 minutes, the kits will all smell the same, as they are all surrounded in the doe's fur. The box can be put back in with the doe. The doe may go into the box to see what has happened, but it is unlikely that she will be upset about the new kits: rabbits can't count.

Some of the kits are fed, but others aren't.

This is a common problem with large litters or where there is a large size difference in some of the kits. Again, this is why it is important to breed more than one doe. Take all of the large kits that are hogging the milk and put them with one doe and take the smaller, meeker kits and put them together. The small kits will not have to fight large kits to nurse and should even out in size. This should be done with meat pens regardless of if the small kits can nurse. The six largest kits should be given to the doe that produces the most milk and all others given to the other doe. This will ensure the fasted growing kits are fed best and have the best

Rabbit can be fed in two different manners. The most common way to feed rabbits is to feed a complete pelleted feed. The pellets provide everything that your rabbits need and are convenient to store and feed. Pellets are really the only way to go when feeding show animals or animals in an intense commercial setting. They allow for the best flesh condition and faster growth. Rabbits fed pellets do not need a salt or mineral lick. Pellet should be fed at the same time every day. Pellets can be free fed or limited fed. The only animals that should be free fed are lactating does, does with litters, and weanlings up to six months. Buck and dry does should be fed a certain amount at the same time every day. A general rule is 1 ounce of feed per pound of body weight, but this should be adjusted based on the individual animal. Ideally, you should be able to run your hand over the animal's spine and feel gentle, rolling bumps. A prominent, spiky feeling spine is underfed and if you cannot easily feel the spine, the animal is overfed. Pellets should be fed by weight (6 ounces), not volume (1 cup).

Pellets should have between 16 and 18 percent protein. Other nutritional values are important, but generally do not fluctuate between brands as much as protein does. The best brand is a brand that can be gotten consistently and fresh. The first ingredient should be alfalfa and all ingredients should be named products (not things like "forage product"). Corn should be avoided.

Besides feeding pellets, the other option for feeding rabbits is best for those who wish to produce rabbit meat that is organic or more "natural." Rabbits can be fed a "natural" diet that is based off alfalfa hay. The alfalfa hay is a legume and provides the 16-18 percent protein that your animals need. Rabbits are offered free choice alfalfa hay, as well as a smaller amount of grain mix, such as oats or barley, and a mineral block. I personally do not have experience with this method of feeding and I believe anyone who wishes to try this type of feeding should do extensive research on a rabbit's nutritional needs and the possible problems with this type of feeding, as it is very easy to do more harm than good with this method, leading to malnourished animals. More information

on organic feeding can be found on the USDA National Organic Program website. Information on the nutritional content of grains and forage products can be found at fedipedia.org

Hay

While pellets provide all of the nutrients that a rabbit needs to survive, hay provides long stem fiber, which is good for digestive health. Hay does not need to be constantly available, but there are serious health benefits to offering it at least weekly. Besides the benefits to a rabbit's sensitive digestive system, it is also a good form of enrichment for your animals, as it gives them something to do.

Kits should be offered hay constantly once they are out of the box. Before they leave the nest box, kits will begin nibbling the hay that the nest is made of. Once out of the nest box, the kits will start to eat pellets. This change from mother's milk to pellets may cause digestive upset called weaning enteritis. This is caused by an imbalance of the gut flora and results in diarrhea, which can be life threatening. By offering hay, the kits will eat hay along with the pellets and the hay will keep the gut moving so that there is less of a chance for an imbalance. If a kit is found with diarrhea, all pellets should be removed and only hay should be offered for three days.

Treats

Rabbits are herbivores, not vegetarians. Therefore, they should not be fed fruit or vegetables except as occasional treats. Rabbits' digestive systems were not designed to digest the high sugar and water content of fruits and vegetables. Rather, good treats would be things such as hay, dandelions and dandelion leaves, plantain (the lawn weed), and other suitable plants. Small amounts of vegetables can be offered at most once a week to animals over six months.

Switching Feed

does are the ones that you should worry about, but even they will probably make a nest if they are from good mothering lines.

My doe had her kits in the box, but did not pull fur.

Fur is the most important part of the nest, as this keeps the kits warm. Your doe will not sit with kits to keep them warm like a dog or cat. If the doe does not pull fur, flip her over and pull fur out from her abdomen. The fur should come out easily. Pulling fur exposes her teats and makes it easier for kits to nurse, as well as stimulates her milk production. If you have a doe pull more fur than necessary, such as during the summer, save the fur for a case where a doe does not pull any fur or does not pull enough. Does will not mind having another doe's fur in her nest.

My doe had kits outside of the box and they're cold.

First, don't panic. Grab the kits and put them against your skin and bring them in the house. Place them in a plastic bag and slowly and carefully warm them under running water, being careful not to get water in the bag. Have someone warm a towel in the dryer. Once the kits are warm, place them in the warmed towel. Once they are fully warmed, the ones that are still alive will begin to move. If the doe built a nest, place the kits into the nest. If she has not, make a hollow in the hay and pull fur from the doe to make a nest. If the kits are fully warmed and still not moving, they have probably expired. If this is a first time doe, do not be too upset. It often takes a doe a few times to fully come into her mothering skills. Most people give a doe "three strikes" to successfully raise a litter. If only some of the litter is chilled, do not put the chilled kits in with the warm ones before they have been warmed or they will make the whole litter cold.

My doe is not caring for her babies.

Most likely, your doe is caring for her kits. Unlike other animals, a doe does not stay with her kits. Your doe will only go into the nest once, maybe twice a day to nurse and then leave them alone.

Wait until her vulva is dark red. If she still will not breed, add some apple cider vinegar to her water at the rate of about 1 to 2 tablespoons per gallon (This is something that can be done daily, as it also reduces the ammonia odor of their urine. They also like the taste and will drink more water, which is always good.) and/or feed her a few black oil sunflower seeds (BOSS) for a few days. She may also not want to be bred because she is malnourished, feels that she is in an unsafe environment, or is generally stressed.

My buck won't breed my does.

Your buck is probably overweight. Bucks should have good sized cages so that they get exercise and stay in shape. You can also try the apple cider vinegar and BOSS with the buck.

My doe is pregnant and stopped eating.

If a doe stops eating after you have put in the box (after day 28) this means that she is getting ready to kindle. If your doe stops eating earlier in her pregnancy, you have to get her eating again or she will develop GI stasis. To do this, mix some corn syrup into her water, she will like the sweetness and drink more, which should entice her to eat. Also, offer her some treats.

My doe is making a nest outside of the nest box.

If the doe starts to make a nest outside of the box, carefully pick up what she has made and place it into the box. If she continues to build outside of the box, put another box or two into her cage so that she has no room to build a nest anywhere but in a box. Once she has chosen a box to build in, you can take the others out.

My doe has not built a nest.

Many does will not build a nest until right before they kindle. Some will build one after she kindles. Others will build wonderful nests weeks before they are due. Some will even build a nest, eat the hay it is made of and then build another one. First time

Because of how sensitive a rabbit's digestive system is, all changes in diet should be done very slowly. To change pellets, begin by mixing 90% of the old feed with 10% of the new feed. Do this for at least three days or until there is no sign of digestive upsets. Then move to 75%-25%, 50%-50%, and so on. This may take up to a month. Slower is better!

New additions to the diet, such as a new treat or new vegetable, should be done very slowly. If this small amount upset the digestive system, only feed hay for a few days.

Breeding Rabbits

Before you breed or consider breeding, you should ask yourself a few questions. Why are you breeding? Do you want to breed show quality animals? If so, make sure that you start with good stock for your breed. Are you going to produce commercial fryers for market? If so, check with your processor to see their requirements before you purchase your breeding stock. Do you just want to have a litter for fun or because you think that they would be cute? That is all well and good, but what are you going to do with the kits? All rabbits must be in their own cage by 12 weeks old at the very latest. Before you breed, ask yourself "do I have a separate cage for each rabbit if it does not sell? Am I prepared to care for and feed every rabbit that I bring into this world for the rest of their lives if they do not sell? Am I willing to butcher any that do not sell if I do not wish to care for them?" If you do not have a guaranteed way of getting rid of excess kits (an auction, home processing, a cull-buyer at a show), do not breed. Also do not breed if you intend to market the kits as show quality or purebred, but your rabbits are not good examples of their breed (just because a rabbit has a pedigreed does not mean that it is a quality animal). A rabbit that can technically be shown is not the same as an animal that is of a high enough quality to be worthy of being shown. You will make a bad name for yourself by selling poor quality animals to people and saying that they are "show

quality.” It cost just as much (if not less) to feed and care for a purebred rabbit that has good type for its breed as it does to feed and care for a mixed or poor quality rabbit. Even if you just want to breed for pets or meat, start with pedigreed animals from a good breeder. This way, if you decide that you would like to show, sell show animals, or sell purebred breeding stock, you can do so. And even if you do not, people appreciate buying a quality animal.

Choosing Your Pair

Choosing your breeding stock is the most important part of raising rabbits. The point is not to just make more rabbits, but to either produce offspring of a better quality and confirmation than their parents, thus improving their breed, or to produce fast growing, firm-fleshed animals that you would be proud to market.

Your breeding stock should be healthy, of good quality and confirmation based on their breed standard, come from lines known for good mothering skills and growth rates, and be in peak condition. Another, less important consideration is color and variety. You want to produce colors that are showable, but confirmation is more important. Build your house, then paint it.

Your pair should not have the same faults. Two rabbits with low shoulders will produce offspring with low shoulders. A doe with excellent shoulders and a not-so-great head should be bred to a buck with not-so-great shoulders and an excellent head or, even better, a buck with great everything. Buy the absolute best buck that you can afford, as he is half of your herd.

If you do not know if your rabbits are good examples of the breed and should be bred, consult an experienced breeder of your breed or get a copy of the Standard of Perfection (SOP) put out by the ARBA. The SOP can be hard to interpret without first having the terms and ideas demonstrated on a real animal, so, ideally, find an experienced breeder to be your mentor.

Breeding Your Does

most likely take a moderate breeding schedule. A doe can be bred again as soon as she kindles, but those breeding for show will see no benefit to this. Ideally, kits will stay with their mother between six and eight weeks. If the doe is bred as soon as she kindles, the kits will have to be removed at around three weeks, which will result in a lot of loss. Personally, if I wish to get a litter out of a doe back to back, depending on her condition, I will breed her when the litter is six weeks. This way, I will remove the kits at eight weeks and the doe will have two weeks “off” before the next litter comes. Carrying the litter is not stressful to or taxing on the doe; raising the litter is. In commercial production, doe are bred on a much more rigorous schedule. Does are expendable, so the shortened breeding life is not of great concern. The doe can be rebred when the kits are two weeks old, again depending on condition. The kits are removed when the nest box is added, when they are about six weeks, and put into a grow-out pen to be grown out to slaughter.

No matter what breeding schedule you choose for your does, the most important aspect is being able to tell when your does are in the condition to be bred. A doe that can be re-bred will have firm flesh, a full, shiny coat, and not be too skinny. If your doe looks ragged or worse for wear, it would be best to give her a break between litters until she is in good condition.

More of a danger than wearing your doe out is not breeding her enough. A doe that is not bred for too long will most likely get fat and have trouble kindling. Even if your doe does not look overweight, she is most likely collecting fat around her internal organs if she is not “working.” The fat will either prevent her from being able to conceive or she will have difficulties kindling, such as having a kit become stuck in the birth canal. This can also happen if a doe is too old when bred the first time.

Trouble Shooting

My doe won't lift for the buck.

Your doe is probably either not ready to be bred or is not in cycle.

to jump out of the nest box. Once the kits begin to jump out of the box, they may have trouble getting back in. Either tip the box over onto its side or provide a step up into the box, such as a brick. At about three weeks in the summer or four weeks in the winter, the nest box can be removed. By this point, the kits will not really be using it. Keep the cage very clean to prevent disease from spreading.

Kits will start to eat their mother's food when they are ready. They start to eat solid food in the nest by nibbling on the hay that makes the nest. You can also sprinkle oats in the nest box at about ten days and they will eat it if they are ready. Once they begin to eat solid food, keep the feeder filled and let them eat as much as they want. Also, feed them hay daily to prevent weaning enteritis, a condition caused by kits having problems switching from nursing to eating solid food. If you see a kit with diarrhea, immediately take away pellets and feed only hay and oatmeal (the Quaker oats kind in the cardboard tube—old fashioned not instant—or steam-rolled livestock oats) for three days.

Kits can be weaned from six to eight weeks. Large litters should be weaned slowly to prevent the doe from getting mastitis. Take the largest kits first and take one kit away at a time over about a week. Rabbits should not be sold until they are a minimum of eight weeks, as they are very susceptible to stress until this point. At the absolute most, the kits can stay together until twelve weeks, although I discourage this, as it slows growth and some develop before twelve weeks. After twelve weeks the bucks will begin to fight and your does may become old enough to become pregnant.

Rebreeding

When you rebreed your doe will have to do with your breeding purposes. Does can be bred back as soon as they kindle, but will have a much shorter breeding career. Another problem more likely to occur is a doe going too long between litters and having a hard time conceiving or kindling. Those breeding for show will

The general rule is to breed does around six months, but a much better indicator of when your doe is ready to be bred for the first time is when she reaches senior weight. For example, senior weight for a mini lop is 4.5 to 6.5 pounds, so when your doe is about 4.5 pounds, you may consider breeding her. A doe that is ready to be bred will have a dark red, swollen vulva. Rabbits are induction ovulators, meaning that they do not have a heat cycle, but rather ovulate (release eggs) after being serviced by the buck. Despite this, does are not always ready to be bred. A doe will cycle through days of being willing to be bred and days of being unwilling to breed. A doe with a pale vulva is not in the part of her cycle where she wants to be bred, but when her vulva is red and swollen, she is ready to be bred. A buck is ready to be bred at about seven or eight months. Before this, he may be willing to breed a doe, but nothing is likely to come of it, as he is probably not producing viable sperm yet.

Only breed animals that are in peak condition. They should be of firm flesh, neither fat nor underweight, be free of molt, and have no other health problems. Check the eyes for brightness and clarity, the nostrils and inside front legs for discharge, the vent area for redness or scabs, and feel the body for blemishes. Be sure not to let breeding animals get overweight. Overweight bucks will have less stamina and be unwilling to service a doe. An overweight doe will collect fat around her internal organs, especially her ovaries, preventing her from getting pregnant.

Bring the doe to the buck's cage. Does are very territorial and will defend their cages. The buck will mount the doe and, if the breeding has been successful, he will seize up, snort (This is the best that I can describe it. It is kind of like a snort/wheeze kind of noise.), and then roll off of the doe either backwards or to the side. Just because the buck mounted the doe does not mean that she is bred! The buck must fall off. Let the buck service the doe as many times as he is willing; this will be about three times. He will rest a minute or two between services. You can then return the doe to her cage. Never leave the doe in with the buck unsu-

pervised. If you wish, about eight hours after the first breeding, as this is when she will most likely ovulate, you may return the doe to the buck's cage and let him service her a few more times.

If the doe is unwilling to lift (rise her back end up to allow the buck to breed her), you can try to table breed the pair. Rather than place the doe in the buck's cage, put them both on a table. Be sure to supervise so that they do not fall off of the table. This way, if necessary, you can hold the doe for the buck and she will be unable to back into the corner of the cage.

Pregnancy

The gestation period for a rabbit is 28-35 days. It is very important that you write down when you breed you does. The day after the doe is bred is day one of her pregnancy. Does do not require any special care during pregnancy. Do not increase her feed until after she kindles unless she is finishing all of her feed long before the next feeding and acts starved when fed. As with all rabbits, it is very important that your doe have constant access to fresh, clean water. On day 27 of her pregnancy, give the doe a nest box. A nest box can be wooden, metal, or wire with a cardboard liner. The box should only be slightly bigger than the doe. She should be able to get in to nurse the kits, but it should not be large enough that she is tempted to sit in it, as she will crush the kits. Do not give the doe the box early or she may use it as a toilet and soil the box. It is very important that the doe has a box to kindle in, so write down the day she is bred, count 27 days and then write the day to put the box in. Stuff the box with hay and give the doe hay in her cage to add to the nest if she desires. In the winter, it helps to add pine shavings to the bottom of the box to absorb moisture.

Kindling

Your doe may kindle anywhere from 28 to 35 days after she is bred, but many does kindle around day 31. Does generally kindle during the night, so you will most likely wake up to babies. Do

not pester a doe that is bred. Go out to check on her as many times as you would normally. Do not bother her, as you will stress her and she will not kindle while you are there. If you catch your doe kindling, leave and come back in about an hour.

It is extremely important to check the babies. After the doe has kindled, either pull the box to the front of the cage or take it out and set it on a table. The doe should have pulled fur to cover the babies, gently set this aside and pick up each kit one at a time. Check each one over to ensure that the doe completely cleaned it, that it is not deformed in any manner, and keep count. Kits are much stronger than you think and move a lot more than you would expect, so be very careful to hold them firmly and to not hold them in your open hand. Rather, keep them enclosed so that they cannot jump out of your hand. Remove any uneaten after-birth and soiled hay. Make sure that the babies are all together again in the nest in the same place when you are done and cover them as they were.

It is a myth that a doe will kill or eat her babies if you touch them. Your doe should be used to your presence and smell, as you should be handling your rabbits at least weekly, if not daily. If you are worried that the doe will harm the babies, when you put the box back in, touch the doe's nose so that all she can smell is your scent and she will not notice that the babies smell any differently. The doe may check on the babies when you put the box back in, but she should not harm them.

Caring For Kits

Check the babies every day. Make sure that none have gotten separated from the group or died and are rotting in the nest. Also make sure that they have been fed. A fed baby will have a round, taunt stomach. A wrinkly baby with dull fur has most likely not been fed. The kits will open their eyes around 10 days. It is recommended that you clean the box out at about this time so that they open their eyes in a clean nest to prevent getting a condition called "nest box eye." Once the kits' eyes are open, they will start