

Blaptica Dubia Roach Care & Info Sheet

What Are Dubia Roaches:

Blaptica dubia roaches are also known as the Guyana spotted roach, orange spotted roach, and Argentine roach, are a live bearing roach species native to parts of Central and South America.

Dubia roaches have many qualities that make them an excellent choice as a feeder insect, and they are quickly becoming one of the most popular feeder insects for a variety of reptiles.



Dubia roaches range in size from 1/8" nymphs to 2" adults, and are edible in all stages of their lifecycle.

Unfortunately pet stores generally do not carry dubia roaches, and breeding or purchasing dubia roaches online is usually the only way to get them. Buying dubia roaches as feeders can get expensive since some reptiles, particularly bearded dragons, will eat a lot of insects. However breeding and caring for dubia roaches is easy & inexpensive once you have the roaches. All that you need is a ventilated enclosure, heat, food, and water.

Dubia roaches reach adulthood at 4-5 months of age and can breed a few weeks after that. They are also capable of breeding for just about their entire lifespan, although they may breed less often as they get older. They will give birth to around 30-40 small nymphs every 1 ½-2 months. The chitin exoskeleton of dubia roaches cannot grow so they will periodically molt their skin as they grow larger, usually about 7 times in their lifespan. A newly molted or newborn roach will be white and very soft. Female dubia roaches can live up to 2 years, with the Males living about 1-1/2 years.

Because dubia roaches cannot climb slick surfaces feeding your bearded dragon in a 1½"-2" glass/ceramic dish with straight, smooth sides will make it difficult for the roaches to escape and you will know exactly how many your dragon has eaten. If one does escape, your dragon will hunt them down because they like eating them.

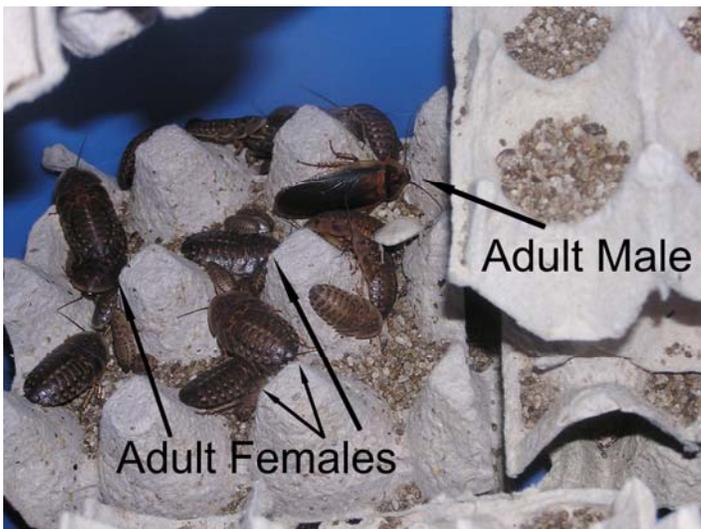
Blaptica Dubia Roach Care & Info Sheet

Nutritional value of common feeder insects:

Dubia roaches are more nutritious than many other insects commonly used for feeding reptiles. They are lower in fat than all of the “worms”, and higher in protein & calcium than most other insects used as feeders. They also have a longer intestinal tract than crickets that slows digestion and makes gut loading more effective.

Species	Moisture %	Protein %	Fat %	Ash %	Calcium (mg/100g)	Fiber %
Butter worm	60%	16%	5%	1%	43	unavailable
Crickets	74%	18%	6%		14	3%
Dubia Roach	61%	36%	7%	2%	20	unavailable
Locusts	62%	41%	5%	unavailable	unavailable	unavailable
Phoenix worm	<10%	17%	10%	N/A	34	unavailable
Silkworm	76%	64%	10%	8%	34	unavailable
Super worm	59%	20%	16%	1%	unavailable	unavailable
Waxwork	60%	18%	18%	1%	13	8%
Mealworm *	59%	10%	13%	1%	3	unavailable

* Never feed to bearded dragons



Blaptica Dubia Roach Care & Info Sheet

Roaches vs. Crickets; Dubia roaches have many advantages over crickets, and many of the other insects commonly used to feed reptiles. Initially they are more expensive, but once your colony is established the care they need is much less than with crickets or worms.

This chart compares dubia roaches and crickets and highlights some of the more beneficial advantages of using roaches as feeder insects.

Dubia Roaches	Crickets
1 Dubia roach has the nutritional value of 3-5 crickets.	Crickets have much less nutrition than dubia roaches.
Dubia roaches have much less chitin which allows reptiles to digest roaches much easier.	Crickets have more chitin and are harder to digest than dubia roaches.
Dubia Roaches are slow, do not climb smooth surfaces, jump, or fly and rarely escape.	Crickets can't climb or fly, but are relatively fast and can jump & escape easily.
High meat/shell ratio. Dubia roaches have 7 times more meat than crickets of comparable size which provides a much higher protein content.	Crickets have a much lower meat to shell ratio providing less protein & less nutrition.
Large size but not too big, and is edible in all stages of its lifecycle allowing feeding of appropriate sized insects.	Small size and lower meat content provides less nutrition for larger reptiles.
Dubia roaches do not carry parasites such as pin worms.	Crickets carry parasites.
Dubia roaches do not bite and cannot harm your reptile	Crickets bite and can harm your reptile.
Dubia roaches do not smell.	Crickets always smell bad.
Dubia roaches live long (up to 2 years) and don't die easily.	Crickets have a short life span (9 weeks) and easily die off.
Dubia roaches do not chirp or make noise.	Crickets are very noisy.
Dubia roaches easy to sex, reproduce easily, breed fast, & produce many live young.	Crickets are harder to sex, lay eggs, breed fairly slowly, and are harder to breed.
Dubia roaches are easily gut loaded because they have a long intestinal tract much slower digestion.	Crickets are hard to gut load because their metabolism is so fast, and it makes them die quicker.
Dubia Roaches are relatively expensive and are usually only available online or at Reptile expos.	Crickets are comparatively cheap and available at most pet stores.

Blaptica Dubia Roach Care & Info Sheet

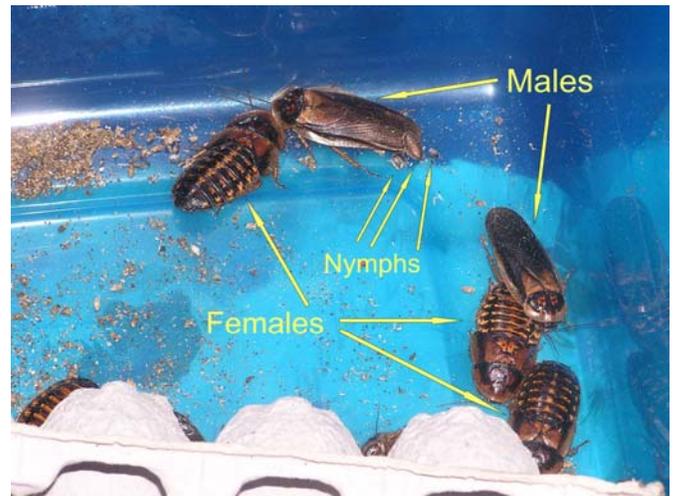
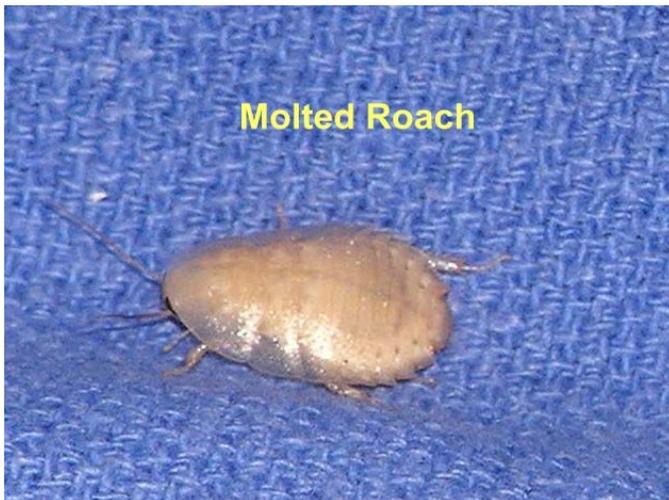
Starting a Dubia roach colony:

Setting up and taking care of a colony of dubia roaches (*Blaptica dubia*) is easy and inexpensive, except for the roaches. You can greatly reduce the expense of the roaches by starting with a small quantity of breeders & mixed roaches, and growing your own colony. If this is the route you chose, we suggest leaving them alone and not feeding out of your colony until it is well established and sufficient to provide your feeder needs. This will allow your colony to grow much quicker, freeing you from crickets. The length of time you will need to leave the colony alone will depend on the number of breeding age roaches you have. Blaptica dubia Roaches are easy and reliable breeders and if your adult dubia roaches are not producing young, then you are keeping the temperature too low. If juvenile & adult roaches are dying during incomplete molts, then the humidity is too low.



This is a list of everything you will need, and each requirement is explained in detail below with various options.

1. An enclosure.
2. A second container or enclosure to hold the roaches during cleaning & sorting.
3. Sorting boxes (optional)
4. Something for the roaches to hide in or under.
5. Heat.
6. Food.
7. Water source.
8. Roaches.



Blaptica Dubia Roach Care & Info Sheet

Care of dubia roaches:

Taking care of dubia roaches is easy, inexpensive, and requires less time and effort than you might think. All that is required is a ventilated container, a heat source, food, water, and something for them to hide under. Your colony should include roaches of all sizes in order to create a complete ecosystem.

Unlike crickets or super worms, roach enclosures do not smell and can be kept clean with very little maintenance. Dubia roaches prefer to be left alone and will do best if you don't mess with them. They should be checked daily to make sure they have food & water, and to remove any leftover food to prevent mold and bacteria growth. The enclosure only needs to be cleaned 2-3 times per year, and the frass (roach droppings & shed exoskeletons) should be allowed to build up. The enclosure should not be cleaned until there is more than 1"-2" of frass in the bottom of the enclosure and it is important not to remove it all because the frass provides a medium for the roaches to burrow into and also provides a food source for the nymphs. The roaches can be sorted, the feeders removed, and they can be moved into a holding container or their second enclosure. The initial enclosure can then be cleaned with dish soap, 10% bleach solution, or a commercial cleaner. The enclosures should be well rinsed and allowed to dry thoroughly before it is used. Some people put dermestid beetles in their colonies to remove any leftover food and dead roaches. These are commonly known as taxidermy beetles, and are used by taxidermists to remove meat from bones. We do not use these beetles as it only makes it more difficult to sort the roaches. If your colony smells "sweet", smells of ammonia, or you have gnats in your colony, it should be cleaned immediately because mold and bacteria can quickly decimate your colony.

Once your colony is established, you should remove your feeder stock for 1-2 months to avoid repeatedly disturbing your breeding colony. This would also be a good time to clean the enclosure if it is necessary. The feeders should be kept in a separate ventilated container and be provided food & water, but will not require a heat source as long as the temperature is above 65F°. It is also a good idea to remove any extra males at this time and use them as feeders. There should be 1 adult male to every 3-4 females. Any extra adult males left in your colony will only eat the food and provide more competition for the available resources for the females. We tend to err on the side of caution keeping the ratio of 1 male to 3 females and believe it is worth a little extra food & water to insure maximum breeding.



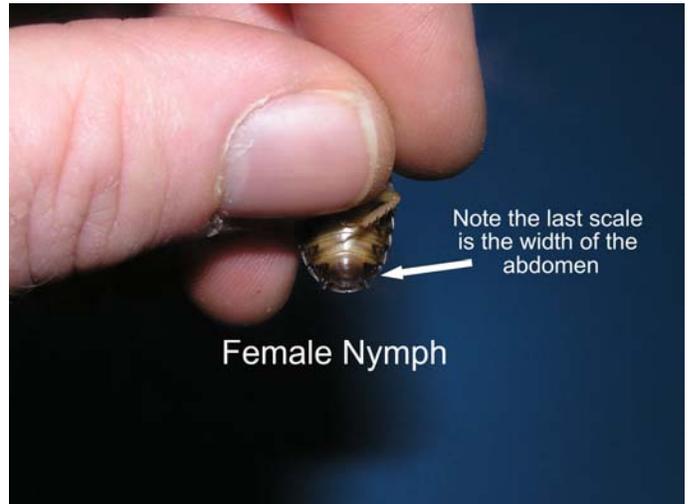
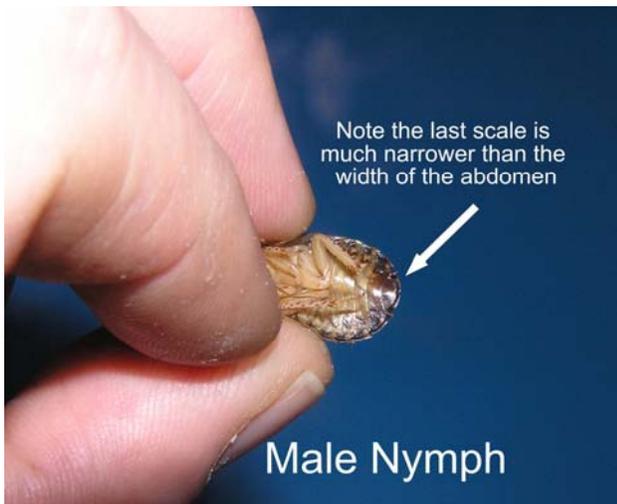
Blaptica Dubia Roach Care & Info Sheet

Sexing Dubia Roaches;

Dubia roaches are sexually dimorphic which means that the males & females look different. The adult males have full wings the length of their bodies, while the adult females have small stubs.



The larger nymphs can also be sexed. Look at the last segment on the bottom of their abdomen. On males the last segment is small and narrow. On females the last segment is large and is the full width of the abdomen. Also the females are also generally wider, and not as long as the males.



Blaptica Dubia Roach Care & Info Sheet

Housing:

There are many options available to house your roach colony, and choosing the correct one will depend on the size of the colony that you will need to produce a sufficient amount of feeders. Since dubia roaches can't climb or fly they can be kept in just about any container that has smooth perpendicular sides. Although dubia roaches can't fly, the males do have full wings and are able to briefly hover & even glide, but they can't gain altitude so are also unable to escape from smooth glass or plastic containers. Some people suggest using Vaseline or smooth packing tape around the top of the container on the inside, but we have not found this to be necessary. If any roaches do escape, it is usually due to human error during cleaning or sorting, and they are not able to survive or breed in the North American climate. It may be possible for them to survive in some areas like South Florida, however if there was a cold snap they would all die. You will also need an additional container to hold the colony while you are sorting them or cleaning their enclosure.



If you are planning a small colony to feed 1-2 reptiles that do not eat many insects then a 10 gallon aquarium would work fine. If you are raising them to feed a bearded dragon or 2, then you will need a much larger enclosure due to the number of insects that bearded dragons eat. You could use a larger aquarium, but they are expensive and hard to manage and move around. If you do chose to use an aquarium, then you will need to paint or cover the sides since roaches do not like light, and will breed better in an opaque enclosure. Be aware that nymphs will be able to climb up the sealant in the corners of the aquarium so you may have to put packing tape or Vaseline around the inside edges and the top of the seams. You would also need a screen top to provide adequate ventilation.

Another popular option is to use opaque plastic totes or plastic garbage cans. These are available in sizes up to 60 gallons, and are relatively inexpensive. If you chose to use the clear totes you will have to paint or cover the sides, so it is easier just to buy opaque totes. All that you have to do is to cut out a section of the lid and hot glue aluminum or steel screening over the hole. This provides the ventilation, keeps other insects out, and



Blaptica Dubia Roach Care & Info Sheet

allows you to place a light fixture over the hole as a heat source. For heat you can use a black or red light bulb, or you can paint a regular light bulb black with high temp barbeque paint.

We use 18-30 gallon opaque totes and prefer to have a second enclosure set up so we can just move the roaches from one enclosure to another when we are cleaning & sorting them. This allows us to clean the initial enclosures at our leisure and not have to clean it immediately so we can put them back into it.

There are 2 ways to setup your colony.

1. Using a natural set up:

The roaches can be set up in an enclosure which is made to resemble their natural environment. The enclosure would be the same plastic or glass container with smooth sides and a screened top used for the minimal setup, but it would have dirt, leaf litter, and branches for the roaches to climb on. It would have to be misted daily to keep the substrate moist and to keep the humidity high. The high humidity aids in shedding and reduces dehydration, unfortunately it also encourages mites, mold, and bacteria which can decimate your colony very fast. This makes cleaning more difficult & it must be done more frequently. Another issue with a natural setup is that it makes it difficult to locate the roaches which will burrow into the substrate. This setup is NOT recommended for a feeder colony.

2. Using a minimal set up:

A 'minimal' set up is the easiest most efficient way to house dubia roaches. The enclosure would be the same plastic or glass container used for the natural setup, but it would not have any substrate. Some people recommend substrate to trap the moisture & raise the humidity, but we have found this only increases the growth of mites, mold, and bacteria, thus increasing the frequency of cleanings, and makes finding the roaches more difficult. We do not use any substrate, instead we use cardboard egg crates, but you could also use paper towel rolls or crumpled up newspaper.

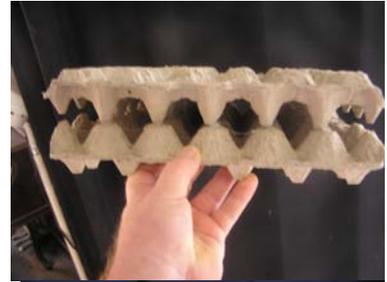
Substrate:

Should you use any substrate? Since the roaches breed just as well without substrate and it makes the maintenance much easier we chose not to use any. Instead we use cardboard egg crates to provide surface area and give the roaches something to hide in. Some people prefer to use substrate and that may work best for them. The only time we would even consider using a substrate is if we were unable get the humidity high enough in your roach colony for them to breed, or if the roaches were dying during incomplete molts. We have never had this problem. Before adding substrate you could try misting the sides of the enclosure, being careful not to get the food or egg crates wet which could promote the growth of mold & bacteria. Dubia roaches like to burrow, especially the nymphs, and if you do not have any substrate you will frequently find them under the feeding dishes. Over time, the frass will build up and provide something for the roaches to burrow in. Using substrate is a topic that has many answers but the final decision is yours.

Blaptica Dubia Roach Care & Info Sheet

These are some of the things commonly used as substrate for dubia roaches.

1. **Cardboard egg crates;** This is our preferred substrate. We like to glue 2 12 x12 sections of egg crate together and stack them horizontally on the bottom of the enclosure. They should be stacked so there are spaces between them for the roaches to move around. Some people recommend stacking them vertically to allow the frass to fall to the bottom of the enclosure, but we stack them horizontally for a number of reasons. The first is that since we use lights for heat, the top egg crate blocks the light from the lower levels and roaches prefer the dark. The second reason is that the frass is caught in the crates and provides small areas where the nymphs can burrow. The last reason is that it makes it easier to sort and clean the enclosure since the roaches can be moved 1 section at a time and sorted, or placed directly into the new enclosure. The egg crates give the roaches more surface area to climb on and hid in. Do not mist the egg crates or paper towel rolls as it can promote mold & bacteria.



2. **Newspaper;** Newspaper is the cheapest alternative and can be crumpled up or laid on the bottom of the enclosure. If it is laid on the bottom, there should be space between the edges of the sheets for the roaches to crawl into and hide. If you are misting your enclosure the newspaper will absorb the excess water and it dries pretty quickly.
3. **Paper towel rolls;** These may also be used as a substrate, but you would need a lot of them to provide the surface area necessary for a larger colony.
4. **Bran Bedding, Laying Mash Pellets, Rabbit Pellets, Landscape Pine Bark Nuggets, Straw, Pine Straw, Leaf Litter, Aspen Shavings, Coconut Fiber, Peat Moss, Sphagnum Moss;** All of these can be used as substrate and the one thing they have in common is that they all will promote mold & bacteria growth when it gets wet. If they are used they should be sterilized before use. They can be baked in an oven @ 200° for 1 hour, or it can be wet and micro-waved until it steams. We do not recommend any of these for use as a substrate, but some people do.

Blaptica Dubia Roach Care & Info Sheet

If you chose to use a substrate to increase the humidity, then only the area near the heat source should be moistened. The cool side of the enclosure should remain dry to allow for a place to put the food. If you have a moist substrate it is vital to constantly check to make sure there are no mites or mold. If there are or if you smell anything “sweet” the enclosure should be cleaned and the substrate re-sterilized.

Heating:

Dubia roaches are tropical insects and they breed best if the warm side of the enclosure is kept at 90F°-100F°. The cool end should be kept above 75F°-85F°. There should also be a temperature gradient for the roaches to cool down when they want. The egg crates should be placed towards the hot side of the enclosure and the food & “water should be placed at the cool end. A thermostat is usually not necessary, because you can tell from their behavior if the temp is correct. If they are all clustered away from the heat source then the enclosure is probably too hot, and if your adults are not breeding then it is probably too cold.

There are many ways to heat the enclosures. Some of the most common are locating the enclosure in a hot dark location like near the furnace, dryer, or hot water heater. They can also be heated by using a reptile heat mat, human heating pad, Heat tape, or incandescent light bulb.



If you have a separate container for your feeder roaches, they will not need a heat source as long as they are kept above 65F° so they can be kept in a dark closet or under the sink.

Food:

Food & water should be provided daily in low dishes that they can climb in & out of. Small dishes or Lids from containers work very well. We use plastic coffee can lids because they are deep enough to keep the food & water in place, but not too deep for the roaches. The food & water dishes should be cleaned routinely, with dish soap and water. They should be well rinsed and allowed dry thoroughly.

What do roaches eat? Well, roaches are scavengers so they will eat pretty much anything they find available, just remember that what goes into the roach eventually goes into your reptile. This is especially important for dubia roaches who have a long intestinal



to

Dry food should be left in the enclosure

Blaptica Dubia Roach Care & Info Sheet

tract and food can take up to 72 hours to digest which makes gut loading much more effective. They should be provided a dry food source that can be left in the enclosure some of the options include roach chow, dog or cat food, baby food, fish food, egg laying chicken feed, rabbit pellets, cereal, bread, etc. Some roach breeders recommend a high protein dry food, but others suggest a low protein dry food may be better and closer to their natural diet in the wild. We use egg laying chicken feed, and sometimes add powdered milk for extra calcium. Some people suggest that with proper gut loading of roaches can eliminate the need to dust the insects with supplements. We do not subscribe to this view, and believe that routine calcium & vitamin supplements are necessary for your reptile's health.

To supplement the dry food they should be provided fresh foods 2-3 times per week. The fresh foods provide an additional source of water and also a lot of important vitamins & minerals. They can be given fresh foods every day but it is not necessary and will just create more work since it has to be removed as daily and soon as it starts to mold. Mold will kill an entire colony of roaches very fast, so any fresh food that is not eaten should be removed and discarded every day. The "fresh" food can include fruits, vegetables, leftover dragon greens, any leftovers you have from preparing or eating meals, oranges, potatoes, grapes, carrots, bananas, apples, lettuce, and almost anything we can eat. All fruits & vegetables should be washed to remove any pesticides or preservatives which may be toxic to the roaches or to your reptile.

Always remember that what you feed your roaches will be fed to your reptile so you will want to be careful with which fresh foods, and what quantities you are feeding the roaches. Foods like bananas are high in phosphorous which binds with the calcium and prevents your reptile from absorbing it. Foods like spinach are high in oxalates which also interfere with the absorption of calcium. Foods like carrots are high in vitamin A which can actually be toxic to bearded dragons in high doses. Don't feed any rotten foods, spoiled foods, uncooked meat, or dairy products.

Water

While they will obtain a significant amount of moisture from the "fresh food" portion of their diet, a clean water source is as important as a good food source and there are many options. Dubia roaches are somewhat tolerant to low humidity, but they prefer a higher humidity and will breed much better with adequate moisture & humidity. If the humidity is too low you may notice roaches dying during incomplete molts.

Water can be provided with a shallow dish of water with a sponge in it, with commercial insect waterers, or with water crystals. If you use a dish of water and a piece of sponge, make sure the sponge doesn't touch the cardboard, as it will soak up all the moisture and promote mold & bacteria. Additionally the sponge will have to be boiled to kill any bacterial that is present



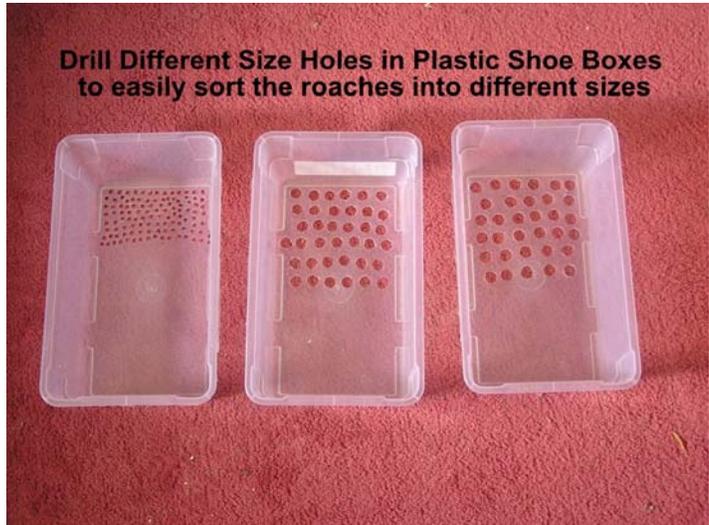
Blaptica Dubia Roach Care & Info Sheet

when the dish is cleaned. You can also mist the sides of the enclosure to provide water and increase the humidity, but make sure you do not wet the substrate or cardboard to avoid mold, bacteria, mites, & fruit flies. Water may not need to be added if you provide regular fruit and vegetables as long as the humidity is adequate.

We supply fresh water with polymer water crystals because we believe that standing water promotes mold & bacteria growth and increases the chance of accidental drowning. Water crystals also help to increase the humidity in the enclosure and decrease the need for misting. Water crystals are relatively inexpensive and can be easily purchased online, and 1 oz of crystals makes 1 gallon of water.

Sorting your roaches:

You can manually sort your roaches by hand, selecting the appropriate size insects to feed your reptile. Or you can make some sorting boxes. To make sorting boxes get 3-4 shoe box size plastic boxes, about \$1.00 each. You will also need a dish pan sized plastic container to catch the roaches. On one end of the 1st box drill a lot of 1/8" holes. In the second box drill a bunch of 3/8" holes, and in the 3rd box drill a bunch of 9/16" holes. You can change



the sizes of the holes, or use extra sorting boxes with different size holes, to adjust the sizes of roaches that are sorted. Remember not to remove all of the roaches of a particular size, some must be returned to the colony to avoid decimating a generation. If you do you will eventually run out of a particular size or find yourself without enough breeders.

1. Pour some roaches & frs into the box with the 1/8" holes and shake the box over the dish pan. This should allow the frs to fall through, but not too many roaches. If any roach nymphs pass through you can remove them and put them back into the sorting box. Dispose of the frs.
2. Next pour the roaches in the 1/8" sorting box into the 3/8" sorting box and shake it over the dishpan. This should sort out the nymph & small roaches. If this is the size you use as feeders you can move them to your feeder box. If not then they can be put in the colony enclosure.
3. Pour the roaches left in the 3/8" sorting box into the 9/16" sorting box and shake over the dishpan. This should sort out the mid-sized roaches. If these are your feeders then they would go into your feeder box, if not then return them to the colony.
4. The adult roaches are all that is left. Periodically it is a good idea to separate/count them to assure there is a sufficient number of females, and that the ratio is 1 adult male to 3-4 adult females.