How To Start Raising Your Own Feeder Insects!

Are you looking to start your own feeder insect breeding colony? If so, you are in the right place! There can be many different reasons why it may become advantageous to start breeding your own feeder insects, whether they be the savings in the amount of time and costs, for the greater practicality, or for several other reasons. However, there are also many considerations one should take into account before deciding to raise your own feeder insects (or "feeder bugs") for your insectivorous reptile well worth considering, especially if you are looking to be able to do so successfully. What scale are you looking to start breeding your insects on, whether personally/individually, or will you become a business with customers? What do you need to get started, what are some pitfalls to avoid, and what are the overall pros and cons to breeding your own feeder insects?

First Considerations!

-Perhaps one of the first considerations for potentially starting breeding feeder insects, will be what kinds, or species of animals are you maintaining them for, and which feeder insects are you looking to promulgate? There are many different types, or species of feeder insects out there, with widely varying nutritional qualities, which may make some better or more nutritional food sources for your reptile than others. Will you be breeding the insects as nutritional or dietary staples, for treats, or somewhere in between? Will you be breeding more than one type of feeder insects?

-Staples are those feeder insects which can readily be gut-loaded in order to provide the most nutritional diet for your reptile (or amphibian) as possible. **Gut-Loading** is the practice of feeding nutritionally sound fruits, vegetables, and other diets to your feeder insects with the aim that these nutrients can then therefore be passed down to your animal when they consume them. Crickets, fruit flies, and roaches (whether they be discoid, dubia, red runners, or the many other species that are available) tend to be the most common and widely used staple feeders. In many European and Asian nations, stick insects, grasshoppers, and/or locusts may also be readily used as staple feeders, accounting for some international differences in feeder insect use and availability.

-Regular feeders can also be used or bred, and can still be suitable and healthy choices, but are those that are not as readily able to be gut-loaded and/or may not be as readily usable in all of their different life stages as crickets or roaches. Some examples of these regular feeders can be your hornworms, silk worms, isopods, or some others. Finally, there are feeder insects which should be considered either as occasional "treats" only, or should only be supplemental to other feeder insects. These may or may not be able to be gut-loaded, and may not have all life stages as being readily consumable (i.e. the adult beetles thereof), and they can be fattier or more difficult to keep gut-loaded. These can include your superworms, mealworms, waxworms, and others. These of course, will be the adult beetles one would be breeding and allowing to pupate, since mealworms, waxworms, superworms, etc. are simply the larvae.

-Planning ahead and doing you research is perhaps one of the most important steps that can be taken when choosing or selecting your feeder insects. Read multiple articles and talk to multiple different people, as well as learn through trial and error. Where to get them in the first place? Initially buying your feeder insects from reputable and knowledgeable local hobbyists or enthusiasts who already breed their own, through your local herpetological society, local reptile expos and shows, or your local reptile or other pet stores can all be great ways of finding your feeder insects to get started with.

-Money and costs are two additional big considerations to consider before one starts breeding their feeder insects. Fortunately, there are still a lot of different ways and avenues one can look to for getting set up and started while still having it be relatively simple and inexpensive. Saving up, and asking around for the enclosures/housing (which can be as simple as opaque plastic storage bins or totes of suitable size and dimensions with enough airflow), food for your insects, and any other supplemental lighting, heating, or other aspects from second-hand sources can still be some of the best ways of still successfully starting with your feeder insects. Likewise, the food for your feeder insects need not necessarily be expensive or even necessarily still be suitable for human consumption; finding slightly past due fruits or vegetables from your local grocery store, supermarket, or local restaurant can be other possible ways of saving money.

-Space and practicality are two more large considerations to keep in mind before starting with feeder

insects as well. Different types of feeder “bugs” may require different types of housing, enclosures, and amounts of space. Where in your household are you planning on raising your feeder insects, and on what scale? Are you planning on dedicating an entire room, or even building or facility for your feeder insects, or can you do it from simply one corner of your home? How much are you looking to produce, and how many animals will they be sustained for?

You’re All Set! Now What???

-The enclosure(s) you will need for feeder insects can vary depending the types of insects one will be raising, and whether you will be propagating multiple different insects. In the vast majority of cases, however, the housing or enclosures one can use for feeder insects can be relatively simple and need not be expensive, as long as they are secure and escape-proof (and have either a securely and tightly fitting top or lid, or smooth surfaces in which the insects are unable to climb up or out of). Adequate airflow and ventilation are really the only other considerations for an enclosure, and several different forms of enclosures can be used including glass aquariums or terrariums, plastic opaque shoeboxes or other plastic totes or containers, or delicups (for smaller and more delicate cultures such as for isopods or fruit flies).

Example Roach Setup. And Feeder Mealworm Example Setup.

-Different types of feeder insects may require different substrates. A commercially available Wheat Bran substrate can work well for waxworms, superworms, and mealworms, while vermiculite, coconut fiber, pine shavings, sand or sand mixtures, peat moss, bark substrates, or even just newspaper, paper towels, or even a bare bottom with no substrate can work well for your staple feeders such as crickets and roaches. Plastic egg cartons can also be readily obtained as well from local restaurants and supermarkets, which can provide as additional substrate and hiding places as well. Other than this, there is not really much else that feeder insects require as enclosure furnishings or décor provided they are otherwise kept adequately fed and hydrated.

-For temperatures, lighting, and humidity, this will again depend on which types of feeder insects one will be propagating, as well as where one lives to a large degree, and whether any supplemental heating would need to be provided. It can still be beneficial to provide a routine, day-to-night cycle for your feeder insects regardless, for their optimal health and nutritional value. Roaches generally tend to be hardier staple feeder insects than crickets, and are less prone to cannibalism and dehydration, but may cost more to purchase than crickets. Most types of feeder insects generally can do fine as long as

temperatures do not drop below 60 degrees F, and they are also not overheated. To create and establish a day-night cycle, or to provide the necessary heating (when it may be needed), one can use a low-wattage incandescent bulb, Flexwatt heating tape, or heating pad attached to a thermostat.

A number of different commercially available feeder insect racks, plastic storage cubbies, or even your own DIY (Do-it-Yourself) rack setup can be a much more practicable and space efficient method of housing your feeder insects, which can be made from wood or lumber, plastic, melamine, or any other number of building materials.

-Different types of feeder insects have different characteristics between males and females, and which will depend on each type of feeder insect. Sexing your feeder insects will be good to know, however, don't worry too much about, or spend too much time wondering which sexes you have, as there will already probably be both males and females in the cultures or supplies you will have initially purchased or are maintaining. Males of some roach species can be more territorial, however, and ensuring one has good sex ratios in their feeder insects can still be important. There is also not usually much else one needs to do in order to get your feeder insects to breed, provided they are kept at the proper temperatures, humidity, and day-to-night light cycles. They can then be sorted, or separated into whichever life stage or size one wishes (i.e. small, medium large roaches, pinhead, ¼", 3/8", ½", 1"+ for crickets, etc.).

<u>The Most Important Consideration!</u>

-Perhaps the most important consideration when raising or maintaining any feeder insects will be ensuring they are treated well, and are receiving the proper food, nutrition, and diet, as well as hydration. THIS CANNOT BE STATED ENOUGH!!! Poorly maintained feeder "bugs" or insects" can lead to poorly maintained animals which will eat them, and thus can make for terrible feeders. As stated earlier, **Gut-Loading** your feeder insects, whenever possible, with the right foods, or otherwise **Dusting** with commercially available Calcium or Vitamin D3 are key considerations! Fruits such as sliced apples, oranges, or bananas, Cut Vegetables such as carrots, squash, potatoes, peppers, or leafy greens can all be good food for many feeder insects, particularly roaches and crickets.

A variety of freshly cut fruits and/or vegetables can be good, nutritional diets for many types of feeder insects.

A number of different commercially available feeder insect diets are also widely available. Some of these are made by Repashy, Mazuiri, and other brands.

-Grains such as alfalfa, wheat germ, or rice cereal can also be suitable food for larval feeders such as waxworms, superworms, and mealworms, while hornworms feed almost exclusively on solanaceous plant leaves such as tomato leaves. Likewise, a homemade “dry chow” can also be created, or there are many commercially available feeder insect diets out there, with some being better choices than others. Somewhat too far gone, but not moldy fruits and vegetables, or leftover table scraps thereof, are perhaps the best choices as food, however.

-Most feeder insects do not require a water bowl or water dish, and can obtain the water and hydration they need from either water crystals or gels (or similar commercially available products), or they are able to derive it from a quality diet from the fruits and vegetables they are eating.

<u>Other Final Thoughts, Tips, and Time Commitments?</u>

-Generally speaking, you shouldn’t have to worry about legalities in most cases when purchasing or maintaining most commonly and readily available types of feeder insects on the pet market. However, if one wants to look into raising some of the stranger or more bizarre species which may be illegal or more heavily regulated in some countries, having the correct permits or licenses on hand may be advisable in these more unusual cases.

-But why go through the trouble of raising your own feeder insects when they can just be collected from outside? Well, there are many reasons why this is not necessarily a good idea. Depending on what exactly the insects are, some, such as boxelder bugs, may be toxic or distasteful to reptiles and

amphibians, and are thus not good choices as feeders. Some “wild” insects such as field crickets (instead of the banded or house crickets) can also have much harder exoskeletons or contain higher levels of chiton, which can be more difficult for your pet reptile to properly digest. Depending on one’s area, there can also be a risk of these insects being contaminated with any local chemicals, herbicides, or pesticides that may have been recently applied in an area. For the health and well-being of our pets, it is always a better idea to stick with well-known and well-established feeder insects that we tend to breed as staples specifically for pet animals.

Superworms.

-Daily care and maintenance is really going to depend on the types of feeder insects you are maintaining, the scale of one’s operation, and other things such as whether one will be preparing their own diets and gut-loading, etc., as well as the amount of cleaning and maintenance of uneaten food and/or soiled furnishings and substrate on a daily, weekly, or monthly basis. The amount of maintenance required will also depend on how self-sustaining or self-sufficient your feeder insects are going to be. How many animals are you planning to be able to feed? **Frass** is the leftover feces and waste produced by feeder insects which should be cleaned out periodically. Making sure one has consistency and an efficient and effective routine down for how often their feeder insects need to be cleaned and maintained is always a good step, particularly in order to mitigate any objectionable odors or escapes and potential household infestations one would probably want to prevent.