



# Bearded Dragon Information and Care Guide

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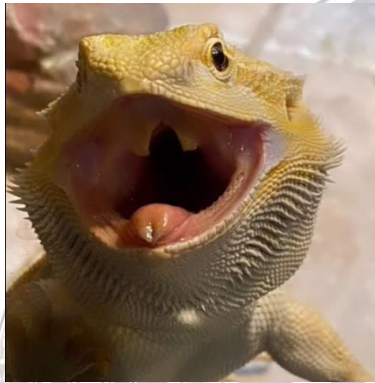
Welcome to the TKO Exotic's Information and Care Guide to Bearded Dragons. This comprehensive guide contains information on bearded dragons as well as their care. This should in no way be used as a veterinarian substitute. If you Bearded Dragon is sick or injured please bring them to a Vet as soon as possible:

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If you have any questions regarding the information contained in this guide or have other questions not covered here please reach out to us and we will gladly help you!

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Bearded Dragons have been around since before the time of the Dinosaurs. Bearded dragons (also known as the inland bearded dragon, central bearded dragon, or yellow-headed bearded dragon) are agamid lizards native to eastern and central Australia. They can be found in a variety of habitats,



including semiarid desert, scrublands, and dry forests. They earned their name from their spiky, expandable throat that can look very much like a beard, especially when they make it turn black. These lizards are diurnal, meaning that they are most active during the day. They

love to bask, and are commonly found sunbathing on everything from rocks and fallen branches to fenceposts and picnic tables. Although they are technically terrestrial, bearded dragons are both excellent climbers and skilled burrowers. Since they are diurnal or active during the day, they also do their hunting during the day. Bearded dragons are omnivorous, so aside from munching a variety of vegetation, they mostly prey upon insects, with the occasional small rodent or lizard. Bearded Dragons can grow to be 18" - 24" (45-61 cm) long from nose to tail and have an average lifespan of 10-15 years, although they are capable of living for 20 years or longer. They are usually sexually mature and fully grown at 1-2 years old. They also possess a variety of adaptations that make them perfectly suited to their natural environment:

- Sticky tongue for grabbing insect prey, like a chameleon

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- Third (parietal) eye on top of their head for detecting predators
  - Spiky scales—usually soft—can be tightened into a sharp spines for self-defense
  - Can darken their color to absorb heat more efficiently
  - Can inflate abdomen to facilitate floating in deep water

Their natural coloration is dull brown or tan with red or gold highlights, depending on local soil color, but modern breeding practices have produced a variety of color morphs from white to lemon yellow to dark red. Some breeders specialize in dragons with bright blue “tiger bars.” Modern breeding has also produced different scale textures as well: Duffers (multidirectional scales) and Leatherbacks (small, smooth scales), Silkbacks also know as Silkies (scaleless bearded dragons. This one is controversial as they are prone to health issues and have difficulty shedding their skin).

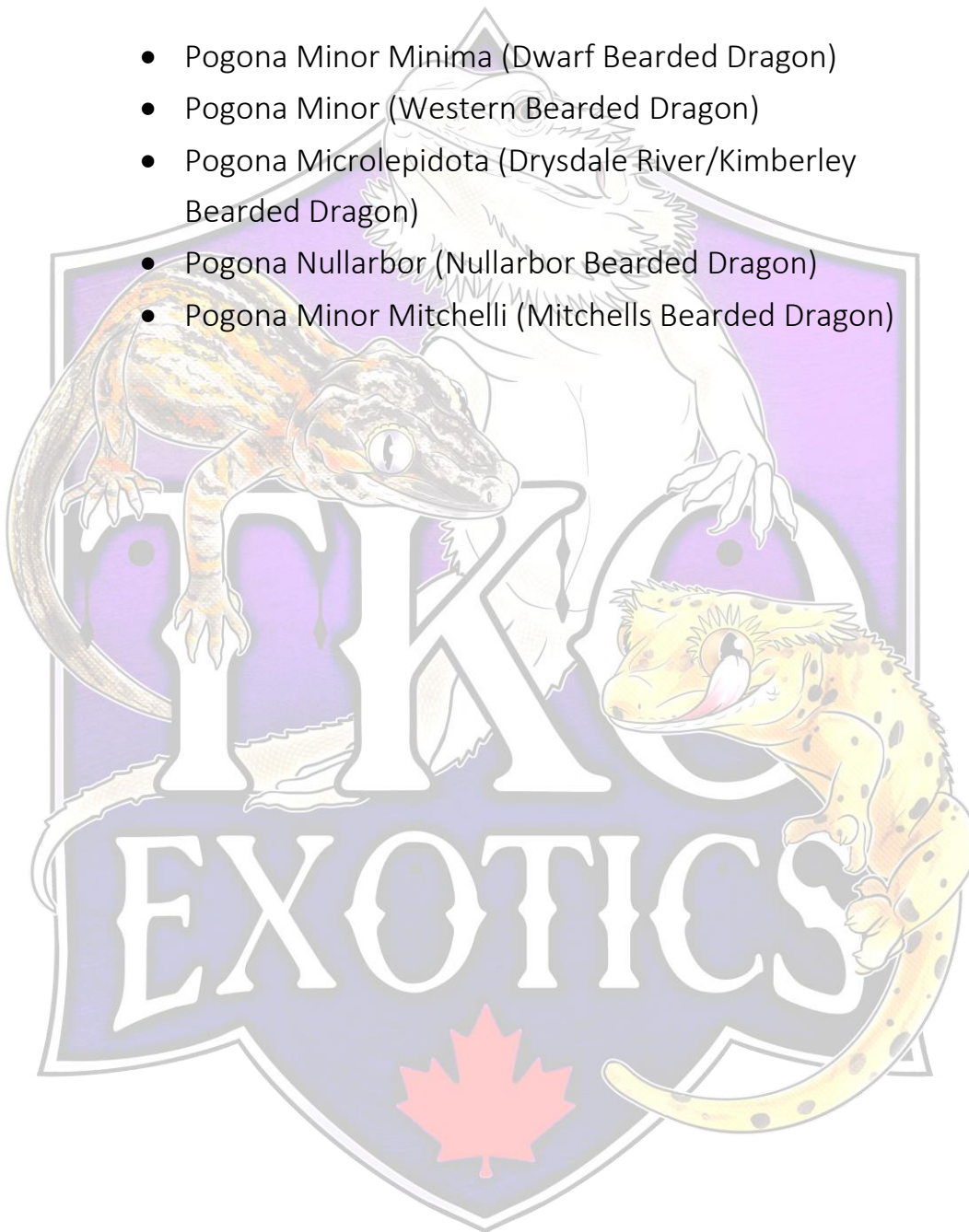
Bearded dragons are exceptionally popular as pets, with a calm, curious temperament and array of social behaviors that makes them a safe, entertaining and fun first reptile. They have full-color vision that is better than humans and a keen sense of smell that helps them recognize their keepers, and some people claim that their dragons respond to their names. All bearded dragons available for sale outside of Australia are captive bred. As pets the most common subspecies of Bearded Dragons are Central Bearded Dragons (*Pogona Vitticeps*), Rankins Dragons (*Pogona Henrylawsoni*) and Eastern or Coastal Bearded Dragons (*Pogona Barbata*). There are many other subspecies of these animals and their care is relatively



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the same. The other less common subspecies of Bearded Dragons are:

- Pogona Minor Minima (Dwarf Bearded Dragon)
- Pogona Minor (Western Bearded Dragon)
- Pogona Microlepidota (Drysdale River/Kimberley Bearded Dragon)
- Pogona Nullarbor (Nullarbor Bearded Dragon)
- Pogona Minor Mitchelli (Mitchells Bearded Dragon)



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## Substrate:

“Substrate” is what many reptile keepers call their animal’s bedding or the flooring in their enclosure. Opinions on appropriate bearded dragon substrate vary widely in the dragon keeper world. This is a list of options so you can pick one that fits your lifestyle, taste, and needs best.

If you choose to use a loose substrate, you will need approximately 80-120 quarts / 2.7-4 cubic feet of substrate in order to create a substrate layer 4-6” deep in an enclosure with a 4×2 footprint.

### Your Choices:

Some substrates mimic a bearded dragon’s natural environment in Australia, making them the best. They are burrowable, which means that your dragon can dig in a nice thick layer of these substrates. This provides enrichment and gives them the ability to do something they enjoy doing. Although they are technically “loose” substrates, they do not pose an impaction risk because they pack well and are composed of natural materials that bearded dragon’s digestive tracts are built to handle. Impaction is what happens when an animal, in this case a bearded dragon eats or ingests something their system can’t break it down and it partially or fully blocks their digestive tract. Untreated this condition is fatal to the animal as food cannot pass through the digestive tract and be passed.

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Below are the best loose substrates for your bearded dragon:

- Jurassic Natural Australian Desert Dragon Habitat — Actual Australian sand/soil harvested from Central Australia. This is the best way to replicate their natural environment as it's from their natural environment.
- Jurassic Reptile Substrate — Dust-free, soft, natural sand with a very fine texture.
- Zoo Med ReptiSand — Super fine quartz sand available in white, red, or black (natural colors, not dyed). Read the package carefully this product can be confused with Vita Sand or Reptilite
- Exo Terra Desert Sand/River Sand — Super fine quartz sand available in yellow, red, black, or brown (natural colors, not dyed).
- DIY naturalistic mix — 50% sand (preferably very fine), 30% organic topsoil, 20% Zoo Med Excavator Clay. (NOT bioactive-ready!)

Many long time people in the hobby believe that loose substrate is all bad however In a 2017 study, despite most of the dragons having been housed on loose substrate, very few patients were impacted. Most of the few impaction cases that there were already sick with other conditions such as parasite infestation and MBD (Metabolic Bone Disease we will talk about this later in this guide), which were attributed as causing the impaction.



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Below are better than good substrates for your bearded dragon as they retain heat well and are more attractive, but are not great for burrowing

- Zoo Med Excavator Clay
- Slate tile

Below are good substrates for a bearded dragon:

These substrates are cheap, sterile, and make cleaning easy however do not provide enrichment by letting a dragon dig and burrow:

- Paper towels
- Newspaper
- Linoleum (Please ensure its low VOC)
- Shelf liner (Please ensure it's low VOC)

Below are substrates pose significant health risks to your bearded dragon. We strongly suggest **NOT** using these as they can harm you Beardie:

- Calcium sand — leads to impaction if ingested due to presence of calcium carbonate
- Vitamin sand— leads to impaction if ingested due to presence of calcium carbonate
- Ground nut shell — dusty and causes impaction if accidentally ingested
- Wood products (bark, shavings, etc.) — causes impaction if accidentally ingested and some types of wood are toxic to reptiles

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- Reptile carpet — fibrous nature traps and breeds bacteria, can also catch claws and break toes
  - Glues and adhesives can be dangerous to bearded dragons as they contain things that are toxic to them as well they can get stuck on it and injure themselves trying to get away or if you try to remove the stuck item.





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## Enclosure and Décor:

Enclosure size is something that is argued about in the bearded dragon keeper community. An enclosure needs to have a temperature gradient (warm side and cool side) so that the animal can move to a spot where the temperature is what they want at that specific time. With this in mind small enclosures not only do not give them enough room to move around, climb and explore; it also doesn't allow for them to have a warm side and cool side. It is recommended to have an enclosure that is 4 Ft long by 2 Ft Wide and 2 Ft high. This gives them room for cruising around and climbing as well as give them the temperature gradient they need. If you wish to go bigger than this that's great just ensure there is proper UV lighting coverage, it's warm enough for them and the humidity is within the correct range (Temperature and Humidity information is covered later).

Bearded dragons need "furniture" in their house the same as we need it in ours. No matter how big your bearded dragon's enclosure is, they will need something to do while it in there to prevent boredom and be comfortable. These enrichment items you chose for inside for them to use shouldn't be just for looks they should have function as well. After all, an enclosure is only as functional as its 'furniture'.

As you create an indoor habitat for your bearded dragon, keep in mind that Bearded Dragons are native to Australia, where its habitat spans desert and grassland. That being said, there are so many options when it comes to bearded dragon decorations. Some people prefer to try to replicate their natural environment as closely

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as possible. Others prefer a more tropical look. And still others like to turn their beardie's home into something more like a dollhouse. The most important thing for you to do is:

- make sure it can accommodate a bearded dragon's temperature, UV, and humidity requirements
- make sure it's safe for your Bearded Dragon
- choose a variety of furnishings that allow your pet to exercise natural behaviors such as climbing, resting, hiding, and hunting/foraging
- Do not use wood from conifers (trees that have needles ex pine or spruce) as they are toxic to most reptiles

Good decorations make a terrarium look good, but they're also important for exercise, mental stimulation, and helping keep your bearded dragon healthy. In zoos, enclosure décor and "toys" are called enrichment items. A common misconception that modern reptile husbandry experts are working to remove is that reptiles are stupid creatures that do not need "toys" or "decorations" beyond their keeper's fancy. Researchers at the University of Lincoln in the United Kingdom and Hungary wanted to know if Bearded Dragons can learn from each other. In their study they were able to prove they can indeed learn from each other. This research shows that the bearded dragon is capable of social learning, something that was previously only thought to be a trait only birds and higher mammals possessed.

Functional décor items are a must with bearded dragons as they need someplace to bask and a place that makes them feel hidden and safe. So having a rock or some kind of basking platform that

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holds heat (but make sure it doesn't get too hot) is important. Without the proper level of heat your bearded dragon will not be able to digest food properly and can lead to health issues. As mentioned above they also need a place to hide or burrow. Many keepers use hides in place of loose substrates which is fine as long as there is somewhere in their enclosure they can get away and hide.

This cave or hiding place also serves as a place for them to go if they go into brumation. Brumation is like a reptile version of hibernation that they do in the wild when the weather changes and gets colder. Even in a temperature controlled environment they can go into this state. While they are brumating it's best to handle them as little as possible and just let them sleep (brumating is covered more in the behaviors section).

### **Safe Plants:**

If you want to include some live plants in your bearded dragon's enclosure they must be ones that won't make them sick, Bearded Dragons tend to try to eat anything green, so accidentally ingesting a piece of toxic plant can be harmful or even deadly. Here are some heat-tolerant live plants that can be used in bearded dragon enclosures:

- Air plant (Tillandsia)
- Agave
- Aloe
- Carex grass
- Elephant bush



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- Festuca grass
  - Gasteria
  - Haworthia
  - Hens and chicks (Echeveria)
  - Ice Plant
  - Jade plant (Crassula ovata)
  - Prickly pear cactus (Opuntia danicolor) (spineless)
  - Sempervivum

Keep in mind that having live plants in your enclosure will raise the ambient humidity. Many keepers choose to plant them on the cool side of the enclosure to create a humidity gradient alongside the temperature gradient.

The rest is completely up to you but we recommend having things to climb in their enclosure as well. One of the most important parts of their décor is having fun while decorating. Just make sure the items are clean, can be cleaned and are dragon safe.

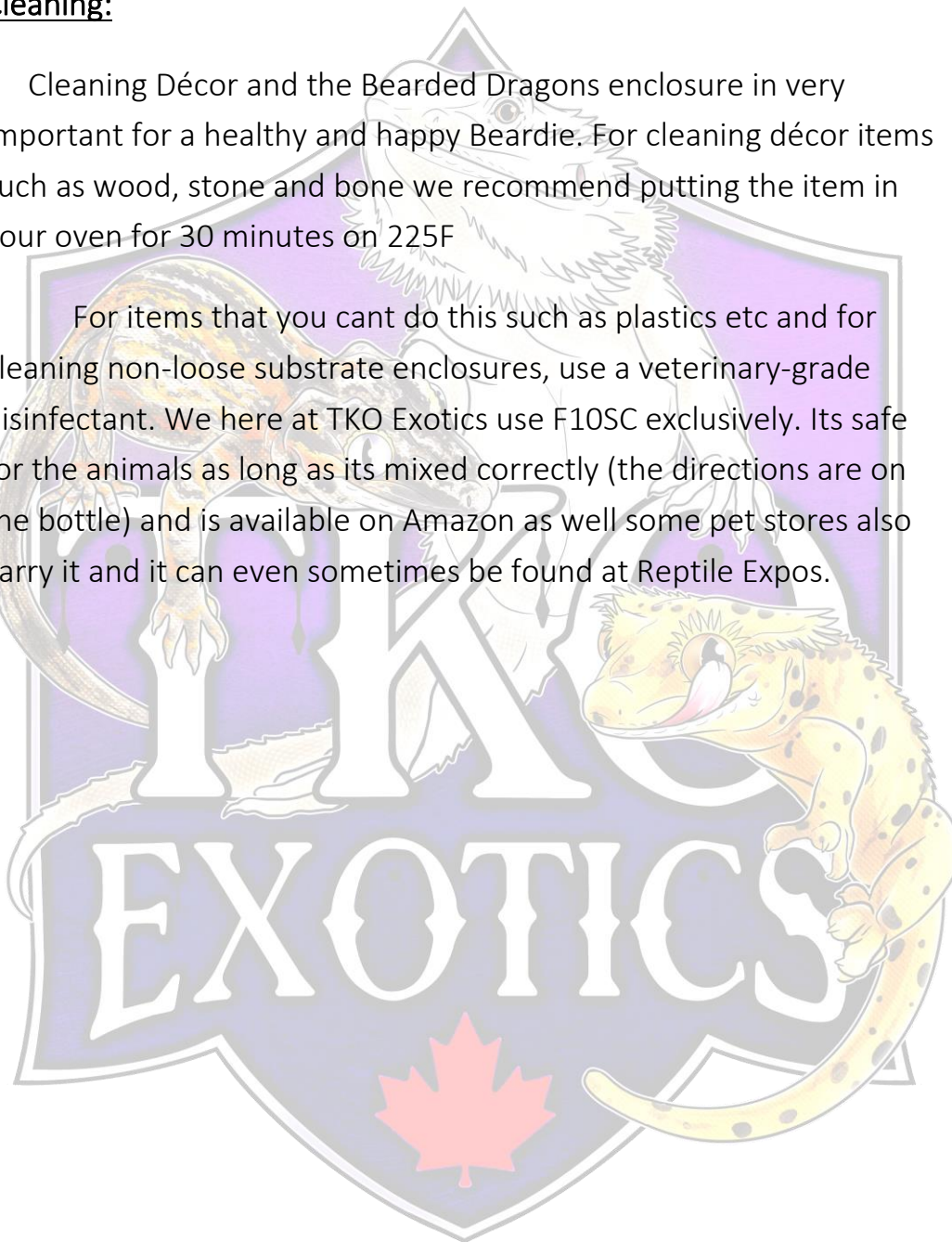
Something you see in many enclosures are hammocks. Beardies generally love them but they can be a danger to them as they can harbor bacteria, their nails can get stuck in the material especially mesh ones or woven ones which can cause broken toes and they just don't make a good or proper basking spot. If you wish to put a hammock in your Dragon's enclosure we recommend a fabric or cloth one just be sure to wash it regularly and if it gets pooped on.

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## Cleaning:

Cleaning Décor and the Bearded Dragons enclosure is very important for a healthy and happy Beardie. For cleaning décor items such as wood, stone and bone we recommend putting the item in your oven for 30 minutes on 225F

For items that you can't do this such as plastics etc and for cleaning non-loose substrate enclosures, use a veterinary-grade disinfectant. We here at TKO Exotics use F10SC exclusively. It's safe for the animals as long as it's mixed correctly (the directions are on the bottle) and is available on Amazon as well some pet stores also carry it and it can even sometimes be found at Reptile Expos.



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## Lighting, Heat and Humidity:

### UVB Lighting:

Bearded dragons are diurnal, which means that they are active during the day and they are pretty much sun worshipers. In fact, their parietal (third) eye uses bright light to set the dragon's circadian rhythm and activity patterns. In other words, they need to have a strong reliable source of UVB Lighting and plenty of bright white light so that they have a proper sleep/wake cycle.

UVB Lighting is critical for your Beardie's health both mental and physical. UVB Light is critical for them to absorb the nutrients in their food, without it they will develop health problems. Some health problems will unfortunately never go away but can be stopped once the lighting is introduced.

An unfortunately common health problem with Bearded Dragons is known as MBD or Metabolic Bone Disease. This is caused by lack of or inadequate UVB Light. MBD happens because the Beardie cannot process the calcium, vitamin D3, or phosphorous in their food because they need UVB light to do so. MBD in early stages is reversible however in later stages unfortunately it isn't. Due to them not being able to process these vitamins and minerals their bones first start to go soft which leaves them more susceptible to broken bones but will progress into them not being able to eat, their bones deforming, losing the ability to walk and climb and even death.



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The following UVB bulbs are appropriate for use with bearded dragons. Pay attention to the recommended basking distances and adjustments for mesh obstruction, as UVB output/strength varies with distances and whether it's partially blocked by mesh.

- Arcadia T5 HO Desert 12% / Zoo Med T5 HO Reptisun 10.0  
Mesh: 9-11" or 23-27cm  
No Mesh: 14-17" or 35-42cm
- Arcadia T5 HO Dragon 14%  
Mesh: 10-12" or 25-30cm  
No Mesh: 14-18" or 35-45cm

(These recommendations are an approximation based on the assumption of a ~45% mesh block)

For maximum effectiveness and safety, the bulb should be roughly  $\frac{1}{2}$  to  $\frac{2}{3}$  the length of your enclosure and placed on the same side as your heat lamps. For a 4' enclosure, that means you will need a 22" UVB bulb. For a 6' enclosure, you will need a 34" UVB bulb.

Make sure that your fixture does not have a piece of glass or plastic to "protect" the bulb. UVB rays are blocked by glass and plastic, rendering that bulb you bought completely useless.

These bulbs do not last forever and just because you see light from the bulb doesn't mean that the light is producing UVB light

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anymore. Every manufacturer's recommendations are different but as a rule, change you Dragon's UVB bulb once a year at most.

### Heat:

Like all reptiles, bearded dragons need heat to digest and maintain their immune systems. Without it, they will get sick and die. Since bearded dragons are basking lizards, they use heat most effectively from an overhead heat source that imitates the sun.

Since they are cold-blooded, bearded dragons need a temperature gradient in their enclosure in order to be able to regulate their body temperature. Although they can tolerate very high basking temperatures, they need to be able to escape to cooler areas in the enclosure to prevent overheating. For example, if we were looking at an average enclosure from left to right, the highest temperatures should be at the far left, gradually descending to the lowest temperatures on the far right.

- Basking side surface temperature— 108-113°F (42-45°C)
- Cool side surface temperature — 77-85°F (25-29°C)
- Air temperature gradient — 72-99°F (22-37°C)

For a heat source there are many manufacturers and different types of bulbs. Just take care that it's providing enough heat or not too much. There's everything from heat bulbs, to Infra red heat emitter bulbs to ceramic heat emitter bulb(not the same as the red heat lights. These are not good for beardies as they CAN see the light and it will hurt their sleep and some studies suggest it can effect their vision over time) If you chose to use a ceramic heat emitter or

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infra red heat emitter bulb we strongly suggest getting a thermostat for it. Ourselves at TKO Exotics we use InkBird's IPT-2CH. It's a smart thermostat that connects to an app that will alert you if the enclosure gets too hot or too cold based on the settings you program. This fantastic thermostat is available on Amazon and is reasonably priced (no we aren't sponsored by them but we definitely have quite a few of them and have used them long enough to be happy to suggest them).

### Humidity:

Every living creature needs water, even the ones that live in arid desert environments, this includes your bearded dragon. While you can keep a water dish in the enclosure, bearded dragons get most of their water from their food and from the air that they breathe. Most Beardies won't drink from standing water as it's an instinct for them to only drink from moving water. We generally give our dragons baths or bring them to the sink for running water. The ambient humidity in your bearded dragon's enclosure should average between 30-60%. To keep track of this there are many digital thermometer and humidity gauge combos and we definitely recommend them rather than the analog or needle gauge ones as they are far more precise. We also recommend getting a temp gun also so you can get a more accurate read of the temperatures in the enclosure.



## Food and Supplements:

Down to the meat and potatoes, almost literally. You need to know what these guys can and can't eat and how often. Well depending on the life stage your Bearded Dragon is in this varies at least in the amount and frequency.

- Hatchlings (0-3 months old)  
Insects 3x/day, as many as the dragon will eat  
Vegetables daily, as much as the dragon will eat  
Calcium powder on all insects and salads  
Multivitamin powder on salads 2x/week
- Juveniles (<12" /25cm long)  
5-6 head-sized insects daily, or equivalent portion  
Vegetables daily (3x larger than insect volume)  
Calcium powder on all insects and salads  
Multivitamin powder on salads 2x/week
- Subadults and Adults (>12" /25cm long)  
3-4 head-sized insects 2x-3x a week, or equivalent portion  
Vegetables daily (one portion = size of dragon's head)  
Calcium powder on all insects and salads  
Multivitamin powder on salads 1x/week
- Gravid females (females that are about to lay eggs)  
4-5 head-sized insects 2x/week, or equivalent portion  
Vegetables daily (one portion = size of dragon's head)  
Calcium powder on all insects and salads  
Multivitamin powder on salads 2x/week

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To put this into a percentage, you're looking at roughly 80% protein for hatchlings, 60% for juveniles, and 15-30% for adults.

### **Bugs and Protein:**

When choosing bearded dragon bugs, make sure that they are no bigger than the space between your dragon's eyes. This rule can be bent for insects such as superworms and hornworms, but is extremely important for roaches and crickets.

The best feeder insects or meals for protein are:

- Black soldier fly larvae
- Dubia roaches
- Discoid roaches
- Silkworms
- Superworms
- Mealworms
- Repashy Grub Pie gel mix
- Repashy Beardie Buffet

Do not feed your bearded dragon wild caught bugs. They can contain pesticides and parasites that can harm or kill your animal.

The below insects can be used as a treat for your beardie but shouldn't be given on a regular basis as they are high in fat and can cause your beardie to become obese which like us can lead to health problems.

- Butterworms
- Waxworms

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- Hornworms (captive only as wild are toxic)
  - Scrambled Eggs (nothing other than the egg in it)

I'm sure you have noticed that Grasshoppers, Locusts and Crickets are not on the lists above. While they are a great source of protein and healthy for your dragon, you need to ensure they come from a reputable source as they can contain harmful parasites. Also these cannot be left in the enclosure with your Beardie after feeding time if they're live as they will bite your dragon while they are sleeping and these bites can become infected. Lastly they're really loud and good at escaping into some unreachable dark corner of your house.

### Veggies and Plants AKA Salad:

Every bearded dragon no matter the age should be offered a salad of nutritious greens and vegetables every day. While they may eat it all, it's best to offer some for snacking, and that will make the transition to a main diet of vegetables later on much much easier.

Bearded dragons are omnivores like humans, they need a variety. Feeding a variety of veggies gives your dragon a good balance of the nutrients s/he needs to keep bones healthy and immune system going strong. Fortunately, the list of dragon-safe vegetables is a long one as some items are only seasonally available or are not available everywhere. The below items can be fed to your Dragon every day:

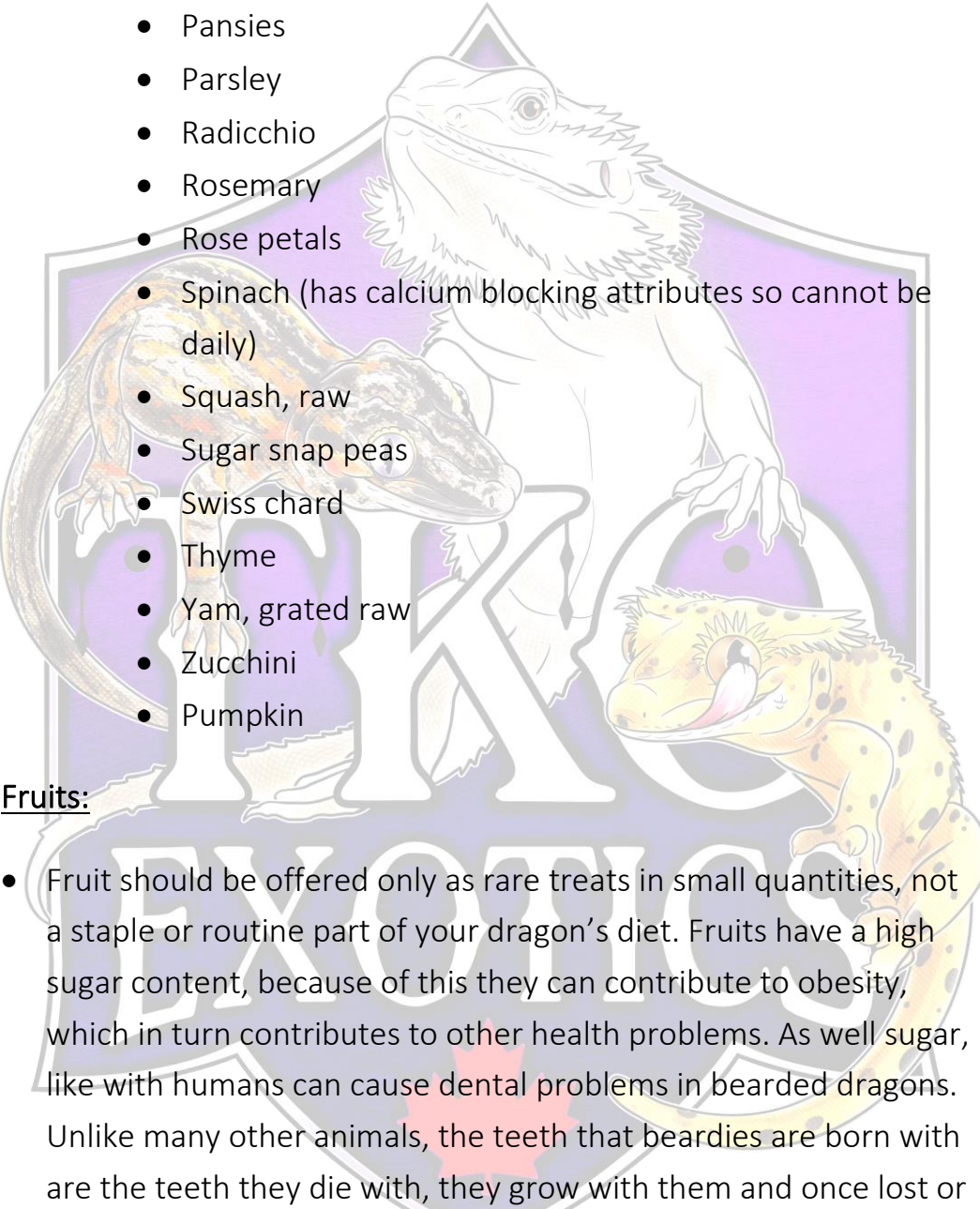
- Arugula/Rocket
- Bok choy
- Cactus pads



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- Collard greens/Spring greens
  - Endive/Chicory
  - Escarole
  - Kale
  - Mustard greens
  - Mustard cress
  - Pea shoots
  - Spring mix
  - Turnip greens
  - Watercress
  - Dandelion Greens (ensure no pesticides/herbicides)
  - Bell pepper (Red and Yellow)

Just like with their bugs there are treat vegetables too. These items should only be fed occasionally:

- Artichoke heart
- Asparagus
- Basil
- Beet leaves
- Carnations
- Cilantro
- Carrot greens
- Cucumber, peeled
- Carrot, grated raw
- Clover (ensure no pesticides/herbicides)
- Fennel
- Lemon balm
- Lemongrass

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- Mint leaves
  - Nasturtium
  - Pansies
  - Parsley
  - Radicchio
  - Rosemary
  - Rose petals
  - Spinach (has calcium blocking attributes so cannot be daily)
  - Squash, raw
  - Sugar snap peas
  - Swiss chard
  - Thyme
  - Yam, grated raw
  - Zucchini
  - Pumpkin

**Fruits:**

- Fruit should be offered only as rare treats in small quantities, not a staple or routine part of your dragon's diet. Fruits have a high sugar content, because of this they can contribute to obesity, which in turn contributes to other health problems. As well sugar, like with humans can cause dental problems in bearded dragons. Unlike many other animals, the teeth that beardies are born with are the teeth they die with, they grow with them and once lost or damaged by dental disease they don't grow back. If you want to give your dragon fruit as a treat it's recommended to do so

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rarely; once a month or less. They do love fruit so below are fruit that bearded dragons can eat:

- Apple (no seeds)
- Banana
- Cactus fruit (Prickly Pear)
- Mango
- Melon
- Most Berries
- Grapes
- Figs
- Papaya
- Peaches

**Unsafe Foods:**

Just like with cats and dogs there are some foods that beardies cannot eat and doing so will harm or kill them. If something you want to feed your Bearded Dragon isn't in the lists above do you research before you feed it to them. Below are items that cannot be fed to bearded dragons:

- Bread
- Centipedes
- Fish
- Lettuce
- Lemons
- Limes
- Oranges



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- Avocados
  - Rhubarb
  - Onions
  - Mushrooms
  - Fire Flies
  - Lady Bugs
  - Box Elder Bugs
  - Eggplant
  - Chives
  - Garlic
  - Beef
  - Chicken

### Vitamins and Supplements:

Because Bearded Dragons aren't getting the same variety and foods that they do in the wild we need to give them supplements to make sure they are healthy and strong including their immune system. As mentioned earlier in this section their foods need to be dusted, depending on their age a certain number of times per week.

Most people with their protein or bugs use the shake and bake method which is fine for the bugs but veggies need some calcium and multi vitamin too. Sprinkling this on their veggies good, just don't go overboard. A sprinkle will be plenty. When picking you multivitamin powder, make sure it contains zinc as most do not.

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## Behaviors, Grooming, Bathing and First Aid:

Bearded Dragons have their own pretty unique behaviors and ways of communication. In this section we will touch on what's happening and why. From head bobbing and waiving to brumation what it is, why they do it and what you need to do for your little friend while they're taking their long nap.

### Brumation:

In the wild, bearded dragons enter a state of dormancy known as brumation during the cooler months. During this time, they will find a place to lay low, conserve energy, and rest until warm days return.

Even as pets in a controlled environment a beardie can go into brumation. During this time you will notice they start to slow down generally in late fall or early winter. You will also notice their eating will slow down or even stop and they spend a lot of time sleeping in their hide or a burrow if they can make one in their enclosure. Baby bearded dragons will typically not try to enter brumation due to their need for frequent meals and limited stores of fat. If your baby bearded dragon attempts to brumate, you should take them to see a veterinarian to assess whether allowing your young beardie to brumate is recommended. Here are some signs your beardie is going into brumation:

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- More sluggish
  - Reduced feces
  - Less interest in food
  - Spending shorter time basking/Hanging out on the cool side
  - Burrowing into the substrate or spending a lot of time in their cave/hide

For many owners, these symptoms can be scary since they can look very similar to other health concerns. Fortunately, there are a few other things you can look for when determining whether your bearded dragon is attempting to brumate or showing signs of illness.

- Does your bearded dragon show signs of stress like black beard or spots on their belly that weren't there before?
- Is your bearded dragon losing weight?
- Do they have any other physical symptoms of illness such as increased mucous or concerning stool texture?

If the answer to the above is no, chances are good that they are going into brumation, especially if the outdoor temperatures are cooling down and the days are getting shorter.

I know when my first bearded dragon went into brumation the first time after I found out what was happening (From my vet) One of my first questions was how long does this last? There is no set schedule for how long a bearded dragon will brumate. Some may only brumate for a few weeks,



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and others may brumate for a few months.

**What do I need to do to care for my Bearded Dragon while they are brumating?**

During this time, it is best to leave them alone and let them rest. Disturbing them while they are brumating can cause stress and throw off their natural process. Think of it like someone scaring you while you're trying to sleep. It's not fun for you and it's not fun for them. In older dragons it can literally give them a heart attack (like us when we get old).

Bearded dragons likely will not want to eat very much during this time. They may accept small amounts of food, but it will be much less than they normally would eat. Even with the reduction in food intake, a beardie should not lose much weight during brumation. Slight weight loss is not cause for concern, however if you notice your bearded dragon losing significant weight, it is possible your bearded dragon is actually sick and not brumating, and you should take them to the veterinarian as soon as possible.

You can reduce the overall light cycle of your bearded dragon during this time as it is unlikely they will be out and needing the lights. In the wild, the daylight hours would be shorter during the cooler months and the temperatures would drop lower, so we can replicate that by cutting back the lights a bit during this time.

It is not likely that your bearded dragon will want to eat much during while they are in brumation. Their metabolisms have slowed down, and food consumed that is not properly digested can cause issues. If you notice your bearded dragon out to bask, you can

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offer a small amount of food. If they don't eat it, don't worry they may eat it they may not but it's best practice to offer it. Ensure your dragon has access to basking and UV light during this time in the event they do eat and need the heat and UV light to digest and absorb nutrition.

Bearded dragons still require access to water during brumation. They may not accept water, but need to have it available to them while they are awake. If you want to put a small water dish in, spray or drip water somewhere they can get it that works or if they are awake and basking take them for a drink (we generally try spraying the glass or their hide if they won't drink from the sink or bath).

Once you notice your dragon showing signs of basking more often and taking interest in food (or demanding it in some cases), you can increase the light cycle once more if you reduced it when they started to brumate. Expect the first few days of waking up to be slow and sluggish, like many of us when our alarms go off to get up but your bearded dragon will be back to their normal selves in a week or two.

Now that you know more about brumation, what it is, and why your bearded dragon does it, hopefully it's a bit less scary for you.

### **Black Bearding:**

It can be a bit surprising, and fascinating, when the scaly skin beneath your beardie's chin turns black and puffs out. (this is where

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the name “bearded” dragon comes from) You may even notice other areas on your dragon’s body turning black.

When this happens, they are trying to tell you something. Usually they are trying to tell you they are stressed, sick, they might be ready to mate or even seen their reflection or another dragon and want to defend their territory. Whatever the reason, a black beard is generally a sign you don’t want to ignore. While a black beard isn't always cause for worry, there are quite a few triggers that can cause your dragon's beard to turn black and puff out. It's important to understand the possible causes and know when to call a vet.

Firstly when did they start black bearding? Has there been any changes to their daily routine? Have you been handling them less? If that’s the case it could be that they want to be out with you. If they’re daily routine has changed they could be telling you that



they’re not liking the routine change. Did they start black bearding when you let someone hold them or after you took them out of their enclosure? If it’s someone holding them that they started doing it it may be they don’t like them or that they

don’t trust them yet. It could be as well them telling you to put them back and leave them alone or you’ve been handling them too much. It could also be that something has scared them (We can’t run our ceiling fans in rooms our beardies are in because it scares them). As stated before bearded dragons are solitary creatures. They don’t like



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being kept in an enclosure with another dragon and doing so can cause black bearding and fighting. Bearded Dragons are territorial by nature and should never be housed in the same enclosure to prevent stress, injuries and even death.

If your dragon is sick they will black beard as well but you may also notice a change in personality (just like many of us, we just aren't ourselves when we are sick). If they are sick there will generally other signs if we look such as:

- Not eating
- Diarrhea
- Vomiting
- Difficulty breathing or moving
- Eye bulging
- Biting or aggression
- Swollen belly
- Lethargy
- Decreased appetite
- Weight loss
- Trouble moving
- Lack of bowel movements or struggle to go to the bathroom
- Bulging in the midsection or around the spine

If you see these signs, call your vet and get an appointment as soon as possible!

### Head Bobbing/Head Banging:

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There are different types of head bobbing you will see from a bearded dragon. In their natural environment, bearded dragons will bob their head to show dominance to another dragon. For example, if a male bearded dragon wants to declare dominance over a smaller male, it will give several quick head bobs. If the other dragon submits, it will respond with several slower head bobs. If it doesn't submit, there will usually be a fight. This again brings us back to what we said in the previous section about having more than one beardie in an enclosure. Give your beardies their own living spaces. Two dragons in the same enclosure will usually lead to a fight for dominance and these fights can result in injury or death. Now there may not be another bearded dragon in the house or they can't see them currently. The fast head bob could just be to tell anyone who is looking that this area is his and he's laying claim to it.

On the flip side of showing dominance, your bearded dragon might be bobbing its head to show submission. When they do this it's slow and much of the time a deep bob almost like bowing. Things to consider if you see this are: Is there another pet that passes by its enclosure like a cat or dog? The head bobbing could even be directed at you, especially if you recently brought your dragon home. It is normal for your dragon to bob its head to show submission or acknowledge the presence of another animal until it grows more familiar or comfortable with its surroundings. Indicating Stress In some cases, your dragon might be bobbing its head in reaction to something in its enclosure that is making it feel uneasy, stressed, or uncomfortable. If your dragon is

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stressed, it can be really important to investigate and try to determine what might be causing the stress.

### Waving:

Bearded dragons wave as a form of communication. However, males and females exhibit this behavior for different reasons. An arm wave combined with a slow bob usually shows submissiveness. It is a way for your beardie to communicate that they are not a threat and wants to be left alone. Female beardies use slow head bobbing and arm waving to show submission during mating. In their natural habitat, male dragons also arm-wave and head bob as a sign of dominance and mating behavior.



Bearded dragons will frequently wave to acknowledge the presence of their owners, visitors, and other pets. Bearded dragons sometimes wave at their own reflection in the glass because they confuse it for another beardie.

Another reason bearded dragons arm wave is to let their owners know that there is something in their tank that they don't like. Poor lighting, improper temperatures, and high humidity could be some of the things that make your beardie unhappy. It is always



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important to check that your bearded dragon tank is appropriately set up before trying to interpret your beardie's behavior.

