

Bokashicycle.com
Actual support questions and answers

Customer: We live in Nakusp, BC. A village of about 1500 people. This village is very much environmentally minded. We ourselves are currently using Bokashi to ferment our kitchen waste as well as dog waste. Wouldn't it a great idea if our village could do this on a large scale? Do you have any suggestions as to how this could be done? Hans

Bokashicycle: Thanks for the great question. I imagine it is very beautiful in your area and I'm happy to hear others like you are serious about keeping things clean.

You can figure as a estimate that each person in your village generates about 1 pound of waste (food waste) per day. This number comes about from any studies and serves well to give you the means to calculate your monthly waste production. So the village generates 3/4 tons per day of food waste. You probably make 25 tons per month. I don't know what is the current method of disposal in your village.

One of our interests is getting back to truly sustainable farming practices. If you were to set up a site on a farm or near a few farms where the waste could be shredded and then fermented, it could serve an excellent feedstock to be fermented and then tilled into the soil to regenerate and improve the soil. That soil would benefit from the added nutrients and its microbial diversity and populations would be greatly expanded. That is good and you would be putting twice the volume of carbon back to the soil compared to composting. It would take less than 1 month for the complete cycle for each load of food waste which is about 10 times faster than composting at a fraction of the cost. Here is an example of what can be done.

<http://www.bokashicycle.com/blog/?p=146>

Unfortunately, because municipalities and counties or regulatory agencies enforcing laws don't know about these new alternatives, implementing such a process can be difficult because they will probably say you can't take waste and treated in a manner that has not been "approved".

However, individuals can do it on their own property with their own waste. And if you think about it that makes a lot of sense too. Why go to the expense of sending waste away when you can benefit using it at home? And you have all of the same benefits improving you soil without the risk of getting contaminated material from another site which is the real risk of centralizing collections (picking up from many sources and concentrating at a single treatment site).

Bottom line is that using systems right at home on your land or in pea patch gardens is very attractive. From a technical perspective it would be easy to do the village and probably a substantial cost savings relative to your current treatment method. It might just be a challenge with local laws and regulations. Individuals can feel good about making their own impact on cleaning up the water and air and getting the soil back to its natural widely diverse population of microbes which will definitely help plants.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: I have two dogs 50 pounds each. How much will it cost me per week to use your system

Bokashicycle: Of course it will depend a little on the diet and the dog but you can figure an 80 pound dog would fill one fermenter in about 2 weeks. Since the system comes with 2 fermenters, and you fill the first and seal it leaving it alone until the second is full before burying the "gravy" mixed with soil, you would head to the garden once every 2 weeks. With 2 dogs you would bury material probably every 1 1/2 to 2 weeks.

You can obtain a 3rd fermenter to buy time if needed so you would then rotate with each fermenter allowing up to 45 pounds of waste processing through the cycles.

It takes one cup of accelerant to 2 gallons of water starting each cycle and 1/3 cup accelerant for the spritz bottle. That allows about 16 cycles with each gallon of accelerant. Assuming you go 2 weeks with 2 fermenters, then you would order another gallon of accelerant every 6 - 8 months (~\$30 per gallon) and probably 3 packs of culture mix (~\$14) so total about \$44 every 6 months. You would have a shipping charge \$10 - \$20 depending on where you live, so lets round off to \$60.

Estimated cost \$10 per month material cost and of course you get the benefits of fermenting for your ornamental garden and stop air, water and soil polluting.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: I just received your pet Bokashi system. I followed the instructions carefully, which included 7 L of water. I added the dog waste which had been collected for some time and the collector is about 3/4 full. The result is a very liquid substance. Some of the waste I added had already partially decomposed. There is of course no evaporation. There is only about 1/4 left to be added. So my questions is how does this very liquid substance become a soil? Did I do something

incorrectly?

Bokashicycle: It sounds like you are doing things right. One thing to note is that you only need 1 cup (~300 mL) of accelerant to process the waste based on recent culture testing. This will reduce volume of liquid a little. Also only use 1/3 cup (~100 mL) for spritz solution and dilute to the 700 mL mark.

On average you will be able to put about 15 pounds of waste in each fermenter at which time it will be full. The liquid actually helps in breaking down the waste material and it is then after being sealed for at least 7 days while you work on filling the second fermenter mixed with soil in the ground. Remember it is a two step process. First you ferment (pickle) the waste, which means the microbes have broken down the material to a form that soil microbes will rapidly metabolize. When you mix it with the soil, it then feeds the soil microbes expanding their numbers and diversity and releasing into the soil nutrients from the waste. The pathogens in the poop have been damaged or destroyed in the fermenting process so they are also further degraded in the soil by hungry non-pathogenic organisms in the soil.

Just dig a hole big enough so you can pour the gravy into the bottom of the hole. Rinse the fermenter and add that rinse water to the same hole. Mix soil in with the slurry of fermented waste and cover with about 6 inches of soil. It will then be gone in about 7 days and there will be no smell of pet waste. This soil is great for the ornamental garden.

I hope that helps clarify things. By fermenting you keep the waste out of the landfill, keep the ground water free of contamination, and eliminate green house gas (methane) production. That is good.

Best Regards,

Larry Green

Bokashicycle LLC

Customer: I would like to know what is in your formula so I know I'm not going to get sick or something years from now. Not trying to copy or start another business, only want to know. Will not purchase something I know nothing about, and your site doesn't explain enough about it. Thank you

Bokashicycle: Obviously we can't disclose the details of formulas we use to most efficiently ferment materials as these come about through considerable research and are proprietary. I'm not certain which materials you are referring to when you ask about formulas but can assure you that all of the ingredients are derived from food sourced materials and naturally occurring non-pathogenic microbes (for example the kinds of microbes found in yogurt and cheese or wine). Our accelerant is a buffered solution with complex sugars and trace minerals designed to rapidly awaken microbes in the culture mix to process pet waste material.

Although your pet or child would not find the materials tasty, if they were to ingest any of the material it would simply be the equivalent of ingesting a pickled soft drink with sugars and they would not likely ask for more. We do advise people that the culture mix is a wheat bran base formulation and so anyone with a true wheat allergy should use precautions as they would with any other wheat based product.

Bokashicycle LLC

Customer: I bought the pet elimination system and am having a hard time, not because it emits any kind of odor (it doesn't) but when I open it daily to add waster, the chemical smell is so much like a porta-potty that I gag. Am I doing something wrong? Also, how long should it sit to ferment after it tis totally filled? I am only doing one pail at this time because I am not sure that I'm going to be able to handle it....its been two weeks since I added to it. How much longer do I need to wait? Thanks

Bokashicycle: Thanks for asking.... and here are some tips.

It sounds like you are doing things properly but you only need to wait 7 days once it is filled with the system completely closed and it is ready to go to the garden. I know it is a little bit of a hassle at first to think of handling the "gravy", but if you reflect about what you are doing, it is very much a good thing. No longer are you diverting waste to the landfill, which isn't sustainable. You have taken the waste and converted it to nutrients that will benefit the soil and help your oriental garden and you have dramatically reduced the potential for ground water contamination. Culture results have shown E. coli and coliforms are rapidly destroyed in this process.

The odor you get in the fermenting will depend in part on your pets diet but it is also ironically a sign of very efficient degrading too. In some cases, no odor at all, in others it is clearly evident while it is in the fermenter when it is open. But what may surprise you is that when you mix it well in a hole with the soil and cover it up, the odor goes away within minutes. And if you dig this area up after 7 days you should see no sign of waste material and there will be no odor. The soil will of course be rich in nutrients including nitrogen and good soil microbes.

There was a typo in some instructions that has been corrected that makes the accelerant last longer (about 16 cycles). You only need to use 1 cup (~300 mL) in 2 gallons of water starting and 1/3 cup (~100 mL) to make up the spritz solution. Using more does no harm but is more than is required. These modifications in accelerant are based on actual culture and chemical measurements taken in the course of fermentation.

I would suggest you bury your first batch and start again. But this time just add each day with the powder and spritz and continue until one is filled. Then leave it sealed while you begin your second fermentation. When that one is nearly full, empty the first one in the garden; rinse it putting the water in the same hole. Mix well with soil and start it up letting your other fermenter stay sealed until this one is nearly full. You can endlessly run this cycle. Once you get the process done a few times it will become very natural. You are doing good things for the land, water and air.

Hope that helps.
Bokashicycle LLC

Customer: Just received the pet waste kit from you and was reading the instructions. The math doesn't figure though. It says the kit has enough material for 16 cycles but at three cups of accelerant per cycle. With sixteen cups in a gallon, that gallon would only last for fiveish cycles -- with what you use for the spritzer as well. Is that a misprint on three cups to begin the system?

Bokashicycle: You are correct and thank you for your sharp eyes. There is a typo in the instruction set where it says 3 cups (300 mL). Technically 1 cup (250 mL) is enough in most situations depending on the alkalinity of the waste material. That is how the estimate of about 16 cycles came about. We will correct it to about 1 cup of accelerant.

Customer: What does one do with the fermented waste when the ground is frozen? Is it possible to store it and keep the bokashi viable for the spring? I have two containers going and nothing seems to be happening. How thick should a layer of "waste" be? One container has been going for four weeks and there is still no liquid. I'm liberal with the bokashi mix, but should I be using one bag full for each container? I'd truly appreciate a response. Frozen in Pittsburgh, Thanks

Bokashicycle: I'm assuming you are doing the fermenter at room temperature and not outside where it is frozen. If it is outside, the rate will slow tremendously when it is freezing. It must be done inside at near room temperature. Assuming you are doing it indoors, then other factors come to play. You might have formed a lot of liquid but your spigot is not opening and letting it out. Move the spigot left to right several times and then lean the fermenter forward to allow any tea to drain. If you hear liquid sloshing inside, and your fermenter has been closed for a few weeks at room temperature, take it outside and empty it completely and run a garden hose with water through the system. Open the spigot and be sure you have it cleared and water is draining.

You should put a good sprinkle about every 1 - 2 inches of waste going into the fermenter. That is plenty and it should have the appearance of brown "dust" on its surface. The microbes know what to do so don't worry, as long as you get it seeded and closed up it will take off. There will be no heat. You should smell a sweet slightly acrid or pickle like smell but no rotting garbage if all is going well when you open it up.

If you put a lot of dry material like bread or muffins, etc. in the system they may soak up the liquid keeping it from escaping. We tell people to put bread, pizza, dry crusty things into a bowl of water, tear it into pieces and squeeze it like a sponge before putting it in the fermenter. It should be about bite size. The moisture makes the bugs go faster through what would have been a "dry desert".

It really depends on what you are putting into the system as to how much tea you will observe. Generally the more fruits and vegetables, the more tea. If you flush the system out as I mentioned above and you are getting liquid coming through the spigot, it is working ok as long as your nose is telling you no rotting garbage. Let me know what you observe. I suspect you will soon see tea and then it will be a regular event. Possibly your spigot is blocked temporarily.

Here is how to deal with the cold weather. It is pretty straightforward and we have lots of people in the east coast and Canada who have 4 or 5 months with frozen ground. Be sure to follow directions on the fermenting, cutting waste to bite size pieces and placing it in the fermenter one layer each day with a good sprinkle of culture mix between layers. Be sure the system is securely closed each time after you put the layer in the fermenter. Empty the liquid every few days and dilute 1:100 with water if you use it on house plants or in a greenhouse garden, or when you use it on the vegetable garden or plants outdoors. Pour the unused material down the drain or toilet.....it will help keep these clean and free of organic debris.

It might take about 4 to 6 weeks to get one fermenter full and then seal it and leave it aside while you work on the second fermenter. When that one is almost full, you can empty the first and then repeat this cycle endlessly.

Where to put the fermented product in the winter? Just put it outside in a separate container and don't worry if it gets frozen. It will be just fine. A lot of people just put it in an extra can outside through the winter. Once the weather warms up and you can get to the soil you want to dig it into the soil mixing it well and covering it with about 8 inches of soil. It will very rapidly degrade and should be virtually gone in about 7 - 14 days. You may want to break up any pits or larger bones that are left in the soil with a stone if they bother you but they are being assimilated in the soil just fine and do no harm. You should have a very rich nutrient soil for your plants.

Don't be alarmed if you don't see any "tea" in the first few weeks as it depends on what you are putting in the system and can be a little slow to form initially. If you go on vacation, just drain the tea and leave it all shut tight until you get back.

Your nose is the best indicator all is well. It will have a sweet acrid vinegar like smell if it is fermenting fine but if it smells

like rotting garbage then you need to add more culture mix. It's easy to ferment and I think after the first month or so you will feel very expert. Good luck!

Customer: Can pet wastes and kitchen wastes be treated with a single system, or must I order a pet cycle and waste cycle for each? Keeping two different systems going and storing supplies for them seems not only costly, but quite likely to cause confusion when more than one individual is responsible for getting wastes into the right container (as well as adding chemicals). Thank you.

Bokashicycle: You are asking a good question. It is pretty simple to keep the systems straight and fundamentally the problem is you cannot trust that when pet waste is fermented it is always done correctly. That is why the systems are purposely separate and why you only put pet waste fermented product in an area where no edible food will be taken from the soil. It is okay to use fermented pet waste in soil for vines, berries, or fruit trees, as that food is not taken out of the ground.

Having said that, both the food waste system and pet waste system use exactly the same culture mix and indeed the end product "tea" produced is by chemical analysis virtually identical. The reason you have to use the accelerant with pet waste is because the animal's pre-digestion process removes some critical natural products needed to activate the culture mix and the GI tract changes the pH (acidity) to an unfavorable condition for fermenting using the bokashi technique. The accelerant is a mix of specialized natural occurring buffers and sugars with enzymes to quickly initiate pet waste processing.

It is easy to tell the pet waste system from food waste systems. It is black to designate that it is for pet waste processing. With our systems all other colors are for food waste systems. You will also note that there is no spigot or fenestrated plate in a pet waste system since tea is not collected. I hope that helps explain why there is a separation of the system processes.

Customer: Hello, My boyfriend started doing bokashi in his apartment and over the course of several months accumulated almost an entire bucket of waste. He was quite diligent about adding the bokashi mix and his kitchen waste in layers but after a while his place began to smell awful. He has now brought his bucket to my place and dumped it in my backyard compost and it smells terrible; in fact the smell is actually seeping into the house via the garage. The smell is a very sour smell, almost as if someone threw up in it. Can you let me know if it will eventually compost in my bin, or has he done something wrong and I'll need to throw the whole bin (with my compost as well) out? Thanks so much!

Bokashicycle: This is a pretty simple problem. The directions were not followed and you can get rid of this problem right away.

First you've got to understand that bokashi fermenting is a two step process. First the waste material is fermented in a proper fermenter. If you are using layer by layer with bokashi culture mix in a proper fermenter that truly excludes air, and keep it closed at least 7 days after the last layer is added, it will completely ferment. It will have a acrid sweet pickled smell at the end of that period. If it smells like garbage or has a foul rotting odor you did not add enough culture mix or have a bad fermenter that does not seal properly. The square design fermenters with the "snap" down lid frequently fail to exclude oxygen because they do not adequately seal. The corners get "dog eared" and sometimes break off or don't fit properly. A threaded seal with a gasket is the best solution and kind to the hand.

In the second stage you must mix the fermented material with soil and this has to be put in the ground. If you put it on the top of the ground or mix it in the compost pile it is not going to get in contact with the proper soil microbes. You will not get rapid or adequate processing to good soil. You will get a mess. Do not put this material into the compost pile. That is going to be a hit and miss situation and you are defeating the good work your microbes did in the first stage. Keep in mind that composting destroys many valuable soil microbes and is damaging the soil food web as the temperature rises. That is why it is not an adequate replacement for soil.

You should also be removing the tea as it is processing. This valuable nutrient broth is loaded with useful microbes too and when diluted is wonderful for plants both indoors and outside. Be sure to dilute it 100:1 with water. That's about 2 tablespoons to 1 gallon of water (US gallon). In Canada 10 ml to 1000 ml.

You can immediately get rid of the smell and stop the problem you are experiencing but will have to take all of the fermented material in the compost pile and mix it with soil and then cover it over with about 8 inches of soil.

In the future don't bother composting. It is slow and inefficient and not good for the atmosphere. It is hard work, requires a lot of turning and attracts pests, flies, etc. and will stop working if the mix of carbon to nitrogen, water level, or temperature in the pile is off. Bokashi is the easy way and much easier and you will not have the smell problem if done correctly.

Good luck. Follow the proper directions and garbage is no longer a problem. Your plants should really appreciate the difference and stop adding fertilizers and pesticides that kill valuable soil microbes hurting the plants over time. I would not waste time composting

Best Regards,
Larry Green

Bokashicycle LLC

Customer: Tell me how pet bokashi system works with cat litter, how would I use it? Do I need to use special litter? Does it only work on solid waste?

Bokashicycle: Virtually any organic matter can be fermented using the culture mix in the fermenting system. With cat waste you would just scoop up the waste and put it directly in the fermenter solution and seal the system each day. This will take away the odors virtually immediately and convert that waste to nutrients for the ornamental garden.

You want to minimize the actual cat litter material which is frequently associated with clay like materials. Some of that going into the fermenter could alter the acidity and make the fermentation less effective if it was overloaded. A small amount of material associated with feces is not a problem.

You could change to the least expensive litter as there is no advantage to using more expensive litter. If the litter was wood chip based it would actually be just fine to also ferment.

With regards to urine smells, you can mix some of the culture mix in with the litter (bran based bokashi culture mix) and it will also freshen things up reducing a lot of odors. The real purpose of disposing of cat feces by fermenting, aside from the cleaning up of the mess and smells is that you get nutrients back to the garden feeding ornamental plants while also protecting the environment from animal pathogens which contaminate our precious water supply. And you are not putting things in a landfill to make methane gas which is the end result of putting it in the trash.

It is very easy to use this system. You keep it indoors. There is no smell or mess. No gases or heat is produced. It's safe around pets. You will probably take a trip to the garden every 3 - 4 months to mix it with soil and cover it over. Here is a link to our reading room. You can click on the "Bokashicycle PetCycle Instructions" file and then print the PDF document if you would like to see the detailed process.

<http://www.bokashicycle.com/readingroom.html>

Best Regards,

Larry Green

Bokashicycle LLC

Customer: What's the difference between the Food Scrap Cycle & the Pet Cycle besides the name and that you want to keep the pet waste out of any garden areas?

Thank you for the clarification. It sounds like they are two separate systems. Another question in regards to paper waste (like wax paper, labels, etc). Can either system process them or would that be more preferable in the food waste system? The reason why I asked about the "wax paper" is that we currently get orange juice (from Organic Valley) & almond milk (from Blue Diamond) in paper containers that "feel" slightly waxy. Do you know if those are recyclable or compostable/fermentable?

Bokashicycle: There are several differences between the PetCycle system and the Food Scrap Fermenting system. Both systems have common features. Both use the same bokashi culture mix and both have anaerobic sealing locks to exclude oxygen.

The pet waste requires a different set of conditions to be properly fermented because it has already been partially digested in the animal's GI tract. It is moderately alkaline and many of the nutrients that are present in food scraps that rapidly initiate and support the fermenting activities are devoid in pet waste. This is why the accelerant is used with the pet waste fermenting.

In the pet waste fermenting there is no use or need for a ceramic pressure plate but this is very helpful in rapidly reducing oxygen levels in food waste systems.

In the food waste fermenting, a liquid tea is formed that is separated from the material fermenting to sustain and support ongoing metabolic activity. There are products in the tea that would slow or possibly inhibit the food waste fermenting if they were allowed to accumulate. That is why there is also a fenestrated plate at the base of the food waste processing system and in addition a spigot that can be used to draw off the useful tea as it is formed every few days. The pet waste system has neither a spigot nor fenestrated plate as they are of no value in that process.

Both systems work with the same general acidic anaerobic process in a closed container (fermenter) and both reach rapidly a point where soil microbes can finish the job nicely returning nutrients to soil for your plants. The accelerant sets up the condition for optimal degrading of pet waste. We keep the end products in different areas in the garden because we don't want to take a risk that if an animal is sick or passes something unwelcome in the waste and the user fails to properly ferment it, it will end up in a vegetable garden. Wax paper and paper in general should be recycled but is not going to ferment except in small batches processed with food waste. Any wax paper or plastic coated paper can't be fermented because the enzymes and microbes won't cross the wax or plastic barrier. I believe

the best solution is recycle to paper processing. It won't easily ferment, Composting would be slow and even if you get it going, it will be a greenhouse gas contributor with a waste of energy. We are currently investigating ways to improve fermentation to handle these particular problems but it will need time to perfect.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: Hello. How long will bokashi tea keep? Can I keep it in a bucket at room temperature? I'm assuming the bokashi decomposition is anaerobic throughout the entire process since when it's added to the soil it's buried. For example, I live in Alaska and I'm not set-up to place my fermented bokashi outdoors at the moment. I have a plastic container with some dirt that I've mixed the fermented material into. Should I leave the lid off to allow air? Can this bin be placed outside, be frozen and thawed out in the spring? I would like to promote bokashi composting in rural Alaska and these would be reoccurring concerns. Thank you very much. Also have you heard much about the fermented materials attraction to wildlife?

Bokashicycle: Q: How long will bokashi tea keep?

A: If it is cold and protected perhaps a long time. But it may easily be oxidized and also overgrown with aerobic microbes. The nutrients will likely remain but the beneficial microbes will be reduced.

Q: Can I keep it in a bucket at room temperature?

A: Better to keep it cold.

Q: I'm assuming the bokashi decomposition is anaerobic throughout the entire process since when it's added to the soil it's buried.

A: Definitely anaerobic in phase 1, but once in the soil, many critters like nematodes, springtails, etc. take a turn at metabolizing the rich nutrient material they can process. Also, there are certainly aerobic microbes that will also get involved. Essentially the entire soil web kicks in and it is not completely anaerobic in that situation.

Q: I live in Alaska and I'm not set-up to place my fermented bokashi outdoors at the moment. I have a plastic container with some dirt that I've mixed the fermented material into. Should I leave the lid off to allow air?

Q: Can this bin be placed outside, be frozen and thawed out in the spring?

A: Yes. When it thaws mix in with other soil to expand the volume of rich restored soil.

Q: I would like to promote bokashi composting in rural Alaska and these would be reoccurring concerns.

A: Very good idea.

Thank you very much.

Q: Also have you heard much about the fermented materials attraction to wildlife?

A: We don't believe any wildlife will find it attractive, especially once mixed with soil. It would be very interesting to hear of your observations where there is a lot of wildlife. Generally because of the acidic pickled quality of the fermented product and the fact that high energy nutrients are no longer present, wildlife will find it unappealing.

Q: Thank you for the reply and the info. I will keep you posted as for the wildlife intrusions. Potential for attracting bears is one of the main reasons composting is limited in rural Alaska. In Bristol Bay we have acidic soil with low organic content but plenty of daylight and water so if can improve our soil quality we could produce more of our own food.

Customer: What's the difference between the Food Scrap Cycle & the Pet Cycle besides the name and that you want to keep the pet waste out of any garden areas?

Bokashicycle: There are several differences between the PetCycle system and the Food Scrap Fermenting system.

Both systems have common features. Both use the same bokashi culture mix and both have anaerobic sealing locks to exclude oxygen.

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condition for optimal degrading of pet waste. We keep the end products in different areas in the garden because we don't want to take a risk that if an animal is sick or passes something unwelcome in the waste and the user fails to properly ferment it, it will end up in a vegetable garden.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: I received the PetCycle kit on Friday and immediately started! After adding 2 gallons of water, 3 cups of activator and 4 days of pet waste, I've realized that I only have 1-inch of headroom left in the container because Canadian (Imperial) Gallons are larger than US Gallons. So I measured the volume of the empty container and determined that 3.5 US Gallons equals 2.9 Canadian (Imperial) Gallons. Ideas on what I can do to reduce the amount of liquid and by how much? Thanks!

Bokashicycle: Wow....did we ever miss the boat thinking a gallon is the same everywhere. You are absolutely correct the imperial gallon is too much fluid.

This is easy to fix. We will correct our directions to specify liters too thanks to your observation.

Take your current filled bucket outside. Pour out 1.5 liters (into a hole in the ground and cover with a little soil). One shovel or spade should easily accommodate this and the fluid will then disappear with any small amount of fermented material that is already done.

After you have removed 1.5 liters, add back 1 cup (50 ml) of the concentrate to the solution and seal it up. You may then continue as before.

From now on, when you start from the beginning, add 7 liters of water and 150 mL of concentrate to make up your starter accelerant. You can use the system in your house where it is a little warmer which will make it work even better. No gas or smell when come from it so you will find it is very handy. I would not be surprised to see that you can go 2 - 4 months before one fermenter is full. Remember to seal that one and start on the second one and only take the full one out and bury it when the second fermenter is nearly full. You may repeat this cycle endlessly and your ornamental plants should very much like the soil you will be making.

Thanks for reminding us about imperial gallons and let us know if there are any other issues or questions you have.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: One white handle was broken off the faucet. This happened in transit to our home. I spoke to some kind gentleman on the phone. He carefully described how to repair / replace the item. Please send the item.

Bokashicycle: We'll ship the part out first thing in the morning. Just set the partially filled system aside sealed for a couple of weeks while you are filling the second fermenter and then empty it in the soil. Once you've hosed it out you can go ahead and replace the new stem handle. Let us know if there is any problem at all and we will get the system replaced.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: Can you use your system to breakdown kitty litter and kitty poop?

Bokashicycle: You can use the PetCycle system to break down (ferment) kitty poop but you should generally try to minimize the kitty litter unless it is wood chips going into the fermenter. Kitty litter is frequently made from various clays and it can alter the acidity and inhibit the breakdown or possibly slow it down. It is okay if there is a little litter attached to the poop. One advantage of using the fermenting system is that you can then go to the least expensive kitty litter because you will be scooping material into the fermenter. The smell will go away virtually immediately as you close the fermenter and by the next time you open it there should be no notable bad smell. Remember to follow the directions.....fill the first one and then seal it and leave it alone until the second fermenter is nearly full, then empty it in the soil mixing well in a hole and covering with a little soil. Do this with your ornamental garden and you should begin to notice the plants look much more lush and vibrant.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: Thank you for your response. I will do a little more checking into this system. It is very attractive both from eliminating waste into the earth and being able to add good stuff to my plants. I just started a regular compost last year and am happy with it. Thanks again.

Customer: I received my order already – that was fast! However, I received the blue table top caddy, but not the 2nd brown one. I had a few days worth of table scraps waiting for the unit to arrive, but the majority of it happened to be skins from naval oranges (organic) and banana peels. I chopped this stuff up pretty much before putting it in the bucket but I'm worried that this mixture may be too much of one thing. Do I need to be concerned about this sort of thing? Also, do you know of any device – sort of like a sieve or nut grinder – that could be used to pre-process the larger pieces like this before putting them in the bucket? I can think of a lot of different kitchen utensils, but none of them really do the trick - the result would be either too mashed up or watery or it's not sharp enough for things like the banana peels and rinds. Hmmm! Ideally the device would be able to screw tightly on to a big glass jar or something and have a crank. Thanks much – I'm just starting out and can't wait to see my first batch.

Customer: Can this process be used with cat pee or fecus after being coated with kitty litter?

Bokashicycle: Yes you can use this to get rid of the cat waste which is very valuable. The problem that sometimes occurs with cat waste is that they harbor parasites that are not easily taken out of the water supply. When you ferment it first and then put it in the ground you get back the nutrients and eliminate the contamination of our water supply. If you scoop up the cat feces minimizing the amount of liter and put it in the fermenter, the smell will be gone quickly and the feces will then be broken down. You want to move away from clay based litter or minimize the amount of it going into the fermenter as it will possibly interfere with the pH if you add a large quantity of it to the system. You don't want to dump a lot of litter into the system unless you add more of the concentrate. It should work just fine as long as you isolate the feces and scoop it into the system.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: How often can or should I put the Bokashi Tea on my house plants? Can or should I put the Tea each time I water them? Or should it be less often like weekly? Please let me know about this issues. My second question is should I store my undiluted Tea in the refrigerator? It is causing the lid on the storage jar I have it in to pop up. It is currently stored in a cool dark place. Also will summer heat hurt the undiluted tea if it is stored at room temperature in the summer?I have a final comment. I have only added the tea to my house plants two times a week apart and I can already see a dramatic difference in the color of the entire plant, the leaves are bigger and are growing faster and again are much bigger and greener than in the past. The plants are blooming much more than they have in the past, so the Bokashi Tea is really helping.

Bokashicycle: Sounds like you are doing a great job. I would suggest perhaps once every 2 weeks. Be sure you dilute 1:100 with water (about 3 tablespoons in 1 gallon of water). You will always have a lot of extra tea and you could put it outside in the garden, on the grass, etc. Dump the rest down the drain and don't try to save it as it will likely over-grow with aerobic microbes. You make plenty of it every week. If you every want to send any pictures of your plants.....that would be fun to look at.

Customer: For high-volume usage-like a restaurant, would it make sense to add a sort of grinder unit to 'pre-process' the waste material, especially fibrous roots and stems, pits and bones to make a uniform size of waste added to the fermenter? If so, could you then grind something dry, like seeds or paper or wooden stirrers or toothpicks to help clean out the grinder?

Bokashicycle: You are correct. For commercial large production waste processes it does make sense to shred and get uniform material size. This also helps in mixing the culture mix uniformly in the material making it far more efficient in fermenting. We have been doing this at the New Earth Farm in Hillsboro accepting waste from several restaurants. The fermentation is done in our 55 gallon drum fermenters, drained to capture tea using the off-loader, and then tilled to the farm soil. It turns over in the soil in about 1 week and all material beautifully is taken up. New produce crops are now being grown in this manner and it is a pretty smooth and fast operation. The restaurants are happy as they have reduced their garbage bill significantly and the farmers are happy because they are getting great soil back and nothing is being wasted. This is the essence of sustainability. You would want to have a good shredding device generally with a vertical shute. We use a shredder driven off a tractor drive. Shredding is better than grinding, is very fast, and takes no time to process tons of material per hour. You could toss a little straw or chips to clean things up a bit after shredding if desired but it is not needed

generally. A quick rinse with a hose cleans everything up.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: Can you use cat poop that has been captured in a litter box? any restrictions on the type of litter used?

Bokashicycle: You can use cat poop in any form. The key thing is to collect the poop and put it into the fermenter discarding as much of the litter as is possible. The best kind of litter would be pine chips or wood chip base material as it will also ferment with the microbes. The clay litter is more troublesome as too much of it in the fermenter would possibly alter the pH and make fermentation a little less effective.

The fermenter will get rid of the smell almost immediately. You just mix the accelerant and add the culture mix in the fermenter and then with each opening and addition give a few spritz puffs of the solution with a sprinkle of culture mix and re-seal. You set the one fermenter aside when it is nearly full sealed shut and start on the second fermenter to allow enough time for all material in the first fermenter to be broken down into nutrients for the soil. This cycle of one completing while the other is loading can be done indefinitely and you will get great soil nutrients for the ornamental parts of your garden without polluting the ground water. I would suggest using the least expensive litter or even better sawdust although that might have a tendency to track.

I should also mention you can do this right inside your home as there is no gas given off, no foul smells, and no mess. You just have to take it out and put it in the ground mixing with soil every few months.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: Got my Bokashi on Friday and it seems to be fermenting well. But the ground is frozen here (northern NJ) and likely to be so for a while. Can I put my bucket's contents in the outdoor composter instead of burying it?

Bokashicycle: Happy to hear you got started so quickly. Yes indeed, you can put the fermented product in the compost pile, assuming you have some "soil" already produced. With the microbes in the pile, the process will rapidly complete. When you put it in the pile, go to the bottom of the pile and mix the fermented product with the soil at the bottom, then cover it well. One thing you should realize is that if you have material that is still composting, it will likely heat up with the introduction of the culture mix. Once the ground outside thaws and you can easily dig into it, mix your material in that soil and you will have a very nutrient rich soil for your plants or garden. Be sure you give the cycle at least one week to sit before putting it in the pile or ground to complete all fermentation. That is why we always use 2 cycles, one filling while the other is completing its process. Once that completed product is put in the ground, it takes about 10 days to let the soil microbes to the remainder of the work and it should look like soil when finished.

Best Regards,
Larry Green

Customer: Wow! That is real customer service! Thanks for sending me items worth a lot more than the \$10.00. And I received the package from USPS yesterday even before I can reply to your e-mail. I am, however, disappointed that I haven't received the package yet from Fed-ex nor I never received any email nor tracking number from them. But I am hopeful it will arrive in a few days. I am just assuming that you used a faster shipping with USPS that is why I received the package earlier from them than the one from FedEx.

Customer: Again, thanks for the extra Bokashi at no shipping cost. And thanks for caring for our Earth!

Bokashicycle: You are correct and we are humbled by how badly we handled your case. I am sending you an additional 12 packets of bokashi culture mix at no additional charge and no shipping charge so you will receive a total of 24 packets. The first batch was sent along with the refund check by FedEx and you should get a tracking number and notice of its departure. The second batch is going out today by USPS and should arrive in about 3 days. You will also receive an email with a tracking number. This is a \$39.95 value pack to make up for the other \$10 that was not included in your refund. I hope you will accept our apologies and we are happy you are going to convince your friends to adopt your values in taking care of the planet.

We did check the shopping cart function and could not reproduce the error in the ordering you experienced on our end. In the future if you make an order and wish to change it, if you click the button remove it should completely clear any inadvertent entry.

Once again, we send you our best wishes.

Sincerely,
Larry Green
Bokashicycle.com

Customer: Larry, Thanks for fixing up my order. I appreciate your good customer service. I noticed that you are going to send me a check of \$16.61. But per invoice I have when I sent my order, I will be billed \$79.86 on my credit card. $79.86 - 53.25 = 26.61$ (instead of 16.61). But if you haven't shipped my order yet, can you just send me my original order of 6 12 packs. It looks like I can save on shipping that way. I am now thinking of giving Bokashi to friends to start them on using them for their kitchen scraps as well. But if it has been shipped, then its fine. Thanks and I'm sorry about the confusion.

Customer: Well, I am no newbie to bokashi. But when we got the 4 month supply of the bran EM mix there were largish, half fist size, white clumps, never having ordered from you guys before. wasn't sure the little microbes were till active. They seemed to be, and I broke up the clumps and mixed it up. you might want to get some QA people to the manufacturer. Your competition's mix is fine bran with no clumps or whitish residue. Thanks

Bokashicycle: Thank you for your inquiry. The material you have is, in fact, very active. The specific question regarding lumps forming is in the FAQ section regarding Bokashi. This appears directly beneath the question about white patches. Here is what is going on and how to fix it.

When there is a lot of humidity and heat, the culture mix can form lumps and appear sticky. You can restore the mix by spreading it out on newspaper under a lamp. Let it dry and then crumble it back to powder and put it back in the caddy. This will restore it to a form easy to use.

This is related to moisture and temperature. Because the fungi are very active, they will sometimes, when the conditions are just right, begin to grow vigorously sending out hypae (long thread like extensions) in all directions. This causes the surrounding bokashi culture mix to be entrapped by the hypae creating what you are describing as lumps.

What you need to do is just place all of your material on a newspaper, or in a bowl under a lamp. Let it completely dry over night and then just crumple up all the lumps to form a powder. The activity of the bokashi culture mix will be retained and you will re-generate the fine granular structure you are interested in that makes it easier to sprinkle on the organic waste. When it is again dry, it will crumble between your fingers to form the powder granular tan colored bokashi culture mix.

Be sure to also dry out your caddy container or the container that is being used to store the culture mix. Then try to keep the humidity down and keep it dry. It may again after a short time form "lumps" which is a sign of high quality material. This shows you have very active material. It is not a question of QA as nothing can be done to prevent this (sorry for that inconvenience). If you have some material that never does this, I would suspect it has very low if any activity.

The whitish residue you note is fungi growth, a most necessary and important observation. You will also see that growth frequently when you are processing your organic waste. I hope I've helped you out and please let us know if we can help in any other way.

Best Wishes,
Larry Green
Bokashicycle.com

Customer: Can I use the Bokashi fermentation mix in my current composting bin?

Bokashicycle: I'm not certain if you are asking about the end product after you have fermented your organic waste and if that can be put into the compost bin, or if you are asking if you can use the bokashi culture mix directly in your compost bin.

If you process organic waste (kitchen scraps, food waste material) and ferment it anaerobically with the bokashi culture mix, then that \$r\$duct needs to go through a second step where it is exposed to soil microbes. If you have a compost bin with soil microbes, you can bury it in that material and it will rapidly be converted to rich nutrients with a lot of microbes (far better then compost). Bokashi fermentation provides both nutrients and microbes rapidly supporting diversity in nutrients and microbes.....giving a lot of value to support plants.

If you have material composting when this goes into the "soil" part of the compost, it will probably cause the pile to heat up and you may find it gets too hot. That would require turning to cool the pile bringing a lot of oxygen into the mix. When the fermented end product goes into the ground and is covered by ~ 8 inches of soil, it is left alone for at least 7 days so the soil microbes have time to finish the work. This is occurring at low oxygen levels and oxidation is not a part of the process. Take a look at the "Pilot GHG Bokashi Fermentation Study Results" in the "reading room" at www.bokashicycle.com. The fermented waste material should be all gone assuming you had it fermented properly

in 7 to 10 days.

One concern about composting, because it does heat up and alter microbes, is that you probably don't really have a proper representation of the diverse microbes found in good soil. That is why it takes time for compost to "catch" on when you put into soil.....it is getting re-populated with normal soil microbes to re-establish diversity. Compost is pretty much at its end a mass of degraded oxidized organic matter and depending on how it was heated and the material used in composting the population of microbes are very likely far from representative of good soil.

My recommendation would be to mix some soil in with the compost and then bury the fermented product in that material. I hope I've helped answer your question Sydney.

Best Regards,

Larry Green

Bokashicycle.com

Customer: Can you tell me if you ship to Canada? I live in Ontario. If so, does the shipping charge double if I order 2 bokashi kits or does it increase by only a nominal amount? Thanks

Bokashicycle: I will see what I can find out on my end with regards to customs charges. I think duty applies when the product is something we can purchase in Canada.

We have been told that shipping to Canada is a problem for the recipient because the Canadian officials may add a duty tax to items being shipped from the US to Canada. We have no control over that process and don't know if it is true or how much it would be. We ship by FedEx and they are very efficient to most every address. To the East coast in the US from the west coast it is around \$18 to ship the system. I would love to get a clear answer on this problem you asked about. We have one large customer who wants to distribute the system near the border and asked us to supply them with large amounts of bokashi culture mix. They are having us ship to Ohio and making their own arrangements to carry it across the border.

I would suggest to be safe, if you have a friend or relative near the border, have us ship to them and then just pick it up and bring it across the border on one of your trips back and forth. I'm sorry, but I can't give you a better suggestion than that. Each system complete with 3 months supply includes a pair of cyclettes. They are packed in a box 13 x 13 x 30 inches and FedEx will charge about \$18 dollars to New York and less as you move west. If you order two systems they will almost double the shipping charge as compared to a single system (2 cyclettes with 3 months supply in 1 box).

You might be able to find out from your custom officer what they would do. I would be most interested if you could let us know should you find a good solution as we know a lot of people in Canada are interested in this kind of organic waste treatment plan. If you give me your exact address I can tell you FedEx would charge for shipping.

Best Regards,

Larry Green

Bokashicycle.com

Customer: Hi I tried to place an order for the blue kit, but it gave a message that it couldn't process without shipping info. I am in Burnaby, BC, Canada. Do you ship here? I can buy supplies locally but I like your container design with the screw on lid, the ones here are harder to use. Thank you

Bokashicycle: Thank you for looking at our product. We are getting the paper work finalized so we will be able to then ship into Canada. The customs people will add a tax and duty charge for all shipments into Canada but those procedures will not be finalized for perhaps another 3 - 4 weeks.

You are very close to the border, if you knew someone near the border where we could ship a system, then you could easily bring it across the border. It would cost around \$9-10 for shipping.

If you send me an exact address I can tell you what the shipping would be. Until the Canadian customs officers get back to us we won't know what your custom duty or tax would be shipping directly to your home address in Canada.

The system we ship comes with a 3 month supply of bokashi culture mix. I think you will find our product very active and at a very competitive pricing schedule.

Best Regards,

Larry Green

Bokashicycle LLC

Customer: two containers is great for the average household, what do you actually offer institutions who rely on composting as part of their recycling and waste programs?

Bokashicycle: Great question. We do provide alternative solutions for institutions. The container used depends on the size or volume of organic waste generated. We use modified 55 gallon drums (plastic) fitted with a special filter to allow the collection of the liquid in processing. For example we are currently working with the Purdy Correctional Facility in Washington State showing them how we can very significantly reduce the cost of organic waste disposal by as much as 30 - 40%.

We take the fermented organic waste in this case in their pilot program and bury it at their facility enriching the soil for fertile gardens. An area of land measuring 20 x 20 feet can accommodate 12 tons of organic waste each year indefinitely. We are also arranging to have fermented waste delivered to farms in the community promoting sustainable farming practices. By this process we have completed a cycle taking food from the land to the consumer and then as waste processing and back to the land to enrich subsequent crop yields. This is done at a great cost savings to the consumer and the farmer and completely eliminates the GHG contribution. It is also rapid as fermentation is complete within about 7 - 10 days and the soil converts all waste (fermented product) to nutrient rich soil for plants in the subsequent 7 - 10 days. Composting would take 6 months, costs a lot more, and produces an inferior product.

I'd love to talk to you about your situation if you would like to look at the bokashi alternative. It is surprisingly simple to make the conversion. Generally if you produce less than 1 ton of organic waste per day, it can be handled easily with 55 gallon containers as fermenters. We also have options for high volume producers using 20 cu yard containers. These are suitable for produce packers, etc. where a high volume of waste is produced in a very short time as the culls are pulled out of the production line.

One important point to consider depending on where your institution is located has to do with regulations by the EPA and state. It is generally easy to obtain a beneficial use permit (exemption) to move organic waste processed by fermentation off-site to farms, etc., but the application can take up to 90 days to get approved. We believe this is very important and needs to be done properly for each state where we are involved in processing.

If you have a specific application for an institution, please feel free to give me a call at any time.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: Hi there, My partner and I order the grey bins over the phone yesterday. I just wanted to make sure you have the right address.

Bokashicycle: Yes, it is already off to FedEx this morning. I will send you a tracking number as soon as we have it. I had your name and email incorrectly spelled but address is correct.

Larry Green
Bokashicycle.com

Customer: Hi Dr. Green,

Thanks for sending the shipment. Unfortunately, the ceramic plate in the one of the containers was broken when we opened the package. The 2nd one was ok. I'm wondering if you could send another please? I've attached photos to show you what it looked like when we opened the box.

Thank you,

Bokashicycle: Very sorry to hear your ceramic plate was so badly damaged. We will send a replacement today. It should arrive before you fill the first cycle.

Best Regards,
Larry Green
Bokashicycle LLC

Customer: I've read about composting online where it is recommended to have a balance of green (vegetable and fruit, providing nitrogen) and brown (wood and paper, providing carbon) components. Do you see benefits to adding household paper waste to the kitchen scraps used in the fermenter, or would this be unnecessary for having the maximum end product for nourishing the home garden?

Bokashicycle: First your question: You won't have any need or advantage by adding paper to the system. It is of

course just fine to add napkins or relatively clean paper used when handling food as it will rapidly digest and be converted to fermented product by the microbes (paper is essentially all cellulose and easily broken down). However paper with printed, especially color inks, has a lot of potential contaminants like metals, etc. that would accumulate in your soil. It is also more economical in recycling to send paper back for processing. So we won't really want people to use newspaper, etc. in the system even though it would digest fine.

Regarding your order Blue complete system. It will take AMEX 48 hours to process your number. Sorry that is so slow. If you have a master card, Discover, or VISA and you could get that to me tonight or early tomorrow morning I can have your system shipped out before the weekend. Otherwise it won't ship out until next Monday or Tuesday. If you want to change to the VISA or Master card, give me a call and I'll make that change.

Customer: Where do you drain the liquid that forms in the compost?

Bokashicycle: Hi, The liquid formed (sometimes called Bokashi Tea) is from the microbes breaking down the cells in the food waste. It is loaded with nutrients including nitrogen, phosphorous, potassium, many small molecules and microbes all of which are valuable for plants. Most people use this by diluting it 1:100 with water and then spraying it on the house plants or vegetable gardens getting it back to soil. By doing this the population of soil microbes and nutrients for soil are much improved. Plants benefit from this treatment. You can just dump it down the drain if you don't have a place for it, or spray it on the lawn (but diluted 1:100 or 1:500 with water is important. Each fermenter (cyclette) has a valve at its base and you will probably see about 1/3 to 1/2 cup of "tea" formed every 2 to 3 days depending on the waste you are processing.

Best Regards,

Larry Green

Bokashicycle