Dirt Maker
FLOW-THROUGH WORM BINS

DIRT MAKER 14
OWNER'S MANUAL

SAFETY

When releasing the ratchet lever of a winch that is under tension, take care so the handle doesn't spin backwards. Hold the handle firmly, and turn it just enough tighter to allow the lever to release. Keep a tight hold on the handle while slowly releasing the tension.

To eliminate the hazard of an accidental release of the ratchet lever, and because the winch handles can get in the way, the handles should be removed after setting up the bin, and after each time they are used to pull the breaker bar.

Never allow children to play near this machine.

Any part of the machine past the ends of the box could be a trip hazard. Make sure other people are aware of this.

Make sure everyone's hands are clear of the screen while winching. The best way to do this is to make sure everyone is standing back.

When inspecting underneath the machine, it is a good idea to wear eye protection. Small particles occasionally fall from the screen.

ASSEMBLY

Selecting a location for the frame.

This machine must be used on a concrete or asphalt surface. Move the frame to its permanent location. This is a lot easier with two people. When deciding on a location, make sure you have at least 5 feet of clear area from the frame at each end, and 3 feet on at least one side. You might want additional space on one or more sides or ends for a wheelbarrow, maneuvering brooms and shovels, etc. If you are going to use a lid, leave at least 4 feet on one side for removing and replacing it. The frame does not need to be level, but should not be twisted (one side more out of level than the opposite side).

This worm bin is designed to handle sunlight and weather. Under most circumstances though, indoor use will make it easier to maintain the proper bedding temperature. The bin shouldn't be used outside in areas with very cold winters. It can be used outside in areas with hot summers if certain precautions are exercised. In all climates, it needs to be in the shade when the sun is overhead in the summer. This would involve either an awning type roof, or putting one side of the bin up close to the north side of a building that has a wide enough overhang on the roof. In some climates, you will want the sun to shine on the bin when the angle of the sun is low in the winter. In this case, the ideal spot would be on the south side of a building, and under an awning type roof. If you plan on locating it outdoors, please read this entire manual first unless you already have extensive experience with the way temperature and weather affect vermicomposting.

Assembling the box.

On all bolted connections of this machine, use a flat washer against the bolt head. Use a lock washer against the nut, and a flat washer between the lock washer and the part. To keep from damaging the powder coating, it’s better to put the finished side of the flat washer against the part.

Position a long and short panel on the frame, and drop a ¼ x 2¾" bolt with flat washer through the top corner connection. This is also easier if you have help. Put a flat washer, lock washer, and nut on the bolt, and hand-tighten. Leave the bolts out of the bottom corners for now. Put the other long side on the frame, and bolt the top corner connection, only

hand-tightening. Put the remaining side on the frame, and bolt the top corners together, only hand-tightening. Square the box by centering it on the frame. Tighten all the bolts.

Confirm the frame is not twisted by checking to make sure all four corners of the box rest on the frame. Use one or both of the plastic shims under one of the legs if needed.

Attaching the cutting bar stops.

These stops are the 1½" x 4" flat bars included in the parts box. Attach them to the angle brackets on the ends of the frame with 5/16 x 1" bolts.

Attaching the winch platforms.

The winch platform assemblies are almost identical, but not quite. One is labeled End A, and the other End B. The ends of the bin are labeled A and B. Attach the channels of the assembly to the frame with 5/16 x 1" bolts, washers, and nuts. Make them less than hand-tight. Swing the assembly up, and drop in 5/16 x 1" bolts with flat washers. Put a flat washer, lock washer, and nut on each bolt. Hand-tighten all four bolts. Then finish tightening them.

Attaching the winches.

Bolt the winches down with the 3/8" bolts, washers, and nuts. Begin by hand-tightening all three bolts. Push the winch as far forward as it will go while keeping it parallel to the sides of the platform. Then tighten the bolts.

Attaching the winch straps.

Attach the winch straps to the winches with the ¼ x 2¾" bolts and locknuts. Do not use washers. The end of the webbing should be on the top side of the sewn loop. The locknut goes on the same side as the winch handle. The nut and bolt should only be tightened until they are just barely snug against the winch spool. They also need to be as close as possible to the hub. Ideally, a flat side of both the nut and bolt head should be against the hub.

Attach the winch handles. Instead of using the locknuts they come with, use the other nuts we provided. You will want to remove the handles after the bin is set up, and these go on and off a lot easier. Put the cutting bar inside the box, and slide to one end of the bin until it's against the stops. Release the ratchet lever so you won't have to hear it clatter. Wind the strap onto the winch by turning the handle while guiding the strap with your other hand. Slip the delta ring of the strap onto the J hook of the cutting bar. Turn the winch handle until it is really hard to turn. This could be about three turns after it looks tight. Then lock the winch.

Go to the other side. Connect the delta ring to the J hook, release the ratchet lever, and reel the strap onto the hub until it's stretched tight. Lock the winch, and go back to the first side. The bar might have pulled away from the stops a little. If it is close the stops, see if you can tighten the winch some. If not, you will need to release the other winch. The bar needs to be within ¼" of the stops to keep the weight of the bedding off it. A small part of the bar will be inside the box, but not enough to matter. Don't be concerned about the straps being too tight. When finished, remove the winch handles.

Sealing.

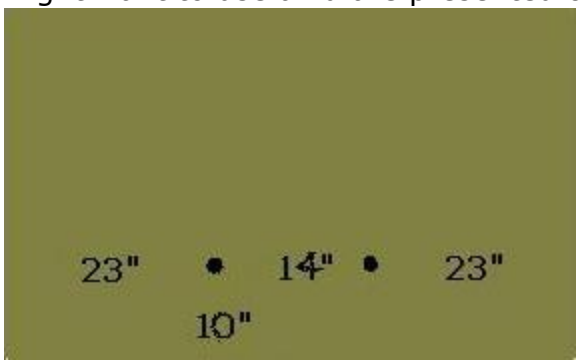
Use the sealant we have provided. It has excellent adhesion to the powder coating. The areas that need to be sealed are where the square tubes overlap on all eight of the connections of the box frame. Run a bead of sealant around all four sides of all of those connections.

Do not apply below 40°F or above 105°F. This temperature range needs to be maintained for at least 3 hours after application. Have a few small cotton rags handy in case you need them. Have a piece of cardboard ready to catch drips when you set the caulking gun down. Cut the tube open at a 45° angle close to the end for a small bead. Pierce the seal. Remember to press the tab at the end of the caulking gun to release the pressure each time you stop running a bead. You will be

using only about 5% of the tube. It might help to practice on something to get used to the viscosity. Though considered non-sag, this stuff is a little on the thin side. A plastic pen cap works well for tooling the beads if you need to. Keep your "tooling tool" on the surface of the bead, and wiggle slightly as you pull the thicker parts of the beads into the thinner areas. It will take 2-10 days for the sealant to cure, but the bedding and worms can be added three hours after you're done sealing.

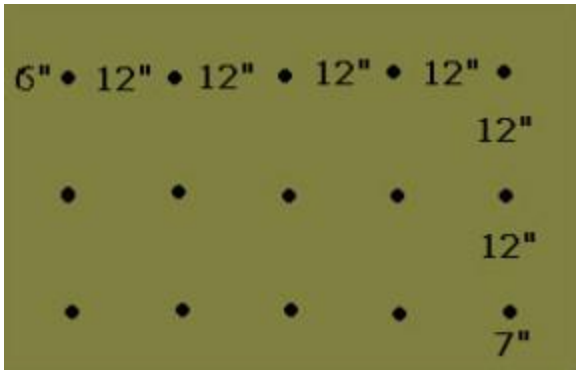
Making a lid.

Under most circumstances, a lid will not be required. We have included handles for a lid though in case you need them. Considerations regarding whether or not you might want to use a lid are presented on pages 13 and 14.



These plans are only suggestions. There are lighter weight materials available, and other designs that will work. A lid can be made from the OSB (oriented strand board) lid of the crate. Make the smooth side the top. Keep it the same width. Make it 5 feet long. Drill two 3/8" holes for the handles as shown in the diagram.

If the worm bin is indoors, or far enough under a roof to protect it from precipitation, drill fifteen ¾" ventilation holes as shown in the other diagram. Paint at least the bottom of the OSB. If it is outdoors, paint all surfaces of the OSB. Use paint with good abrasion resistance.



If the worm bin is outdoors and not protected from precipitation, the lid should be made pitched for runoff. Don't drill any ventilation holes. Cut a 5' long piece of 2x2 and two 3' pieces of 2x2. Paint all surfaces of the OSB and 2x2s. Fasten the 5' piece to the bottom of the lid with screws as shown in the photo. Putting a convex side against the OSB adds strength. Fasten the 3' pieces to the top of the OSB as shown. It helps to put concave sides of these against the OSB.

Attach the handles with one of the 2" square plate washers on each side of the lid, and a lock washer against the nut.

Before you go through the work of painting these assemblies, you might want to put them together to see if they feel like they will be manageable to handle. It only

takes a few minutes to disassemble them for painting. Using plywood instead of OSB will reduce the weight by about 4 lbs.

The photo on the left is the lid with holes for indoor use. The photo on the right is the lid without holes for outdoor use where water needs to run off. The handles work best for both lids when they are 10" from the edge as shown in the photo on the left.

SETUP

Making the bedding.

Cover the screen all the way to the bar stops with newspaper only two sheets thick. Don't use any of the smooth paper. Cut the paper to fit between the UHMW strips. This paper will usually decompose before you need to winch the bar. Crumple sheets of newspaper to block off the ends where the bar comes through. These won't completely decompose, but you will be able to easily pull them out later. The end where the bar is resting won't need to be blocked off except where the tongue of the bar comes through.

There are many different recipes for bedding. At least half of the bedding should be well aged or partially composted food waste, grasses, or manures. We recommend using a 1:2 mixture of peat moss and well aged manure with some agricultural lime mixed in. Don't use dolomite lime unless you mix it 1:4 with ordinary ag lime. Don't use bagged compost. It probably won't have enough food energy left in it to support a high density of earthworms. A high energy recipe will also help the paper on the screen to decompose.

If the aged manure smells much like manure, it might be ok for worm food, but probably isn’t old enough for the initial bedding. Horse manure has the perfect structure for aging in a pile. If you can find a pile of horse manure that is over six months old, that would work great. Aged separated dairy solids (a mixture of manure and bedding from a manure separator) also have good structure for aging in a pile. Manure from most vegetarian animals will work if it is aged (or partially composted) properly. The aging process needs to have taken place where some rain can leach salts from the manure unless it has been leached first or came from a manure separator. Be wary of bagged manure. It might not be aged enough, and could contain high levels of salts. You can substitute homemade compost for the aged manure if you didn't go too hot and heavy with your composting. Unless you made a huge amount of steam with your pile, there will be plenty of energy left in it for the worms.

Soak a 2.2 cu ft compressed bale of peat moss overnight. Squeeze the water out so the moss is damp and fluffy. It will yield just over 4 cu ft. An easy way to mix the bedding is to put the ingredients in a pile on a concrete surface, and then go around the pile with a flat shovel, scooping and turning. For each batch, use one 5-gallon bucket of peat moss, two 5-gallon buckets of aged manure, and ½ cup of lime. If you are using a grain shovel, you could double this recipe. Keep mixing batches until all the peat moss is used.

You can use coir instead of peat moss if you want. They will both work equally well.

Check again to make sure the box is centered before adding the bedding. When putting the bedding in the bin, it's easier to keep from moving the paper if you use a pail instead of a shovel. You should end up with 10-12 inches of bedding.

Water the bedding slowly and evenly for about 30 seconds. Then wait a minute, and water again for just a few seconds. Repeat slow intermittent even watering until all the paper is wet. Use warm water for this initial watering unless the bin is in a hot summer environment.

Because the worms' food becomes their bedding, we will use the term *bedding* from now on to refer to the entire contents of the worm bin.

Choosing the right type of worm.

You will need to use a composting type earthworm that reaches high population densities. They need to have a healthy appetite, live near the surface, and stay in the worm bin. The most commonly used species are *Eisenia fetida* and *Eisenia andrei*. Both of these species are sold as *Eisenia fetida*, and often end up being a mixture of the two. Different species don't always get along, but these two do. Do not pay a premium for your worms for the privilege of selling their offspring back to

the company. There is a 100% chance you will be disappointed if you do this. All the information presented in this manual pertains to the species *E. fetida* and *E. andrei*.

Adding worms to the bedding.

Start the worm bin with 15 or 20 lbs of worms. The biomass will max out at 30-40 lbs in 2-4 months. Don't try to start with more than 20 lbs or less than 15 lbs. There are several reasons for this.

If you mail order the worms, they will probably come in bags. Carefully empty these on top of the bedding. Worms are weighed when they are packed, and will shrink considerably during shipment. They won't look like 15 lbs of meat, but will soon recover from their journey. Do not allow any direct sunlight to shine on them. Don't disturb them any more than is necessary. They will crawl in and spread out without any help even if they are all in one big ball.

Worms of a different species are likely to separate from the crowd. If you see a worm with a bluish tint racing around on top, it's a *Perionyx excavatus*. You would definitely want to remove that one. If there are any with a dry brown look instead of a wet reddish-brown look, they don't belong there either. Any worms that refuse to crawl in should be relocated. Feed the worms after they have all crawled into the bedding. Feeding tips are presented on the next page.

Training your worms to stay.

Cut a carpet remnant to 35¼" x 56¾", and lay it on top of the bedding, or use cardboard to completely cover the bedding, or place a lid on the worm bin. Leave a light on all night. Slowly remove the covering or lid in the morning. Leave the light off the next night. Only use the covering or lid that second night if you need to keep the worm bin warm, or need to keep animals out. Check on the worms with a flashlight about an hour after dark. Don't shine it directly on the bedding. Keep in mind it is normal for the worms to be crawling on top of the bedding at night, and even partway up the sides. Check on them again about an hour later, and then again about an hour after that. If no more than one or two have crawled out of the bin, then everything is ok, and the rest will stay. Any worms that crawl out should be relocated. If more than a very few crawl out, give them one more night of training. After the worms settle in, you won't need a light at night.

Never leave a light shining on the bedding all night, not even through holes in a lid. If done long enough, they will mass migrate the first time the light isn't on.

A few worms might fall out the bottom until the bin fills up to about ¾ full, but not that many, and they probably won't be doing it on purpose.

Whether or not you need the carpet and/or lid from now on will depend on a variety of circumstances. These are explained on pages 13 and 14.

OPERATION

Feeding the worms.

A calcium supplement is absolutely essential. Use agricultural lime according to the recommendations below. Don't use dolomite unless you mix it 1:4 with ordinary ag lime.

In some cases, it is advisable to use uncomposted food to help warm the bedding through microbial action. In other cases, it is advisable to use partially composted food to help keep the bedding from getting too hot. These strategies are presented on pages 13 and 14.

The presence of viable seeds in vermicompost doesn't usually cause too much of a problem. If it's a concern though, you can avoid certain feedstocks and/or precompost. Cow and horse manures usually contain a few viable seeds that will survive the vermicomposting process. Vermicompost produced from fruits and vegetables will sometimes grow a few tomato and other plants. Grass clippings and certain types of hay can have a huge amount of seeds. Worm farms usually hot compost their worms' food enough to kill most of the seeds. This usually involves composting several cubic yards of material at a time, but the amount of heat needed can be produced with as little as one cubic yard of material. It's possible to kill the seeds, and still have enough energy left in the feedstock to produce heat in a worm bin. It's also possible to compost to the point of the material not producing much heat in a worm bin, but still having enough energy left to nourish the worms.

It's best to feed your worms a somewhat steady diet so they can get used to their food. Fruits and vegetables can be used as a staple, with a few other foods mixed in if you want. A little reject grain can be sprinkled in every now and then, but it would be a good idea to know why it was rejected (hopefully not because of chemical contamination). A little grain will fatten the worms, but don't use too much at one time. The amount of grain and other high protein foods should be limited. Coffee grounds are good, as well as tea bags, eggshells, unsalted pasta, almost any plant material. Don't put any hot peppers in the bin. Onions, garlic, and citrus are ok in moderation. Never feed your worms meat or dairy products. Don't feed them any food that has been salted or peppered.

If you're feeding your worms fruit and vegetable waste, mix a 1:3 ratio of "brown" to fresh materials. The best brown material is dry brown leaves. Shredded cardboard is good. Hardwood sawdust or shavings are good. Paper isn't the easiest to work with. If you use paper, make sure it's shredded into very narrow strips.

Most absorbent high carbon materials will work. Don't use straw unless it's been ground into 1" or shorter lengths. Cutting up the fruits and veggies really helps, but don't puree them. A good method for cutting up a batch of reject produce or pre-consumer restaurant waste is to dump it on the ground, and chop it with a flat shovel. Feed the worms 1½- 2" of this 1:3 mixture. Sprinkle ¼ cup of lime on top. Then add ½" of brown material. Wait until the worms have eaten about half of the fruit and veggie portion of their last feeding before feeding them again.

Aged manure can be used as a staple. These worms love manure. It doesn't need to be as old as the bedding manure. A couple of months is usually enough. If it came from an animal that has been wormed though, it might need to be aged longer. Do some research on the particular vermicide. Some are more persistent than others. Stock piling a couple yards of manure at a time is the easiest way to keep a worm bin fed. It won't get too old to be good worm food. Timing when you make the piles can provide well-aged worm food for producing less heat during the summer. Keep the piles wet. Covering them during the winter will, to some degree, help keep them from freezing.

A 50/50 mixture of grass clippings and brown material can be used as a food staple. Make sure insecticide wasn't recently used on the lawn. If herbicide was applied to the lawn, make sure it was watered before being mowed. This is a good mixture for partial composting to help keep bedding temps down during hot summers. If uncomposted, it will help heat the worm bin during the winter.

An excellent feedstock is the mixture of alfalfa and goat manure that comes out of goat pens when they are cleaned. Mix it half and half with a brown material. This is also a good mixture for partial composting, or for providing heat if uncomposted. An extra benefit: the alfalfa is usually seed-free.

If you're feeding your worms aged manure or partially composted food, put 1½ - 2" of food in the bin at a time, sprinkle ½ cup of lime on top, and wait until the worms have eaten most of what they can before feeding them again. They can only eat about two thirds of it until bacteria soften it up some more. You will know they're done eating when this compost doesn't have any more stickiness left to it. By "eating most of what they can," we mean there will be just a few small sticky clumps left.

If you're feeding your worms an uncomposted mixture of grass or alfalfa and brown material, feed them 2" at a time, sprinkle ¼ cup of lime on top, and feed them again when they have eaten about a quarter of the grass portion of the last feeding.

If you're feeding the worms uncomposted food, they will mostly be eating their next to last feeding. They should be almost completely done with the feeding below that

one. It's a good idea to dig down once in a while with a garden claw to see if they are keeping up. If not, you should slow down on the feeding to let them catch up.

Watering the worms.

The worm bin should be kept at 80-90% moisture. The frequency and amount of watering will depend on many factors. If you are feeding your worms nothing but fresh juicy reject produce in a mild humid environment, you might not need to water them. In some other cases, you might need to water every day.

Water enough and often enough to keep the top and bottom of the bin constantly wet, but not so much that moisture drips from the bottom. If a little moisture happens to drip though, it won't be too wet for the worms. You can't get a worm bin wet enough to endanger them. If you are trying to heat the bin with bacterial action, water less often so the bottom stays dry to the touch for about a day. Water enough at one time though so the entire bottom becomes damp. Water slowly and evenly. Sometimes warm water is better. Other times cold water is better. These cases are presented below and on the next page.

Temperature control.

The bedding temperature is slow to change. It won't change much day to night. It usually takes 2 or 3 days for a sudden hot or cold spell to affect the bedding temperature much in a full worm bin of this size. Because of the heat produced by bacteria, the temperature of the bedding could be much warmer than the average day and night temperatures. This will depend on moisture levels, the temperature of water given to the worms, what they are being fed, and other factors.

It is strongly recommended that you purchase a compost thermometer. Reotemp makes one with a 20-inch stem for about $30. When taking the temperature, the end of the stem should be at the center of the bedding, or slightly higher.

If the bin is kept in a building heated to 50° F in the winter, and cooled to 85° in the summer, it will be very easy to keep the bedding temperature within range.

The temperature range of the bedding should be 50-90°. The worms will survive low temperatures until most of their bedding actually freezes for an extended period of time, but they won't be eating or breeding much if their bedding temperature falls below 60°. For optimal production, their bedding needs to be above 70°. Don't let the entire bed get to 95°. When a portion of the bedding gets that hot, the worms relocate to a cooler portion of the bedding. If the whole worm bed gets that hot for very long, it could be upsetting. There are ways to prevent this during hot weather.

Keeping the worm bin cool.

During hot seasons, the worm bin should be fed materials that are at least partially composted or well aged. Even these materials will produce heat, so the bedding should be kept very moist to reduce the amount of bacterial activity. Wait until the worms have eaten all of the sticky portion of this food before feeding them again.

The worm bin should be left uncovered, and the bedding surface constantly wet to provide some evaporative cooling. If the bin is indoors, there should be plenty of ventilation to help with evaporation.

The worm bin would of course need to be in the shade all day.

Chilled water can be used if it's needed to keep the bedding temperature down. If the bedding temperature gets above 90°, you might want to consider using a bag of crushed ice for the next watering.

Keeping the worm bin warm.

Evaporation will allow heat to escape from the bottom. If used outside, block the prevailing wind from getting underneath the worm bin.

Bacterial action is the best heat for a worm bin. The thing is; when the bedding temperature goes too low, the bacteria that supply the heat slow down. Then they produce less heat, which allows the bedding to get even colder. This downward spiral won't get out of control though until the bedding temperature gets below 50°. Using the procedures below will keep the bedding temperature above this threshold in an environment with average day and night temps of 40°, sometimes colder. Depending on the temperature, you might not need to do all of these things.

> Use uncomposted feedstock. Grass, alfalfa, and other high nitrogen foods mixed with brown materials will provide slightly more heat than most fruits and veggies mixed with the same brown materials. Manure also heats up good. Make sure it is at least a couple months old though. It will still heat up.
>
> Allow the worms' food to warm up before placing it in the worm bin.
>
> Use warm water.
>
> Lay a 35¼" x 56¾" piece of carpet on top of the bedding. Keep the carpet dry. If you're feeding you're worms fruits and veggies, remember to put the layer of "brown" material on top of the food to help keep the carpet from molding. Using a new carpet remnant instead of an old piece of carpet will also help. Don't use a layer of brown material on top of compost or aged manure. That would be too much brown material.

Use two or three layers of carpet if extra insulation is needed. Keep the level in the worm bin just low enough so the carpet isn't above the top of the marine board.

If the worm bin is outside, it should be located where it can receive as much of the winter sun as possible. Also take into account where the sun will be in the summer.

Insulate the worm bin. Wrapping polyethylene film around the sides will create airspace, boosting the insulating value. If outside, using black film will also trap solar heat. Greenhouse supply companies have tape that has excellent adhesion to poly film. For even more insulation, foam sheets can be placed between the marine board and the plastic film. Cut them to fit snug between the framing members so they don't fall out while you're wrapping.

One layer of carpet and the lid with holes both provide about the same amount of insulation. If you only need one or the other, it won't matter much which one you use. If you are using the slanted lid outside, it won't provide any insulation at times that the air isn't completely still, but should be used if it's needed to keep precipitation out of the worm bin, especially if you are using the carpet (which will need to be kept dry). You might want some weight on the lid if it's exposed to wind.

If you want to try vermicomposting in an even colder environment, the worm bin can be heated. Even though bottom heat is more efficient, top heat is better in this case. That's where the worms are, and where you want them to stay. There are many ways to do this. Because there are so many variables involved, it is beyond the scope of this manual to explain which are better for each specific circumstance. If you contact us though, we will try to help.

An option some people take advantage of in cold climates is to just take a vacation from the worms for 2 or 3 months in the winter. If the bedding temperature goes low enough, you won't have to feed the worms. You might not even have to water them. They will survive as long as the bedding doesn't freeze.

Removing vermicompost.

Wait until the worm bin fills up before removing vermicompost. Before winching the cutting bar the first time, remove as much of the paper blocking the ends as you can get a hold of. Don't use a metal tool for this. What you can pull out with your fingers is probably enough. All of the paper on the screen usually decomposes to the point it has fallen out, but if for some reason it hasn't, the portion that remains needs to be removed. Don't use a metal tool for that either. A pencil will work.

Put the winch handles on. Unlock both winches. Winch the bar across the bin. Use a brush or the back of your hand to brush material off the top of the strap before it gets to the winch. Just before the bar reaches the stops, some slack will form in the strap, so you will need to keep turning the handle after the bar contacts the stops until it feels real tight. Lock the winch. Go to the other end, snug up the strap, and lock the winch. Go back to the other end, and check to make sure the bar is within ¼" of the stops. When done, remove the winch handles.

Don't try to winch the bar across the worm bin more than once at a time. It sometimes takes a while for the full weight of all the bin contents to settle on the screen. Winching the bar across before that happens could cause it to travel skewed. You will need to pull the bar only once for every one or two feedings.

Don't stop turning the winch handle until you have moved the bar the full length of the bin. It is possible that settling bedding could push the bar against the screen if you stop for more than a few seconds.

If you let the vermicompost partially dry for a couple days, it can be pulled out from underneath with a push broom.

Leaving the worms home alone.

If you are taking a trip, you might not need a caretaker for your worms if you make sure the bedding is completely drenched, and you have given them a little extra food. They will continue to receive nutrition by eating what continues to decompose from previous feedings, and by eating what they have already eaten. If the environmental temperature is within range, and most of the bedding remains moist, they will be ok for a week or two. If you're not sure though that the bin won't get too dry, it might be a good idea to have someone water them. If the worms have traveled down to get to moister bedding, wait until they come back up before winching the bar.

While it is ok to let the worms run out of food like this once in a while, don't do it too often. For the most part, they should be fed proper portions at regular intervals.

WARRANTY

We warrant the Dirt Maker 14 Flow Through Worm Bin to function for a period of five years beginning on the date of delivery.

This warranty does not cover cosmetic defects.

The box side frames will be covered by this warranty only if they are sealed before use as described beginning on page 5 of this manual.

The exclusive remedies of this warranty shall be, at our option:

1. Repair; or
2. Replacement of defective parts; or
3. During the 4th and 5th years of this warranty period, repair or replacement of defective parts, or reimbursement to the customer the depreciated value of the machine based upon a five-year period of use.

We will pay all shipping costs associated with complying with this warranty.

Please do not ship us any parts unless we ask you to. In some cases it will not be necessary.

All claims must be submitted prior to the end of the warranty period.

This warranty will not apply in cases of intentional damage or misuse.

To the extent permitted by law, this warranty does not cover incidental costs or consequential damages.

RETURN POLICY

Refunds will be given for returns only in cases where the customer notifies us, Dirt Maker, within 30 days of delivery of intent to return the machine, and makes it available for pickup within 45 days of delivery. Return shipping costs, crating, and protective packaging of parts are the responsibility of customers requesting refunds.

TECHNICAL SUPPORT

Please do not hesitate to contact us with any questions you may have. We will be glad to do all we can to help. We would also greatly appreciate comments and suggestions.

Our very best regards to you. Thanks. Enjoy!

Dirt Maker
1378 Falstaff Ln
Gardnerville NV 89410

775-783-9050
775-783-9315 (fax)

info@dirtmaker.com
www.dirtmaker.com