

Caution:
Never handle or touch ants directly.
They can bite or sting to defend themselves.

**Uncle
Milton®**

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KEEP FOR FUTURE REFERENCE



THE ANT WATCHER'S MANUAL

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Ants are fun!

From the minute you stock your Ant Farm® brand live ant habitat, a new world opens up in front of your eyes... a busy, bustling world that shows you that ants are a lot like the nicest people you know!

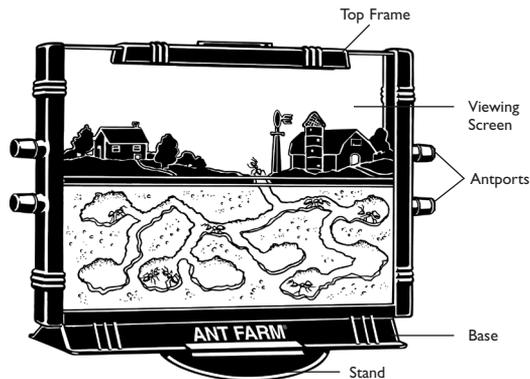


Many of the most famous people in the world have been ant watchers. Lord Avebury, a world-famous scientist, once wrote: *“When we consider the habits of ants, their social organization, their large communities, elaborate habitations, and their roadways... they have a fair claim to rank next to man in the scale of intelligence.”*

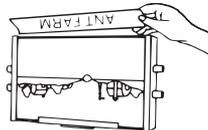
And that’s true! As you study your ants, you’ll find that they plan their world very much as we plan ours. They engineer their homes and highways carefully. They seem to consider artistic form as well as function in their building. The highways and tunnels in the ants’ world are always arranged in smooth curves and their hills are well balanced.

This little book tells you all about your Ant Farm brand habitat... how to stock it, how to feed the ants and how to take care of them. Read every word carefully, for if you treat your ants properly, they’ll let you in on their secret world and keep you fascinated.

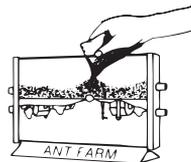
To start your Ant Farm



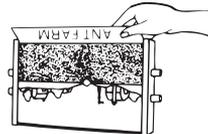
1 Turn Ant Farm upside-down and remove base and top frame. Attach base to the other end to help keep the habitat upright.



2 Cut a small corner off of bag of sand with scissors. Carefully pour sand into the habitat until lower half is filled. (Make sure area is ventilated. Sand can be dusty.)



3 Replace the base. Make sure it snaps down on viewing screen securely.



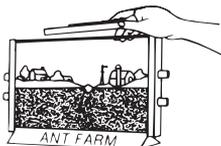
4 Turn Ant Farm right-side-up. Slowly pour in about 2 oz. (1/4 cup or 60 ml) clear drinking water. Sand should be evenly damp but not soggy. Don't worry if a little water leaks out.



5 Using supplied stick, push the cotton stopper halfway into sand. This will start a tunnel.



6 Replace top frame. Make sure it's centered and secure.



7 Slide stand onto center of base.

8 Ant Farm brand habitats can be connected to each other! You can use just one Ant Farm habitat, or you can build an entire village!

To connect, cut Antway tube to desired length and attach end tightly onto an open Antport. Attach other end onto an Antport of another Ant Farm habitat.

If using just one Ant Farm habitat, you can attach the Antway tube from one side to the other. Keep any unused Antports tightly capped.

To stock your Ant Farm

You can order live Harvester ants online using the Ant Farm certificate included in this package (note: shipping and handling fee is required).

To order Harvester ants online, follow the instructions on the certificate included in this package or go to www.unclemilton.com/antsonline. After ordering, you will receive by mail a supply of Harvester working ants (note: we cannot supply queens or male ants).

Normally you can expect to receive your ants in 7 to 10 days, but shipment may be postponed for a while if the weather is too hot or too cold for ants to safely make their long journey in the mail. Your ants will be sent when the temperature in your area is consistently within a safe range of 34° to 85° F (1° to 29° C). If you have an outdoor mailbox, watch for the mail and do not let the ants stay long in there. It may be too hot or too cold for them!

“All orders must be sent at the same time to ensure that all the ants will be from the same colony.”

Ask your mail carrier to watch for it and bring it to your front door if that is possible.

When your ants arrive, be sure to read the directions that come with them. Before you

open the tube of ants, put it in the refrigerator (not the freezer) for about 15 minutes. This makes them less active and much easier to put into the habitat. They will soon “warm up” to start working.

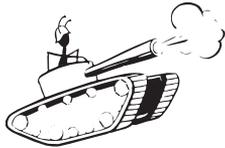
Remove the top frame, carefully open the plastic tube of ants and carefully squeeze the tube of ants so it fits between the clear windows. Shake or tap the ants in and replace the top frame.

“Caution: Never handle or touch ants directly. They can bite or sting to defend themselves.”

If the ants seem lazy the first few hours, don't worry. Put the habitat in a dark place overnight. They'll soon become accustomed to their new home.

Don't start a war!

While ants are very loving with one another in the same colony, they will fight with ants from another colony. Never mix your ants, or you will start a war. How can you tell if ants are friends? Well, if we send you a supply of ants, they will all be from the same colony, and ants from the same colony are always friends.



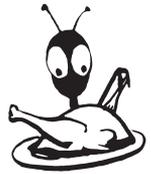
If you gather your own ants, be sure they all come from the same place. When you find a big group of ants all

“Never mix ants from different colonies.”

working together, they are from the same colony. Otherwise, they would probably be fighting! Look for large ants that cannot escape through the air holes. Try to find ants that are nesting in the ground – they will be more likely to dig tunnels than ants that live in trees or elsewhere. Let the ants crawl up onto a stick without touching them. Remove the habitat lid, carefully shake the ants in, and replace the lid.

Ants love to eat

Ants eat almost anything, but remember they are tiny creatures and they eat tiny meals. So don't overfeed your ants!



You can give your ants food that you probably already have in your kitchen. Once a week, remove the top frame and drop in just a tiny crumb of bread.

You can give your ants some variety. However, if you stuff too much food in your habitat, it will spoil and make it messy. This is not good for the ants.

“Never over-feed your ants.”

One food ants love is fruit. It's sweet and juicy. A pin-head-size piece of apple is enough for a whole week.

Other foods ants like are two or three birdseed, a tiny bit of hard-boiled egg white, or a drop of honey mixed with water.

Ants also like leaves, especially leaves from fruit trees. Take a 1/4" piece of leaf, break it up and drop it in. You'll enjoy watching the ants nibbling on the leaf.

They like to drink, too

You should not give the ants too much water either. Just add a few drops of clear drinking water every other day.

Be sure to keep the sand slightly moist, but not soggy. Try not to get water on any bits of food inside your habitat.



You might see some droplets of water (condensation) on the inside of the windows. If this happens, stop watering for a few days.

Don't bake your ants!

When the sun shines directly on your habitat, it becomes an oven, and the ants can die from the heat.

Don't leave them outdoors in icy weather.

Ants can't stand extreme changes in temperature. Room temperature of 65° to 75°F (18° to 24°C) is fine.



“Never leave your Ant Farm in direct sunlight or near other sources of heat, such as a lamp, stove or fireplace.”

Ants don't like earthquakes!

Be kind to your ants. If you shake your habitat, or turn it upside-down, you will wreck their tunnels and bridges. They take great pains building their little world, and if they are disturbed too much they will die.



“Keep your Ant Farm in a quiet and stable place. Don't shake or tilt it. Treat your ants with respect.”

Place the habitat on a sturdy shelf or table that won't get bumped or shaken. Quick, sudden movements will collapse the tunnels and kill the ants.

Ants are farmers

In some types of ant colonies there are farmer ants. They actually have farms! They gather tiny seeds from the fields, bring them home, and plant them underground. Soon the seeds sprout. The farmers bite off the green sprouts and carry the seeds out into the sun to dry. The seeds turn into sugar... and everyone knows how ants love sugar!

Some ants raise and till fields above ground. They plant small crops and keep them neat and well-tended. Then the farmers carefully harvest the seeds and store them in underground storage chambers.



There are even ants that keep “cows.” The cows they keep are really aphids — tiny insects that live on the juices of plants. Inside the aphids, these juices turn into a sweet liquid, similar to the grass

real cows eat turns into milk. The aphid “milk” is called honey dew. When an aphid is full of honey dew, *milkers* ants stroke it, and it drops its honey dew for the milkers to gather up.

Other farmer ants raise mushrooms. They plant tiny bits of mushroom in their deepest, dampest caves. The bits of mushroom grow, then the ants snip them off so they won't grow too large. The ants are always very good farmers. They weed their mushroom beds to prevent growth of other sorts of plants among their crops.

Ants are sanitary

Yes, ants are very neat and tidy creatures. They keep themselves clean and they will not tolerate litter. They have a place that they use as a “dump site.” All the trash from the colony is carefully gathered up and hauled away to this dump, usually away from the rest of the colony.



Long live the queen!

The idea that all ant colonies have only one queen is not always true. There are often two or three queens in a colony, and in a very large colony, there may be as many as a dozen.



In the mating season, the young queen and prince ants crawl out into the sun. Both have wings, and they fly high into the air to mate. The princes have now finished their job, and they soon die. The queens, however, have scarcely begun their lives' work.

After a young queen rests, she sheds her wings and explores until she finds a good place to start a new colony. She digs a tunnel with a small chamber at the end, and there she lays her eggs. For the rest of her life, the queen will do nothing but lay eggs. Nurse ants will care, feed and clean her.

Some eggs the queen lays will hatch other queens and some will hatch princes. Others—most of them in fact—will hatch workers. Indeed, for the first few years of her life, the queen will hatch only workers. An ant queen may live for as long as fifteen years.

Ants are loyal

Ants are among the most loyal creatures on earth. They do whatever it takes to help each other.



We can learn some wonderful lessons in good citizenship by watching ants. First, ants respect the rights of others. They're always ready to help and work as a team. They share their food and get along very well in their colony.

When an ant begins to dig a tunnel, it sends out the message that it needs help. Other ants come help complete the tunnel. This is how ants accomplish such seemingly overwhelming projects as creating an entire underground colony, grain by grain!

Ants are hard-working

Ants are very strong for their tiny size. Some can carry loads that weigh fifty times more than they do. That would be like a human being lifting a car!



Each ant has a special job to contribute to the colony. There are, for example, nurse ants that take care of the young and the sick. Builder ants dig tunnels and make bridges. There are forager ants that find and store food for the rest of the colony. There are also guard ants that protect the colony from invasion. Finally, there are undertaker ants that carry the deceased away to a graveyard for burial.

Ants are athletes

Ants have many activities. They work hard but they also find time to play.

Ants go for two special kinds of sports — soccer and wrestling. Sound crazy? Well, watch your ants! Drop one tiny round birdseed into your ant habitat. Soon you'll see ants rolling the seed toward each other, or passing it from one to another just like a game of soccer!

If you see two ants in your habitat appear to be fighting, they're having a wrestling match. Ants in the same colony never really fight, but they enjoy bumping each other. Sometimes they have a “no-holds-barred” match!

Ants are sociable

Often you'll see a whole group of ants gathered together. They'll tap one another on the heads with their antennae and act as though they are having a meeting or a party. Ants are very social creatures!

Why watch ants?

For thousands of years, philosophers and scientists have been fascinated by these industrious little creatures. Nobody knows who the first ant watcher was, but the Bible tells how King Solomon — who was certainly one of the wisest men of the ancient world — advised his subjects to “Go to the ant... consider her ways and be wise!”



History is filled with famous ant watchers. Pliny, one of the greatest naturalists of ancient times, wrote about the wisdom of the ants. Aelian, a Greek philosopher, noted that ant colonies and ant highways were very much like the famous buildings and roads of Greece and Crete.

Ants are even found in Greek mythology. An ancient myth tells how one son of Zeus, the leader of the Greek gods, turned himself into an ant to make a good impression on the lady with whom he was in love.

So you see that ants have been highly regarded for their perseverance, teamwork, and industriousness for centuries. In fact, ants are among the most successful of all living things. They have been around since prehistoric times!

An Ant Farm is much more than a toy. It provides a lesson in nature study and is a good example of community cooperation. Ant Farm habitats can be found in classrooms throughout the world, from nursery schools to colleges!

As you observe your ants, you'll become acquainted with the different members of the colony. You'll discover

which ones are smart, which ones aren't, which ones are leaders and which ones prefer to follow.

Watch them — a magnifying glass will come in handy — and you'll soon realize why you should take good care of your ants. These little creatures work very hard, they are very loyal to the colony, and are good citizens in their community.

Ant questions and answers

Q: Do the ants get enough air in Ant Farm habitats?

A: Yes. Your Ant Farm brand habitat is scientifically constructed to provide sufficient air through tiny vents.

Q: Are there both male and female ants in a colony of workers?

A: No. All worker ants are sterile females. The only male ants are the "princes." They mate with the queens and die soon after mating.

Q: When will I receive the ants I ordered?

A: Normally, we mail ants to you within 3-6 weeks after we receive your order, sometimes they are delayed because it is too hot or too cold for them. It is best to order when the temperature is between 32°F and 85°F. If you have an outdoor mailbox, don't let the package stay in there for long! It may be too cold or too hot for them.



Q: Can the ants travel by mail in their small tubes without dying?

A: Yes. Our ants are packed in special containers for travel. Our experience proves that only a few ants out of a shipment die in transit. After all, some ants die of old age or other weakness. However, we ship you more than enough to work your Ant Farm habitat.

Q: Can I use my own ants?

A: Yes, you can. In fact, ants from your own neighborhood may thrive even better since they are already adjusted to your climate. Just be sure to find large ants that cannot go through the air holes. (See pages 6-7.)

Q: How long do ants live?

A: A worker ant can live about one year from birth. The ants we send are adult workers, so under proper care and conditions, they should live one to three months. However, fumes, heat or improper care can shorten their lives. The biggest causes are overfeeding, over-watering or under-watering.

Q: How do ants communicate?

A: Ants communicate mostly by odors (called pheromones). They often hold meetings and you will see them all standing around in a group as if they are having a get-together! Sometimes, when an ant wants to attract the attention of another ant, it taps that ant on the head with its antenna.

Q: Do ants work all the time?

A: No. They work very hard, but they also play, and they rest. When they play, they bump and wrestle with each other. Sometimes two or three of them will roll a bit of grain or sand around like a soccer ball.

Q: Do ants take baths?

A: Yes. They are very clean. Watch them closely and you will see the ants rubbing their faces with their legs. They are cleaning themselves when they do that.

For further reading

If you want to know more about ants, you'll find many interesting books in your public library. You can also find Frequently Asked Questions under the "Support" tab of our website.

To re-stock your Ant Farm

Welcome your new ants to a clean home. Take your Ant Farm apart and sift the sand clean for dead ants, leftover food bits, etc., or use new sand. Rinse the plastic parts under water and blot dry (don't wipe — the clear parts can scratch). Replace the clean dry sand into the reassembled units and moisten as directed on pages 4-5.