

Care and Culture of Earthworms

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Keeping earthworms for future fishing is easy. Raising them takes a bit more equipment and managing.

Both large nightcrawlers and small garden angleworms can be kept in wash tubs, large boxes, old bathtubs, concrete enclosures, and specially prepared worm beds in the back yard. For example, the ordinary wash tub, 2 feet in diameter and 12 inches deep, can hold a ready supply of earthworms; 3,000 to 5,000 of the small, garden variety can be produced annually. The number of earthworms you want or need will help you decide the size and kind of container to use. Earthworms in any container must be fed and kept cool, moist, and clean.

Housing angleworms

Always locate worm beds or containers in cool shaded areas. Garages and cool basements are used successfully. For year-around storage, earthworms must not get too warm, preferably not over 70° F, nor freeze solid during the wintertime. Whether worm beds are located inside or outside, one of the biggest problems is to keep the right amount of moisture in the soil. In the summer the soil will need watering; during the winter you may need to cover the soil to prevent freezing or flooding from excess rainwater. Drain holes are needed in practically all types of containers.

A 55-gallon oil drum cut in half, provided with a drain and sunk into the ground to within 4 inches of the top, will serve nicely under most Oregon conditions. The earthworms can go deep enough to escape winter frosts or excessive rainwater. For the drain, make a 2-inch hole in the bottom of the drum and cover the opening with a patch of fine meshed copper screen. Seal the screen down with hot tar or ordinary paraffin wax. This same plan is applicable for drains in other types of containers.

Feeding

Earthworms like fine-textured soil containing lots of humus or well-decayed organic matter. They swallow the soil and get their food from it. The larger nightcrawlers also will eat leaves and other similar foods. To add more humus to Willamette Valley soils, mix in some old rotted manure, grass clippings, leaves from fruit trees, sod, clover hay, or peat moss.

Food for earthworms can come from either animal or plant sources. The leaves of celery, cabbage, lettuce, and other vegetables are good. Lawn clippings are eaten to a degree. Work modest amounts of these types of food into the top soil and keep moist.

An excellent feeding ration is made from one part of discarded kitchen fat to two or three parts of corn meal. Another good ration is one part of cottonseed meal, one part of egg laying mash, and two parts of alfalfa meal mixed together and spread throughout the top 6 inches of the soil. Also, broiler chick mash or regular egg laying mash may be used alone.

Mixing rations into the soil without damaging the worms may be difficult. One way is to make holes in the surface with a pointed instrument such as an ice pick or stick. Then partially fill the holes with feed, smooth out the top of the soil, and wet down with a small amount of water. Another good way is to work in some feed while collecting worms for fishing. Avoid overfeeding to insure against souring and excessive eating. Feeding at weekly intervals has proved to be very good for both keeping and raising earthworms.

Raising

When raising your own supply of ordinary garden angleworms, use at least two containers. This will permit the fisherman to leave one container completely unmolested and still have a ready supply of worms in the other. Small angleworms should reach maturity 60 to 90 days after egg capsules hatch out.

Fifty to one hundred of the small garden variety of angleworms will be enough to start a worm farm in an oil drum container. Brood angleworms may be collected from home grounds or even purchased from commercial growers. Pick out the hardiest, most vigorous and mature angleworms for your breeding stock. One way to find good worms is to wash them and place a few at a time in a dish of water. The injured and weak ones will easily be seen.

Earthworms must mate to reproduce, even though one earthworm contains both the male and female reproductive organs. The eggs are formed in a slime tube which slips off over the angleworm's head and forms a cocoon or capsule that incubates them. The eggs develop into tiny worms in the cocoon and crawl out through one end when ready to emerge. Earthworms breed most



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actively in the spring, although under favorable moisture, food, and temperature conditions they can continue during the summer and fall. The cocoons of earthworms vary in shape and size. They are usually from 1/25 to 1/3 inch in length. Some of the fast-maturing and well-fed varieties reach fishable size in 60 to 90 days.

Nightcrawlers are difficult to raise in homemade containers. Most people have failed in trying to do this and resorted to picking the worms from lawns, gardens, and orchards. The well-fertilized and watered lawns kept by large public institutions are favorite places for collecting nightcrawlers.

Transplanting

In the hot summer, special care is needed to take earthworms along on a fishing trip or transport them to a market. To keep worms alive, be sure they are cool and moist. A good way to do this is to put the earthworms in a bucketful of damp sphagnum moss for several days previous to transporting them. With this treatment they get cleaner, tougher, and more prepared to make the trip. They can be moved in a bucket of moss or put into small moss packages. The damp moss helps to keep the worms cool.

Packaging

For packaging earthworms, the pint-sized cardboard container is a favorite for commercial sales or short fishing trips. Put damp moss in the container and add a

dozen nightcrawlers or three to five dozen angleworms. Punch small holes in the top of the container and pack in the coolest place you can find. Avoid storing worms in metal bait boxes and direct sunlight.

If you want to check the earthworms, turn the package upside down for a short time. Most of the worms will go to the bottom of the container and press against the lid. Then, turn the package right side up and open the lid to check to see how many earthworms are against the lid and in the exposed moss.

For long shipments through the mail, dampened moss is preferable to soil or other substances for keeping the worms cool. Heat is the major hazard in either shipping or taking earthworms along on a fishing trip. Temperatures over 70° F are often fatal.

If worms are to be kept for some time in storage, they should be refrigerated at about 40 to 45° F.

Cleaning

Earthworms, like other living creatures confined in a small area, get their living quarters dirty and unsanitary. Therefore, remove the soil from the beds annually and refill with new soil and food materials. A good time for housecleaning the earthworm beds is in the late fall after the fishing season is over. Also, the soil with a few of the remaining angleworms makes excellent covering for flower beds or the garden. Soils from used earthworm beds are high in nitrogen and organic matter, products which plants and flowers thrive on.