UNIVERSITY OF KENTUCKY

COLLEGE OF AGRICULTURE ● DEPARTMENT OF ENTOMOLOGY

ENTFACT-002

RAISING MEALWORMS OR FISHING WORMS

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Mealworms

Mealworms are the larval stages of a common darkling beetle and are pests of flour, meal, grain and related products. They vary in size from the very small, newly hatched worms to full grown larvae that are approximately an inch long. These worms may be easily raised at home by following a few suggestions.

An initial supply may be obtained from dealers or found in feed, grain, or meal in a barn or feed room. A wooden box or box eight to ten inches deep, twenty four inches long and eighteen inches wide makes a satisfactory rearing container. This box should be half-filled with fine meal or flour to which some middlings or bran is added. A few scraps of cloth or wrinkled paper will assist in preventing the meal from packing too solidly.

Proper ventilation and a fairly even temperature are essential to prevent mold growth. Cheese cloth tied over the tray will provide ventilation while preventing the escape of the adult beetles. A two inch strip of sheet metal should be securely nailed to the inside walls of the tray above the food mixture to prevent the insects from crawling over the side.

Some moisture is necessary. This may be best provided by the addition of some moist foods such as pieces of raw potatoes, carrots, ripe apples or banana peels. These should be placed on the surface of the mixture and slightly dampened every few days.

After the tray has been prepared and mealworms added, the tray should remain undisturbed for several weeks to allow the worms to develop. The larger worms will then have changed into the pale, quiet stage which later changes into the adult. The colony should then be prepared for expansion. A little bran may be sprinkled on the surface of the mixture and a few pieces of apple and carrot added followed by a second sprinkling of bran. A close watch should be kept for several weeks until a number of adult beetles appear.

Another tray should then be provided, prepared with the same food mixture as in the first. The adults should be placed in this tray to lay eggs for more young worms. As soon as these young worms have grown sufficiently to be handled they should be put in the first tray and allowed to grow as large as desired. By using a two tray system, one should be able to provide a continuous supply of worms.

The food mixtures must be discarded, the trays cleaned and scoured, and a freshly prepared food mixture put in occasionally for the successful rearing of the worms. Old food mixtures will become foul unless occasionally changed.

Fishing Worms

Galvanized washtubs, metal drums cut lengthwise, old bathtubs or other watertight containers can be used. To prevent rusting, paint tin or galvanized containers on the inside with hot asphalt, acid-proof paint or good house paint. A tub two feet in diameter and ten inches deep should give 3,500 to 5,000 worms of fishing size per year. Some should be left to breed; only 3,000 should be used from one tub per season. The best plan is to keep two tubs, alternating their use.

For breeding, use about 100 worms obtained from bait stores or local sources. Do not use sandy soils in the tubs. If soil does not contain considerable organic matter, mix in one-fourth its volume of dead leaves or rotten straw. Fill eight inches deep and add worms. Mix one pound cornmeal and one-half pound shortening into the top two or three inches of soil. Cover with damp burlap or strips of wood. One month later and every two weeks thereafter add a similar feeding and about one quart water. Within six months the soil should be saturated with worms of all sizes.

To remove the worms, take out the soil containing worms and throw it loosely into a ten quart bucket. Allow to stand for 30 minutes and then put the soil back in the tub. Most of the worms will be found in the bottom of the bucket.

Mites, ants, rats and mice also enjoy the diet put out for worms. To kill mites, lightly dust top of soil with

sulfur dust; a thin layer does not hurt worms. To keep out ants, support the tub on logs placed in oil or dust the floor around the tub with pyrethrum dust. To keep out rats and mice, cover the tub with screening.