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Breeding methods - Mites and molds

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be kept in mind that mites can easily be passed from bottle to bottle by handling.

Most of the trouble with molds can be avoided by starting cultures at the optimum temperature until larvae are present. Of course in slow breeding species such as sulcata or repleta parent flies should be matured in small vials for a week to ten days. If a multiple mutant stock, or any one difficult to carry becomes infected with mold or harmful bacterial growths, flies to be used as parents from this stock may be kept for a few days in a vial with a hardy culture of some other species. Here the larvae of the second species keep down the mold and the flies of the first stock have a chance to mature in a mold-free environment. Assume that mold spores will be spread by infected etherizing bottle, or any other piece of apparatus used in manipulating flies and take necessary precautions to prevent this.

Demerec, M. Control of mites. As a preventative measure against the spread of mites we are keeping stock cultures (and also all other culture bottles which are used during a long period) standing in a weak soap solution. For this purpose shallow (2 inches or 5 cm high) galvanized iron trays are used. These are made to order to fit our shelves (usually 12 x 36 x 2 inches). In case any of the cultures is infected with mites the soap solution prevents their spread to adjacent cultures and keeps the infection under control. Some of our trays have been in use for over five years without any sign of wear. The initial cost for trays, therefore, is spread over a long period. Mites can also be controlled effectively by avoiding accumulation of old culture bottles and by wiping frequently, shelves and tables, with carbon tetrachloride or kerosene. (Copied from DIS 2:61).

Gottschewski, G. Control of mites.

Beim Auftreten von Milben werden Kulturflaschen und Abstellregale regelmäßig mit einer 5% igen Sagrotan-Lösung abgewaschen. Außerdem werden die vermilbten Kulturen 2 Tage nach ihrem Ansetzen erneut in frische Flaschen umgesetzt. Die Milben bleiben fast vollständig im Futter der alten Kultur und die umgesetzten Fliegen sind Milbenfrei. Dadurch ist es gelungen, die Milben vollständig zu vertreiben.

Gwen, John W. Control of mites.

Three or four years ago I would have said that the control of mites was

relatively simple. At the present time, however, in view of my experience of the past two years, I do not consider it quite so simple - although entirely possible. My method of control consists in using cotton-stoppered bottles and in transferring pairs as soon as they hatch. This method repeated three or four times has, in every case, freed the culture of mites. Using paper caps it does not seem possible to control mites by this.

technique as they are apparently able to invade the bottle by way of the space left between the neck and the cap. The place where the bottles to be freed of mites are kept must, of course, be protected against contamination from cultures carrying mites.

Kyoto Laboratory    Control of mites    As a preventive method against the spread of mites, several larvae and pupae in the culture are put into a siège with fine meshes, and washed with rapid running water. After the measure, they are transferred to a fresh culture bottle.

Shipman, E.E.    Ridding cultures of mites.    If not too many cultures are involved the following plan might be followed. Larvae are bathed

in 70% alcohol for about one minute, dipped in water, and then put on fresh food. Most of the larvae survive the treatment. The writer used this method of eliminating mites from personal stocks three years ago and has seen no mites in the stocks since that time. (University of Illinois).

Columbia University Laboratory    Mites and molds    For keeping down mold, we have been using 0.1% Nipagin-M with both banana and cornmeal formulae and have completely eliminated mold with no effect whatever on viability. This was determined by careful experimental counts.

For cleaning stocks of mites a piece of paper on which larvae have pupated may be completely immersed in alcohol (70%) for two minutes, dried, and placed in a clean bottle to hatch. This is much simpler and more efficacious than immersing individual flies.

Crew, F.A.E.    Mites and mold    The addition of Nipagin M has proved a satisfactory protection against mold.

Two attacks of mites in vial cultures (but none in stocks) have been experienced. On such occasion the parasites were eliminated by segregating affected cultures and avoiding contamination. The mites were observed to enter clean cultures through the crevices often formed by the muslin coverings then used over cotton wool stoppers. When the use of muslin was discontinued, the spread of mites was rapidly reduced. Instruments coming in contact with affected cultures were sterilized after use.

Glass, B.H.    Control of mold and mites.    In combatting a severe infection of mold in Drosophila cultures, it has been found helpful to hold individuals for two or three days in vials of food containing 0.2% formaldehyde, added when the food is prepared. Flies can live for several weeks in such