

Cheese Mites
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Cheese mites are small insects which are just visible to the naked eye. When they attack cheese they will first be detected as a brown powder on the surface of the cheese or in small cracks or breaks in the paraffin. When cheese mites are permitted to act on the cheese for a long time, they borrow into the cheese, leaving behind them the characteristic accumulation of brown powder, which consists of dead mites, living mites, cheese debris and excreta. This brown powder has a characteristic sharp, pungent odor.

CONDITIONS FAVORABLE FOR MITES

Several factors favor the development of cheese mites in a curing room. Temperatures of about 60°F. are very favorable for their growth. As the temperature of the curing room is decreased, the activity of these mites decreases. When the temperature approximates 32° there is little or no damage caused by this pest. They will grow at temperatures between 60°F. and 90°F. Mites seem to attack old cheese in preference to young cheese. The presence of very old cheese in old boxes in a curing room will usually be the first point of infection of cheese mites. Moist cheese is more apt to attract their activities than one which is very dry and hard, cheese which has been freshly paraffined is not easily attacked by cheese mites if the coating is sound and free from cracks. If the coating of paraffin has been damaged by handling,

the cracks in it will offer an open gate for infection by mites. Unclean conditions in the curing room such as greasy shelves, old dirty cheese boxes, dirty walls, ceilings or floors encourage the development of mites.

METHODS OF INFECTION

Cheese mites at certain stages of their growth may be distributed by attaching themselves to the clothing or persons of people. They may be carried on an air current and so find their way into the cheese room. Undoubtedly many cheese rooms have small numbers of mites even though they do not appear in numbers large enough to cause any visible damage to the cheese. Cheese mites may crawl from one cheese to another, but necessarily because of their size they do not move very far by this method. Workers in cheese curing rooms are probably the chief means of transportation for these small insects.

PREVENTING INFECTION

The control of cheese mites depends upon a few important factors. The cheese curing room or cheese storage should be kept strictly clean. Cheese shelves should be washed thoroughly and this washing should include the supports which carry the shelves. It is wise to give the cheese curing room a thorough scrubbing, including the ceiling, walls, as well as the floor, two or three times a year. Perhaps more frequent scrubbing may be necessary

when conditions favor rapid growth of cheese mites. Cheese mites can be destroyed if they are exposed to scalding water at temperatures above 160°F. Old cheese should not be permitted to stay in the cheese curing room or storage unless it is properly paraffined. Scraps of substances, such as cheese, greasy bandages, grain, dried fruits, which might serve as food for cheese mites should not be allowed to remain or collect in the cheese curing room. Cheese boxes which are suspected of infection should be thoroughly scrubbed, scalded, and dried before they are used for cheese in an unaffected room. The use of low temperatures is one of the best methods of preventing the growth of cheese mites. Keep temperatures within a few degrees of 35°F. and not higher than 40°F. When temperatures are increased above 40°F., the activity of the mite is correspondingly increased.

GETTING RID OF MITES

When a cheese curing room is infected with mites, all infected cheese, boxes and accumulations of scrap material should be moved out of the curing room. The operator then should thoroughly clean the cheese curing room, scrubbing the ceilings, walls, floors, uprights, shelf supports and shelves. The whole room should then be thoroughly scalded if possible and dried. Cheese in boxes should be taken out and re-paraffined. If the accumulation of dust is noticeable on the cheese, the dust should be removed by brushing in a place where the mites will not have the opportunity to drift back into the cleaned room. Some vacuum cleaners can be used for removing this loose dust. The cheese can be paraffined without removing the old coating of paraffin.

This paraffining operation destroys the mites on the surface of the cheese and gives the cheese a new coating of wax to protect it. Cheese boxes should be thoroughly scrubbed, scalded, and dried if they are to be moved back into the curing room. If it is possible to do so, it is wise to leave the old cheese out of the curing room or dispose of it in some manner. The worker who may be handling the infected cheese should not be permitted to carry the clean paraffined cheese into the curing room until he has changed clothes and washed himself thoroughly. Another worker who has had no contact with the infected cheese may well do this work in order to prevent re-infection.

FUMIGATION

Fumigation of cheese rooms to destroy mites is a practical procedure when carried on by experienced operators. In a recent publication on cheese mites and their control, Department of Agriculture, Ontario Agricultural College, Bulletin 385, April 1937, two of the fumigants tested were found satisfactory. One was methyl-bromide 6.8% plus carbon dioxide 93.2% and the second fumigant was ethylene-oxide 1 part plus carbon dioxide 9 parts. Fumigation is usually unnecessary unless the infection is very severe and the room is very difficult to clean thoroughly.

The following references, which have been consulted in preparing this discussion, may be useful to anyone who desired to study this subject in greater detail:-

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