

THE CONTROL OF ASPERGILLOSIS IN BIRD COLLECTIONS

J. V. Beer

As the form and condition of avian collections vary considerably, these notes must, of necessity, be generalised, but the methods can easily be adapted to local requirements.

At present, cure of the disease is not possible as there is no reliable diagnostic method, and drugs, such as Nystatin, have yet to be proven effective. The best approach is therefore one of prevention, and the easiest way is to provide and maintain a good standard of hygiene in the collection area.

Basically any large concentration of the fungus *Aspergillus fumigatus* must be removed and destroyed, and further build up prevented. This organism is a saprophyte and grows readily on almost any moist, and in particular, warm organic debris such as old grass cuttings, damp food, old sacks, straw and the like. Pens, nesting boxes, etc. should be kept free, as far as is possible, of this organic debris, and all 'raw materials' such as food and bedding should be clean and free from dust and mould. Fungicides and disinfectants can be used to further reduce the concentrations of the fungus in the environment of the birds. The use of fungicides and the maintenance of good hygiene will in the long run keep the fungus, and consequently Aspergillosis, at a low level.

The proposed measures are primarily aimed at the disease in young birds, but they can be equally well applied to the environment of adult birds. In addition, maintenance of the general health of the birds will go a long way to combating the disease.

PROCEDURES:

1. Removal of organic debris

- (a) Remove any old food, mouldy straw, grass cuttings, old sacks, etc. Avoid spreading spores, if very mouldy, by damping with disinfectant.
- (b) Check that food bins do not contain mouldy food and remove any accumulated dust.
- (c) Ensure that all organic matter is removed from nests between each incubation period.
- (d) Where possible keep concrete areas washed down (into a drain).

2. Provision of clean 'raw materials'

- (a) Food should be clean, free of large amounts of dust and smell sweet, with no mouldy odour.
- (b) Sawdust and hay are not good nesting materials. Straw and possibly peat are better. The former should be clean, bright yellow and reasonably free of dark blotches.
- (c) Bedding material, if used, must be clean and free of any form of mouldiness.
- (d) If sacks are used for bedding, change frequently and treat as below. New, clean and *dust-free* sacks probably do not require an initial treatment.

3. Use of fungicides

- (a) The soil under incubation boxes can be treated with the fungicide Pentachlorophenol (PCP), at the rate of 0.5% W/W* and by damping slightly with a 1% solution in water of Sodium pentachlorophenate (NaPCP).
- (b) Sacks, if used, should be boiled in disinfectant and hung out to dry in the sun. Sacks stored during the winter should be boiled before use.
- (c) 1% NaPCP can be used in any cleaning operation particularly when mouldy material is involved. (Some little care must be taken in handling this material as the dust causes violent sneezing).

4. Use of concreted areas

- (a) If concreted areas can be used, it is easier to dispose of organic debris with water and a stiff broom into a drain.
- (b) Straw roofs and walls should be avoided, where possible, in favour of other materials such as asbestos boarding and concrete blocks.

5. Incubator

- (a) Incubators and any vacant 'rooms' should be cleaned out and fumigated with:—

(Per 100 cu. ft.) 35 ml. formalin, plus 17.5 g. Pot. permanganate.

These two are mixed in a large vessel and the door shut. BEWARE OF VAPOUR! The atmosphere should be warm and moist for optimum results. Leave for one hour at least, and then ventilate the room.

6. General health of the birds

- (a) Every effort should be made to ensure that the general health of the birds is kept at a high level. Weak and sick birds are susceptible to the disease.

Summary

Any one or a combination of these attacks on the fungus will reduce the likelihood of Aspergillosis appearing in the birds:

1. Remove and destroy *all* mouldy material.
2. Provide clean raw materials.
3. Use fungicides and disinfectants as indicated.
4. Consider use of concrete and like materials.
5. Fumigate incubators and 'rooms'.
6. Maintain general health of the birds.

*Weight/Weight

