

Northern Fowl Mite Control

effective control measures prove practical
for use on large or small poultry farms

Deane P. Furman, W. Stanley Coates, and George H. Rohrbacher

The northern fowl mite—*Bdellonyssus sylviarum*—sometimes mistakenly known as the feather mite, can be controlled readily according to the findings of laboratory and field tests extending over a period of almost two years.

Excellent control was obtained with 1% Sulphenone sprays applied by means of power sprayers supplied with mechanical agitators. The spray may be used at approximately 50 pounds pressure using a nozzle producing a coarse droplet, cone-shaped spray at a rate not exceeding 35 birds per gallon, and with Triton X-100 as a wetting agent.

Sprays of 1% Sulphenone and with 1% Neotran were applied effectively by means of hand sprayers. These sprays were prepared by using 1.6 pounds of 50% wettable Sulphenone per 10 gallons of water or 2 pounds of 40% wettable Neotran per 10 gallons of water. One third ounce of Triton X-100 per 10 gallons is adequate to provide thorough wetting of the birds. Frequent shaking is necessary in using these suspensions in hand sprayers.

Hand dusting of birds with 10% to 40% Neotran produced effective control and good residual protection against reinfestation, as did 10% Sulphenone.

A 40% dust of Sulphenone applied to caged birds with a puff-type duster at the rate of two strokes of the plunger per bird was very effective when the dust was directed into the tail and breast feathers of the bird. No toxicity to poultry was found within the range of concentration of Sulphenone or Neotran tested for northern fowl mite control.

A mixture of equal parts of 40% nicotine sulphate—Black Leaf 40—and diesel oil used as a roost paint produced effective though temporary control of the northern fowl mite—when all birds were using the roosts.

The northern fowl mite is an insidious parasite which may exist on a poultry farm in inapparent numbers for some time and then flare up into a severe infestation in a matter of days.

Unlike the common red mite of poultry which usually attacks birds at night to suck blood, the northern fowl mite commonly spends all its life on the bird.

Because the fowl mite is attracted to warmth, one of the first places it is usually noticed by the poultryman is on

newly laid eggs, where the mites can be seen easily as they crawl about as active flecks or red specks on the shell. Feathers of heavily infested birds appear matted, with normally white feathers frequently becoming grey or black with mites and their excrement. The skin, particularly around the vent, often shows severe scabbing.

Widely Distributed

The northern fowl mite is widely distributed throughout the world and is one of the most common mites found on wild birds. Sparrows and finches often are heavily infested with these mites during the nesting season and are frequently found about poultry ranches in California. Consequently, they are the number one suspect in establishing infestations among poultry or in transmitting infestations between poultry flocks. However, because the mites can live for one to two weeks off the birds, they may be carried readily in numerous ways—on clothing, feed sacks or almost any object—from one flock to another.

It is known that the virus of western equine encephalomyelitis may be harbored by these mites, although there is no proof that they can transmit the infection by their bite. Of more immediate concern to the poultryman is the fact that egg production in heavily infested birds is greatly reduced. In one heavily infested mature flock the egg production rose from 30% to over 70% within two weeks following treatment. In addition

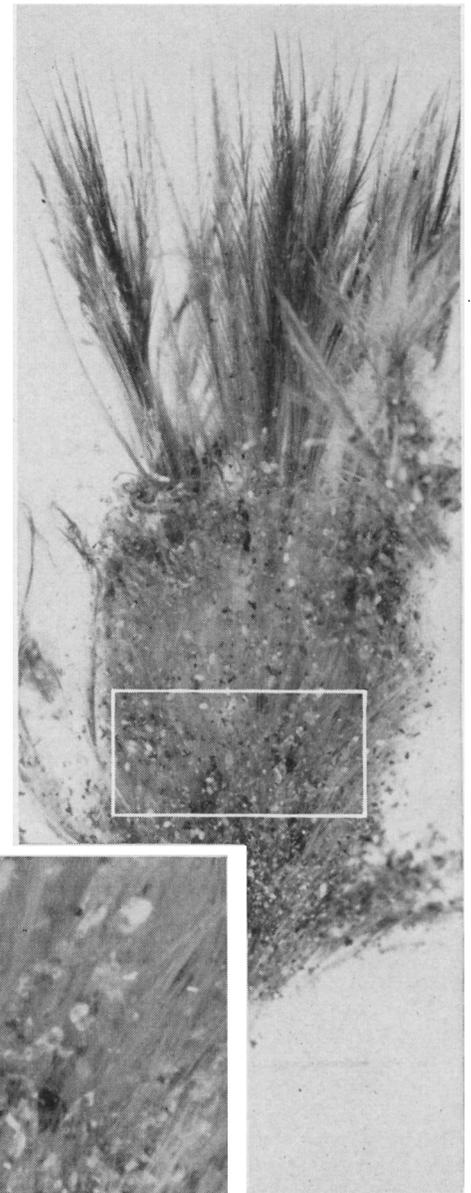
the growth of immature birds is seriously retarded by northern fowl mite attacks.

Deane P. Furman is Associate Professor of Entomology and Parasitology, University of California, Berkeley.

W. Stanley Coates is Farm Advisor, Alameda County, University of California.

George H. Rohrbacher is Research Assistant in Entomology and Parasitology, University of California, Berkeley.

The above progress report is based on Research Project No. 681.



Eggs, larvae, nymphs, and adults of the northern fowl mite on a feather from a chicken. Insert: a close-up of that portion of the feather indicated by the white frame.