

KERATOPHAGOUS MOTHS IN THE URBAN ENVIRONMENT AND MODERN INSECTICIDAL PRODUCTS FOR THEIR CONTROL

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Keratophagous moths don't have the medical or epidemiological significance, but in the urban environment they occupy specific niche as synanthropic arthropod pests. Nearly 30 species of keratophagous moths can be found out on the territory of Russian Federation. Our most common pest species is the webbing clothes moth, *Tineola bisselliella* (Humm.). Another economically significant species is the casemaking clothes moth, *Tinea pellionella* L. Caterpillars of keratophagous moths feed on the residues of animal origin, containing proteins keratin and collagen. Nutritional substrates for these caterpillars include hair, fur, wool and woolen fabrics, bristles, feathers, leather, horns, hooves, bones, dried meat and fish, bone and fish meal, felt, velvet, carpets, stuffed animals and skeletons, bookbinding, parchment, etc. In the search for necessary food resources, caterpillars of keratofagous moths can damage the non-edible materials, gnawing through tunnels and holes in paper, cardboard, linen, cotton and synthetic fabrics, polythene bags, wire insulation, etc. Thus, keratophagous moths are the target organisms for controlling by insecticidal treatments regardless of season. During 2003-2009, 50 mothproof formulations were registered in our country. Within the assortment of mothproof treatments over the study period 50% (25 formulations) are aerosols (with or without propellant), 40% (20 formulations) are cardboard plates and sections, 10% (5 formulations) include 2 paper strips, 2 gels, and 1 glue. Analysis of the assortment of mothproof compounds in the aerosol packages has shown that permethrin is the most frequently used active ingredient (19 formulations). The content of permethrin in these formulations is 0,2-0,55% (w/w). In fumigation mothproof preparations in the form of cardboard plates and sections, paper strips, and gel vaporthrin take the first place (17 formulations). Assortment of mothproof formulations included both native and imported products. In Russian Federation, during the study period, 21 native producing companies in total have been registered the 32 mothproof formulations, 13 companies have been registered by 1 formulation each one, 6 companies – by 2 products each one; and two companies – by 4 formulations. Eighteen formulations have been registered by 13 foreign producing companies.

Key Words *Tineola bisselliella*, mothproof formulations, insecticides