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Rejex-it® bird repellents - mode of action

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Abstract: Rejex-it® bird repellents are used to repel birds and reduce bird predation. Rejex-it® represents a long-needed, logical alternative to inhumane bird control methods such as poisoning and shooting. Its effectiveness as a nuisance bird repellent is based on a common, naturally-occurring, component of food that has been designated by the FDA as a "generally recognized as safe" food and fragrance additive. Methyl Anthranilate (MA), the active ingredient in Rejex-it® Bird Repellents, acts as a sensory repellent by irritating the bird's taste buds, skin, and trigeminal chemoreceptors in the beaks, gizzards, eyes, and mucous membranes. Irritation occurs as a result of exposure to or ingestion of the formulation similar to how people react to chili pepper extract. Stimulation of the trigeminal chemoreceptors leads to a wide variety of protective, but not adverse, physiological reflexes. These reflexes are an important part of the common chemical sense to prevent exposure to irritants (Parker 1912, Journal of the Academy of Natural Sciences 15: 221-224). As a result, birds modify their behavior by avoiding places where they have been exposed to this stimulus. Significantly, they cannot habituate to these reflexes. Indeed, they remember and avoid the geographic location where this experience took place. However, because the impact on the olfactory nerves (odor) is minimal, subsequent visits by other, more welcomed birds are possible. So far, no bird species is to be unaffected by Rejex-it®. Furthermore, birds do not habituate to this action. Rather, they become more sensitized with repeated exposure. The exposure to the birds can be either in the form of a dry fog to their eyes and mucous membranes or through the ingestion of treated food. Food sources treated with Rejex-it® in sufficient quantities are unpalatable to all species of birds. Even if they swallow larger quantities, the birds will unwillingly regurgitate the treated food and thus will not gain any energy benefit and will look elsewhere for other sources of nourishment.

Key words: bird repellent, Methyl Anthranilate, Rejex-it®