

Format: Abstract

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## Symptom complaints following aerial spraying with biological insecticide Foray 48B.

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### Abstract

**AIM:** To investigate the effect of aerial *Bacillus thuringiensis* (Foray 48B) spraying on self-reported symptom complaints, health perceptions, and visits to healthcare providers.

**METHODS:** Two hundred and ninety two residents within the Ministry of Agriculture and Forestry (MAF) West Auckland spray zone were recruited by a door-to-door survey of homes within the most intensively sprayed area ten weeks prior to the first aerial spraying. Participants completed a symptom checklist and a questionnaire measuring health perceptions. Three months after the start of spraying, 181 (62%) of the original participants responded to a similar postal questionnaire. Symptom reports, health perceptions and visits to healthcare providers were compared between the baseline and the follow-up questionnaire. Rates of symptom complaints in respondents with previously diagnosed asthma, hay fever, or other allergies were compared to those in respondents without these prior health conditions.

**RESULTS:** Symptom complaints increased significantly following the aerial spraying, in particular: sleep problems, dizziness, difficulty concentrating, irritated throat, itchy nose, diarrhoea, stomach discomfort, and gas discomfort. Analyses showed a significant increase in symptoms in those participants with a previous history of hay fever. While overall self-ratings of health decreased following the spraying, most residents saw their health as unaffected by the spray programme, and there was no significant increase in visits to general practitioners or alternative healthcare providers.

**CONCLUSIONS:** Aerial spraying with Foray 48B is associated with some adverse health consequences in terms of significant increases in upper airway, gastrointestinal, and neuropsychiatric symptoms, as well as a reduction in overall perception of health in the exposed population./

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