Report On Agrichemical Spray Drift Incidents Reported To Public Health Services, 2003

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by

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SUMMARY

The aim of this project is to effectively monitor the incidence of spray drift events with potential, reported or alleged health effects. This is achieved through a surveillance system, *DriftNet,* which collects information on spray drift complaints and incidents reported to Public Health Service staff, and any subsequent investigations. This report summarises the information recorded on *DriftNet* during 2003.

The number of complaints reported by Public Health Services for 2003 reached an all time low; four compared with 9 in 2001, and 28 in 2002. The number of complaints reported through *DriftNet* since its implementation in 1998 has never been high, averaging 14 per annum. Such small numbers hardly warrant maintenance and support of the *DriftNet* software in each PHS, nor the production of a specific annual report. It is therefore proposed that the purpose/scope of *DriftNet* be re-evaluated and that this be the last standalone annual spraydrift report.

RECOMMENDATIONS

1) That the purpose/scope of *DriftNet* be re-evaluated, in consultation with the Ministry of Health and Public Health Services.

2) That this be the last standalone spraydrift annual report, due to the small number of complaints reported through the *DriftNet* software. Instead, reporting of spraydrift incidents be incorporated into the reporting of environmental health indicators or chemical injuries, depending on the outcome of the review of the project.

INTRODUCTION

This report details agricultural spray drift incidents reported to Public Health Services (PHS) during January to December 2003. When PHSs receive reports of agricultural spray drift incidents they are recorded locally on *DriftNet* software. *DriftNet* records information on complaints, associated illness and investigations. Each year in January/February, data recorded by PHSs for the previous year are forwarded to ESR where they are collated nationally and a report produced. This is the fifth report on *DriftNet*, which covers the 2003 calendar year.

RESULTS

During 2003, four complaints were recorded on *DriftNet*, compared with nine for the year 2002 and 28 in 2001. This is the lowest number reported via the surveillance system during its 5 years and 3 months of operation (system implemented in September 1998) (*Table 1*).

Table 1: Number of Spray Drift Complaints Reported on DriftNet by Year

	Year					
	1998*	**1999**	**2000**	**2001**	**2002**	**2003**
No. of Complaints	14	16	13	28	9	4

* System implemented in September 1998

Although health problems were claimed to have been experienced on two occasions, there were no exposure/illness reports associated with the complaints. Two of the four complaints had accompanying event/incident reports.

The four complaints were from the following health districts: Waikato, Manawatu, Canterbury and Otago. The incident location for all four complaints was private residence. The complainant type was recorded for three complaints – all were members of the public.

The incidents were detected by the following means: smell (1), smell and symptoms (1), visible mist or cloud (1), and not recorded (1). For all four complaints there was no prior notice of application given. The intended target was recorded on three occasions: market gardens, pasture and cornfields. The methods of application were as follows: vehicle towed or mounted (2), helicopter (1) and unspecified dusting application (1). The actual spray equipment recorded for the vehicle towed or mounted applications were boom applicator and control droplet applicator.

In three instances the agrichemical was recorded. In one instance, several agrichemicals were identified (active ingredient in brackets): Steward 150 C (indoxacarb 150g/l), Primor 50 (primicarb 500g/kg), Dacomil (chlorothalonil 720g/l) and Kerb 500 F (propyzamide 500g/l). In the other two instances the agrichemicals involved were urea, and Pasture Clean (ethofumesate).

Health problems were claimed to have been experienced in association with two complaints, in one specified as shortness of breath and a headache that persisted for several hours. As no exposure/illness reports were completed further detail is not available. There is no record of the illnesses being confirmed by a doctor, although one complainant was advised to visit her GP.

Actions taken by the PHS included the following: referral to Regional or City Council, consultation with ESR, data on toxicity obtained from TOXINZ, GP advised of sprays involved in incident, and complainant advised to empty tank water (house on rainwater supply).

DISCUSSION

DriftNet has been installed in PHS since September 1998. Over this time the number of spraydrift complaints reported has been low, averaging 14 a year. Reported complaints peaked in 2001 (28) but reached an all time low in 2003 (4 complaints). Previously it has been suggested that the low number of reported complaints on *DriftNet* may be due to: 1) unfamiliarity with the software and/or software incompatibility and 2) complaints being directed to the National Poisons Centre (NPC) or Regional Councils rather than PHS.

Unfamiliarity with the *DriftNet* software in the first couple of years after it was implemented in PHS was thought to contribute to the low number of complaints recorded. In later years compatibility issues were involved (the software was originally written in Access 2.0) but an Access 97 and Access 2000 upgrade CD was distributed in 2002. However, the numbers for 2003, when none of these issues are paramount, are at an all time low.

The 2002 *DriftNet* report included agrichemical complaints received by the NPC and six Regional Councils. While not all complaints were health related, this data showed that the overall incidence of agrichemical spraydrift complaints and incidents is underestimated in *DriftNet*. The NPC have their own system for recording phone calls but it was thought that if a web-based data collection tool was developed and made available to Regional Councils, then more complaints may be captured via the one system. In 2003, some screen shots for such a web-based application were developed and circulated to several Regional Councils. While the councils supported a web-based application, they would rather it more a discussion database than a collection tool.

At present the small number of cases reported to PHS does not justify the maintenance and support of the *DriftNet* software nor the development of an Internet based system that will not be used more broadly. It is therefore recommended that the scope and purpose of *DriftNet* be re-evaluated during the 2004/2005 financial year, in consultation with the Ministry of Health and PHS.

One possible scenario would be extending the surveillance to include chronic chemical health complaints, or exposures to substances reported to the Public Health Service or Regional Councils. ESR has begun scoping exposures, symptoms or syndromes, and circumstances under which such a reporting mechanism would yield meaningful information for policy makers and the local authorities alike. This review includes commentary on the strength of association of various environmental exposure and health outcomes and is expected to be included in this year's Environmental Health Indicators annual report. In doing so it is anticipated that the project will then tie in more closely with the environmental health indicators and/or chemical injuries projects undertaken by ESR. As such, any reporting will be in conjunction with these projects, thus it is anticipated that this will be the last standalone annual spraydrift report.

Regardless of the future of the *DriftNet* software, it is recommended that the spray drift guidelines (*Guidelines for the Investigation of Agrichemical Spray Drift Incidents*) and advice service provided by ESR be retained and updated periodically.