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Summary Report: Otorohanga Agrichemical Collection 2007

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Executive summary

Environment Waikato, in association with the Ministry for the Environment, undertook an unwanted agrichemical collection programme in the Waitomo district over the summer of 2006-2007. This collection, netting 4.5 tonnes of chemicals, cost less than budgeted. The result of this was that Environment Waikato undertook a second district collection, this time in Otorohanga. Again, the main aim was to collect Persistent Organic Pollutants (POPs), but all unwanted agrichemicals were collected.

The collection, carried out in May-June 2007, was offered free to all farmers/growers in the district and it was predicted that the collection would received about same volume of agrichemicals as that collected in the Waitomo district between February and April 2007. As indicated from the Waitomo collection, a target of less than 1000 farmers/growers, with registration rate greater than 10%, should result in the surrender of around 4.5 tonnes of unwanted agrichemicals.

The project was initially communicated to farmers/growers through a personally addressed letter and one article in a local newspaper. This contact requested only phone or email registrations – no mail-back registration forms were used. The initial contact was followed by a reminder phone call inviting those not yet registered to do so.

At the outset, there appeared to be 1169 farmers/growers in the Otorohanga district. As the project progressed double-ups and farmers/growers not requiring contact were removed. It was found that 804 farmers/growers required phone contact. In total, 526 farmers/growers (65%) were contacted. From these, 116 farmers/growers (14%) registered chemicals for collection.

At the completion of the collection, a total of approximately 5.5 tonnes of unwanted agrichemicals had been collected from 120 farms (15%) with a mean of 45.8 kilogram per participant and a median of 17 kilogram. POPs were collected from nine properties (7.5% of those from which collections were made) with a total volume of 38 kilogram (0.7% of total).

Comparisons have been made between the Otorohanga and Waitomo collections. The registration process and types of chemicals collected were fairly similar in both areas. The cost of the two collections was substantially different and the savings made during the Otorohanga collection were because of the procedures and templates being created during the Waitomo collection. A distinct difference can also be seen in the types and amounts of chemicals received from properties with different land uses. Notably, there was a much higher proportion of intractable agrichemicals collected from drystock properties when compared to dairy farms in both districts.

The project was successful in recovering a considerably high total volume of unwanted agrichemicals, collecting from a significant proportion of the farms in the target area and effectively utilising the remaining budget. The total cost of the collection was low, but as the quantity of POPs collected was *very* low questions have arisen regarding the efficiency of the project to collect POPs. If the cost is based only on the volume of POPs collected, because of the very low volume collected, the project was expensive. But, if the assessment is based on the collection of unwanted agrichemicals and their removal from the rural environment, the project was successful.

1 Introduction

Environment Waikato, in association with the Ministry for the Environment, undertook a collection of unwanted agrichemicals on rural properties in the Waitomo district over the summer of 2006-2007 (Gauntlett, 2007). This collection, netting 4.5 tonnes of agrichemicals, cost less than expected and what was budgeted for. This lead Environment Waikato to undertake another collection of unwanted agrichemicals, this time in the Otorohanga district.

The project was carried out in May-June 2007 and the service was offered free to farmers/growers in the Otorohanga district. It was estimated that approximately 4.5 tonnes could be collected, given the remaining budget. As indicated from the Waitomo collection, a target of fewer than 1000 farms, with a registration rate greater than 10%, should recover the expected volume. Again, the main aim was to collect Persistent Organic Pollutants[1] (POPs), but all unwanted agrichemicals were collected.

The decision was made to collect from the Otorohanga district for a number of reasons. Firstly, during the Waitomo collection a newspaper article misquoted Environment Waikato and stated that the collection was being offered to farmers/growers in the North King Country, not just the Waitomo district. This resulted in 30 registrations being received from the Otorohanga district. Another factor was that Otorohanga borders Waitomo, so it made sense to collect from an adjoining district. Also, the predominating land use types in the two districts are substantially different, and it was thought that this could allow for an analysis of the effect that land use type has on the type and quantity of agrichemicals collected.

The timeframe for the Otorohanga collection was much shorter than that of the Waitomo collection, as the project had to be completed prior to the end of the financial year. This meant that there were a number of differences between the Waitomo and Otorohanga collections.

For more information on the Waitomo district collection and a background on agrichemical collection in the Waikato region, see the report by Gauntlett (2007).

2 Method

2.1 Waitomo collection method

The method for the Otorohanga collection generally followed that of the 2006-2007 Waitomo collection. For more details on the method of the Waitomo collection, see Gauntlett (2007). However, the method used for the Otorohanga collection was slightly altered. The differences are outlined in this section. The main differences were that no registration form was used and that the district was split into zones. The reason for the changes was to reduce the timeframe under which the collection was undertaken.

2.2 Changes to Waitomo collection method

The Otorohanga collection did not use a registration form because the Waitomo results indicated that a large amount of time was spent waiting for registration forms to be returned. Instead of asking farmers/growers to return a registration form, the promotion letter advised farmers/growers to register either by phone or email only, and stated that someone from Environment Waikato would call them as a follow up to the letter. The

[1] Persistent Organic Pollutants (POPs) are the 12 persistent chemicals included in the Stockholm Convention: aldrin, chlordane, dichloro-diphenyl-trichloroethane (DDT), dieldrin, dioxins, endrin, furans, heptachlor, hexachlorobenzene (HCB), mirex, polychlorinated biphenyls *(PCBs*) and toxaphene.

letter sent to farmers/growers, which was slightly different from that sent for the Waitomo collection, is attached as Appendix 1.

The reduced timeframe of the Otorohanga collection resulted in limited opportunities to advertise the collection in the newspaper or on Fonterra tanker dockets. The Waitomo News printed a results summary of the Waitomo collection which preceded the Otorohanga Collection, and one advertising article was printed two weeks into the phoning period. Because of the limited time frame, no attempt was made to put a note on the bottom of Fonterra tanker dockets.

The target area for the collection was split into three zones, each containing approximately the same number of farms. The reason that the district was split into zones was to shorten the total time needed for the collection. Zoning the district allowed the collection contractor to collect chemicals from one zone while Environment Waikato phoned individuals in the next zone. This is in contrast to the Waitomo collection where all phone calls were made before the contractor started collecting chemicals. A non-zoned system is summarised in Table 1, while a zoned system is outlined in Table 2. Note the fewer number of weeks required for the zoned system.

Table 1: Example outline of phone call and collection during a non-zoned collection

Week one	Week two	Week three
• Phone calling • No collecting	• Phone calling • No collecting	• Phone calling • No collecting
Week four	**Week five**	**Week six**
• Collection • No phone calling	• Collection • No phone calling	• Collection • No phone calling

Table 2: Example outline of phone call and collection during a zoned collection

Week one	Week two	Week three	Week four
• Phone Zone 1 • No collecting	• Phone Zone 2 • Collect Zone 1	• Phone Zone 3 • Collect Zone 2	• No phone calling • Collect Zone 3

Recommendations from the Waitomo report resulted in phone calls for the Otorohanga collection being made only in the evening (between 5.30pm-8.30pm), this time by two students[2]. Collectively, the two students spent approximately 28 hours a week making calls. The students made an average of 175 successful phone calls per week.

3 Results

3.1 Registration

When the Otorohanga district was first chosen as the target area, it was estimated there were 1169 farms in the area. As collection progressed, however, around 300 double-ups were removed from the list, resulting in only 885 letters being sent out.

The internet White Pages was the only source of phone numbers for the Otorohanga collection. No other sources were used (Environment Waikato contacts database, Fonterra Suppliers List, etc). After searching the White Pages, there was still a list of about 160 farmers/growers without a contact phone number, but no attempt was made to attain contact details for these. It was hoped they saw the newspaper article, received a letter, or possibly no longer owned/managed that property.

After a four-week period (one week lead-in for letter, three weeks phone calling) contact had been made with 526 farmers/growers. Out of the total (885), 278 could not be contacted (phone numbers could not be found for 160 and 118 didn't answer the

[2] Students were employed to do the calling to reduce the cost of the collection.

phone) and 81 did not require contact. Reasons for those not needing to be contacted included:

- their property details were a double-up that had not initially been removed, or,
- their property was leased by a neighbour who was contacted as part of the collection.

Phone calls were made by two students over a three-week period, calling between 5.30pm-8.30pm, Monday-Thursday. Using the original number of farmers/growers (885) contact was made with 59%. Using the updated number, 804 (885 minus the 81 who did not require contact), contact was made with 65% of farmers/growers.

In total, over the three zones 116 farmers/growers registered chemical to be collected during the registration and phone calling period. Included in the 116 were the Otorohanga registrations mistakenly received during the Waitomo collection (referred to in Section 1) who had not yet taken their chemical to a transfer station.

3.2 Collection

Although a number of farms that were originally registered did not end up participating, the number of late registrations made up for this. By the end of the collection, the number of registered farmers/growers had increased from 116 to 120 farmers/growers. The majority of farms participating in the collection were dairy farms (66%) compared to drystock (34%). There were 14 farms with an unknown land use type and one property was land use code 'arable farming'.

A total of 5.5 tonnes of unwanted agrichemicals were collected from 120 properties (average 45.8 kilogram per participant, median 17.1 kilogram). Of this total, 2,552 kilograms (46%) were identified as local[3] and 2,945 kilograms (54%) identified as intractable[4]. POPs were collected from nine properties, as indicated in Table 3, with a total volume of 38.1 kilograms (<1% of the total collected). The POPs consisted of 32.8 kilograms (86%) DDT and 5.3 kilograms (14%) PCBs. Of the DDT, 26 kilograms was collected from a single property.

Table 3: Composition and quantities of POPs collected

POP	Volume of POP (kg)	No. of collections of POP	Mean volume of POP (kg)	Median volume of POP (kg)	Range (kg)
DDT	32.8	5	6.56	1.3	0.8-26
PCB	5.3	4	1.33	0.95	0.5-2.9

The herbicides 2,4,5-T and 2,4-D, collected in volumes of 979.9 kilograms and 601.8 kilograms, respectively, together formed 29% of the total volume collected. Mineral or bloat oil contributed 650.2kg (12% of total) and 326.2 kilograms (6% of total) of agrichemical with unknown active ingredient was collected. A single property contributed 547 litres (10% of total) of ethoprofos. The top eight chemicals, as identified by active ingredient, are shown in Figure 1.

[3] Local agrichemicals are those that can be (as determined by the Ministry for the Environment's *designation-list*) treated and disposed of in New Zealand.

[4] Intractable agrichemicals are those agrichemicals that must (as required by the Ministry for the Environment's *designation-list*) be shipped off-shore for treatment/disposal. That includes all POPs.

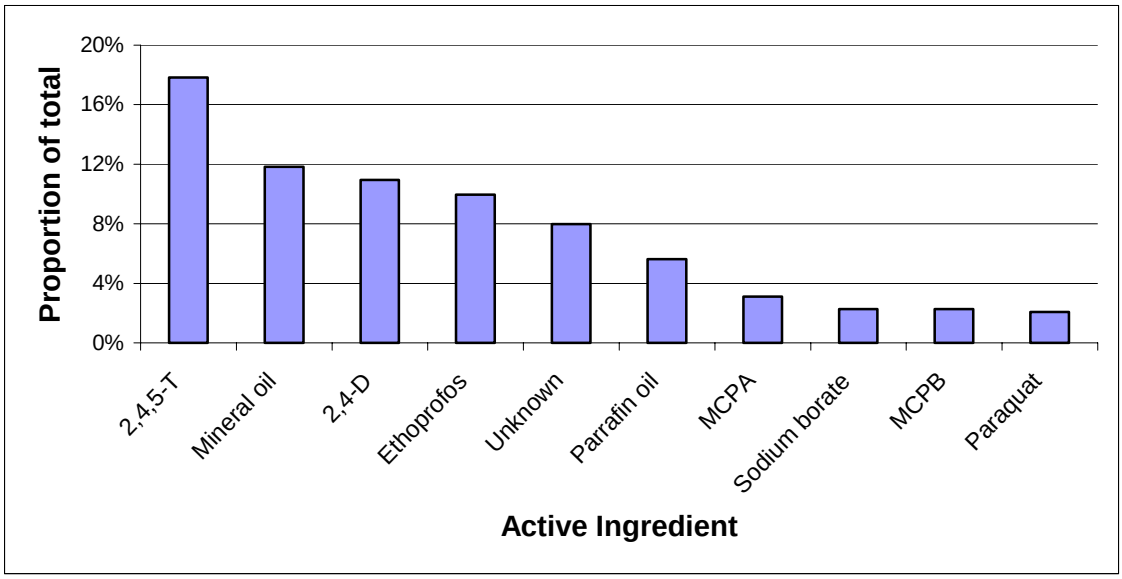

Figure 1: Ranking of agrichemicals by proportion of the total volume collected

NB The other 100 agrichemicals by active ingredient were in volumes <2% of total.

A total of 118 different agrichemicals, as identified by active ingredient, were collected as 601 units[5]. Of the 118 different agrichemicals collected, 28 (24%) were in total volumes of 2 kilograms or less. Of the herbicides, 2,4,5-T and 2,4-D, the median volumes of the units collected were 2.8 kilograms and 4.9 kilograms, respectively. Unknown agrichemicals were collected in 61 units with a median volume of 2.1 kilograms (Table 4). A full table of volumes is attached in Appendix 2.

Table 4: Median volumes of the three major components

Agri-chemical	Median volume of agrichemical (kg)	Range (kg)	Proportion less than 20kg (%)	Number of units collected
2,4,5-T	2.8	0.5 – 136.3	88	51
2,4-D	4.9	0.4 – 131.8	90	51
Ethoprofos	547.1	547.1	0	1
Mineral oil	18.6	2.2 – 192.5	66	11
Unknown	2.1	0.2 – 97.2	90	61

The unwanted agrichemicals offered for collection can be categorised by type, and this is shown in **Figure 2**

Figure 2 illustrates the predominance of herbicides (50%) followed by animal remedies (22%) and insecticides (17%).

[5] Unit refers to one container or package of agrichemical that a farmer/grower surrenders for collection. For example one farmer/grower may surrender 20kg of chemical in two 10kg units.

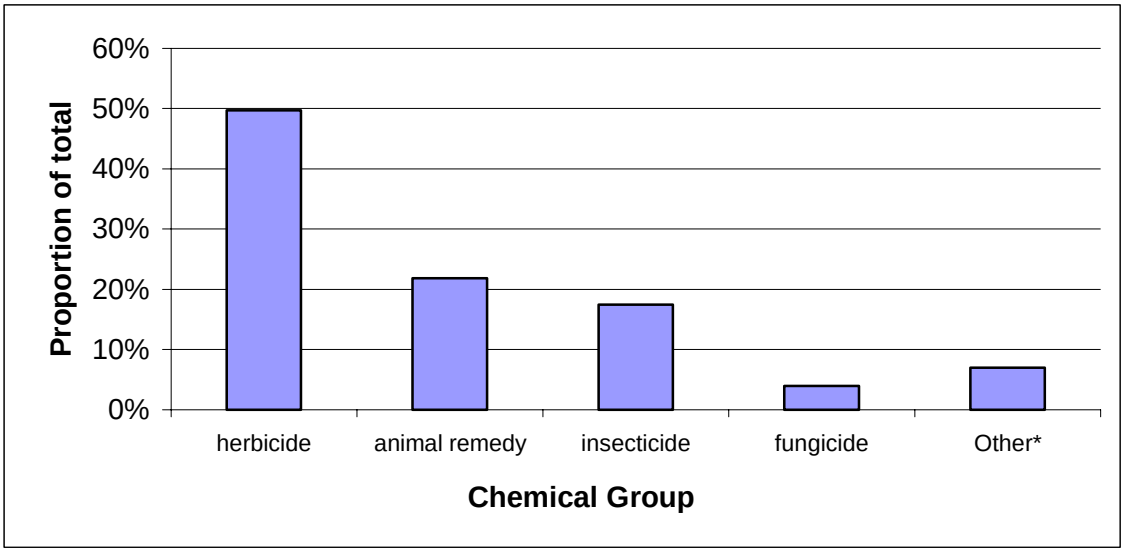

Figure 2: Categorisation by type as a proportion of the total volume collected
*Other includes preservative, unknown, spray additive, detergent, vertebrate poison, industrial chemical, trace element, disinfectant, and insect growth regulator, each making up <4% of total.

3.3 Costs

Costs for the agrichemical collection are split two ways: Environment Waikato covers the cost of running the collection and the Ministry for the Environment covers the cost of disposal. The amount spent by the Ministry for the Environment for the disposal of the 5.5 tonne of chemical is unknown, but using an estimated disposal cost of $10 per kilogram, the Ministry for the Environment spent $55,000 on disposal for the Otorohanga collection. The amount spent by Environment Waikato can be estimated from analysis of the relevant charge code. Table 5 summarises the majority of the major costs to Environment Waikato: employee time, the cost of producing the letter and the cost of the contractor collecting the chemical. Other costs are not as easy to calculate, most notably the cost of phone tolls. These are difficult to calculate because at Environment Waikato they are not attributable to an individual charge code.

Table 5: Summary of cost

Attribute	Cost
Student (phone calls)	$2,591
GIS	$2,140
Communications staff time	$0
Collection contractor services	$40,112
Other Labour time	$8,357
Letter printing, envelopes and postage	$474
TOTAL	**$53,674**

4 Discussion

4.1 Registrations

During the Waitomo collection (as discussed in Gauntlett, 2007), 28 registrations were received from farmers/growers in the Otorohanga district. These farmers/growers were advised (before a decision was made to collect from the Otorohanga district) that it might be easier for them to drop their chemical at a transfer station. However, at the commencement of the Otorohanga collection, a number of these farmers/growers had not disposed of their agrichemicals. These made up the first registrations for the Otorohanga collection. It is assumed that if they had not registered during the Waitomo

collection they would have registered for the Otorohanga collection and are, therefore, treated as though they registered during the Otorohanga registration period.

Again, there was success using a discrete territorial boundary. The zoned approach to collection also seemed to work very well. One drawback was that each zone had only a week between being contacted and when the contractor began to collect. In total, four weeks were taken to do this, in comparison to the seven weeks (three-week registration period plus four-week phone call period) for the Waitomo collection. In addition, the registration closing date was not specifically stated for each zone. The result of these two issues was that there were a significant number of late registrations. It was good from Environment Waikato's perspective to receive additional registrations, (increasing the participation rate), but it was logistically problematic for the contractor who, after collecting from the three zones, had to make a sweep collection from those who registered late.

Recommendations from the Waitomo report meant that phone calls were made solely in the evenings (5.30pm-8.30pm), this time by two students. The overall response rate for the Otorohanga collection was lower than that gained in the Waitomo collection and could be attributable to the changes to the phone calling method or the change in the people making the phone calls. The registration rate for the Otorohanga collection was also lower than that of the Waitomo collection. This could perhaps be because the Otorohanga collection did not use registration forms, the short lead-in time, limited newspaper advertising, and lack of advertising on Fonterra tanker dockets.

A total of 116 farmers/growers registered to have chemical collected. Using the earlier figure of farmers/growers (885), the registration rate was 13%. Using the revised number (804), the registration rate was 14%.

4.2 Collection

After the Waitomo collection it was clear that the budget would allow for another collection of similar scale to be undertaken. The results from the Waitomo collection were used to estimate how much would be collected in the Otorohanga district. Roughly, it was assumed that the target would be about 800 farms and that 130 participants would submit about 4.5 tonnes of chemical.

Although some farmers/growers pulled out of the collection, the number of late registrations made up for this, and a total of 120 farms were collected from. The participation rate using 885 (the number of letters sent) was 14%, or, using 804 (the number of farmers/growers attempted to be contacted by phone), was 15%.

As with the Waitomo collection, most collections received only a small quantity of chemical. This is illustrated by the mean (45.8 kilograms) being much high than the median (17.05 kilograms). The low median and high mean highlight that substantial quantities of agrichemicals were collected. There were 10 collections over 100 kilograms, two of which were over 550 kilograms.

As with the Waitomo collection, the land use type proportions (dairy to drystock) for the participants (66% dairy, 34% drystock) match well with that of the entire district (57% dairy, 43% drystock). This would suggest that participation is not influenced by farming type. Comparisons can be made, however, between the land use type and the amount of chemical collected; Table 6, Table 7 and Figure 3 illustrate the difference. It was seen that a larger total volume (median and mean) of chemical was collected from dairy farms, but a much larger volume of POPs was collected from drystock farms.

Table 6: Summary of the collection results for dairy farms

	Local agrichemical (kg)	Intractable agrichemical (kg)	Total (kg)	POPs (kg)
Total	1900.2 (55%)	1552.4 (45%)	3451.8	9.6 (0.3%)
Mean	27.5	22.5	50	0.14
Median	2.5	11.8	19.9	0

Table 7: Summary of the collection results for drystock farms

	Local agrichemical (kg)	Intractable agrichemical (kg)	Total (kg)	POPs (kg)
Total	462.2 (28%)	1187.2 (72%)	1649.4	28.5 (1.7%)
Mean	12.8	33	45.8	0.8
Median	1.7	7.5	16.2	0

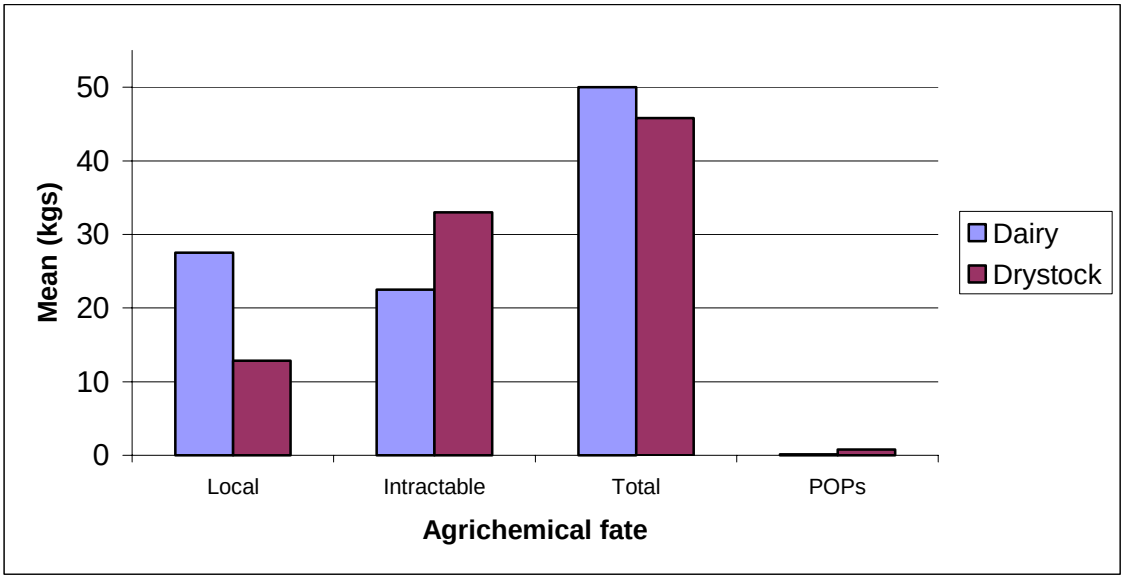

Figure 3: Average amounts of chemical collected by dairy and drystock farms

Again, as with Waitomo, although a large quantity of chemical was collected, and a high response rate obtained, there is still no guarantee that what was collected was all the obsolete[6] and legacy[7] agrichemical remaining in the district.

4.3 Costs

The collection cost was approximately $54,000. Outlined in Table 8 are four ways of measuring this cost.

Table 8: Cost per unit collected

Attribute	Quantity	Approximate cost per attribute
Farms participating	120	$450
Farms targeted	885	$61
Kg of chemical	5496.2	$9.82
Kg of POP	38.1	$1417

[6] Obsolete agrichemicals, as distinct from legacy agrichemicals, are currently registered agrichemicals that are no longer wanted or required by farmers/growers and include chemicals that have recently passed their used-by date.

[7] Legacy agrichemicals, as distinct from obsolete agrichemicals, are agrichemicals that have been kept by farmers/growers after becoming banned or deregistered. Legacy agrichemicals may have been inherited from the previous land owner/occupier and/or accumulated by the current farmer/grower.

Table 8 shows that when assessed per participant or per kilogram of POP collected the collection cost was very high at $450 and $1417, respectively.

5 Comparison: Otorohanga and Waitomo collections

This section involves a comparison between the results of the Waitomo and the Otorohanga collections. For the full results of the Waitomo collection, see Gauntlett (2007).

5.1 Registration

Because of the differences in both the method used and the land use types in the Otorohanga and Waitomo districts, it is difficult to form conclusions on factors which influenced the participation rate and the amount of chemical received. It is suggested that the changing method may have resulted in the lower registration rate, although this could also have been because of the different predominating land use type. It is believed that the difference in land use is the main influence on amount of chemical collected – a much higher amount being collected from dairy farms. The converse is true for POPs, with the majority of the POPs collected from drystock farms for both the Otorohanga and Waitomo collections.

5.2 Collection

Generally, the proportions of the agrichemicals collected did not differ significantly between the Waitomo and Otorohanga districts. A comparison of chemicals collected by agrichemical type (herbicide and insecticide) exemplifies this (Figure 4 and Figure 5). Exceptions are the herbicides 2,4,5-T and 2,4-D of which a greater proportion was collected from the Waitomo district and paraquat of which a notably greater proportion was collected from the Otorohanga district.

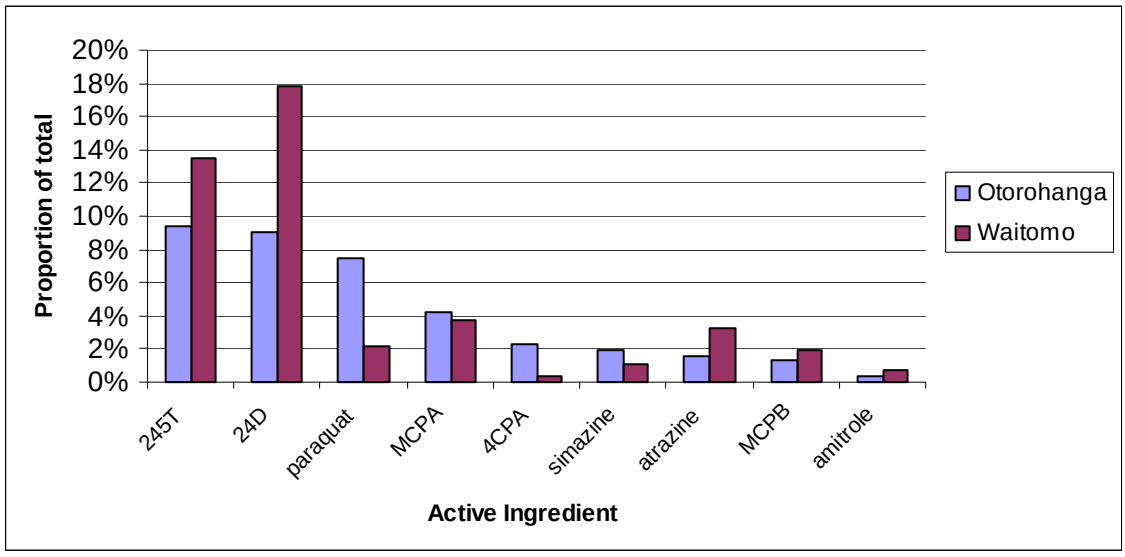

Figure 4: Herbicides collected during the Waitomo and Otorohanga collections

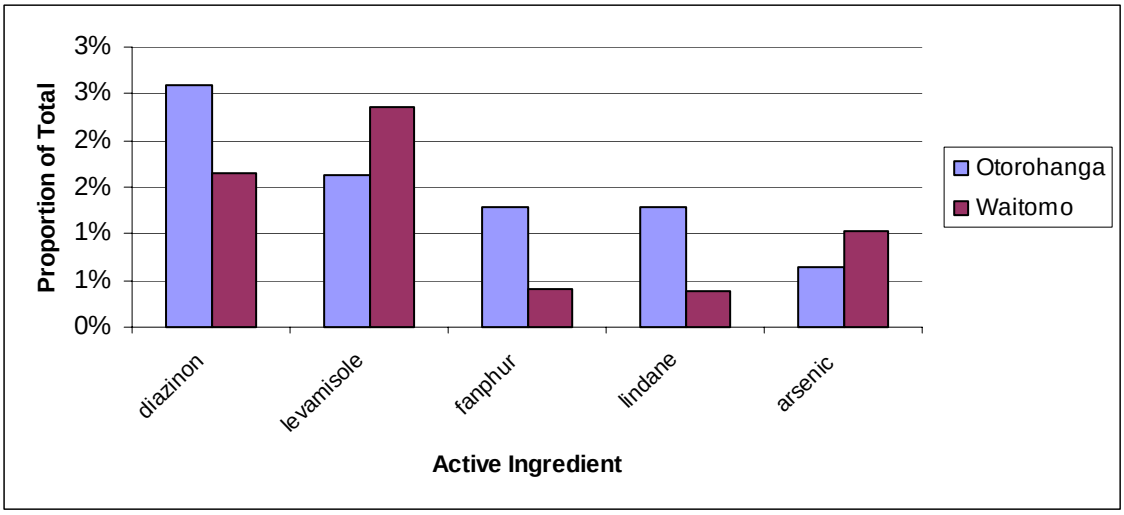

Figure 5: Insecticides collected from Waitomo and Otorohanga collections

The Waitomo collection yielded 18% less volume from 7% more properties (Table 9) compared to Otorohanga. In comparison, POPs and the range of agrichemicals collected was 6.8 and 1.1 times greater, respectively, in Waitomo.

Table 9: Categories and volumes of agrichemicals collected during the Waitomo and Otorohanga collections

Area	Total tonnes of agri-chemicals	No. of Properties collected from	Total intractable agri-chemicals (kg (% of total))	Total local agri-hemicals (kg (% of total))	Total POPs (kg (% of total))	Types of agri-chemicals[1] N
Waitomo	4.5	130	3403 (75)	1142 (25)	265 (6)	127
Otorohanga	5.5	120	2945 (54)	2531 (46)	39 (<1)	118
Total	10	250	6366 (63)	3673 (37)	304 (3)	

[1] type of agrichemical defined by active ingredient.

The proportion of intractable materials collected from the Waitomo district (75%) was greater than that from the Otorohanga district (54%). This reflects the difference in predominant land use types within each area. It can be concluded that drystock farms will surrender a greater proportion of intractable agrichemicals than local chemicals, while the proportion of agrichemicals received from dairy farms is more similar. This is shown in Table 10.

Table 10: Comparison of proportions by fate for the agrichemicals received in the Otorohanga and Waitomo by land use

Area and land use type	Local agrichemicals	Intractable agrichemicals
Waitomo Dairy	47%	53%
Otorohanga Dairy	55%	45%
Waitomo Drystock	24%	76%
Otorohanga Drystock	28%	72%

Median volumes of agrichemicals collected in the Waitomo and Otorohanga districts were very similar (Table 11). Significantly, the median total quantities of product collected (from 50% to 60% of the participants) are less than the 20 kilogram acceptance maximum that currently applies at transfer stations. Therefore, in many cases, the product could have been dropped off at a transfer station rather than featuring within an on-farm collection.

Table 11: Median volume per property during the Waitomo and Otorohanga collections

Area	Local agrichemicals (kg)	Intractable agrichemicals (kg)	Total agrichemicals (kg)
Waitomo	2.2	10.2	17.05
Otorohanga	2	9.9	17.05

5.3 Costs

The Waitomo project, costing $69,000, involved a large amount of planning and management prior to the actual collection taking place. The costs for the Otorohanga Collection, in which 1.1 more tonnes of chemical were collected, are considerably lower at $54,000. This is because the majority of the groundwork (i.e. letter drafting, procedure setting) had already been completed.

Because of the low quantity of POPs collected during the Otorohanga collection (even though the project was overall less expensive and more efficient at collecting agrichemicals) the cost per kilogram of POPs was much higher.

6 Conclusion

Procedures set up during the Waitomo collection made the Otorohanga collection much easier and more efficient. The zoned approach and removal of the registration form resulted in a much quicker collection. The somewhat rushed collection could, however, have been the reason for the lower response and participation rate in the Otorohanga district.

Although there was a lower participation rate, more chemical was received. However, in the 5.5 tonnes collected, there was a very low proportion of POPs – which supports the results of the Waitomo collection. The results of both Waitomo and Otorohanga collections prompts two possible conclusions: either the legacy of POPs is smaller than expected or alternatively farmers/growers are not willing to surrender the POPs they have. As with the Waitomo collection, Otorohanga saw a large number of small amounts surrendered, and a small number of large amounts surrendered, illustrated by a median lower than the mean.

The project was a success in terms of adequately using the remaining budget, reaching the required total volume and resulted in collections from a reasonable proportion of the farmers/growers in the target area. The total cost of the collection was low, but as the amount of POPs collected was very low questions have again arisen as to the efficiency of this collection method (that is, on-farm collections) to collect POPs. It is hoped that a low volume of POPs received means that there is a low amount remaining, but there is always a problem of not knowing exactly what is left uncollected in the rural environment.

Because of the differences in both the method used and the dominant land use types in the Otorohanga and Waitomo districts, it is difficult to form conclusions on factors which influenced the participation rate and the amount of chemical received.

References

Gauntlett, W. J. 2008: *Summary Report : Waitomo Agrichemical Collection*. Environment Waikato Technical Report 2008/04. Waikato Regional Council (Environment Waikato), Hamilton.

Appendix 1 – Letter to farmers/growers

File No: 22 02 65A
Document No: 1176403

8 May 2007

«OCCUP1_FIRST_NAME» «OCCUP1_SURNAME»
«OCCUP2_FIRST_NAME» «OCCUP2_SURNAME»
«OCCUP1_ADDR1»
«OCCUP1_ADDR2»
«OCCUP1_ADDR3»
«OCCUP1_ADDR4» «OCCUP1_POSTAL_CODE»

Dear «FRIST_NAME1» «AND» «FIRST_NAME2»

FREE COLLECTION OF OLD, UNUSED OR UNWANTED AGRICHEMICALS!

As a result of the success of the recent agrichemical collection we ran in the Waitomo district, we've decided to offer this service to land owners in your area. This means that over the next couple of months, you and other land owners in the Otorohanga district can get your old, unused or unwanted agrichemicals collected from your farm – for free!

Organised by Environment Waikato and the Ministry for the Environment, this collection is supported by Federated Farmers, Fonterra and WaiPAC (Waikato Pesticide Awareness Committee).

> "Many farms have agrichemicals that have passed their 'use by' date, are no longer registered for use, or are no longer required due to changes in the farming operation. We therefore support Environment Waikato and the Ministry for the Environment's initiative to provide a free service to dispose of agrichemicals in a way that does not risk the contamination of our farms and environment."
> ***Waikato Federated Farmers President Peter Buckley***

We can collect	**We can't collect**
• Pesticides • Herbicides • Insecticides • Fungicides • Animal remedies/veterinary medicines	• Detergents or disinfectants • Dairy shed cleaners • Sharp objects • Asbestos • Used oil or paint • Batteries or explosives • Empty containers

We can also collect PCBs (polychlorinated biphenyls), such as old transformers, capacitors and switch gear.

In particular, we're interested in collecting the more hazardous chemicals, such as DDT, Dieldrin, Lindane, Chlordane, 245-T, arsenic sprays and sheep dips.

These chemicals are toxic to people and animals. They can remain in the environment for a long time and accumulate in the fatty tissue of living organisms. The residue can also appear in farm produce.

As a signatory to the Stockholm Convention, New Zealand has agreed to stop using these types of chemicals. This means land owners can no longer use these chemicals and are required to safely dispose of them.

Although we can't collect all items, the contractor can give you advice on future storage, use and disposal of agrichemicals. Triple rinsed empty agrichemical containers can be taken to transfer stations participating in the Agrecovery Programme.

Confidentiality
Transport regulations require the contractor to record the type and amount of agrichemicals collected. However, Environment Waikato will not keep records of the amount or types of agrichemicals collected from your farm. Further to this, no individual land owners participating in this collection will be identified in any files, records or reports.

Registering your agrichemicals for collection
To participate in this collection, you must **register** your old, unused or unwanted agrichemicals.

Registering is as simple as checking your farm for chemicals and then calling Environment Waikato's freephone 0800 800 401 and asking for William Gauntlett. You'll need to be able to tell William:

- approximately how many kilograms/litres of agrichemicals you want to register for collection
- the types of chemicals they are.

Alternatively, you can email the information to william.gauntlett@ew.govt.nz. Once we've got your details, we'll arrange for a licensed contractor to pick the agrichemicals up from your farm.

The next steps
- Ensure the chemicals are stored safely until they can be collected by the contractor. Call us if you need advice about storage.
- To avoid spills, try not to move chemicals stored in insecure containers.
- For any advice call us, or refer to www.ew.govt.nz/enviroinfo/hscs/hazsubs/index.htm.
- If you know what's in a container that's lost its label, please label it.
- The contractor will collect your chemicals in **May/June 2007**. He will contact you two or three days before collection to tell you what day he'll be at your farm.
- In case you're unavailable when the contractor comes, please tell someone else on the farm where the chemicals are.

We will call you in the next few weeks to follow up on this letter. In the meantime, if you have any concerns, or need more information, please call us.

Yours faithfully

Chris McLay
Group Manager, Resource Use

This collection is supported by:

FEDERATED FARMERS OF NEW ZEALAND (INC)

Fonterra Dairy for life

WaiPAC

Appendix 2 – Materials collected

Active ingredient	Volume (kg)	Active ingredient	Volume (kg)	Active ingredient	Volume (kg)
245t	979.9	nicotine sulphate	14.5	propetamphos	2.7
mineral oil	650.2	chlorpyrifos	14.4	chlorfenvinfos	2.5
24d	601.8	diquat	13.1	dichlofluanid	2.5
ethoprofos	547.1	maldison	12	sethoxydim	2.3
Unknown	439.2	deltamethrin	10.6	carbaryl	2.2
parrafin oil	309.5	ethofumesate	10.6	glyphosate	2.2
mcpa	171.5	phorate	10.5	cyhalothrin	2.1
sodium borate	125.4	pindone	9.8	phosmet	2.1
mcpb	125.2	maneb	8.9	dodine	2
paraquat	114.5	temephos	8.9	trifluralin	2
izaprofos	89	bromoxanil	8.6	ivomectin	1.9
calcium polysulphide	82.8	dichlorvos	8.6	warfrin	1.8
atrazine	57.3	formaldehyde	8.6	metribuzin	1.6
lead	55.1	arsenic	7.9	mevinphos	1.6
picloram	54.4	amitrole	6.8	nitrofen	1.5
thiophanate methyl	54.4	sodium cyanide	6.8	pyridine sulphate	1.5
4cpa	52.5	lindane	6.7	vinclozolin	1.5
zinc	51.2	demeton-s-methyl	6.4	pyrethroid	1.2
asulam	45.7	thiram	6.4	glyphosate/22dpa	1.1
levamisole	44.5	oxfebdazole	6.1	fluizifop butyl	0.9
acetachlor	44.3	chlorothalonil	5.9	hydroxycarbolin	0.8
alachlor	41.7	thibenzole	5.8	triademefom	0.8
diazinon	34.5	clopyralid	5.5	copper	0.7
selenium	33.4	pcb	5.3	metsulfuron	0.7
metolochlor	32.9	arsenic/rotenone	5.2	fosamine	0.6
ddt	32.8	albendazole	5.1	permethrin	0.6
dicamba	31.6	calcium	5	rycobendazole	0.6
sodium chlorate	26.9	phenothiazine	5	cobalt	0.5
iodine	26.8	methomyl	4.5	cyromazine	0.5
brodifacoum	25.6	fenthion	4.4	amoxyllon	0.4
surfactant	25.3	prolate	3.8	chlorfenthion	0.4
22dpa	24.5	propagite	3.8	dichlofenthion	0.4
cypermethrim	22.7	trifloxystrobin	3.7	pirimicarb	0.4
benomyl	20.2	copper oxychloride	3.3	rotenone	0.4
simazine	20.2	tebuthylazine	3.1	coumaphos	0.2
fanphur	19	dinoseb	3	cresylic acid	0.2
tca	18.3	captafol	2.8	parathion	0.2
eptc	17.2	captan	2.8	flumetazole	0.1
24db	16.5	pirimiphos-methyl	2.8		
fenvelerate	15.2	folpet	2.7	**TOTAL**	**5496.2**