

13. Dead livestock

13.1 Introduction

Dead livestock is a serious disposal issue on farms. Most farmers incur some adult dead during the year and some dead calves especially if inducing. Fortunately in Taranaki there is a very good collection service for both adults and calves for most of the year. Livestock that go down out side this collection time are disposed on farm – adults are buried in a pit or convenient hole, and calves are typically disposed to an offal hole, which is usually a large drilled hole with a concrete lid. Lambs are usually left in the paddock to be disposed of by scavenger, or disposed to an offal hole, and sheep are buried.

Adults and calves that are collected are processed for their meat and hide. The hide of still born calves is particularly valuable since it is in excellent condition.

13.2 Information sought

Farmers were asked if they generated any dead livestock on the farm each year, what quantity of each type. Farmers were also asked how they disposed of dead livestock.

13.3 Results

Of those farmers surveyed 59 responded to the question of dead calves or dead cows on their farms. Of these 51 provided a specific number for calves which averaged 21.6 dead calves per farm, while 54 provided a specific number for cows/adults which averaged 5.4 dead cows/adults per farm per year. There was insufficient data collected/provided during the survey regarding sheep and lambs, and consequently regionalised quantities could not be produced (see Table 53).

Table 53 Quantity of dead calves and cows/adults

	Dead calves	Dead cows/adults	Lambs	Sheep
Average quantity per farm per year	21.6	5.4	*	*
Regionalised quantity ¹	58,320	14,580	*	*

Key: numbers in [] are percent

* insufficient data [less than 5 data points]

¹ based on 90% of farms in the region

Nearly all farmers used the Taranaki By Products' collection service which picks up dead animals from the farm. This is a separate collection from that of dead calves which was carried out by a different collector and places more emphasis on hide value than carcass. There were one or two farmers who were out side the reach of these collections, and therefore, buried on the farm.

Dead calf collections are carried out in the calving season and those that go down out side of the collection 'run' are either fed to farm dogs or more commonly disposed of to the farm offal hole.

Some dead cows/adults are buried on the farm if the regular collector cannot reach the farm within a certain time. The quantity disposed of this way seems to be very low as the collection system is more convenient for the farmer.

It is not known how many offal holes there are in Taranaki and the survey results are inadequate to use for estimation purposes.



Photo 9 Typically constructed offal hole with concrete cap and lid

13.4 Discussion

There is a very good dead cow/adult system in Taranaki which ensures that nearly all are disposed of off farm. The same can be said for dead calves. However, from conversations with farmers during the survey it is reasonable to assume that some dead animals are disposed of on the farm. This is probably an average of one dead cow/adult and two dead calves per farm per year in the region. Dead cows/adults are buried in a pit or hole and dead calves are typically, buried in a specially constructed offal hole. Such offal holes are usually about 1.5 metre wide and two to three metres deep, capped with concrete and a concrete lid (see Photo 9). It should be noted that these holes are not concrete lined.

Therefore, allowing for 90% of farmers disposing of one cow/adult [2,700 cows/year in the region] and two calves [5,400 calves/per year in the region] per farm per year this equates to approximately 8,100 dead animals disposed of on farms in the region each year. This is approximately 190 tonnes of dead calves [at 35 kg per new born] and 810 tonnes of dead cows/adults [at 300 kg per animal] totalling approximately 1,000 tonnes of carcass disposed on farms in the region each year.

The burial location of farms is important if water bore quality is to be maintained. Pit and offal holes located too near, within 50 metres (Regional Fresh water Plan for Taranaki – Rule 30), to boreholes run the risk of being contaminated. Such

contaminants include bacteria, sulphur and ammonia etc. and pose serious health risks to those who consume this water.

13.5 Future disposal options

Farmers are encouraged to continue to dispose of their dead animals by the collection services run in the region. Aiming to dispose of all dead animals by this route would be ideal. If burial is to take place on farm the burial site is best situated beyond 50 metres of a water take borehole (Regional Fresh water Plan for Taranaki – Rule 30).

14. Summary of results

Table 54 collates the different types and quantities of farm waste generated each year in the region. The survey revealed some interesting estimates regarding waste and recyclables quantities in the rural community. The estimates correlated well to national data for various waste types, and to census data.

The information gathered demonstrates that there is a significant quantity of waste in the rural community, which is not surprising considering that one quarter of the Taranaki population live in the rural areas.

Most farm waste is burned or buried but it was interesting to note that there is a reasonable usage rate of skips (16%) and wheelie bins (23%) on farms in the region. Certain items such as vehicle batteries and dead livestock have a high recycling/reprocessing farmer participation rate which is probably attributable to the established collection or take back systems in place for these wastes, and some residual economic value.

Table 54 Summary of waste types and estimated quantities generated per farm or in the region per year

Waste item	Per farm per year	Region per year
Plastic wrap	215 bales	500 tonnes
Plastic pit cover	224 m ²	35 tonnes
Plastic agrichemical containers	3	9,000
Plastic detergent containers 100 litres [acid] *	2.4	1,564
Plastic detergent containers 200 litres [acid] *	1.6	2,777
Plastic bucket 20 litres [alkali] *	3.0	6,925
Plastic teat spray containers 20 litres *	2.2	1,235
Plastic teat spray containers 100 litres *	1.5	1,426
Plastic teat spray containers 200 litres *	1.1	939
Plastic pour on containers	2.3	5,574
Vehicle batteries	1	3,000
Tyres ¹	-	80,000
Agrichemicals	NK	NK
Animal medicines	-	16.3 to 29 litres
Animal medicine containers	NK	NK
Plastic syringes and needles	17	49,000
Engine oil	-	49.5 to 104 m ³
Rotary oil	-	69 to 117 m ³
Oil containers ²	1	3,000
Construction and demolition	NK	NK

Waste item	Per farm per year	Region per year
Household waste in rural area (25,000 people)	350 kg/person	8,750 tonnes
Household waste disposed on farm	-	approximately 6,000 tonnes
Household recyclables (23% of total household waste)	-	2,013 tonnes
Total dead stock (cows/adult) in the region each year	5.4	14,580
Total dead stock (calves) in the region each year	21.6	58,320
Dead stock (cows/adult) buried on farm ³	1	2,700
Dead stock (calves) buried on farms ³	2	5,400
Cars	-	420 (on farms in region at present)
Mastitis tubes *	529	1.3 million

Key: NK = not known

* Dairy farm only

1 not considered a waste on most farms

2 based on conversations with farmers (not data)

3 based on 90% of farmers

15. Summary of future disposal options

Overall, farmers are encouraged to dispose of their waste in an environmentally sound manner. Not only does this include appropriate disposal but also resource recovery whenever practicable. Farmers achieved good reuse rates for certain materials such as detergent containers, clothes, etc. and ideally will continue this. Farmers also achieved very good dead livestock reprocessing and vehicle battery recycling rates, which is very positive.

Farmers could consider reviewing their existing waste disposal practices with the aim of improving environmental practices and recyclables recovery rates.

Local authorities and rural organisations may consider examining current waste disposal options. There is opportunity to educate and promote best disposal practices of waste in the rural community, and the possibility of advocating for or even providing targeted services, after further consideration.

The Ministry for the Environment could review the current waste disposal options available to the rural community. There is opportunity to promote improved waste disposal methods and recyclables capture rates.

Commercial waste operators could consider reviewing their operations to include greater servicing of the rural areas for waste and recyclables collections.