



Telford

Te Whāre Wanaka Puerua

A Campus of Southern Institute of Technology

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Unit Standard 19111

Farming Skills

Demonstrate knowledge of the Types, Breeds, Uses,
and Health Requirements of Farm Dogs

Version 2 Level 3 Credit 4





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Introduction

“Dogs evolved from wolf-like ancestors which lived in hierarchical social groups and were predators and scavengers. They were the first animals to be domesticated by humans, and have been an important and valued part of many human communities for thousands of years. The domesticated dogs of today retain some of the behavioural characteristics of their ancestors and it is important to recognise this in considering their needs and interests.”

Code of Recommendations and Minimum Standards for the Welfare of Dogs, Ministry of Agriculture

Dogs are present in many households as a family pet. Many of you will be accustomed to caring for a dog in this manner, or will have had interaction with pet dogs at some stage.

However, working dogs are a different story. On most farms they are not being kept as a ‘pet’ - they are there to work. Some farms have only one working dog present, while others have a team of four or five dogs, or even more.

Working farm dogs are not cheap. Untrained dogs and pups are cheaper of course, but for a good working dog, you can expect to pay thousands of dollars.

It is important to understand the needs and interests of farm dogs of all types, and to know how to care for them properly. A dog that is well cared for will work well until it is 10 years old or even more, and will remain fit and strong. Underfed dogs and dogs that are not housed and exercised properly are more likely to develop problems such as arthritis that mean that they have to be retired early. It is important to understand the needs and interests of farm dogs of all types.

It is important to know how to properly care for dogs, understand your obligations as a dog owner, and know a little about each type of dog.

When you have finished this module you should be able to:

- Demonstrate knowledge of the types, breeds, and uses of farm dogs
- Demonstrate knowledge of the major types of canine ill health

Breeds and Types of Farm Dog

In New Zealand, there are different 'types' as well as 'breeds' of farm dog. Some people confuse the two, when they are really two very different things.

A type of dog relates to the nature of the work it will carry out, whereas the breed refers to the breeding or bloodline which the dog belongs to.

Types

The three main *types* of working farm dog are;

- heading dog
- huntaway dog
- handy dog (also referred to as a *crossbred*)

Breeds

Three *breeds* of farm dog commonly encountered in New Zealand are;

- kelpies
- border-collies
- beardedies

First the breeds of dog will be explained, and later the types of dog will be detailed.

The Kelpie

The Kelpie originates from Australia. It is universally recognised as a stock dog and is well suited to this activity.

Kelpies were originally bred because the European breeds of dog were not cut out for the rough terrain of Australia. The farmers needed a dog to be tough to work the cattle and withstand the extreme conditions – dust, heat, long distances. The stock was naturally wilder too, having been grazing on large stations, and was not used to contact with people or dogs. The Kelpie is often tougher in mind as well as body, and can handle hard work well.



Figure 1 Australian Kelpie

Kelpies are not shy and will get amongst the stock and make their presence felt. They are quite an independent dog, and as a result they may be slightly harder to train than other breeds. They are not afraid to jump on the back of stock (called 'backing'), moving them along that way, and this is a desirable feature for some farmers who do a lot of yard work or loading. The Kelpie is an excellent cattle dog.

Kelpies are usually happy to work with other dogs, but may be aggressive with dogs of the same sex. This however can be common amongst any dogs. A Kelpie is primarily a working dog, and is not suitable for a pet unless it has ample work to keep it busy (and therefore content).

The Kelpie is sometimes referred to as the Australian Huntaway. It has both the characteristics of a heading dog and a huntaway, meaning it is very much a handy dog. It is argued by many that the Kelpie may have dingo blood in its bloodlines.

The Kelpie is a fit looking dog, with hard muscles and strong bone. It is usually coloured brown or black, and gives the appearance of a dog which is keen to work hard. Kelpies are also used in America with great success.

The Border Collie

This is the archetypal sheep dog. It originated in the English-Scottish border country, where it is a sheep-dog that is small, highly intelligent and long-haired, and that 'crept' around stock on its belly to gather them in.

This dog has enjoyed a popular reputation as a sheepdog, which it was initially bred for. The Border Collie has the instinct to herd animals, and if not used for this purpose, it will look for other animals to 'round up'. The dog needs to have some work with stock as its focal point or it will look for other things to do – which may be of a destructive nature!



Figure 2 Border collie

The Border Collie has a long coat, which is usually black and white, or brown/red and white. These are some different patterns which may be found within the colour, including speckles and spots. The coat is reasonably long in most dogs, but this can differ. It is not a large dog. The male will weigh around 20-24 kg, while the female commonly weighs in around 17-19 kg.

A Border Collie is an excellent fetching dog. It is very trainable, and will usually respond instantly to an order given by its owner. The Border Collie has also enjoyed success as a pet. Border collies have excellent endurance and speed, and although they have a long coat, most of these found in NZ are of the short-haired version. The dog was imported into New Zealand in the 1800's from the English-Scottish border. It has been instrumental in the development of the New Zealand huntaway, which has some Border Collie blood. The Border Collie barks as well as heads, but will usually only bark if very excited and some dog trialists frown upon barking in this breed.

This breed of dog is usually a heading dog, and may move stock along by biting. It is usually quick to act, and to react to orders. Some strains have a tendency to grab and bite when in close.

Beardie or Bearded Collie

The Beardie originates from Scotland, where it was developed as a barking dog. In Scotland there is a lot of terrain where the stock can hide in undercover, and the Beardie was sent into the undercover to bark and chase the stock out.

The Beardie has an extremely shaggy coat, and a squarer head than a Border Collie. The colour is grey, white and tan, with long hair and a beard (hence the name). It is a huntaway dog, since it uses its bark to control the stock.



Figure 3 Bearded collie

The Beardie has the nature that it is willing to please, and will work all day if required. They tend to be good-natured and energetic.

Heading Dogs

Heading dog – or *eye dog* - is the term usually given to a dog which controls the stock by using their 'eye', rather than barking, and working around the sheep rather than moving them strictly toward or away from the handler.

Most heading or eye dogs are Border collies, although a few are crossbreds.



Figure 4 Heading dog

The title is also loosely given to a breed of dog, resulted from a Border Collie being crossed with a Greyhound. This breeding eventuated because the Collie by itself was having trouble with stockwork on steep hills and the long hair of their coat was proving troublesome. Once the two breeds were crossed, there emerged a breed now often called a 'heading dog'.

The heading dog uses a good flow of movements when working stock. It is more likely to move backwards and forwards along the stock, rather than pushing them along from either the front or the back of the mob (like a huntaway). Good heading dogs react quickly to the movements of the stock and to their owner's instructions. They are useful dogs in many situations, from working out in the open paddock to yardwork.

A heading dog uses its eyes to control the stock. This is achieved by fixing a strong stare on the animals and intimidating them, causing them to move away. An animal with a strong eye is desirable in a heading dog.

The Huntaway

The Huntaway sometimes can be confused as a *breed* and a *type* of dog. It can be in fact both, as a huntaway has been bred in New Zealand, specifically for use with stock.

A huntaway is a dog that moves stock along by barking. A loud bark is desirable, and so dogs which make a lot of 'noise' are good huntaways. This is an advantage when the dogs are working in the hill country and their bark must carry a long way.

Huntaways are very versatile dogs. They do a bit of everything, that is heading, hunting, yardwork and anything that the handler requires. Hunting is when the dog is required to work sheep towards or away from the handler. They do not have a strong eye like a heading dog, rather they rely on their 'noise' to control the sheep.

Huntaways are found in a variety of colours, the most classic being the black and tan colouring. They may have a totally black coat, and ginger colouring is present in some dogs.

An interesting point to note with the huntaway is that it has no clearly defined bloodlines. There is a 'bit of everything' that has gone into the dog, with blood from beardies, border collies, labradors, fox hounds, and others. What resulted was a versatile dog that is capable of handling stock very competently, performing most jobs required on the farm. The huntaway is common on most stock farms throughout New Zealand.

Handy Dogs

The handy dog is just that – one which is very handy to have on the farm! It is able to perform a mixture of the tasks which a heading dog and a huntaway would normally do.

The handy dog will have a reasonably strong eye, to allow it to head the sheep. It will bark on command, so it is useful when mustering or doing yard work.

If a farm is small and only requires one dog, a handy dog would be better rather than two dogs to perform heading and huntaway duties separately. Unfortunately there are not many of them, and they can't be necessarily be bred by crossing a heading dog with a huntaway.

A handy dog may be of specific bloodlines, or it may be a huntaway-type mix. It is not usually the result of crossing a heading dog with a huntaway to produce a dog that will do everything! This is not usually successful.



Figure 5 Huntaway

Either way, it is the term used to describe a dog that can do all tasks rather than *just* heading or *just* huntaway. A true **general purpose** dog.



Other breeds

Note that there are other breeds that were originally bred for stock work, but as a result of selection for the show ring rather than farm work, they are generally of very little use on the farm. Some examples: Corgis, Old English Sheepdogs, the Shetland Sheepdog (Sheltie), and rough-coated collie (Lassie type). Most of these dogs would be a liability on the farm!



Corgi



Old English Sheepdog



Shetland sheepdog



Rough coated collie

Test Yourself #1

1. In the following pictures, choose whether the dog is most likely a 'heading' dog, or a 'huntaway'.







Statutory Obligations as a Dog Owner

Dogs are legally protected by the:

- Dog Control Act 1996
- Dog Control Amendment Act 2003
- Animal Welfare Act 1999

and are also protected by the

- Code of Recommendations and Minimum Standards for the Welfare of Dogs.

Anyone who owns a dog must abide by the requirements of these statutes, or they risk being fined or having their dog taken away from them.

Dog Control Act 1996 & Dog Control Amendment Act 2003

The following information has been sourced from the Dog Control Act 1996, and parts are extracted from the Act.

Obligations of Dog Owners

Every owner of a dog is obliged:

- to ensure that the dog is registered in accordance with the Act, so that all relevant territorial authorities (i.e. the local Council) are promptly notified of any change of address or ownership of the dog.
- to ensure the dog is kept under control at all times
- to ensure the dog receives proper care and attention, and is supplied with proper and sufficient food, water and shelter
- to ensure the dog receives adequate exercise
- to take all reasonable steps to ensure the dog doesn't cause a nuisance to any other person, whether by persistent and loud barking or howling or by any other means
- to take all reasonable steps to ensure the dog doesn't injure, endanger, or cause distress to any stock, poultry, domestic animal or protected wildlife
- to take all reasonable steps to ensure the dog doesn't damage or endanger any property belonging to any other person
- to comply with the requirements of the Dog Control Act and of all regulations and bylaws made under the Act.

Dog Control Officers/Rangers

These people work for the local 'territorial authority' (which is usually the local District Council). They have the power to seize your dog and take it away if they suspect you of mistreating the animal.

If a dog control officer has good cause to suspect that an offence against the Act or a bylaw is being committed on your land/premises, the officer and an assistant can legally enter onto your premises or land at any reasonable time. They can inspect any dog which is kept on your land or premises, and are allowed to inspect the conditions in which it is kept. If they are authorised under the Act, for instance if you are not following your obligations as a dog owner and a dog is suffering, they can seize or take custody of any dog on your land or premises.

A dog control officer is not allowed to enter your house without your permission. If they wish to enter your house to carry out their duties, they must have authorisation from a Judge and be accompanied by a police constable.

If the dog control officer has reasonable grounds to suspect that a dog doesn't have access to proper and sufficient food, water and shelter, they may enter your land/premises where the dog is present, and;

- supply the dog with food, water or shelter
- enter the premises from time to time to continue to supply the dog with the above
- seize the dog and remove it from your land/premises

The officer is only allowed to take the last option of seizing and removing the dog if they are satisfied that the dog hasn't got access to proper food, water, or shelter. They must also be satisfied that apart from what the dog officer has provided to the dog while they were visiting (e.g. food), the dog won't be given this by you within the next 24 hours.

If the dog officer does take your dog, they must give written notice to the owner of the dog, or to the person in charge of the property if the owner is not home. This usually means that the officer will fill out a form, an example of which can be found on the next page.

If no one is home, the officer must leave the note/form in a conspicuous place.

Form 1
[Territorial authority]
Notice of seizure and removal of dog

r 2

Section 15, Dog Control Act 1996

To [*name of owner or, if the owner is not present, name of person appearing to be in charge of land or premises*]

Address:.....

Dog: [*description*].....

This is to notify you that this dog has been seized and removed from this address under [section 15\(1\)\(c\)](#) of the Dog Control Act 1996.

This was done because—

- the dog was believed to be without access to proper and sufficient food, water, or shelter; and
- there was reasonable cause to suspect that the dog would not be given access to proper and sufficient food, water, or shelter within the next 24 hours.

The owner* may apply for the return of the dog and should contact [*names and designations of officers of territorial authority*] at [*address and/or telephone number*]. The owner may be required to pay any fees incurred in the seizure, custody, sustenance, and transport of the dog.

Signature of Dog Control Officer/Dog Ranger:.....

Date:.....

*For the purposes of the [Dog Control Act 1996](#), you are the owner of a dog if—

- you own the dog; or
- you have the dog in your possession (otherwise than for a period not exceeding 72 hours for the purpose of preventing the dog causing injury, or damage, or distress, or for the sole purpose of restoring a lost dog to its owner); or
- you are the parent or guardian of a person under 16 who is the owner of the dog and who is a member of your household living with and dependent on you.

Schedule form 1: substituted, on 1 November 2004, by [regulation 3](#) of the Dog Control (Prescribed Forms) Amendment Regulations 2004 (SR 2004/354).

The owner is liable for the costs that were the result of the seizure, custody, sustenance and transport of the dog, as outlined in the form on the previous page.

If you are the owner of a dog and you decide to wilfully obstruct a dog control officer when they are 'exercising their powers' (for example, they are trying to seize your dog and you lock the dog inside your house so they cannot take it) you are likely to be fined.

Disqualification from Owning a Dog

The Territorial Authority (e.g. District Council) have the power to prevent you from owning a dog, if;

- you commit three or more infringement offences (not relating to a single incident or occasion) within a continuous period of 3 months; or
- you are convicted of an offence (not to be confused with an *infringement*) against the Dog Control Act 1996; or
- you are convicted of an offence against a specific part of the Animal Welfare Act 1999, the Conservation Act 1987, or National Parks Act 1980.

Dangerous Dogs

Most farm dogs will not fall into this category, but it is useful to note that dangerous dogs have special laws relating to them. They must be kept in a securely fenced area, must be neutered, and must be muzzled and controlled on a leash if in a public place.

Registration

This is something which affects all dog owners, not only the owners of working farm dogs. Every Territorial Authority (T.A.) is required to keep a register of the dogs that are registered with it under the Act. For each dog within their district, they must know;

- the name, date of birth and address of the owner
- the address at which the dog is ordinarily kept
- the description of each dog – breed, colour, marks, age of dog
- whether the dog is classified as dangerous
- the sex of the dog and whether it is neutered
- the registration number on the dog's tag

Each dog must be registered before it is 3 months of age. Each dog must be registered no later than the first day of each registration year, or fines are payable. Each Territorial Authority may vary the fees that they charge for registration, and they may make allowances for the following;

- lower fees for neutered dogs
- lower fees for working dogs, but they may limit the number of working dogs owned by one person which qualify for lower fees
- different fees for various classes of working dogs
- lower fees for dogs under 12 months of age

The owner of a working dog may need to make a written statement that the dog is a working dog of a specified class.

If a dog is being registered as 'neutered' and is receiving a lower fee as a result, the owner may need to provide a vet certificate which proves that the dog is indeed neutered.

Any false information supplied on a dog registration will mean a hefty fine for the guilty owner!

Once the dog is registered, meaning that the form was completed in full and the fee was paid, the owner will receive a receipt and a numbered tag or disc which corresponds to their dog. It must be attached to the collar of the dog at all times. The tag or disc will change colour every registration year so an unregistered dog can be clearly identified.

If the dog changes ownership during the year, the owner needs to give 14 days (2 weeks) notice in writing to the Territorial Authority.

Some owners may decide to be dishonest and, to avoid paying fees or try to trick a dog control officer, remove a collar with a registration tag, or remove the tag from the collar. They may also try to buy tags which resemble the official tag and try to cheat their way past the registration system. These methods are all illegal and, if you are caught trying to be dishonest, you are liable for a large fine.

If a dog is found by the authorities and is not wearing a collar which has a current registration tag, the dog will be considered unregistered until it is proven otherwise.

Basically, the main points to avoid trouble are to register your dog on time, be honest when filling out the registration form, notify the T.A. promptly if the dog has changed ownership or address, and ensure your dog is wearing the correct tag on its collar.

An example of a registration form can be found on the next two pages. These forms may vary slightly from district to district. This one is from the Far North District Council.

Owner ID 

APPLICATION FOR DOG REGISTRATION

For the year 1 July 2017 to 30 June 2018 (Section 36, Dog Control Act 1996)

Animal Management

Form No: 001

PLEASE USE PRINTED BLOCK LETTERS**OWNER* PARTICULARS**

Owner's* Full Name	Mr / Mrs / Miss / Ms / Dr (Circle ONE)
Owner's* Postal Address (Please include postcode)	

*For the purposes of the Dog Control Act 1996, you are the owner of a dog if:

- you own the dog; or
- you have the dog in your possession (otherwise than for a period not exceeding 72 hours for the purposes of preventing the dog causing injury, or damage or distress or for the sole purpose of restoring a lost dog to its owner; or
- you are the parent or guardian of a person under 16 who is the owner of the dog, and who is a member of your household living with and dependent on you

Physical Address (Where dog is kept)			
Home Phone	Work Phone	Mobile Phone	
Owner's Date of Birth (MUST be 16 or older)	(Day) / (Month) / (Year) / /	Email Address	(Only use BLOCK letters where applicable for email address)

Your date of birth is required to enable you to be distinguished from other persons with the same name. Certainty of Identification is required in the enforcement of the provisions of the Dog Control Act 1996

DOG PARTICULARS

Particulars	DOG 1	DOG 2	DOG 3
Animal Reference <small>Unless already allocated, this will be issued once fees are paid / processed</small>			
Tag Number <small>This will be allocated once fees are paid</small>	(Year) / (Number) 2017-18 /	(Year) / (Number) 2017-18 /	(Year) / (Number) 2017-18 /
Dog's Name			
Class <small>W = Working P = Pet D = Dangerous M = Menacing PD = Pig Dog</small>	W / P / D / M / PD (Circle ONE)	W / P / D / M / PD (Circle ONE)	W / P / D / M / PD (Circle ONE)
Breed <small>(Predominant and Secondary ONLY)</small>	(Predominant) / (Secondary) /	(Predominant) / (Secondary) /	(Predominant) / (Secondary) /
Colour / Distinguishing Marks			
Sex <small>M = Male F = Female</small>	M / F (Circle ONE)	M / F (Circle ONE)	M / F (Circle ONE)
Neutered <small>Y = Yes N = No</small>	Y / N (Circle ONE)	Y / N (Circle ONE)	Y / N (Circle ONE)
Age of Dog	(Years) / (Months) /	(Years) / (Months) /	(Years) / (Months) /
Microchip number OR Dog Tattoo details			
Dog Status <small>(New Dog OR Renewal)</small>	New / Renewal (Circle ONE)	New / Renewal (Circle ONE)	New / Renewal (Circle ONE)
Fee Payable (Our staff will indicate the fee payable)	\$	\$	\$
GST No: 52-004-926 <small>This becomes a tax invoice when paid</small>		TOTAL DUE (GST Inclusive)	\$

It is an offence, when applying for the registration of a dog, to make any written statement knowing that statement to be false. On conviction, a court may impose a fine of up to \$3,000.

I confirm that the information above relating to dog (s) in my care is true and correct:

SIGNED:**DATE:****OFFICE USE ONLY**

Receipt Number			
Total Paid	\$	Date	
CSO		Branch	
Comments			

PLEASE SEE OVERLEAF FOR FURTHER INFORMATION

FURTHER INFORMATION

Registration Fee (01/07/17-31/07/17)			Registration Fee (01/08/17-30/06/18)		
Dog Class	Neutered	Entire	Dog Class	Neutered	Entire
Normal Pet	\$51	\$61	Normal Pet	\$76	\$86
Menacing/Dangerous	\$81	\$91	Menacing/Dangerous	\$119	\$129
Working/Pig Dog	\$39	\$49	Working/Pig Dog	\$58	\$69

PENALTY CHARGES WILL APPLY TO DOGS REGISTERED ON OR AFTER 1ST AUGUST 2017
COLLECTION CHARGES WILL APPLY IF PAYMENT IS RECOVERED BY ANIMAL MANAGEMENT ON OR AFTER 1ST SEPTEMBER 2017

PAYMENT OPTIONS

MAIL: Send a cheque (NOT cash) to: Animal Control Department, Far North District Council; Private Bag 752; Kaikohe 0440
IN PERSON: Pay by cheque; cash or Eftpos at a FNDC office. Located in Kaikohe; Kawakawa; Paihia (i-SITE); Kerikeri (John Butler Centre); Kaitaia (Te Ahu); Rawene; Opononi (i-SITE) or Kaeo. Pay in person during normal office hours.

INTERNET BANKING: **Account Name:** Far North District Council; **Bank:** ASB Bank; **Account Number:** 12-3244-0022509-00; **Ref:** Dog

Note: The above information will be kept by the Far North District Council but may be used only for lawful official purposes and will not be generally available to the public. However, section 35 of the Dog Control Act 1996 allows the name and address of the owner of any specified dog to be made available to any person who has made a written application for that information. Before supplying the information, the Far North District Council must be satisfied of the identity of the applicant and that the information is required for one of a limited number of specified purposes, such as returning a lost dog to its owner or seeking compensation for damages.

Note: Failure to supply any of the information requested in this form that is relevant to your application may prevent registration of your dog. You are encouraged to request the Far North District Council to correct or amend any of these details if you discover a mistake or if the relevant circumstances change. You are required to notify the Far North District Council of any change of address or change in the ownership of the dog.

NOTES ON REGISTRATION

All dog owners of dogs ordinarily kept in the Far North District Council district must register their dogs with the Far North District Council.
All dogs over the age of 3 months must be registered.
It is an offence to keep a dog older than 3 months which is unregistered. On conviction, a Court may impose a fine of up to \$3,000.
On completing the form properly, a dog owner may post the form, together with the appropriate fees payable, to the Dog Registrar at Far North District Council; Private Bag 752; Memorial Avenue; Kaikohe or deliver these items to an office of the Far North District Council.
It is an offence, when applying for the registration of a dog, to make any written statement knowing that statement to be false. On conviction, a court may impose a fine of up to \$3,000.
Replacement discs and collars may be obtained from the Far North District Council if the current disc or collar has been lost or stolen.
Any dog not wearing a collar having a current registration label or disc attached will, until the contrary is proved, be treated as unregistered.
On change of ownership of any registered dog, both the previous owner and the new owner must, within 14 days, give written notice to the Far North District Council, of the change of ownership and the residential address of the new owner and the address at which the dog will be kept. It is an offence not to comply with this requirement. On conviction, a court may impose a fine of up to \$500.
If the owner's address is changed within the district, the owner must, within 14 days, give written notice of the change to the Far North District Council.
If any dog is transferred to and kept in the district of another territorial authority, other than the one in which it has been kept, for 1 month or more, the owner must, within 6 weeks of the transfer, give written notice of the transfer to both territorial authorities, setting out the address at which the dog will be kept. It is an offence not to comply with this requirement. On conviction, a court may impose a fine of up to \$500.
If the fee for the registration of a dog is paid and that dog dies, a refund will be made on request as follows:

- Where a dog dies before the commencement of the year, the full fee will be refunded;
 - Where the dog dies during the year, 1/12th of the annual fee for each complete month remaining in the registration year after the date of application for a refund will be refunded
- If any dog is first required to be registered after 1 August in any registration year, the fee shall be 1/12th of the annual fee for each complete month remaining in the registration year after the date of such registration.
The registration fees include goods and services tax.
Owners wishing to claim a reduced fee for neutered dogs must produce a certificate from a registered veterinarian certifying that the dog has been neutered.
If any dog over the age of 3 months is found not wearing a collar with a current registration label or disc attached, on land or premises other than its owner's land or premises, or in any public place, the dog may be seized and impounded.

Control of dogs

Section 52, 53 and 54A, Dog Control Act 1996

The owner of a dog must keep the dog under control at all times and, when in a public place with the dog, must use or carry a leash at all times.
A dog will be treated as not under control –

- if it is found at large on any land or premises other than a public place or a private way without the consent (express or implied) of the occupier or person in charge of the land or premises; or
- if it is found at large in any public place or in any private way in contravention of any regulations or bylaw.

You will commit an offence and be liable on conviction to a fine not exceeding \$3,000 if you fail to comply with these provisions.

Obligations of dog owner generally

Section 54, Dog Control Act 1996

The owner of a dog must –

- ensure that the dog receives proper care and attention and is supplied with proper and sufficient food, water, and shelter, and
- ensure that the dog receives adequate exercise

You will commit an offence and be liable on conviction to imprisonment for up to 3 months or to a fine not exceeding \$5,000 if you fail to comply with this provision.

Obligations of dog owner on owner's property

Section 52A, Dog Control Act 1996

The owner of a dog must ensure, when the dog is on land or premises occupied by the owner, –

- that the dog is under the direct control of a person; or
- that the dog is confined within the land or premises in such a way that it cannot freely leave the land or premises.

You will commit an offence and be liable on conviction to a fine of \$3,000 if you fail to comply with this provision. In addition, a dog control officer or dog ranger may seize and impound the dog.

Enquiries can be made by Free phone: 0800 920 029, Ph: (09) 4015200, Fax: (09) 401 2137, or website: www.fndc.govt.nz

PARTICULARS OF LAST REGISTRATION

DOG ID	DOG NAME	YEAR / TAG / AUTHORITY

Please advise of any additional dog(s), or dog(s) disposed of during the year

DOG ID	Tag NO	Dog name	Age	Sex	Neutered	Breed	Colour / Marks	Fee

Control of the Dog

Each owner of a dog must keep their dog(s) under control at all times, by law. A dog must not be found on any premises without the consent of the occupier or person in charge of that land. For instance, you are not allowed to leave your farm dogs roaming about so that they end up in the next-door-neighbour's paddock. You should tie them up or keep them within sight if they are let off their chain or out of their kennel.

If a dog is found on premises **without** its owner and **without** the consent of the occupier or owner of the land – it will be deemed not under control and the owner will be liable to be fined. If the owner of stock or poultry makes a complaint to the District Court about the dog being 'at large' (unattended) among their animals, the court can order the dog's owner to keep their dog properly restrained or else it may be ordered to be destroyed.

The owner of a dog is liable for the damage done by their dog, so keep this in mind if you choose to leave your dog(s) running loose and unattended!

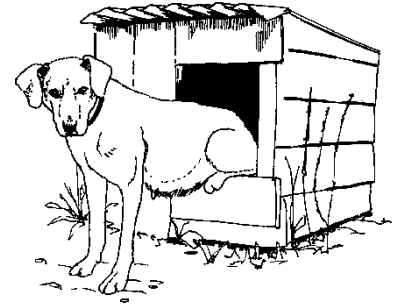
Fines

There are hefty fines to pay if you choose to ignore the legislation surrounding dog ownership. Following are some of the fines payable for some offences relating to dogs (subject to change).

Offence	Fine of up to
Wilful obstruction of dog control officer or dog ranger	\$1000
Failure or refusal to supply information or wilfully stating false particulars	\$1500
Failure to comply with any bylaw	\$500
Fraudulent transfer or sale of dangerous dog	\$1000
False statement relating to registration	\$1000
Failure to register dog	\$300
Fraudulent attempt to procure replacement label or disc	\$1000
Failure to advise change of ownership	\$100
Failure to advise change of address	\$100
Removal or swapping labels or discs	\$1000
Failure to keep dog under control or confined	\$500

General Care of Farm Dogs

The working farm dog requires much the same care as a pet dog. There is a 'Code of Recommendations and Minimum Standards for the Welfare of Dogs' which lays down the simple guidelines for the care of a dog.



One of the main purposes of this Code is to ensure the welfare of dogs throughout New Zealand is maintained. The five basic principles covered by the Code are applicable for any animal, not only dogs, and help to prevent the mistreatment and abuse of animals.

The five principles stipulate that animals should have;

- freedom from thirst, hunger and malnutrition
- provision of appropriate comfort and shelter
- prevention of, or rapid diagnosis and treatment of, injury, disease or parasite infestation
- freedom from distress
- the ability to display normal patterns of behaviour

If you ensure that your farm dogs are being cared for within the boundaries of these five principles, you are well on the way to caring for them in a responsible way. In return, the dogs will be able to perform at their best, and should be able to reward you with a full day's work when required.

Dogs are social animals, and benefit from being allowed some social contact time with other dogs. They enjoy being worked in the company of other dogs. If possible, it is good to keep the farm dog kennels in one area to offer the dogs some company.

Housing

It's a sad fact that too many farm dogs don't have adequate housing. It makes no sense for a valuable working dog to be kept in a cold dirty kennel. If your dog is to work well for a long time it should have clean, dry, draught-free housing with a comfortable bed. The site for the kennels should be chosen carefully.

- The sleeping boxes should back into the prevailing wind. The kennels should be sited so that they can't be flooded and the run area drains freely and doesn't become muddy.
- If the run becomes muddy the whole kennel unit should be shifted to clean ground.
- In summer, the kennels should be moved under shade to prevent over-heating.
- The farm dog kennel may be a sleeping box to which the dog has free access, but more often it is a kennel with an enclosed run attached or a kennel to which the dog is tied on a rope or chain.
- Sleeping boxes with an enclosed run attached are good for bitches in heat, and they have the advantage of being lockable to prevent theft of the dog. The sleeping boxes should back against the prevailing wind.

- The sleeping box and entrance must be big enough to give the dog room to get in and out and to stand and turn inside easily. The sleeping box should be cleaned regularly so that it is dry and clean and the run area should be kept clear of faeces, mud and bones.
- Sleeping boxes can be made of wood or metal, but un-insulated metal can be a bit like an oven on a sunny day and an ice-box in winter. A wooden lining provides good insulation and helps maintain the inside of the box at a comfortable temperature.
- Metal based and concrete based sleeping areas are not recommended because they can cause pressure sores and exacerbate arthritis.
- If the dog is tethered to the kennel the dog's collar should be connected to the chain or rope by a swivel clip, and there should be no physical protrusions to cause entanglement. Chain tethers must not be used within reach of electric wires.

Most farm dogs aren't provided with bedding, but there is no doubt clean soft bedding helps keep the dog warm and comfortable. It also helps prevent chilling and pressure sores and arthritis and aids recovery after bouts of hard work. If bedding is provided it should be changed regularly to keep it clean.

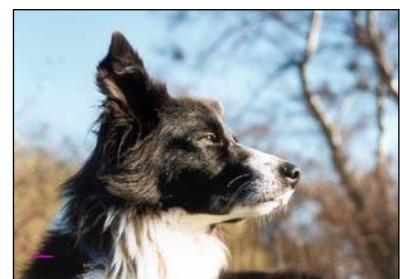
Farm dogs need not be smelly. If a dog is smelly, it means that its owner keeps it in a smelly kennel. Regularly cleaning out the mud and cast hair will help prevent smell. Leaves of straw or hay provide effective cheap bedding – and hay is a natural deodorant!

All this might seem like common sense, but it's surprising how many kennels are badly designed and thoughtlessly sited. It's little wonder that the dogs in them become smelly, stiff, cold and susceptible to arthritis and pressure sores.

Feeding

Carbohydrates

Dogs need carbohydrate for energy, and this is very important for working dogs. Carbohydrate is essential for dogs that are using a lot of energy to work or to produce milk. In other words, hard-working dogs and bitches suckling pups need carbohydrate. Lean meat alone cannot provide enough energy to keep a working dog in good body condition or a lactating bitch in good health.



Dogs can't digest the energy in raw grain, so cereals must be cooked before being fed. Too much energy in the form of lactose (eg in cow's milk or skin milk powder) will usually cause diarrhoea. Carbohydrates shouldn't exceed 60% of the diet.

Protein

Protein is important for building muscle and is required daily as it isn't stored in the body like fat. Protein should make up from 20 to 25% of the dry matter content of the diet.

Fats

Fats and oils are a good source of energy in the diet and they help to make food tasty. They are stored in the body fat depots under the skin and in the abdomen. Fat under the skin provides good insulation. At least 5% of the daily food intake should be fat or oil and 20% is ideal. Diets with higher fat levels can become rancid easily.

Vitamins

Vitamins are essential for good health. There are at least 13 that are needed for good health, and they can be sub-divided into the water-soluble vitamins B and vitamin C and the fat-soluble vitamins A, D, E and K. Fortunately, most diets provide sufficient vitamins and vitamin C is synthesized by most dogs, so adding vitamins is generally unnecessary. However when meat is frozen or boiled (as required for hydatids control) vitamin B1 (thiamine) is lost or destroyed, and deficiency may occur unless supplements are provided. Commercial foods contain added thiamine.

Minerals

There are many minerals that are needed for various functions of the body, and most commercial foods contain these minerals in ample amounts. Deficiency problems can occur with home-made diets or lean meat only. Calcium and phosphorus are two of the most important minerals but they have to be present in the correct proportions. A calcium: phosphorus ratio of 1.2 to 1.4 calcium to 1 of phosphorus with adequate amounts of vitamin D is best. Meat-rich diets are low in calcium and high in phosphorus, and this can lead to bone problems especially in young growing dogs. Supplementation with bone flour or dicalcium phosphate can help correct a dietary imbalance. However adding calcium to a balanced diet can cause more problems than it prevents, so before adding calcium to the diet of young dogs, it is important to get advice from a veterinarian.

What to feed?

It is interesting to note that dogs don't necessarily prefer the type of food we might think they do! Given the choice, they prefer pork and beef to mutton, and they prefer minced meat to chunks, they prefer cooked meat to raw, and they prefer food that is warm, wet and sweet!

In the wild, if they kill a prey animal, they often eat the offal and intestinal contents first.

So, while we might think they prefer chunks of lean meat, this is not necessarily so, and in fact lean meat does not provide a balanced diet, especially for working dogs that require more energy in their diet.

There are several different types of food that can be offered to farm dogs:

- **Commercial dry dog foods** are widely popular for farm dogs. They are easy to obtain, can be purchased by the sack, are easily stored and prepared, and the dogs enjoy them. There are several types - some contain biscuit only and are designed to be fed with meat to give a balanced diet. Some are designed to provide a complete balanced diet – they have added protein, minerals and vitamins. Sticking to well-known brands of complete dry dog food may cost slightly more, but at

least you have peace of mind that it is quality food, the dogs will eat it, and the food won't be wasted. One way of ensuring a good diet is to buy AAFCO (Association of American Feed Control Officials) tested dog food brands. A range of different formulations of dog food are available; the food fed to your dog will depend on whether you have a growing pup, an active working dog, a house pet, an old age dog, or a pregnant or nursing bitch. Feeding AAFCO approved balanced commercial diets ensures optimum levels of vitamins, minerals, carbohydrates, fats and proteins are provided.

- **Home-killed meat** is often fed to dogs. Cull sheep are usually available, so it's a cheap option. Dogs seem to enjoy fresh meat as part of their diet, especially if it is on the bone, and chewing it can help relieve hours of boredom in the kennel. However, on the down side, a lean-meat only diet is far from balanced. It is low in fat and energy. If it has been frozen and thawed, many vital vitamins may be lost with the juice that escapes, and vitamin deficiencies can result. It is not easy to prepare. You will have to spend time killing and then dressing the carcass. Fresh meat does not store well, and takes up a lot of room in a freezer. To repeat an important point, if feeding carcass meat alone, it's important to provide offal and intestinal contents and fat and bone to provide a complete diet. Lean meat alone (e.g. from dressed cull ewes) does not provide nearly enough vitamins, minerals, fat or carbohydrate for a working dog. The many dogs that survive on meat-only diets are almost certainly scavenging dung and carrion and all sorts of other rubbish to try to compensate. Dogs can safely be fed rabbit carcasses and meat (not offal) from cattle, horses and deer.

What not to feed

- Don't feed cow's milk or skimmed milk powder to dogs, except in small quantities. Dogs will get diarrhoea on big amounts of milk as they are not usually able to digest lactose easily.
- Avoid indigestible chunky food like maize cobs.
- Beware of toothpicks in table scraps – a plastic or wooden toothpick can penetrate the intestine and cause a painful death.
- For control of hydatids and sheep measles, you must not feed offal or meat that has not been frozen for at least 7 days. An alternative is to cook the meat thoroughly, but this is usually messy, it might take an hour or two of boiling, and for most farmers, it's just not a good option.
- Don't feed untreated pork to dogs. It is wise to cook or freeze wild pig meat and offal (just to eliminate any risk of hydatids or tuberculosis).
- There are other obvious risky substances, like the plastic wrap on dog roll and plastic bags. These can cause obstruction of the intestine. Ear tags and other metal or plastic objects like CIDRs (intravaginal pessaries) that are used in or on livestock may be fatal if scavenged.
- Don't feed meat while it's still frozen. Imagine working all day and getting a chunk of frozen meat for dinner. Not much of a reward from a grateful boss! It takes at least 24 hours and sometimes several days for most chunks of meat to thaw.
- Don't feed possum carcasses if there is a risk of 1080 poisoning. 1080 will be present in the stomach of intestines of poisoned possums
- Most dogs love a bone, but avoid cooked bones and never give dogs chicken, chop or fish bones. The only safe bones are brisket and big raw beef shank bones that cannot splinter into sharp spikes.
- It's common to feed table scraps to dogs, but beware of toothpicks and corn cobs - they can be fatal. The scavenging habits of dogs can get them into trouble too - especially if they swallow ear

tags or intraruminal capsules, or objects that get stuck in the intestine like golf balls or nylon pantyhose.

How much to feed

Dogs should be fed enough to maintain their body weight within the normal range and with a condition score of 2 to 3 (see below), no matter how active they are.

The maintenance part of a dog's diet is the amount of feed needed to maintain healthy basic body functions. The body weight of a fully-grown dog that is not working or pregnant or lactating will be steady.

If the dog is growing, or if it is pregnant or lactating or working hard, it will require more than basic maintenance rations to maintain body condition. The extra amount is called the 'production' ration.

Therefore when dogs are fed, they require a maintenance ration plus whatever is needed for production (work or reproduction or growth).

Note too that dogs need up to twice their usual ration in cold weather (to produce the heat they need to maintain normal body temperature).

The following table is taken from the Code of Recommendations, and is useful when considering what to feed your farm dog. M = maintenance rations

Table 1 Recommended Rations

Dogs in Work	
Light exercise	1.5 x Maintenance (M)
Medium exercise	2.0 x M
Heavy exercise	2.5 to 3 x M
Bitches	
Late pregnancy	2.5 x M
Early lactation	3.0 x M
Pups	
6-9 weeks	1.5 to 3.0 x M
9 weeks onwards	decrease to adult levels

Note that pregnant bitches and lactating bitches require very much more than maintenance rations. How do you know the dog is being fed enough?

A dog that is well fed will be in good body condition, around body condition score 3 using the following system:

Body condition scores

- 0 Emaciated
- 1 Outline of all ribs readily felt or seen
- 2 Outline of last two ribs can be readily felt or seen
- 3 All ribs or all but last two lightly covered by fat
- 4 Ribs covered by layer of fat, outline not readily felt
- 5 Obese, ribs cannot be felt without considerable pressure

The condition score of 2 to 2½ is best for working dogs. Condition score 1 is common in farm dogs, but it is far from ideal. Dogs with condition scores 0 and 1 are likely to have a dull lustreless coat. A dog with condition score 1 will feel the cold more and may not be as strong or have as much stamina as a dog in body condition score 2.

How often should you feed?

- It is preferable to feed the dog every day but it depends on the amount of work it is doing.
- Feed twice a day or once at the end of the working day.
- Feeding a dog every second day has no merits apart from less work for a lazy boss.
- Pregnant and lactating bitches are fed so much more than normal that it is wise to feed half the daily ration twice a day.
- If you feed once a day or less frequently, be aware of the risk of gastric torsion if the dog runs about with a full stomach (see below).

Pregnant and lactating bitches

- The pregnant bitch must have more food than before and it should be good quality food. By the ninth week she needs up to three times her usual diet.
- Don't feed extra calcium before whelping as this can interfere with calcium metabolism and the result may be that she does not produce enough milk and/or she may develop eclampsia, a life-threatening condition like milk fever in cows, seen about 3 weeks after whelping (see below).
- However, as soon as pups are born and for as long as she is suckling them, the bitch will benefit from a high-quality supplement such as Calcium Sandoz (calcium gluconate), giving the amount shown on the packet.

Feeding pups

- From about 3 weeks of age, pups should be given some solid food. High quality dry commercial puppy feeds are best, and it is best to soak them in water or milk at first. A cupful for a litter may be enough at the start, gradually increasing as the pups demand more.
- From 6 to 8 weeks, the bitch will be getting sore round her udder, and the pups are growing fast, so they benefit from being given high quality feed three times a day. The meals can be varied, eg Weetbix and milk in the morning, dry food at midday and meat in the evening.

- The pups can be weaned from 6 weeks of age, and not before 4 weeks. The pups can be given supplementary feed from 3 weeks of age. The whelping box should be cleaned frequently from when the pups are 2 to 3 weeks of age. If there are a very large number of pups, early euthanasia of a few may help the bitch and the other pups.
- From 5 months of age, feed two meals a day with one at least containing the quality dry commercial puppy food. This is necessary as long as the pups are growing. The pups should be in good body condition, not 'ribby'.

Special regulations surround the feeding of raw meat to dogs. The following guidelines are reproduced from the Christchurch City Council website www.ccc.govt.nz

Hydatids

- If owners require their dogs treated for hydatids for any reason, they should consult their local veterinarian.
- The feeding of raw offal and untreated sheep or goat meat is still illegal as defined by the Bio Security Act. (Dog owners are reminded that all offal should be thoroughly cooked before being fed to dogs and that sheep and goat meat must have been treated by thorough cooking or have been frozen for at least 7 days at a temperature of not less than -10°C).

Safe Feeding

- Do not feed dogs any untreated sheep or goat's meat.
- If sheep or goat's meat is to be fed, treat by freezing or cooking.
- **Freezing:** freeze meat to a core temperature of -10 deg C or colder for at least 7 days.
- **Cooking:** heat to at least 72 deg C throughout. Carry out this process within a dog-proof area.
- Do not feed raw scraps of sheep or goat meat to dogs.
- Remember, all sheep and goat meat should be treated, including meat purchased from shops, as it cannot be guaranteed to be sheep measles free.

Recommended Farming Practices

- Home killing of sheep or goats should be carried out in a dog-proof enclosure.
- Before feeding sheep or goat meat to dogs, treat by freezing or cooking.
- **Freezing:** freeze meat to a core temperature of -10 deg C or colder for at least 7 days.
- **Cooking:** heat to at least 72 deg C throughout. Carry out this process within a dog proof area.
- Always treat the head, tongue and other off-cuts of sheep before feeding to dogs.
- Cut up meat in dog proof area (killing enclosure).
- If freezing, date dog food meat clearly to allow identification of meat ready for use.
- Check freezer is operating at -10 deg C or colder. 7. Use alternative safe foods, such as dog pellets, biscuits, sausage or meal.
- Keep dogs under control when not in use (including pet dogs).
- Treat dogs for sheep measles with an appropriate drug in the event of a suspected control breakdown.
- Require all dogs entering property to have evidence of treatment with a cestocidal drug.

Exercise

It's not possible to be specific about the amount of exercise a dog should have. Common sense guidelines apply. For example, if a dog gets worked each day it won't need any additional exercise. If the dog is not working, it should be offered at least one spell of 30 minutes or more out of its kennel or off its tether each day. Apart from the fact that this relieves boredom, it helps to keep it fit for when it is required to work.

Another very important reason for allowing the dog daily exercise opportunities is that it doesn't then have to foul its "nest". Dogs are naturally clean animals and given the opportunity, they generally won't urinate or defaecate in their runs if they can help it.

Note that it is important not to allow a dog to jump or run about after a large meal or it could develop fatal stomach torsion.

Exercise for pups

By the time they are 4 weeks old, pups are getting quite mobile, and need exercise to develop muscles, joints, and general co-ordination. From the time they are weaned until they have almost finished growing at about a year of age, they are like teenagers - full of energy for a while, then they collapse. So although they need exercise, you shouldn't overdo it, particularly in the 4- to 8-month period when their bones are growing, and joints developing. Some large types like huntaways are particularly prone to joint damage at this time.

Transport

Farm dogs must by law be reasonably comfortable and secure when they are being transported. They shouldn't be transported in the same container as livestock. Their containers must be free of exhaust fumes and road dust (even the dog boxes on a stock truck). Dogs on the back of trucks must be held securely by a lead or in a crate. The dog should not be able to slip off the deck with a risk of being dragged. They should be offered clean cool water at intervals during the trip.

Neutering

Neutering (spaying and castration) is best for all working dogs that are not intended for breeding. Castration of the male involves removal of both testicles, while spaying of the bitch involves removal of both ovaries and the uterus. Castration like spaying is a very significant surgical procedure and it must only be carried out by a veterinarian. The traditional age for neutering is around 5 to 6 months, before sexual maturity. Spaying and castration are performed under general anaesthetic, with a short stay in the veterinary clinic for 1 or 2 days.

Spaying has real benefits, such as stopping all the problems associated with on-heat bitches, and it prevents mammary cancer and life-threatening infections of the uterus, which many old bitches can develop.

Contrary to popular opinion, castration will not adversely affect the performance of the working dog. It may in fact help because it curbs the tendency to wander when bitches are in heat and reduces aggression towards other male dogs.

Breeding farm dogs

Breeding is a serious responsibility, and you have to provide optimal conditions for bitch and puppy if you want healthy litters. The bitch may need assistance at whelping, and pups need careful nurturing, feeding, and health care in the months it takes them to mature. It all takes time and money, and you need to be prepared if you are going to get into it.

Bitches in heat

Most bitches come in heat for 1 to 3 weeks at intervals of 4 to 10 months. They must be carefully supervised, behind solid walls if necessary, to discourage visiting dogs and prevent unwanted matings.

Even when she is in heat, she must be given all the exercise and attention she needs. Apart from anything else, it's a legal obligation to do so.

If an unintended mating has taken place, see a veterinarian right away, as there are several options for terminating the pregnancy in the first 6 weeks, using anti-progestagen drugs or prostaglandins. Some veterinarians will spay pregnant bitches at 28 days.

Managing bitches in heat

Some bitches are bred into old age, but in general those more than 7 years old should be retired from breeding. Older bitches are more likely to develop problems like uterine inertia (inability of the uterus to contract at whelping).

Pregnancy, whelping and lactation

Pregnancy can be confirmed by the veterinarian (by palpation of the abdomen to feel the foetuses in the womb or by ultrasound scanning of the abdomen).

During pregnancy (about 63 days' duration), the bitch must be well fed (up to three times the maintenance ration). Her condition score should stay about 3. If you can see all her ribs, you are not feeding her enough.

The bitch will appreciate a warm, comfortable, safe, clean and cleanable box to whelp in, away from the attentions of other dogs.

Surgical procedures

Farm dogs shouldn't be tail-docked. They use their tail for balance and for signaling.

However, it can be wise to remove any dew claws especially on the hind legs. Dew claws can get caught on vegetation and on wire causing painful injuries. It is best to remove dew claws before the pups are 4 days old, and even then the procedure should be carried out carefully with very high standards of hygiene. It can be left for the veterinarian to remove the dew claws at the same time the dog is neutered. Dew claws of pups over 4 days old should be removed only by a veterinarian.

Debarking is a veterinarian-only procedure, and the veterinarian will only carry out the procedure if it is in the interests of the dog (and not just because it's a nuisance barker).

Muzzling

Farm dogs are more often muzzled than other types of dog. They might be muzzled to prevent them biting and injuring livestock and other dogs. And they might be muzzled when working near areas where poison such as 1080 has been laid, to prevent them eating poisoned bait and poisoned carcasses.

There are various types of muzzle, but it's very important for the farm dog that the open wire types are used. These are large enough to allow the dog to pant with an open mouth and drink water, and this is important if the dog is not to become over-heated when working.



Figure 6 Dog muzzles

Health Disorders of Working Dogs

Many of these health disorders affect not only working dogs, but any type of dog. Signs of ill-health include:

- Abnormal dullness, lethargy
- Abnormal excitement, agitation
- Loss of appetite and/or thirst
- Increase in thirst or appetite
- A discharge from the eyes, nose, mouth, anus, vagina, prepuce, ears
- Vomiting and/or diarrhoea
- Any bleeding that does not stop within a few minutes
- Straining unproductively as if to defaecate or urinate
- Sneezing or coughing or abnormal or increased rate of breathing
- Lameness or gait abnormality or inability to stand
- Loss of balance, incoordinated gait, convulsions (fits)
- Significant weight loss
- Patchy or excessive hair loss
- Swelling of part of the body
- Anaemia (pale gums and inner eyelids)
- Persistent scratching or biting resulting in self-mutilation
- Persistent shaking of the head

Injury

Farm dogs may become injured through a variety of activities. A working dog is required to mingle with stock which are usually much larger in size than the dog. Farm dogs are often involved in a 'stand-off' when working obstinate animals, and due to the active nature of their work, injuries do happen. For various reasons, farm dogs sometimes run in front of vehicles, or can fall off the back of a truck or motorbike.

It is important that the owner or farmer knows what to do when an injury arises, and to take the correct action to ensure the dog is not damaged any further through incorrect handling.

If a dog has obviously been injured, the person at the scene should take great care around the dog. Injured animals can be unpredictable, and a normally docile dog may decide to bite if it is in pain. Putting a muzzle on the dog first of all is a safe precaution to take.

Be careful how you handle the injured dog. You may cause further injury or increase the severity of the wound if you are rough, or if you do not handle the dog in the correct way. Do not attempt to move a dog with broken bones, unless it is in danger where it lies.

A dog which does not appear to have broken bones can be safely lifted by putting one arm around the back end of the dog, and the other arm around the chest.

Consider the use of a stretcher if the dog must be kept immobile but needs to be relocated from the site of the injury.

A dog with broken bones needs to be kept still and as quiet as possible. You may be able to tell if bones are broken by the appearance of the limbs, but broken bones other than those in the legs are more difficult to spot and are often more serious.

Do not put a splint on a broken leg, as this may cause more damage. The blood vessels and nerves are in danger of being injured at the point where the break has occurred.

The leg may be kept immobile by kindly wrapping the leg with a roll of cotton wool padding, then lightly bandaging round the wool to keep it in place. This is good temporary support for the broken leg.

A dog may injure itself by spraining or straining a tendon, ligament or muscle. An example of when this may happen is when the dog jumps down from the back of a truck and lands awkwardly. A sprain is when the ligaments stretch and/or tear, and will result in pain at the site of the injury.

If a dog suffers from a sprain or strain, they will usually start using their leg normally again within 1-3 days. The dog should be kept quiet and preferably confined until the leg has healed. If the dog is still obviously in pain after this time, consult a veterinarian.

Bleeding

Some types of injury will result in bleeding. If this occurs, keep firm pressure over the wound. If an artery is severed, a pressure bandage should be applied to the wound to control the bleeding. Call the vet if bleeding is prolonged or difficult to control.

Wounds

You may need to call the vet, depending on how extensive the damage is. Sometimes there is a lot of damage under the skin which needs to be treated. Any bleeding should be brought under control before taking action to clean the wound. By using water and/or a diluted antiseptic solution, you should (gently) get rid of any dirt or foreign objects in the wound. This is required for the wound to be able to heal properly. Trimming the hair away from the wound is preferable.

If the wound is large, or in a difficult place, it may need the attention of a vet for stitching and/or cleaning. Treatment may need to be administered by the vet in the form of antibiotics and a booster for tetanus. Put a muzzle on the dog if there is any question of being bitten when cleaning the wound.

Puncture wounds are particularly dangerous in that they can encourage tetanus infection. Keep an eye on the site of the wound for the appearance of infection – inflamed skin, discharge. The vet will most likely

need to administer antibiotics and anti-tetanus protection, and may need to insert a drain to keep the wound clean.

Exhaustion

Usually caused by heat, exhaustion can be dangerous. Working dogs are at risk due to the fact that they may be active during most of the day, often in hot, dry conditions. Overworking of a farm dog in hot weather, without rest and without access to plenty of drinking water and shade, may easily lead to heat exhaustion.

Dogs can't easily cool themselves down. They are covered with a coat of fur, and do not have many sweat glands, unlike humans who sweat to cool down. A dog must pant to cool itself, since it cannot sweat except through the pads of its paws.

Signs of heat exhaustion include:

- excessive/heavy panting
- skin on inside of ears is flushed and red
- dog collapses
- gasping for air

If the dog shows these signs and starts to stagger about and is obviously weak, it may be affected by heat stroke. It should be put in a cool place, offered water to drink, and hosed down with cold water. If the dog is seriously affected, as well as hosing the dog, hold an ice pack to the dog's head to cool it down. The treatment should continue until the dog's body temperature has approached normal. Once the dog has become more stable, take it to the vet.

The normal internal temperature of a dog is between 100°F and 102°F (around 38.6°C). If the dog becomes affected by severe heat stroke, the results can include heart failure, brain damage or death.

Canker

Canker is a problem which occurs in a dog's ear. It is caused by irritation of the inner ear, usually due to the presence of ear mite insects. These small creatures move around inside the ear canal and cause intense irritation.

Once the ear mites have caused irritation, the dog's ear will produce wax. This wax provides a medium in which bacteria, yeasts and fungi will grow. Once this sets in, the ear has a serious infection present.

The main sign that points to canker is the discomfort of the dog. It will be obviously distressed, trying to shake its head and scratch its ear. The dog may rub its head on the ground to relieve the itching, or even walk with its head turned on an angle.

Upon inspection, the ear will most likely have a discharge – and an awful smell to accompany it. The colour of the discharge can vary, from a brown or yellow pus-like excretion, to blood stained matter. A dog with this condition needs to be treated immediately.

The vet should be consulted. In some cases, the vet may recommend a product which will dissolve the wax, reduce the infection, and kill the ear mites – usually in the form of ear drops or a cleaning solution. These drops are useful when fighting infection that is already present, but should not be used to prevent the condition. Damage may be done to the ear during treatment if a small object is pushed inside the ear, so cotton buds are not a suitable applicator. Great care should be taken as it is easy to accidentally push the wax (and infection) even further down into the ear canal during treatment.

The vet may wish to examine the dog to ensure that ear mites are indeed the cause of the infection. It is possible that there is a foreign object in the ear, so the vet may need to treat the dog themselves.

Once the infection has cleaned up, the ears should be checked weekly to ensure re-infection does not occur.

Constipation

Constipation is the term used when a dog is having problems defecating (going to the toilet). The dog may be having great trouble defecating, or may not be able to at all. The faeces are usually hard and dry when the dog is constipated, which increases the straining required.

There are many factors which can lead to a case of constipation. These include;

Diet Problems

- The dog may not be getting enough fibre in its diet. It may have ingested foreign matter such as bones or hair, which can form into a mass and can't be passed through the dog's system.

Environmental Problems

Some other factors influence the dog in relation to constipation, these include;

- lack of exercise
- ageing
- fractures of the pelvis
- lesions around the rectum
- prostate disease
- tumours
- metabolic or endocrine disorders
- debilitation
- dehydration

Once the cause of the constipation has been determined, action can be taken to help the dog. If it is a dietary problem, the dog can be put onto a special fibre-rich diet to help restore correct bowel function. The dog may need to have its water supply increased if lack of water is a contributing cause.

If the cause was an environmental factor, the vet will need to be consulted about a course of action. The dog may require medication or surgical treatment, depending on the problem.

Parvovirus

A highly contagious virus, this is correctly called Canine Parvovirus (CPV).

The virus travels through the dog's system where it comes to rest in the intestine. There, it attacks the intestinal wall and causes a great deal of inflammation. Dogs can be affected at any age, but it most commonly attacks those which are less than one year old. Puppies under 5 months old are those which are hit most severely by CPV, and which are the hardest to successfully treat.

The virus is contracted from infected items such as food bowls or faeces. The main source of infection however is the faeces of an infected dog. It contains a large number of viral particles, and these have a very long life in the environment. This means that CPV is very hard to control. The virus is also resistant to heat, alcohol and detergents, making it difficult to disinfect.

Dogs spread the disease by carrying it on their hair and feet, but people may contribute by carrying the disease on their shoes or clothes. The disease doesn't require dogs to come into contact for it to infect.

A dog which has contracted CPV will become sick around 7-10 days after it was infected. The most usual sign that the dog is ill with the virus will be vomiting. Diarrhoea often follows, and other symptoms include depression, fever, and a lack of appetite. It is hard to diagnose CPV as the symptoms could point to a range of problems, but the vet will do tests to determine the cause of the illness. The dog may not exhibit all of the symptoms, but vomiting occurs in the majority of cases.

Once the dog has been infected, there is no 'cure'. The dog needs to be put on an intravenous drip to replace the electrolytes and fluids lost during the vomiting and diarrhoea. The virus itself doesn't kill the dog, it is the effect that it has on the dog that can prove fatal. Dogs end up with severe dehydration, electrolyte imbalance, and septicemia – an infection in the bloodstream. This occurs because the lining of the intestine is damaged, allowing the intestinal bacteria to move out into the bloodstream.

Antibiotics and anti-inflammatories may be administered to the dog to try and control the septicemia, while anti-spasmodic drugs will help calm the vomiting and diarrhoea. CPV may be prevented by undertaking an approved vaccination programme. The vet will be able to advise on this. Once a dog has been diagnosed with CPV, all items relating to that dog (food bowls, etc) must be disinfected with a solution (250ml chlorine bleach to 4 litres water) that will kill the virus.

Distemper

This is a highly undesirable virus. Although around 25-75% of dogs will recover (if their immune system responded early), there are a lot of dogs which do not.

The signs of infection differ depending on the strain of virus present, the age of the dog, and the speed in which the immune system responds to the infection.

As explained above, those dogs whose immune system reacts quickly have the best possible chance of a full (or nearly full) recovery. Those dogs whose immune system reacts more slowly are more likely to develop an illness – a chronic infection, but not the potential of the full-blown illness.

A dog whose immune system doesn't react at all to the virus will suffer the full brunt of it. They will develop a serious systemic illness with acute encephalitis (brain inflammation) and may be dead as soon as 3 weeks after exposure to the virus.

There are two types of distemper which affects dogs;

- **Acute encephalitis** – young dogs
- **Chronic encephalitis** – older dogs

Being infected with the acute illness means that the systemic illness will rapidly affect the dog. They may suffer from coughing, nasal discharge, vomiting and diarrhoea. The dog may suffer from neurological problems either before or after this systemic illness, along with seizures.

Chronic encephalitis often has no obvious signs that the dog is infected. The symptoms may not appear, or may disappear without warning. The dog may have a problem with its gaits (walking, running), and it would possibly be uncoordinated. Seizures are uncommon but possible.

The vet may have problems diagnosing distemper in older dogs, and is likely to make the diagnosis from examination of the spinal fluid. In young dogs, the symptoms of the illness aid the vet in making the diagnosis.

The outlook is not positive for puppies struck down with distemper, but some adult dogs do survive. There is no actual medication to treat distemper directly, the vet will attempt to treat the symptoms and support the dog while it is ill.

Hepatitis

Chronic Hepatitis

This is a disease of the liver which affects dogs. There are a number of possible causes, which include viruses, specific drugs, and bacterial infection. An accumulation of copper in the liver has been suggested as a cause of hepatitis, as has the theory of the immune system mistaking the liver for a foreign presence and attacking it.

Hepatitis causes the cells of the liver to die. This doesn't happen all at once – it is a progressive disease that worsens over time. The functional cells of the liver become inflamed and gradually die, leading to conditions such as liver failure, cirrhosis and death.

The disease kills the cells of the liver, which are replaced by patches of fibrotic tissue. These patches do not allow the liver to replace the lost cells, and so over a period of time the fibrotic tissue starts to take over. When the patches join to form areas, this is called cirrhosis (scarring). After a while the liver can't function and liver disease develops.

A dog with hepatitis will show signs of depression, weakness, and a loss of appetite. It may be jaundiced, lose weight, and drink/urinate more often than usual.

A vet needs to diagnose hepatitis, and they will do this by evaluating the history of the dog, blood tests, x-rays, and will often perform a liver biopsy.

There are no sure-fire cures for hepatitis, rather the disease may be slowed and somewhat controlled by following a few guidelines. These include;

- treating inflammation with anti-inflammatories
- controlling secondary complications i.e. infections
- eliminating known or suspected causes
- suppressing those things (such as inflammation) that help with the progression of the disease

The prognosis for an affected dog depends on how severe their individual case is, how well they are responding to treatment, and how badly they are scarred (due to fibrosis). The vet will be able to advise.

Infectious Hepatitis

This virus can be picked up from the faeces of an infected dog. The symptoms are thirst, fever, vomiting, diarrhoea, eye and nasal discharges, red mucous membranes, and the dog will be listless. The liver will be affected by this form of hepatitis also, as well as other major organs. The best form of defence is a vaccination from the vet.

Mange

The following article is reproduced with permission from the Internet.

The Mystery of Mange

Norma Bennett Woolf

Introduction

Mange comes in three varieties: Demodectic, Cheyletiella and Sarcoptic. It is caused by different species of mites, tiny eight-legged critters related to spiders.

Demodectic Mange

Demodectic mange is caused by *Demodex canis*, a tiny mite that cannot be seen without the aid of a microscope. This mange strikes puppies from three to 12 months old.

The demodex mite is commonly present in the pores of puppy skin and usually does not cause symptoms, and it not at all certain what causes them to activate. The mites can produce a substance that lowers the dog's resistance to them and make use of an opportunity to multiply.

It's also possible that some lines of purebred dogs carry lowered resistance to the mites, and that stress can trigger an active infestation. In any case, demodectic mange symptoms include thinning of the hair around the eyes and mouth and on the front legs that evolves into patches of hair loss approximately one inch in diameter. This mange may correct itself within three months or may require treatment.

However, demodectic mange can also begin as a localized infestation and develop into a generalized case with multiple hair-loss sites on the dog's head, legs, and body. This is a far more serious condition and requires veterinary attention. The dog's skin is sore, crusty, and oozing; the hair follicles are clogged with mites and debris. Treatment is extended and requires bathing in medicated shampoo and application of an insecticide to kill the mites.

Cheyletiella Mange

Cheyletiella mange is also known as walking dandruff. It affects puppies and is caused by a large reddish mite that can be seen under a magnifying glass. This mange is identified by the dandruff dusting that occurs over the dog's head, neck, and back.

Walking dandruff is highly contagious but short-lived. It causes mild itching. The mite that causes the mange dies a short time after leaving the host.

Sarcoptic Mange

Sarcoptic mange, also known as scabies, is caused by a microscopic mite. The female mite causes the characteristic intense itching as they burrow under the skin to lay their eggs. The eggs hatch in a few days, develop into adults, and begin laying their own eggs in less than three weeks.

Dogs with scabies dig and bite at themselves with great ferocity. Their skin reacts with oozing sores, and secondary infection may set in, requiring treatment with an antibiotic in addition to treatment for the mites. Unfortunately, the sarcoptic mange mite can be difficult to find in skin scrapings, and unless the veterinarian parts the hair and carefully examines the bare skin for the characteristic pin-point bite marks, diagnosis is difficult. Furthermore, the presence of a secondary skin infection can hamper the search for the mite bite marks.

Telltale signs of sarcoptic mange are crusty ear tips, fierce itching, and hair loss, particularly on the ears, elbows, legs, and face in the early stages. Later on, the hair loss spreads throughout the body.

Sarcoptic mange is contagious to canines and humans. If the dogs share sleeping places or if the infected dog sleeps on beds or furniture, everyone will begin scratching. It is not unheard of for the family dog to infest the kids, the kids to infest their playmates, and the playmates to infest their pets and parents with scabies. Fortunately scabies in humans is self-limiting, that is the mite can burrow under the skin and cause itching, but cannot complete its life cycle on humans and dies within a few weeks.

Veterinarians now use Ivermectin in two doses, two weeks apart, to kill the mites. They may also prescribe steroids for short-term use to relieve the itching until the mites begin to die off and give the dog some relief. Itching usually begins to subside within a few days of the first dose of Ivermectin.

Canine skin damaged by sarcoptic mange and secondary skin infections can take weeks or months to recover, depending on the scope of the problems. Frequent medicated baths may be necessary to soothe irritated skin.

Mange damage can mimic that caused by other skin conditions, including autoimmune diseases, bacterial infections secondary to flea allergies, and contact dermatitis, making it impossible for the pet owner to diagnose with any success. If your dog suffers from irritated, itchy skin, make an appointment with the veterinarian. Early diagnosis of any of these problems will give you a head start on a cure and will be less uncomfortable for the dog and your wallet.

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Kennel cough

Kennel cough is a respiratory disease that causes a dry hacking cough, loss of appetite, and lethargy. It is caused by a combination of microbes – the parainfluenza virus is one of them but there is also a Bordetella bacterium involved. The disease is highly contagious, and it can spread rapidly through the dogs in a kennel complex.

A harsh dry cough is the characteristic sign of the illness. The cough may persist for many weeks and become a chronic problem due to secondary bacterial infection

Prevent by vaccination

All of these viral diseases are more common in cities and towns than in country areas. This means that unless they are vaccinated, farm dogs will be very susceptible to them, and at real risk of infection if they leave the farm and encounter other dogs, or if other dogs visit the farm. Even visiting people could carry the virus on their shoes or clothes. Most of these diseases don't require dogs to come into direct contact to spread.

Vaccination is very effective and routine vaccination of farm dogs against these viral diseases is very important. This is discussed in more detail below. If farm dogs and even pups are not vaccinated, they are at risk every time they leave the farm. This means that even school 'pet days' can become a real risk!

Disinfection

After an outbreak, all the housing and utensils relating to the infected dogs must be disinfected, with a disinfectant such as dilute bleach (250ml chlorine bleach to 4 litres water). Canine parvovirus is spread in the faeces of affected dogs, and can survive for long periods in the environment. The kennels and runs of infected dogs should be cleaned and thoroughly disinfected with a disinfectant such as Clorox (one part to thirty parts of water)

Leptospirosis

In some North Island areas and parts of Nelson farm dogs can get leptospirosis. This is caused by (*Leptospira interrogans*). It is a severe disease affecting the liver and kidneys, and causing high fever, jaundice, vomiting and sore muscles. Half of affected dogs die. Dogs catch the disease from rats, and can pass it to humans. There is a vaccine available to prevent the disease, and your veterinarian will advise if it is necessary to include this with the other puppy vaccinations.

Parasites

A parasite is a living thing that lives upon, or within, another living thing. Parasites can be either **internal** (e.g. hookworm) or **external** (e.g. fleas).

Internal parasites

Hookworm (*Uncinaria*)

A dog infested with hookworm will not look its best. It will not be getting the most from its feed due to the infestation. Anaemia is also a sign.

Hookworm eggs are found in the soil, where they are picked up by the dog. They burrow through the skin and live inside the dog until they are passed out of the body.

The dog should be wormed to prevent hookworm becoming a threat to the dog's health. It is thought that around half of New Zealand's farm dogs are infested to some degree with hookworm. Keeping the area around dog kennels free of a dirt surface will help to control the problem, seeing that the worms live in the soil.

Roundworm (*Toxocara canis*)

Roundworms are common in farm dogs. They mainly affect pups, and the pups contract the worms from the mother. The pups may show signs of infestation which are a pot-bellied appearance, and diarrhoea. The pups should be treated with a wormer while young, at 2, 4 and 6 weeks. The vet will be able to advise.

Whipworm (*Trichuris*)

Whipworm affects dogs by inflaming part of the gut (the caecum). The dog will lose weight which will only worsen as the worms multiply. The dog may suffer diarrhoea. Again, regular worming is a good preventative measure.

Hydatids

The following was reproduced and slightly abridged from Australian Academy of Science

'Hydatids – When a dog is not man's best friend', www.science.org.au

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What is hydatid disease and where does it occur?

Hydatid disease is a parasite infection of humans and animals. In New Zealand and Australia, hydatid disease is caused by a tiny tapeworm, *Echinococcus granulosus*. Hydatid disease occurs throughout most of the world.

The life-cycle of *E. granulosus*

E. granulosus has a peculiar life cycle that requires definitive hosts and intermediate hosts. Definitive hosts are carnivores such as dogs, while intermediate hosts are usually herbivores such as sheep, cattle, goats. Humans can also act as intermediate hosts – but since the life cycle relies on the carnivores (eg, dogs) eating infected herbivores (eg, sheep), humans are usually a 'dead-end' for the parasite.

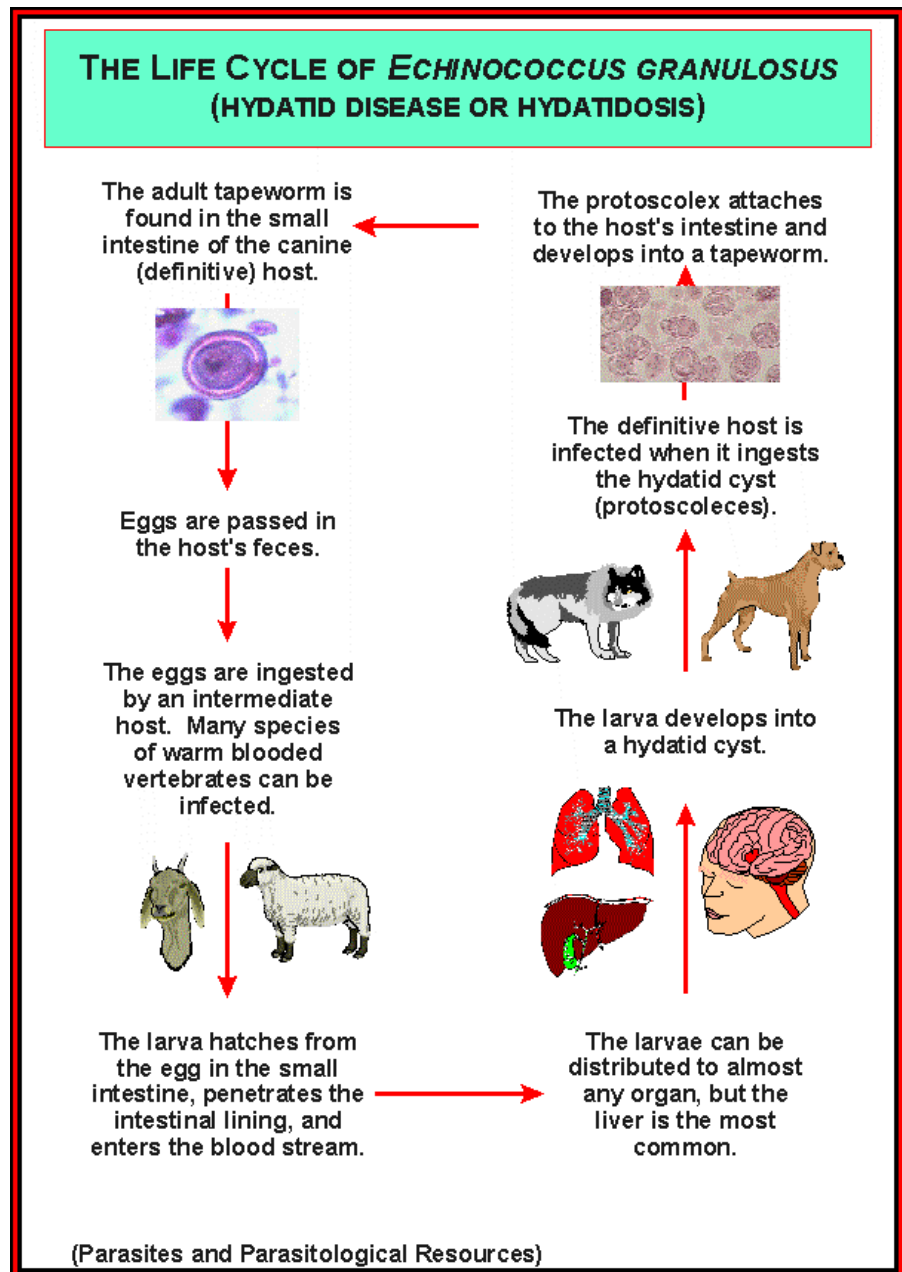
Intermediate hosts such as sheep become infected by ingesting the eggs of the parasite, which are passed into the outside world in the faeces of the definitive host such as a dog. Inside the sheep (or human), the eggs hatch and release tiny hooked embryos which travel in the bloodstream, eventually lodging in an organ such as the liver, lungs, bone marrow, kidneys or brain. There, they develop into hydatid cysts, which are the cause of medical problems in humans and are the most damaging manifestation of the disease. Disease symptoms arise as the cysts grow bigger and start blocking or putting pressure on blood vessels or organs. Inside the cysts are thousands of tapeworm larvae, the next stage in the life cycle of the parasite.

The cysts are small to begin with but grow steadily – in a year they will expand by 1-1.5 centimetres in diameter – and they may continue to grow during the life of the host. Cysts the size of golf and tennis balls are common, while cysts the size of soccer balls have been observed.

Sustaining the life-cycle

In New Zealand, hydatid disease has historically been sustained in a farm-dog to sheep cycle. When dogs are fed the offal of infected sheep, they become infected with *E. granulosus* and in turn produce eggs in their faeces, which infect new sheep with the disease.

A few basic changes in farm practices can help eradicate or at least greatly reduce the incidence of the disease. The first and most important of these is to prevent the farm dogs from eating the offal of dead livestock. The second step is to 'worm' dogs regularly, which usually involves feeding them a drug called praziquantel to kill the tapeworm. By employing such practices, hydatid disease has been virtually eliminated in New Zealand, where it was once very common.



The risk to human health

Hydatid disease causes significant problems to the health of wildlife and livestock and may have ecological and economic effects. But perhaps the biggest concern is for human health. It can be a killer. Direct contact with infected dogs is perhaps the most common way by which people become infected by the parasite. As explained earlier, *E. granulosus* eggs are passed into the environment in dog faeces. We all know that dogs have a habit of sniffing each other's rear ends, and licking their own. In this way, eggs can be transferred to the dog's muzzle, tongue and fur. The eggs can then be transferred to people when they pat the dog or are licked by it.

There are two other types of hydatids tapeworm found in New Zealand:

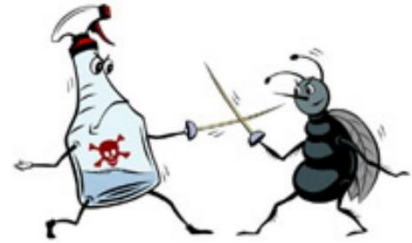
- Sheep Measles (*Taenia ovis*) – which moves between sheep and dogs. An outbreak will mean that meat is contaminated by a rash of white measles-like cysts.

- False Hydatids (*Taenia hydatigena*) – these also cause the development of cysts. The tapeworms work their way through the body and stop in the abdomen, where they develop into a cyst.

External Parasites

Fleas

Fleas are insects which lay eggs in the soil around the dog kennel, in the dog's bedding, basically anywhere that the dog goes. They then make their way onto the dog and cause it distress from the itching sensation they inflict. The dog can lose condition because of fleas, and can injure their skin from the itching. Another problem with fleas is the



potential infestation of the dog's owner – fleas are not fussy and will easily hop from the dog onto a person.

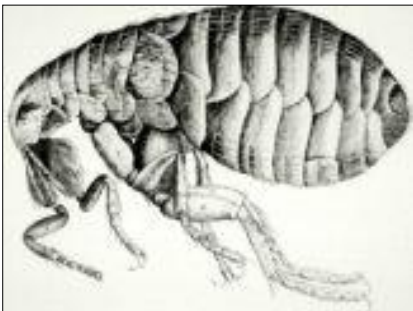


Figure 8 Flea

A flea collar is the best way to get rid of fleas, as well as cleaning around the kennel area with an insecticide. Treating only the dog will not be sufficient to control the problem, as more fleas will simply hatch.

Lice

Lice cause problems when the dog suffers from anaemia as a result of infestation. The dog may lose condition and won't perform at its full potential. To control lice, contact the vet who will issue a treatment to kill the lice.

Mange Mites

As explained earlier in this module, mange is the condition which arises when a dog is infested with mange mites. The dog's skin may be damaged through itching, and there is a possibility that the dog's handlers can become infected too. The vet should be contacted about a suitable treatment.

Ear Mites

These mites move around in the dog's ear and ear canal, and in many cases are the cause of canker (see explanation of *canker* earlier in this module). The mites must be killed, and the vet can advise on a suitable treatment.

Cattle Tick

Ticks are not common in New Zealand, in fact the cattle tick is the only one that is found. Since dogs are working with deer and cattle, on which the ticks can live, they can easily become infested. The tick will bury its head in the dog's skin, and will fill with blood. There will be no symptoms until there is a reasonable infestation of ticks. To remove a tick, apply an insecticide, or use the old remedy of applying kerosene. The vet may be consulted about a tick infestation, as once the dog is heavily infested it will begin to lose condition.



Figure 9 Cattle tick

Bitch problems after whelping

Retained foetal membranes

This is quite a common problem. Generally the membranes (placenta) are usually expelled at birth or soon after, but sometimes the membranes are retained, leading to serious infection. Then there is a dirty discharge from the bitch's vulva for several days after whelping. She may become listless and her milk will dry up as infection builds in her uterus. It is wise to weigh pups regularly so that you can tell if they are failing to gain weight. Then you know you have a problem such as retained foetal membranes. Your vet will put the bitch on antibiotics and may give her an injection to stimulate her uterus to expel the membranes.

Mastitis

Inflammation of the mammary glands occurs particularly with small litters, where the bitch has more milk than the puppies can drink. The udder becomes swollen, hot and painful, and she may push the pups away or snap at them. Your veterinarian will probably prescribe antibiotics and an anti-inflammatory drug.

Eclampsia

Also called hypocalcaemia, eclampsia is sometimes seen 2 to 4 weeks after whelping in the day of whelping with liquid Calcium Sandoz or another suitable calcium preparation. Note that giving the bitch calcium supplements before whelping can increase the risk of her developing eclampsia.

Agalactia

A small number of bitches fail to produce milk after whelping. It is vital to get veterinary help immediately. There are drugs available to help milk let-down, and the veterinary clinic may be able to supply canine milk replacer. In an emergency a milk substitute can be made by mixing 300ml cow's milk with an egg, a teaspoon of glucose and a few drops of cod liver oil. This is not a substitute for colostrum (the bitch's initial milk, which contains valuable antibodies), but it can help keep the pups alive.

Congenital or inherited conditions in pups

A number of problem conditions can occur in pups and some, unfortunately, require humane euthanasia of the affected pup(s). These may be obvious at birth, eg cleft palate (gap between the roof of the mouth and the nasal cavities) and hydrocephalus (a large domed head), or absence of an anus.

Some faults may take a while to become obvious:

- “swimmers” (“flattened’ pups that don't move well, with legs flailing in a swimming motion; may resolve with time)
- umbilical hernia (a gap in the muscle wall below the navel with fat or intestines spilling through under the skin; small holes may resolve, big holes won't and might require surgery)
- entropion (the eyelashes and hair on the lids rubs on the eyes, leading to inflammation, corneal ulcers and permanent discomfort; needs veterinary advice, can resolve if not severe).

- heart defects (holes in the walls or abnormalities of the blood vessels of the heart; usually mean euthanasia for farm dogs)
- cryptorchidism (one or both testicles are retained, apparent from 6 to 8 weeks; get veterinary advice, don't use for breeding)

Hip dysplasia

Hip dysplasia is not uncommon in New Zealand, particularly in huntaways. It is a condition in which the hip joints are shallow and this predisposes to arthritis. X-rays of young dogs can be used to assess their breeding potential. There is a New Zealand Veterinary Association Hip Dysplasia scheme, which assesses hips at some stage after 15 months. Your veterinarian will advise on diagnosis and selection for breeding.

Osteochondritis dissecans (OCD)

OCD is a condition usually in the shoulder and usually in heavy, fast-growing young dogs in the 6 to 10-month old range, and it can be hard to manage. The shiny joint cartilage on the head of the humerus (the upper bone in the front leg) is damaged, usually by over-exercising, and a crack develops on the cartilage surface. As the blood supply there is poor, it may not heal, and a piece of the cartilage may separate and slough off into the joint. The dog becomes intermittently then permanently lame in a foreleg.

Veterinarians usually use X-rays to help diagnose the problem.

Treatment for OCD can involve strict cage rest with cartilage-enhancing drugs such as Cartrophen, or in some cases major joint surgery to remove the cartilage piece. Either way, it is expensive.

Poisoning

There are many potential poisons in the farm dog's environment, and it's important to do what you can to minimise the risks, recognise the signs and take appropriate action.

The most common poisons are probably vermin poisons like rat poison and 1080, and antifreeze.

Anticoagulants

Most rodenticide poisonings are the result of careless placement of baits and carcass scavenging. With anticoagulant rat poisons like warfarin, there is internal bleeding, leading to anaemia, depression, difficult breathing, convulsions and death in severe cases. There is often bleeding through the nose. There is a latent period of two to five days before clinical effects are seen. Sometimes the dog is found dead as a result of internal bleeding.

1080

Dogs are very susceptible to poisoning by 1080, and poisoning has occurred months after poison was laid because dogs have scavenged mummified carcasses that contained 1080 in their stomach. The signs are an

initial period of restlessness, followed by panic and howling for up to 6 hours. It's a horrible way for a dog to die and there is no treatment for it.

The only hope for a dog that has eaten 1080 is to make it vomit within half an hour of eating the poison (see below).

To prevent 1080 poisoning, don't allow unmuzzled dogs onto land that has been poisoned in the last 5 months unless the dogs are muzzled. Large wire muzzles that allow the dog to pant are preferable to tight-fitting muzzles that can lead to heat stress because they don't allow the dog to pant.

Cyanide

Cyanide (eg Feratox capsules) is extremely poisonous and it is palatable to dogs if it is presented in bait such as peanut butter, flour or jam. Fortunately it doesn't usually persist in the environment for long. Dogs poisoned by cyanide die very quickly, ie in a matter of minutes.

Antifreeze

Ethylene glycol is found in antifreeze. It is odourless, colourless, and dogs will lick it from puddles under vehicles because it is sweet tasting. It causes kidney damage, and death may occur weeks after the poison was drunk.

What to do

If you suspect your dog has been poisoned, try to make it vomit by pushing a crystal of washing soda down its throat, or dose it with a super-saturated solution of common table salt. (Don't do this if the suspect poison is corrosive, eg kerosene.) A brave owner might stick his or her fingers down its throat to make it vomit! Then take the dog to a veterinarian as soon as possible. If you can, take with you the poison container, or a sample of the suspected source of poisoning and/or vomit in a clean plastic container or jar.!

Neosporosis

It is worth noting the possibility of an association between dogs and cattle abortion. Neosporosis is the most common cause of abortions in cattle in New Zealand. Not a lot is known about it but it is thought that dogs may carry the tiny parasite that causes it and that it cycles through dogs, and so they help spread it to cows. Cow to cow spread is more likely but because dogs may have a role to play, it's best not to let dogs defaecate on dairy cow pasture and it is definitely not wise to allow dogs to eat cow placentae if it's at all possible to avoid it. It may be worth muzzling to prevent this.

Euthanasia

Euthanasia by a veterinarian is possibly the most stress-free method, although a rifle shot to the head is generally very quick and humane, it is not a job you will want to do if your dog has been a good friend and worker on the farm.

Pups must not be killed by drowning. They have a diving reflex that prolongs the time they can survive without breathing underwater and therefore the period of distress before drowning.

Euthanasia is best carried out by lethal injection by a veterinarian, or it could be by crushing the skull.

Another method uses car exhaust fumes. A hose from the car exhaust to an enclosed box containing the pups can be humane if the exhaust gases are cool by the time they reach the pups (ie delivered through a long pipe or bubbled through water).

Disease prevention

Vaccination

Parvovirus disease is a potential killer of farm dogs, especially pups. If the bitch has been vaccinated, she will pass on protective antibodies to her pups. But at around 6 weeks, the antibodies run out and the pups are then unprotected and highly vulnerable.

Distemper and viral hepatitis are also potential killers and they still pose a risk to farm dogs.

Vaccination is an effective way to protect dogs against all these diseases. Pups should be vaccinated at 6 weeks and a booster at 10-12 weeks is essential. Sometimes a second booster at 14-16 weeks is necessary depending on the manufacturer's recommendation and your veterinarian's regime.

Kennel cough can be a problem too, and this is a complex disease produced in the presence of both a parainfluenza virus and a bacterium called Bordetella. Most of the current parvo/distemper/hepatitis vaccines also include a parainfluenza component, but the Bordetella vaccine requires a second injection, or it can be administered in an intra-nasal form, requiring only one dose. Your veterinarian will advise what is best.

In summary, a suggested regime is:

- 6 wks Distemper / Hepatitis / Parvo
- 10-12 wks Distemper / Hepatitis / Parvo and Parainfluenza + Kennel Cough (Bordetella)
- 14-16 wks Distemper / Hepatitis / Parvo and Parainfluenza + Kennel Cough (Bordetella)

After the initial puppy vaccinations, your adult dogs should be boosted annually, or at least every 2 years.

Worming

All pups are born with roundworms. The parasite *Toxocara canis* is passed via the placental bloodstream from mother to pups. In the bitch, inhibited or dormant larval stages of *Toxocara* lie in the muscles and other tissues. During pregnancy, unknown factors, probably regulated by hormone changes, cause these larvae to become active and enter the bitch's bloodstream, from where they pass to the pups.

Worm the bitch before mating, then once or twice during pregnancy and worm the pups every 2 to 3 weeks while nursing puppies, paying particular attention to hygiene.

From 3 to 6 months of age the pups should be treated monthly then 3-monthly.

It is important to have an effective worming programme for all other farm dogs too, otherwise they will become infected and their performance and general health will suffer.

Your veterinarian will advise on the best worming programme for your particular circumstances. He or she may advise using a wormer that gets rid of tapeworms as well as roundworms, and it is wise to include a wormer of this type from time to time.

In general then, you should treat your dogs every 3 months if they are adults and more often if they are breeding bitches or if they are less than 3 months old.

Treatment comes in the form of tablets, powders and pastes. Like all medication it is essential that the correct dose be given for the animal's weight, and you need to be sure that the animal actually swallowed the prescribed amount of worm treatment.

Help prevent worms by keeping the kennel and run areas free of faeces. Worm eggs spread in faeces, even tiny amounts of it, and good hygiene is the best preventive of all.

Pups and travel

Newly weaned pups traveling long distances (by rail, air or road) are extremely vulnerable to parvovirus disease. The stress of weaning on top of the stress of travel leaves their immune system wide open to infection. Pups going on long journeys should have been weaned and vaccinated at least 2 weeks earlier.

Test Yourself Answers

1. *Is a heading dog*
2. *Is a huntaway*
3. *Is a heading dog*

Recommended Reading

The following books are recommended to help your understanding of the New Zealand working farm dog.

- *I Am A Working Dog*. Michael Oliver and Tony Sheild. Longacre Press, Dunedin. 2004
- *Working Dogs - Breeding, Feeding, Training and Care*. Neil Rennie. Beckett Publishing, 1989
- *A Guide to Training Sheep Dogs in New Zealand*. L.J. Knight. Gainsborough Printing Co, 1984
- *Farm Dogs*. Clive Dalton. The Farmer NZ Rural Press. (09 520 9450)
- *Code of Recommendations and Minimum Standards for the Welfare of Dogs*. Code of Animal Welfare No 20. Ministry of Agriculture, 1998.
- *The Australian Kelpie*. Tony Parsons. Penguin Books Australia, 1992

Useful websites

- Breeds of Working/Herding Stockdogs, Esther Ekman <http://agrihelp.com>
- How a Border Collie Works www.gis.net
- Government NZ website www.legislation.govt.nz
- Heat Exhaustion, Leanne Gossett www.barkbytes.com
- Ear Problems in Dogs Dr Cam Day, www.petalia.com.au
- Parvovirus Infection www.animalclinic.com
- *Distemper*. WB Thomas DVM www.canine-epilepsy-guardian-angel.com
- Chronic Active Hepatitis www.pethealthcentre.org
- New Zealand Veterinary Association www.vets.org.nz/CareerPet/PetCare/dogcare.htm

References

- Breeds of Working/Herding Stockdogs, Esther Ekman, <http://agrihelp.com>
- How a Border Collie Works, www.gis.net
- The Australian Kelpie, Tony Parsons, Penguin Books Australia, 1992
- Government NZ website, www.legislation.govt.nz
- Heat Exhaustion, Leanne Gossett, www.barkbytes.com
- Dog Control Act 1996
- Dog Control Amendment Act 2003
- Ear Problems in Dogs, Dr Cam Day, www.petalia.com.au
- Parvovirus Infection, www.animalclinic.com
- Distemper, WB Thomas DVM, www.canine-epilepsy-guardian-angel.com
- Chronic Active Hepatitis, www.pethealthcentre.org
- Dog Parasites, www.planet-pets.com
- The Differences between the Border Collie and the NZ Heading Dog, Amanda Self, www.nzheadingdog.com
- A Guide to Training Sheep Dogs in New Zealand, LJ Knight, Gainsborough Printing Co. 1984
- Working Dogs, Breeding, Feeding, Training and Care, Neil Rennie, Be

