

# **Livestock Guarding Dog Program**

## **A Farmers Manual**

*The Introduction, Training and Care*



# **Acknowledgements**

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# Livestock Guarding Dog Handbook

## *Introduction*

The objective of this booklet is to help farmers to use livestock guarding dogs (LSGDs) to protect their livestock from predators. This guide provides information on how to introduce guarding dogs, how to train them, care for them and how to monitor and curb health and behavioural problems that farmers may encounter with their livestock guarding dogs.

Human Wildlife Conflict (HWC) is an ongoing problem that affects communities and threatened wildlife species the world over. This conflict is particularly damaging for low-income farmers who can suffer economically from the loss of crops and livestock to wildlife. In turn, wildlife populations can be significantly threatened due to extensive conflict and may be pushed to the brink of extinction.

Both human and wildlife populations have increased in northern Botswana recently and as a result, so has the conflict between them. The conflict is spreading as population pressure leads to land transformation. Remote area communities (mostly subsistence farmers) are seeking more land for livestock grazing, crop planting and settlements. In addition, through Botswana's efforts and high level of commitment to conservation, wildlife populations particularly elephants, have made a remarkable recovery over the last two decades. The transformation of critical wildlife habitat and the rise of wildlife populations have led to a growing number of conflicts between local people and wild animals, which threatens the livelihood of locals, as well as wildlife populations.

## *The Project*

This booklet has been created to support the "Northern Botswana Human Wildlife Coexistence Project". This 5-year project is supported by the Global Environment Facility (GEF) in partnership with the Government of Botswana. The World Bank will assist the Department of Wildlife and National Parks (DWNP) with management and supervision of the project's implementation.

The project beneficiaries of this assignment include 13 villages in three districts of:

1. Seronga, Gunitsoga, Beetsa, Eretsha, Gudigwa in Okavango.
2. Mabele, Kavimba, Kachikau, Satau, Parakarungu, Lesoma in Chobe.
3. Khumaga, Moreomaoto in Boteti.

The objectives of this project are to reduce human-wildlife conflict in selected rural communities in northern Botswana's three project areas.

The direct objectives are:

1. To mitigate human-wildlife conflict through proactive prevention interventions such as kraals and livestock guarding dogs, chilli pepper fencing, beehive fencing and use of early maturing seeds.
2. To offer local people in the project areas employment choices in wildlife-based tourism in order to benefit directly from the presence of wildlife.

### ***The Use of Livestock Guarding Dogs***

Though not a cure-all for predator problems, guarding dogs are a good first line of defense in many types of farm operations, as a supplement to other methods of non-lethal predator control. The proper introduction of a puppy into a goat or sheep farm is critical to its success. This takes time and patience, but the results can be worth waiting for.

Before investing in a puppy, livestock producers should consider the following information and investigate the concept fully.

- Do you have problems with predators killing or threatening your livestock or do you anticipate having these problems in future?
- Do you have the time needed to train and monitor a dog that is working with your herd? Spending the necessary time training your LSGD is imperative as it is possible for guard dogs to injure or kill livestock in a flock if not properly trained.
- Do you have other working dogs on the farm that may interfere with a livestock guarding dog?

Do you have the resources to care for the dog over a possible lifespan of 10 years? Livestock guarding dogs will not work well if they are mal-nourished, sick or injured. Proper food and veterinary care are needed on a regular basis in order to maintain an effective livestock guardian.

A livestock guarding dog is one that stays with livestock without harming them and aggressively deters predators from livestock. The dog does this because it has been taught to remain with livestock as it has been reared with them since infancy. Its protective behaviours are largely natural, and there is relatively little formal training required other than timely correction of undesirable behaviours (e.g., chewing on ears, over playfulness, and excessive wandering). The livestock guarding dog is not a herding dog but rather a full-time member of the flock. Success of the dog is a result of dedication, interest and hard work from the farmer, the herder and the dog.



**An effective livestock guarding dog stays with its herd at all times.**

### ***How do Livestock Guarding Dogs Defend Livestock?***

They do this by patrolling, barking, chasing, making noise thus alerting the farmer if there are predators nearby. With experience, the dog will learn when disturbances from predators are likely to occur (evening and early morning hours) and will be actively patrolling or on alert at a selected location. If well trained and the bonding has taken place effectively, some livestock may learn to return to the dog when they are threatened by a predator. A livestock guarding dog uses its senses and experience to know when and where to patrol and how best to keep predators away from the livestock. The dog should be free to develop its guarding behaviours within the restrictions dictated by each particular livestock operation.

### ***Characteristics of an Effective Dog***

Livestock guard dogs protect a herd by patrolling, barking, scent-marking and will even pursue a predator that might be close by. An ideal guard dog is intelligent, alert, and confident and it must act independently and react instinctively while protecting livestock. It will investigate and aggressively confront intruders, but above all, it must be attentive to livestock and not harm them. An investigative and aggressive dog is of little benefit if it will not stay near livestock. The dog should be healthy and large enough to keep up with the livestock. Dogs of both sexes can effectively guard livestock as long as they are sterilised to keep them from leaving the livestock in search of other dogs in heat.



**Healthy dog**



**Unhealthy dog**

### ***How Many Livestock Guarding Dogs?***

The ideal number of livestock guarding dogs for a farm really depends on the size of the herd that needs to be guarded. Generally speaking, if your herd is over 50 and especially if your herd is splitting up in the veldt, two dogs may be more effective than one. Keep in mind that it may be problematic to raise more than one livestock guarding dog puppy at once as this can sometimes hamper bonding between the dog and livestock and can lead to extra behavioural problems like leaving the livestock to chase wildlife. Conversely, training a puppy together with a properly trained adult livestock guarding dog is a good way to teach a new puppy how to behave.

### ***Human Contact***

There is an appropriate level of human contact that a guarding dog should be exposed to, but it varies depending on the character of the dog. The dog needs to be fed and checked each day. Praise should be given to the dog when it is with the livestock and can be given to the livestock guarding dog verbally or physically in the form of checking the dog for ticks. As the dog matures, less human contact may be required. Too little human contact can cause a dog to be shy or fearful of people and such dogs are difficult to handle for physical examinations and are hard to control. Dogs like this cannot be moved readily to other pastures and cannot be kennelled. Some dogs with this type of temperament are effective guardians and may fit into some livestock operations, however, it is almost essential to be able to handle and work with the guarding dog directly.

It is very important however that the livestock guarding dog never be treated like a pet or handled too much. Too much human contact can threaten to degrade the dog's bond with the livestock and it may result in the dog leaving its herd to search for human interaction. Livestock guarding dogs should never be fed at the homestead or allowed to sleep at the house, but rather should be fed and should sleep in the kraal with the livestock.

## ***How to Use a Livestock Guarding Dog***

### ***Choosing a Puppy***

A suitable dog may be a specific guard dog breed, but mixed or local crossbreeds can be just as successful. If properly trained and bonded to the livestock, any puppy raised amongst the livestock herd will probably develop into a good guard dog.

#### ***Remember to:***

- Choose a puppy from a family line that exhibits good physical and behavioural traits and check the health of the parent dogs.
- Avoid over shy or aggressive puppies and consider sterilising them to prevent future problems during the heat cycles (sterilisation of males or females significantly improves their guarding capability).
- Do not choose breeds that are too small to keep up with livestock (i.e. Chihuahuas) or too heavy to handle long days walking in the veldt on rough terrain (i.e. St Bernards).

### ***The Bonding Period***

Patience and discipline are needed to get a livestock guarding dog to bond with a herd of livestock and to accept responsibility for guarding it.

#### ***It is important to remember that:***

- A puppy must be raised with the type of livestock it will be guarding, both goats AND sheep, if it is to be expected to protect both types of livestock.
- From the age of 4 weeks, the dog will begin to imprint on their surroundings, so the critical time to introduce and begin to raise a puppy properly with the herd is between 5 and 8 weeks. In order to strengthen the bond between livestock, the puppy will need to remain in the kraal for at least a few weeks before going out with the livestock into the veldt. The puppy needs to be with the livestock all of the time, so it is necessary to leave one or two head of livestock in the kraal with the dog during this time.



- The LSGD puppy should be placed with young livestock to avoid injury from older or aggressive animals, with direct contact with older animals being introduced gradually and under supervision.

- The puppy will need a shelter, so it can have a safe place to shelter away from the livestock.

- A new puppy should be introduced to its boundaries on a lead several times in the first few weeks of its time on the farm, as well as being introduced to all “friendly” animals and people on the premises This includes farm workers, family members, pet dogs, other livestock and if possible, exposure to wild game. Aggressive behaviour towards these friendly animals and people should be disciplined, overly friendly behaviour ignored and tolerant behaviour rewarded with praise. These introductions are important so that the dog knows who and what a threat is and who is not. Introductions to wild game species are important to try to avoid aggressive behaviour towards wildlife, which can result in a livestock guarding dog killing wild animals.



**Bonding period is very important for puppies.**

- A livestock guarding dog should be fed daily, twice in a day inside the kraal and should grow to be stocky and weigh between 20-60kg. If the dog is not fed properly or in bad health it cannot do its job well and won't be able to protect your livestock.

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- The time needed for the livestock to accept the new dog will vary. It can take several days to a few weeks for a herd to accept a new puppy. Similarly, the dog/puppy may take a while to bond with the livestock, however with time and by monitoring and disciplining bad behaviours, the bonding process should be successful.

### ***Curbing Bad Behaviours***

A certain amount of licking, pawing, chasing and nipping of livestock can be expected with some puppies. You will need to closely supervise new puppies to stop them forming bad habits. General playfulness will decrease with age. New puppies need to be monitored to make sure they develop correct guarding behaviour and bad behaviours should never be tolerated but rather disciplined immediately.



**Playful behaviour is common in puppies with kidlings.**

***It is important to make sure that:***

- The puppy must not play with or chase the livestock, so behaviour including biting the livestock, rough handling and over-aggression should be corrected with stern discipline (and alternatively, they should be praised when they are behaving well).
- A run-wire can be used to limit the movements of a playful puppy while allowing livestock to keep away.
- Failure to stay with the livestock needs to be corrected by immediately returning the dog to the livestock.
- If you are having problems with the puppy leaving the kraal with herd (for example, at night to come to the house, to chase livestock or to roam), chaining the dog in the kraal at night and releasing it during the day may achieve good results.



**Run wires**



Keep in mind that larger breeds mature more slowly and puppy behaviour can last up to 36 months of age in some dogs. Patience and discipline are required with all puppies and monitoring your livestock guarding dog for behavioural problems should continue throughout its life to avoid undesirable behaviours. Attentiveness to livestock should increase with time. In a small percentage of dogs, regardless of training, a strong bond with livestock does not develop and these dogs will need to be re-homed and a replacement livestock guarding dog found.

### ***Taking Care of a Livestock Guarding Dog***

Livestock guarding dogs are valuable animals, so they must be cared for properly and protected against accidents. Livestock guarding dogs can be vulnerable to illness, injury or death from other animals (including snakes), moving vehicles, being shot or trapped or being poisoned. Shooting, trapping and poisoning often occurs when neighbouring farmers are unaware that you have a working dog and think that your livestock guarding dog is a feral dog. To avoid this, make sure that all your neighbours are aware that you have a livestock guarding dog and try to dissuade neighbours from using poison baits that may affect your dog. Dogs can become ill, the same as any livestock, so be aware of loss of appetite, diarrhoea or changes in behaviour. If your livestock guarding dog is sick or injured it cannot protect your stock. As such, it is worth following a strict health plan to secure the health of your livestock guarding dog. Feeding the dog a balanced diet is also necessary for it to perform well as a guardian. A diet of mealie meal alone is not enough to ensure that your dog is healthy and has enough energy to follow your livestock every day. Try to give your dog a mixture of dog food pellets, meat, and mealie meal. Leftovers, bran and milk may also be given as supplementary food.



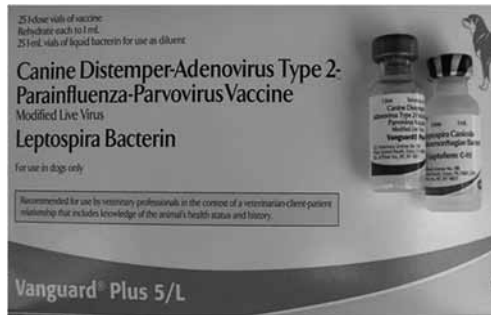
**Dog feeding is important from an early age.**

## Preventative Medical Care of Livestock Guarding Dogs

### Vaccinations

The following vaccinations and schedules are very important to maintain the health of your livestock guarding dog.

Treatment	Age	Estimated Cost
DHPPi (First Puppy)	6 weeks	P160.00 per dog
DHPPi (5 in 1 + Lepto)	9 weeks	P160.00 per dog
DHPPi (5 in 1 + Lepto)	12 weeks	P160.00 per dog
DHPPi (5 in 1 + Lepto)	Annually	P160.00 per dog
Rabies	12 - 14 weeks	P160.00 per dog
Rabies	Annually	P160.00 per dog



Examples of medicines and vaccines.

### Worms

The general guide is deworming is that it should be done every two weeks from the age of two weeks until the puppy is three months old. After the dog has turned 3 months old, it needs to be dewormed every 2 to 3 months until it's 12 months old. Once it is more than a year old it needs to be dewormed every 6 months for the rest of its life. If particular problems with worms occur, a dog can be dewormed every 3 months or as

needed until the problem is cured. Rotating the brand of dewormer you use can minimize the chance of resistance by the parasites in your area. It is recommended that tablet forms of dewormers should be used on adult livestock guarding dogs as opposed to syrups/liquids. Tablet forms of dewormers are the best as they are effective against both round worms and flat worms. Consult your veterinarian or the Department of Veterinary Services (DVS) for more information.

<b>Dewormer</b>	<b>Age</b>	<b>Cost Per Dog</b>
Panacur Liquid (1ml/1kg)	6 weeks	P5.00
Antezole Tablet (1ml/10kg)	12 weeks	P5.00
Antezole Tablet (1tablet/10kg)	6 months	P15.00 - P22.50
Antezole Tablet (1tablet/10kg)	9 months	P30.00
Antezole Tablet (1tablet/10kg)	12 months	P30.00
Antezole Tablet (1tablet/10kg)	18 months	P30.00
Antezole Tablet (1tablet/10kg)	24 months	P30.00
Antezole Tablet (1tablet/10kg)	Every 6 months	P30.00

## Ticks

The treatment for ticks varies seasonally as the prevalence of ticks is much higher in the rainy season. Tick treatments should be conducted as needed, however as a guide it should be done at least every month in rainy seasons, and every other month in dry seasons. There are many different types of tick treatments such as neck collars, dips, powders, back pour-ons and injections.



**Applying frontline regularly on dogs reduces external parasites.**



**Tick medicine that can be used on dogs.**

Product	Month	Cost per Dog
Revolution/ Frontline Ectodex Dip	November - May (monthly treatments)	P77.00 per month. P37.00 done every second month.
Revolution/ Frontline Ectodex Dip	June - October (treatments every second month)	P77.00 every second month. P37.00 every second month.

## Sterilisation Surgery

Livestock guarding dogs should not mix with any other dogs so sterilisation is important. The reasons are to prevent attracting other village/farm dogs which cause unwanted pregnancies and can spread disease.

Surgery	Age
Spay (females)	P550.00
Castration (males)	P330.00

## General Health

If your dog seems to be unhealthy in any way, a yearly health check with the veterinarian will be very beneficial. Consultations fees vary dramatically but can range from P100.00 - P200.00. If any particular problems are identified during the visit, additional costs may arise for additional treatments.

Dog food prices also differ dramatically and CCB recommends using any brand of dog pellets, e.g an 8kg bag of Bobtail brand dog food can be purchased for P80.00 which should feed an adult dog for at least 2 weeks (without additional supplement food like mealie meal or leftovers). Most local people feed their dogs with mealie meal, samp, sorghum, meat, milk and leftovers. This is fine as long as foods are well cooked and varied to provide a balanced diet. Avoid feeding chicken/ bird or fish bones because they can lodge in the digestive system and cause problems. With vegetables, avoid onions as they are known to cause a certain type of anaemia in dogs (known as Heinz body Anaemia). In particular, puppies need to be fed well to grow healthy and including milk in their diet is ideal at a young age. Nutritional supplements can also be given to a dog to improve its condition. Veterinary Clinics will sell effective products, some of which are sold at affordable prices.

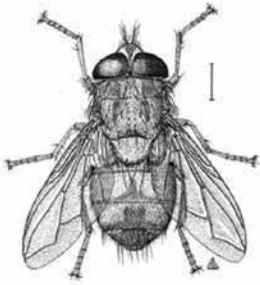


**Examples of food pellets that can be offered to dogs.**

Product	Quality	Source	Total Cost per dog per Year
Vets Choice/ Supervet	6 bags per dog per year	Any veterinary clinic	P3000.00
Cani-Vit (Nutritional Supplement)	6 bags per dog per year	Any veterinary clinic	P390.00

## ***Putzi Fly***

These flies can cause a problem to the health of dogs, particularly in the rainy season. The female fly lays eggs in the soil. Once larvae come out they look for a mammal host (dogs included), burrow into the skin and nestle in the skin area that has been in contact with the soil. As the worm grows the boil becomes increasingly itchy and painful. When the larvae are developed fully they burrow out of the skin into the next phase of the life cycle. Treatment is remarkably simple. Apply petroleum jelly (Vaseline), wait for the larvae to suffocate. Await 30 minutes to an hour and push out through gentle finger pressure. If left untreated they may cause inflammation, severe pain and rupturing. A course of antibiotics is generally advised to combat the skin infection that goes with the larvae infestation.



**Putzi fly**



**Putzi larva fly wound.**

Having a livestock guarding dog can reduce predation on livestock and increasing your farm's productivity and your income. The dog will also act as a deterrent against human thieves as well as alert you of any problems with the herd. Livestock guarding dogs have been known to assist in other ways such as staying overnight with mothers who are giving birth in the veldt and bringing them back to the herd safely in the morning. When working effectively, a livestock guarding dog is a very useful tool for livestock farmers, however, they do require time and effort to train them and in some cases predation may still occur while the guarding dog is at work. Dogs may be viewed as a first line of defense against predators in many operations. The use of a livestock guarding dog does not eliminate the need for other control methods and livestock dogs will work best when used in combination with other livestock management methods such as kraaling, breeding seasons and proper record keeping.



### **Contact Information**

Department of Wildlife and National Parks (DWNP)

Department of Veterinary Services (DVS)

Department of Animal Health and Production (DAHP)

<b>Office</b>	<b>Location</b>	<b>Postal Office</b>	<b>Telephone</b>
DWNP	Boteti	Rakops	297 5124
DVS/ DAHP	Boteti	Box 40, Rakops	297 5121

<b>Office</b>	<b>Location</b>	<b>Postal Address</b>	<b>Telephone</b>
DWNP	Okavango	Box 101, Gumare	687 4026
DWNP	Okavango	Seronga	687 6803
DWNP	Maun	Box 11, Maun	686 0368
DVS	Okavango	Box 66, Gumare	687 4938
DVS	Maun	Box 6, Maun	686 0236
DAHP	Okavango	Box 66, Gumare	687 4036

<b>Office</b>	<b>Location</b>	<b>Postal Address</b>	<b>Telephone</b>
DWNP	Chobe	Box 17, Kasane	625 0486
DVS	Chobe	Box 7, Kasane	625 0244/0407





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