



## RHINO RESCUE PROJECT

### HORN TREATMENT PROGRAMME QUESTIONS & ANSWERS

#### **What does the treatment entail?**

The horn is treated with a special compound of depot ectoparasiticides (specifically, acaricides, pyrethroids and organophosphates) and an indelible dye. A full DNA sample is taken, three identification microchips are inserted, along with a GPS and radio tracking Device.

#### **How was the treatment developed?**

Following the poaching on their reserve, Rhino Rescue Project started researching a number of possible solutions to prevent having another rhino poached and in the process, heard about a group of wildlife vets researching the treatment and management of ectoparasites in rhino through the use of depot ectoparasiticides. Much research went into all products readily available on the market for treating livestock, to ensure that firstly, they would have not have a negative effect on the rhino or its horn, and secondly that they would have no impact on other fauna and flora sharing the same ecosystem.

#### **What are depot ectoparasiticides, acaricides, pyrethroids and organophosphates?**

Registered depot ectoparasiticides are used to to treat ectoparasitic infestations.

Wikipedia definitions:

- An ectoparasiticide is an antiparasitic drug used in the treatment of ectoparasitic infestations
- An ectoparasitic infestation is a parasitic disease caused by organisms that live primarily on the surface of the host.
- Acaricides are pesticides that kill members of the Acari group, which includes ticks and mites
- A pyrethroid is an organic compound similar to the natural pyrethrins produced by the flowers of pyrethrums (*Chrysanthemum cinerariaefolium* and *C. coccineum*). Pyrethroids now constitute a major commercial household insecticides
- In health, agriculture, and government, the word "organophosphates" refers to a group of insecticides or nerve agents acting on the enzyme acetylcholinesterase. Organophosphate pesticides irreversibly inactivate acetylcholinesterase, which is essential to nerve function in insects, humans, and many other animals.

**Are any of the products highly specialised and or illegal?**

No. They are all freely available over-the-counter products.

**Are the products used exactly as directed?**

The products are registered to treat ectoparasites in cattle, horses and sheep, so the only extra-label use is that it is being used on rhino instead.

**What is Extra-Label use?**

The South African Medical Journal says “The term 'off-label' means that the medicine is used in another way or for an indication other than those specified in the conditions of registration of the medicine and as reflected in its labelling. It does, however, not necessarily imply that the medication is not effective or is unsafe to be used in this way. Off-label use has become an important part of mainstream, legitimate medical practice worldwide and is especially common in oncology, obstetrics, paediatrics, infectious diseases (notably HIV) and rare diseases. Depending on the circumstances, off-label use of medication can vary from being experimental or controversial to standard practice and even state-of-the-art treatment.”

Wikipedia makes the statement that “The veterinarian has a much smaller pharmacopeia available than does the human practitioner. Therefore, drugs are more likely to be used off-label”

**Are the products poisonous?**

The selections of depot ectoparasiticides for inclusion in the treatment compound are registered for use in animals and only Ox-pecker friendly and Vulture safe products have been used. Ectoparasiticides are not intended for consumption by humans, and are registered as such. Although not lethal in small quantities, they are extremely toxic, and symptoms of accidental ingestion may include, but are not limited to, severe nausea, vomiting, convulsions and/or nervous symptoms.

**What if an animal is injured by a treated horn (ie. in a fight between two rhino)?**

There will be no side-effects. It is the same as a cow with a lesion on its leg being dipped.

**Are you trying to kill people?**

No. The compounds are extremely toxic, but non-lethal in small quantities. Research into quantities of rhino horn used for medicinal purposes has indicated that no more than a pinch of ground horn is generally used.

**What is the reason for treating the horn?**

Aside from the health benefits to the rhino's, it is the hope of the Rhino Rescue Project that the treatment of the horn will deter the poacher and prevent the rhino being killed in the first place. We are hoping that no treated horn enters the market and no-one gets sick, as that will mean that programme is successful and the rhino horns are being left on the rhino.

**What steps have been taken to prevent treated horn being accidentally ingested?**

The fact that the rhino's in the reserve are treated is widely publicised all around the reserve and, should a treated rhino be killed, the indelible dye is clearly visible inside the horn.

**What is the purpose of the dye and how does it work?**

The dye is bright pink and clearly seen inside a treated horn which means that there can be no doubt about whether a horn is treated or not. It is similar to products used in the banking industry and has the added benefit that it is visible on an x-ray scanner. Thus a treated horn, even when ground to a fine powder, cannot be passed through security checkpoints unnoticed and so airport security checkpoints are almost certain to pick up the presence of the dye. Furthermore, sniffer dogs have been trained at a professional training facility to track rhino horn, even in minuscule quantities.

**Is the dye animal- and eco-friendly?**

It is 100% organic and biodegradable.

**Is the treatment injected?**

No, it is not possible to inject into a rhino horn. Rather it is infused into the horn using a high-pressure device patented by the vet overseeing the programme.

**What is the reason for the DNA sample and Microchips?**

To further assist in the ongoing war against poaching, scientists at Onderstepoort have made available a full DNA sampling kit, called RHODIS. Information from the sample is added to the national database of rhino, with the aim of aiding the legal community in securing prosecutions in cases where poached horns are recovered by being able to trace exactly which animal the horn belonged to. The microchips also serve as a means of identification.

**What is the purpose of the GPS and radio tracking device?**

The tracking device allows the real-time tracking and location of the rhino horn (whether it is on the rhino or has already been removed) using satellites and sophisticated cellular technology.

**When can a rhino be treated?**

Rhinos can be treated at any age as long as they have a horn. Compound quantities are adjusted for all cases.

**What are the costs involved?**

The treatment is fairly inexpensive compared to other alternatives and has a minimal impact on the environment, and no impact on tourism. The cost includes the professional time (ie. application of the treatment by a vet, taking of DNA sampling and insertion of microchip, and insertion of GPS and Radio tracking devices) as well as the consumables involved (anaesthetic, treatment compound, dye, DNA kit, microchip, GPS tracking device). As the flying time is highly variable, this will be invoiced directly by the chopper pilot.

**How does the treatment affect legal hunting?**

We believe that treatment of horns could slot neatly into the hunting trade. If Government would endorse an initiative whereby only rhinos with treated horns may be hunted, it can be ensured that these animals are no longer valued solely for their horns. Reputable hunting farms whose business is true trophy hunting should, in principal, easily reconcile themselves with having horns treated since the horns are not to be removed from the rhino anyway.

**Why would professional hunters be against the treatment?**

Unscrupulous game farmers have managed to trade in horns unchecked, under the guise of legal hunting, and have thus been feeding the demand from the virtually insatiable market. Only those individuals who are interested more in the horn and less in a trophy could possibly have objections to having horns treated.

**How long does the treatment remain effective?**

The Rhino Rescue Project horn treatment remains effective for approximately three to four years, after which re-administration would be required.

**What are the long-term effects of the treatment?**

Since all the products used are biodegradable and eco-friendly, there are no long-term effects on the environment. The treatment “grows” out with the horn and so poses no long-term effect and, if a treated animal dies of natural causes, retrieval and registration of the horn is a legal requirement.

**Is the treatment programmed intended to be used as a long-term solution?**

It is our hope that by the time the treatment needs to be reapplied, a more sustainable solution would have been found rendering re-administration unnecessary.

**What are the overall benefits of the treatment?**

The treatment assists towards improved health of the animals. Wild animals are not normally treated against parasites – we believe strongly in nature being allowed to run its course and human intervention being kept to a minimum – however, the treatment potentially neutralises a dual threat (both poaching and parasites). This treatment also benefits the rhino owner, does not harm the environment, does not harm other living organisms, has no adverse effects on tourism or the economy, is cost-effective, legal and can be completed in under an hour.

Moreover, insurance brokers have expressed a strong interest in the treatment, with the option of improved insurance premiums and/or rebates.