

## Management of Percussion Drill Samples

*Good management of percussion drill samples is especially important when operating in areas of high value agricultural land in order to minimise the impact of the collection, storage and disposal of samples on the agricultural operations and reduce the cost of rehabilitation.*

### Background

Cortona Resources Limited has been conducting drilling campaigns on high value pasture paddocks in recent years. In order for these drilling campaigns to meet landholder expectations, the drilling activities had to have minimal impact on the pasture. The landholders had invested a great deal of time and money to develop their pasture and stock and so required minimal interference.

### The Solution

To minimise the impact of the drilling operation a key part of the process is the management of the collection, storage and disposal of the drill samples.

The collection of percussion samples involves several processes where chips and dust may be deposited on the ground due to spillage and venting of cyclone and outside return hoses. Samples are collected in plastic bags and laid in rows on the ground.

Minimising disturbance and damage to the ground cover reduces the amount of rehabilitation and makes the drilling process more acceptable to the landholder.

### Sample Management

To minimise the impact of the collection, storage and disposal of percussion samples on pasture, Cortona incorporated the following steps into its drilling procedures:

- Use of dust suppression to reduce dust and rock fragments blowing over the pasture
- Use of above ground sumps to collect and managed water from the drill hole (see Case Study No.3)

- Removal of sample bags to bag farm as soon as practical.

### Dust Suppression

The use of a dust suppression system greatly reduces the amount of dust and chips spilled from a conventional cyclone and the amount of airborne dust vented from the cyclone and outside return. An ideal dust suppression unit should have the ability to capture and filter both the sample and outside return material. It should also have a bin to catch dust and chip spillage and any water, which can then be drained into an above ground sump.



*Dust suppressor and sump*

A dust suppression unit also reduces the amount of material required to be cleaned up after the drilling has finished and minimises the grey dust 'scar' from the cyclone.

The handling of dust and spillages will depend on the particular dust suppression system used. The use of black plastic beneath cyclones to catch spillage makes clean-up easier. Eliminating material falling on the ground significantly reduces the clean-up time and impact of the drilling.

### Sample Bags

The short-term impact of storing the plastic sample bags on pasture is sweating and killing of the grass. The long-term impact on pasture is that the bags deteriorate over time, can be disturbed by stock and the clean-up process takes more time and money. Removal of the sample bags to a

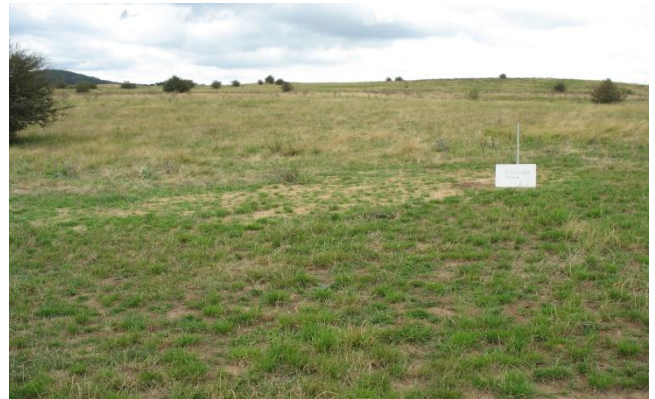
suitable bag farm upon completion of the hole minimised the impact of the bags on the pasture, reduced the rehabilitation time and cost and met the landholder expectations.

The bag farm needs to be readily accessible and located where the long term storage of bags will not cause additional management and rehabilitation issues. Removal of sample bags involves manual handling. Correct lifting techniques must be used. It is important to place the bags in ordered rows, with each labelled with hole number, in case further sampling is required. Bag farms are usually fenced to prevent interference from stock.

When the plastic sample bags are no longer required the bags may be disposed of in an appropriate landfill site.

The overall aim of good management of percussion samples is to minimise the short-term and long-term impacts of the sampling process

and storage on the land and to reduce the amount of clean up and disruption to the landholder activities.



*Drill site after sample bag removal, showing little impact on pasture*

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