

IDENTIFICATION OF RHINOS

E Harris & A Kotze

ARC - Animal Improvement Institute

Private Bag X 2, IRENE 0062

Tel : 012-672-9215

DNA technology is a powerful instrument in the identification of individual animals. The applications are many and varied but the most commonly employed are in parentage determination and forensics. The automated system used gives highly accurate results that are transferred to a database.

This technique looks directly at the heritable material, the DNA. Each animal has a unique DNA profile that distinguishes it from any other individual even its siblings - but, even more important, is the fact that each profile is a combination of the two parental profiles. Comparison of the profiles of the possible parents with the offspring can identify the actual parents.

Each rhino need only be tested once. The profile is then stored on a database and remains accessible for future reference purposes. The information can, for instance, be used for verification of future offspring or for the identification of individual rhinos in cases of illegal hunting. The courts accept this DNA technology and, applied to other animals such as cattle, goats and horses has led to many convictions of stock thieves.

The test can be performed on any tissue - blood, hair roots, semen and meat but usually blood or hairs roots are the most convenient for the game farmers.

DNA profiling has been offered as a service to owners and breeders of cattle, goats and horses for some years but the profiling of rhinos will be possible if funding is available.

BUDGET

DNA microsatellites manufacture	R20 000
Rhino database set-up	R40 000
Parentage determination per sample	R130:00