

Title: Analysis of genetic diversity in *Brachyleana huillensis* using ISSR molecular markers: Implications to the genetic management of the species.

I. Work Program goals achieved (maximum length: 200 words)

The work program goals, which were set up at the beginning of the program, were achieved as detailed below:

The amount and distribution of genetic variation between and within natural populations of *B. huillensis* was determined using ISSR molecular markers. Sampling strategies that can capture a broad range of genetic variability for the species for conservation have been recommended. The current status of *B. Huillensis* was assessed within the species distribution range. Geographical distribution of genetic variation in *B. huillensis* populations was established. Populations requiring conservation status and those with high levels of genetic diversity were identified. Areas appropriate for *in situ* conservation and where further germplasm collection would most likely yield novel genetic variation were identified. Specific recommendations on conservation and genetic management of this valuable genetic resource were made.

II. Plans for follow-up (maximum length: 200 words)

A detailed report will be presented to other stakeholders such as Kenya Forestry Research Institute (KEFRI), Forestry Department and IPGRI so that the results and recommendations generated from the present work can be disseminated. Discussions will be held with the KEFRI seed centre so that they can use this information as a guide in seed collection both for utilization and for long-term conservation. The forestry department may use this information as a guide in making decisions on *in situ* conservation strategies. Populations requiring special conservation status as a result of over-exploitation have been identified and the Forestry Department will be provided with the information so that it manages these populations in a sustainable manner. Structured progeny trials will need to be carried out to determine whether some of the unique variation found was due to useful quantitative characters. A manuscript will be submitted to a suitable journal for publication so that the information generated can be shared among more interested groups.

III. Report budget utilization including whether budget was spent as planned (maximum length: 100 words)

The budget was spent generally as planned as detailed below:

Item	IPGRI	Kenyatta	IFAR	Total
Stipend and subsistence			2030	2030
Supplies		1050	3980	5130
Travel				
Local (local)			2010	2010
Publications			415	415
Monitoring and supervision (staff costs)	2500			2500
Dissemination of information			505	505
Office expenses, communications		530	722	1252
Administrative costs ¹			400	400
Total	2500	1580	10062	14142

Supplies: Chemicals for DNA extraction, Taq DNA polymerase, dNTPs, primers, tips, microfuge tubes, PCR tubes, etc

Subsistence and local travel: local travel for field survey and collection of leaf samples

Publication: Dissemination of information

Office expenses, communications:

¹Administrative costs retained by IPGRI

IV. Assessment of the fellowship experience and general comments. (maximum length: 300 words)

I am very pleased with the fellowship. I have been looking for an opportunity to carry out detailed genetic studies in *Brachyleana huillensis* and this became a reality when I received the IFAR fellowship. I was also pleased with the administrative part of the fellowship. I received support and information from IPGRI whenever it was needed both at the regional office in Nairobi and Rome. I am also grateful to IPGRI for forwarding and recommending my request for two-month extension to IFAR. The two-month extension was very welcome as that enabled me to carry out detailed and quality work. That kind of flexibility should be retained in the IFAR fellowship when the extension is clearly justified. I also learnt that when you are clearly focused and determined you can achieve a lot within six months.

I am very grateful to IPGRI staff (Demetrius Kweka and Dr. Mikkell Grum) for technical support especially on sampling strategies. I am specifically thankful to Demetrius Kweka for accompanying me to the field during collection of leave samples for analysis. It was great to work closely with IPGRI staff and I believe future beneficiaries of IFAR will equally find IPGRI a useful partner.

Lastly, field surveys revealed that the over-exploitation of the species and need for its conservation was more urgent than initially imagined.