Disclaimer: unless otherwise agreed by the Council of UPOV, only documents that have been adopted by the Council of UPOV and that have not been superseded can represent UPOV policies or guidance.

This document has been scanned from a paper copy and may have some discrepancies from the original document.

———

Avertissement: sauf si le Conseil de l'UPOV en décide autrement, seuls les documents adoptés par le Conseil de l'UPOV n'ayant pas été remplacés peuvent représenter les principes ou les orientations de l'UPOV.

Ce document a été numérisé à partir d'une copie papier et peut contenir des différences avec le document original.

———

Allgemeiner Haftungsausschluß: Sofern nicht anders vom Rat der UPOV vereinbart, geben nur Dokumente, die vom Rat der UPOV angenommen und nicht ersetzt wurden, Grundsätze oder eine Anleitung der UPOV wieder.

Dieses Dokument wurde von einer Papierkopie gescannt und könnte Abweichungen vom Originaldokument aufweisen.

———

Descargo de responsabilidad: salvo que el Consejo de la UPOV decida de otro modo, solo se considerarán documentos de políticas u orientaciones de la UPOV los que hayan sido aprobados por el Consejo de la UPOV y no hayan sido reemplazados.

Este documento ha sido escaneado a partir de una copia en papel y puede que existan divergencias en relación con el documento original.

UPOV

BMT/3/7
ORIGINAL : English
DATE : August 31, 1995

INTERNATIONAL UNION FOR THE PROTECTION OF NEW VARIETIES OF PLANTS

GENEVA

WORKING GROUP ON BIOCHEMICAL AND MOLECULAR TECHNIQUES AND DNA-PROFILING IN PARTICULAR

Third Session
Wageningen, Netherlands, September 19 to 21, 1995

AVAILABILITY AND COST OF MOLECULAR MARKERS

Document prepared by experts from ASSINSEL

Method	Patent Position	Availability	Cost
RFLP	PHI patent pending on use in breeding	- probes publicly available for maize, soybean, sorghum, wheat, potato, etc.	
	PHI likely in favor of wide use for variety identification purposes	- much published literature - contract labs - codominant markers - readily score as alleles once genetics determined - one month from seed to data (genomic DNA)	$1-3/dp 100 samples x 100 markers, 2-3 months; 2 fulltime people
RAPD	issued U.S. patent to DuPont only use under license from DuPont research exemption clear??	- no technological barriers, primers readily available - much published literature - dominant markers - ability to score alleles? - one week from seed to data (PCR technique)	$3-4/dp

SSR	patent pending (J.L. Weber of Marshfield Clinic, Wisconsin) on C-A, G-T repeats patent pending (C.T Caskey and A.O. Edwards of Baylor College of Medicine, Houston, TX) on numerous SSRs and fluorescent tagged labeling research exemption? licenses needed for non-research use	- primers published and commercially available for soybean from Research Genetics in Huntsville, AL - several publications in many animal and plant species - primers being developed for corn and other species - improved fluorescent tag technology being developed - may be available as kits that would standardize and include patent license and administration costs - codominant markers - score readily as alleles once genetic control established - one week from seed to data (PCR Technique)	$0.27/dp - $0.36/dp (multiplexed at 3-6 loci/lane, respectively) 2 fulltime in 12 months could generate and database 200,000dp

DAF	**patent pending**	**- published upon for several species** **- primers can be readily synthesised** **- complex profiles might compromise repeatability** **- dominant markers** **- ability to score alleles?**	
AP-PCR	**not patented** **publicly available**	**- as RAPD**	
AFLP	**European and U.S. Patents pending** **use under license from Keygene**	**- information on primers and restriction enzymes from Keygene** **- relatively easy to get up and running to find many new polymorphisms in familiar and unfamiliar species** **- 80% dominant markers scoring most bands as alleles likely after genetics worked out** **- one week from seed to data (PCR technique)**	**188 samples x 120 dominant markers or 376 samples x 60 dominant markers;** **1 month; 2 fulltime people** **cost/dp:- 0.20/dp for polymorphic crops (maize);$1/dp for less polymorphic crops (soybean, wheat)**

[End of document]