

Kistler 1990) hybridized to all putative chromosomal bands (data not shown).

Representative RFLP probes from the 12 known genetic linkage groups of *G. fujikuroi* mating population A (Xu and Leslie, 1993) and heterologous probes representing known structural loci in other filamentous fungi were hybridized to CHEF gel blots (Table 2). All 12 chromosome bands can be tagged with probes belonging to specific linkage groups (Fig. 2), leading to the correlation of genetically defined linkage groups with CHEF-gel-defined chromosomes. Among strains in mating population A, even though there is some minor chromosome length polymorphism, the electrophoretic patterns are quite similar (Fig. 1). Some minor chromosome length polymorphisms can be observed in the strains belonging to mating population A, but the RFLP probes tested all hybridized to the same chromosome. These results indicate that all of these strains have a similar genome organization

pattern, in spite of diverse host and geographic origins. The relative lack of chromosome aberrations or other significant chromosome length polymorphisms suggests that the karyotype of this biological species is relatively homogeneous.

#### Karyotypes of other *G. fujikuroi* mating populations.

In addition to karyotypes from strains in mating population A, we also karyotyped five strains from mating population B, two from mating population C, five from mating population D, seven from mating population E, and six from mating population F (Table 1). Strains belonging to the same mating population had similar electrophoretic karyotypes, which were unique for each mating population (Fig. 3). Minor chromosome length polymorphisms, similar to those observed in mating population A, were also observed between strains within the other five mating populations. All of the strains examined have 12 chromosomes; no chromosome

Table 1. *Gibberella fujikuroi* strains used in this study

Strain	MP and MT <sup>a</sup>	Host	Geographic origin	Other numbers <sup>b</sup>
A-00102	A <sup>+</sup>	Sorghum	San Joaquin Co., CA	PTS-F80, PEN-M3120, FGSC-7598
A-00149	A <sup>-</sup>	Maize	Visalia, CA	PTS-F237, PEN-M3125, FGSC-7600 also 8961
A-00488	A <sup>-</sup>	Maize	Transkei, South Africa	MRC-826, PEN-M1325
A-00498	A <sup>-</sup>	Maize	Rossville, KS	PEN-M6459
A-00549	A <sup>-</sup>	Maize	Silver Lake, KS	PEN-M6466
A-02949	A <sup>-</sup>	Maize	Crowder, MS	PEN-M3797, FGSC-7605
A-04516	A <sup>+</sup>	Maize	Katmandu, Nepal	PEN-M5500, FGSC-7606
A-04522	A <sup>+</sup>	Maize	Katmandu, Nepal	PEN-M5538
A-04643	A <sup>-</sup>	Progeny from A-00149 female × A-04522 male		
A-05113	A <sup>-</sup>	Progeny from A-00149 female × A-04516 male		FGSC-7607
B-00278	B <sup>+</sup>	Sugarcane	Hsingying, Taiwan	PTS-F1251, PEN-M3127, FGSC-7608
B-00281	B <sup>-</sup>	Sugarcane	Hsingying, Taiwan	PTS-F1254, PEN-M3128, FGSC-7609
B-01722	B <sup>-</sup>	Sorghum	Laguna, Philippines	PEN-M5476
B-01762	B <sup>+</sup>	Unknown	South Africa	MRC-1240
B-03810	B <sup>-</sup>	Unknown	Unknown	PEN-M846, WG-63320
C-01994	C <sup>+</sup>	Rice	Taiwan	PEN-M1149, EGK-FSL290
C-01996	C <sup>-</sup>	Rice	Taiwan	PEN-M1151, EGK-FSL294
D-00502	D <sup>+</sup>	Maize	Rossville, KS	PEN-M6471, FGSC-7612
D-00666	D <sup>-</sup>	Maize	Highland, KS	PEN-M5123
D-00720	D <sup>-</sup>	Sorghum	Powhattan-1, KS	PEN-M6485
D-01591	D <sup>+</sup>	Maize	Beijing-1, China	PEN-M5360
D-02945	D <sup>-</sup>	Sorghum	Holcomb, MS	PEN-M3793, FGSC-7613
E-00434	E <sup>-</sup>	Maize	Breakover, KS	PEN-M6496
E-00507	E <sup>-</sup>	Maize	Rossville, KS	PEN-M5119
E-00551	E <sup>-</sup>	Maize	Silver Lake, KS	PEN-M6501
E-00731	E <sup>+</sup>	Maize	Powhattan, KS	PEN-M5126
E-00990	E <sup>-</sup>	Maize	St. Elmo, IL	PEN-M3696, FGSC-7616
E-02192	E <sup>+</sup>	Maize	St. Elmo, IL	PEN-M3693, FGSC-7617
E-03809	E <sup>-</sup>	Maize	Iran	PEN-M845
F-00728	F <sup>+</sup>	Sorghum	Powhattan, KS	PEN-M5598, MRC-5713
F-00965	F <sup>+</sup>	Sorghum	Zeandale, KS	PEN-M5134, MRC-5707
F-01051	F <sup>+</sup>	Sorghum	Alma, KS	PEN-M5594, MRC-5709
F-01377	F <sup>+</sup>	Sorghum	WaKeeney, KS	PEN-M5555, MRC-5706, FGSC-7619
F-01540	F <sup>-</sup>	Progeny from cross F-01377 female × F-00966 male		FGSC-7620
F-04091	F <sup>-</sup>	Progeny from cross F-01377 female × F-01540 male		FGSC-7054

<sup>a</sup> MP = mating population (A-F); MT = mating type (+ or -).

<sup>b</sup> EGK = E. G. Kuhlman, USDA Forest Service, Athens, GA; FGSC = Fungal Genetics Stock Center, Department of Microbiology, University of Kansas Medical Center, Kansas City; MRC = Walter F. O. Marasas, Program on Mycotoxins and Experimental Carcinogenesis (PROMEC), Medical Research Council, Tygerberg, Republic of South Africa; PEN = Paul E. Nelson, Fusarium Research Center, Department of Plant Pathology, Pennsylvania State University, University Park; PTS = Philip T. Spieth, Department of Plant Pathology, University of California, Berkeley; and WG = W. Gerlach, Biologische Bundesanstalt für Land- und Forstwirtschaft, Institut für Mikrobiologie, Berlin.