

Appendix 7

Results of Mating Attempts with *Phytophthora* Isolates

Results from the matings with selected heterothallic *Phytophthora* spp. indicated that many isolates were sterile (Table A7.1)--specifically isolates of *P. citrophthora*, *P. cryptogea*, and *P. drechsleri*. However, this is only the expected outcome with isolates of *P. citrophthora*, which does not produce oospores during its life cycle (Erwin and Ribeiro, 1996¹). It is surprising that *P. cryptogea* and *P. drechsleri* did not produce sexual structures in dual cultures. It is possible that the temperature in the incubator (25°C) may have inhibited production of sexual structures with these two species. I have found no reports on the optimum temperature for mating these two species, although optima, which may differ from optimum temperatures for growth, are reported for some other species. V8 medium is reported as conducive to oospore formation, but other media are also used and may warrant investigation in any further attempts at mating with these species.

¹ Erwin, D. C., and Ribeiro, O. K. 1996. *Phytophthora Diseases Worldwide*. APS Press, St. Paul, MN.

Table A7.1. Results of matings with selected *Phytophthora* isolates and A1 and A2 mating types of *P. capsici*, *P. cinnamomi*, and *P. nicotianae*.

Isolate #	Genus species	Mating Type	Antheridia	<i>P. capsici</i>		<i>P. cinnamomi</i>		<i>P. nicotianae</i>	
				A1 ^a	A2 ^a	A1 ^a	A2 ^a	A1 ^a	A2 ^a
183	<i>P. capsici</i>	A2	amphigynous	1	0	0	0	0	0
279	<i>P. capsici</i>	A2	amphigynous	0	0	1	0	0	0
103	<i>P. citrophthora</i>			0	0	0	0	0	0
104	<i>P. citrophthora</i>			0	0	0	0	0	0
110	<i>P. citrophthora</i>			0	0	0	0	0	0
119	<i>P. citrophthora</i>			0	0	0	0	0	0
290	<i>P. citrophthora</i>			0	0	0	0	0	0
372	<i>P. citrophthora</i>			0	0	0	0	0	0
283	<i>P. citrophthora</i>			0	0	0	0	0	0
67	<i>P. citrophthora</i>			0	0	0	0	0	0
252	<i>P. cryptogea</i>			0	0	0	0	0	0
340	<i>P. cryptogea</i>			0	0	0	0	0	0
352	<i>P. cryptogea</i>			0	0	0	0	0	0
355	<i>P. cryptogea</i>			0	0	0	0	0	0
361	<i>P. cryptogea</i>			0	0	0	0	0	0
578	<i>P. cryptogea</i>			0	0	0	0	0	0
136	<i>P. drechsleri</i>			0	0	0	0	0	0
145	<i>P. drechsleri</i>			0	0	0	0	0	0
170	<i>P. drechsleri</i>			0	0	0	0	0	0
178	<i>P. drechsleri</i>			0	0	0	0	0	0
185	<i>P. drechsleri</i>			0	0	0	0	0	0
188	<i>P. drechsleri</i>			0	0	0	0	0	0
616	<i>P. drechsleri</i>			0	0	0	0	0	0
626	<i>P. drechsleri</i>			0	0	0	0	0	0
658	<i>P. drechsleri</i>			0	0	0	0	0	0
699	<i>P. nicotianae</i>	A2	amphigynous	0	0	0	0	1	0

100	<i>P. nicotianae</i>	A1	amphigynous	0	1	0	0	0	1
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^a 0 = no production of sexual structures; 1 = production of sexual structures.