

Summary of research achievements on seed/tuber transmission and root bridges

Seed transmission						
Host	Disease	Plant organ	Phytoplasma detected	Transmission	Location	Reference
Coconut palm	Cape St Paul wilt disease (CSP), LY	embryo	16SrIV-A	Not proved	Ghana	Cordova <i>et al.</i> , 2003 Nipah <i>et al.</i> , 2007
Corn		kernel seedling	' <i>Ca. P. asteris</i> ' 16SrI-B, 16SrV, 16SrXII-A	Not proved	Peru Italy	Nipah <i>et al.</i> , 2007 Calari <i>et al.</i> , 2011
Wild carnation	Yellowing and stunting	seed seedling	16SrIII, 16SrIII + 16SrI-B 16SrIII, 16SrIII + 16SrI-B	Not proved	Croatia	Seruga Music <i>et al.</i> 2004
Alfalfa	Witches' broom	seed and seedling	16SrI-F, 16SrI, 16SrII	Proved	Oman	Khan <i>et al.</i> , 2002
Lime		seedling	16SrI, 16SrXII, 16SrII		Italy	Boti and Bertaccini, 2006
Tomato		seedling seedling	16SrI, 16SrXII, 16SrII 16SrI-B, 16SrXII-A		Italy	Boti and Bertaccini, 2006 Calari <i>et al.</i> , 2011
Winter oilseed rape		seedling seedling	16SrI, 16SrXII, 16SrII 16SrI-B, 16SrII, 16SrXII-A, 16SrV		Italy Italy	Boti and Bertaccini, 2006 Calari <i>et al.</i> , 2011 Olivier <i>et al.</i> , 2008
Apricot	EFSY	pollen, complete flower, flash, kernel	Not detected 16SrX-B	Not proved	Czech Republic	Necas <i>et al.</i> 2007
Stylosanthes						De La Rue <i>et al.</i> , 2002
Pea						Zwolinska <i>et al.</i> , 2010
Tuber transmission						
Host	Disease	Plant organ	Phytoplasma detected	Transmission	Location	Reference
Potato	Stolbur	No data	16Sr XII-A 16Sr I-B	Not transmittable, conflicting results	Europe	EPPD/EPPD, 2004
Potato	Stolbur	tuber, plantlet	16SrXII-A	Proved	Hungary, The Netherlands	Kölber, pers. comm. 2004 Verhoeven, pers. comm 2005, Ember <i>et al.</i> , 2010, 2011
Potato	Beet leafhopper transmitted virescence agent (BLTVA)	tuber, plantlet	16Sr VI-A	Confirmed	USA	Munyaneza and Crosslin, 2006, 2007
Seed potato	asymptomatic	plantlet	16SrI-B (related to ' <i>Ca. P. asteris</i> ')	Confirmed	Italy	Paltrinieri, 2007
Seed potato	asymptomatic	plantlet	16SrI-C (related to Clover phyllody)	Confirmed	Italy	Paltrinieri, 2007
Seed potato	asymptomatic	plantlet	16SrII-D (related to Australian tomato big bud)	Confirmed	Italy	Paltrinieri, 2007
Seed potato	asymptomatic	plantlet	16SrX-A (related to ' <i>Ca. P. mali</i> ')	Confirmed	Italy	Paltrinieri, 2007
Seed potato	asymptomatic	plantlet	16SrXII-A	Confirmed	Italy	Paltrinieri, 2007
Root-bridges						
Host	Disease	Plant organ	Phytoplasma detected	Transmission	Location	Reference
Apple	Apple proliferation		AP	Experimental root grafting proved	Germany Italy Hungary	Seidl, 1965, Kunze, 1972 Refatti <i>et al.</i> , 1984 Ember <i>et al.</i> , 2004
Apple	Apple proliferation		' <i>Ca. P. mali</i> '	Natural transmission proved, confirmed	Italy Italy	Vindimian <i>et al.</i> , 2002 Cicotti <i>et al.</i> , 2007;

				Slovenia Italy	Lesnic <i>et al.</i> 2008 Baric <i>et al.</i> , 2008
Apple	Apple proliferation	' <i>Ca. P. mali</i> '	Experimental transmission proved	Italy	Cicotti <i>et al.</i> , 2008
Pear	Pear decline	' <i>Ca. P. pyri</i> '	Natural root grafting proved	Italy	Babini <i>et al.</i> , 2007
Stone fruit	ESFY	' <i>Ca. P. punorum</i> '	Natural root grafting not proved	Italy	Poggi Pollini <i>et al.</i> , 2007
Stone fruit	ESFY	' <i>Ca. P. punorum</i> '	Experimental root grafting not proved	Turkey	Gültekin <i>et al.</i> , 2010