

Distribution Maps of Plant Diseases

Compiled by CABI in association with EPPO
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Map No. 766

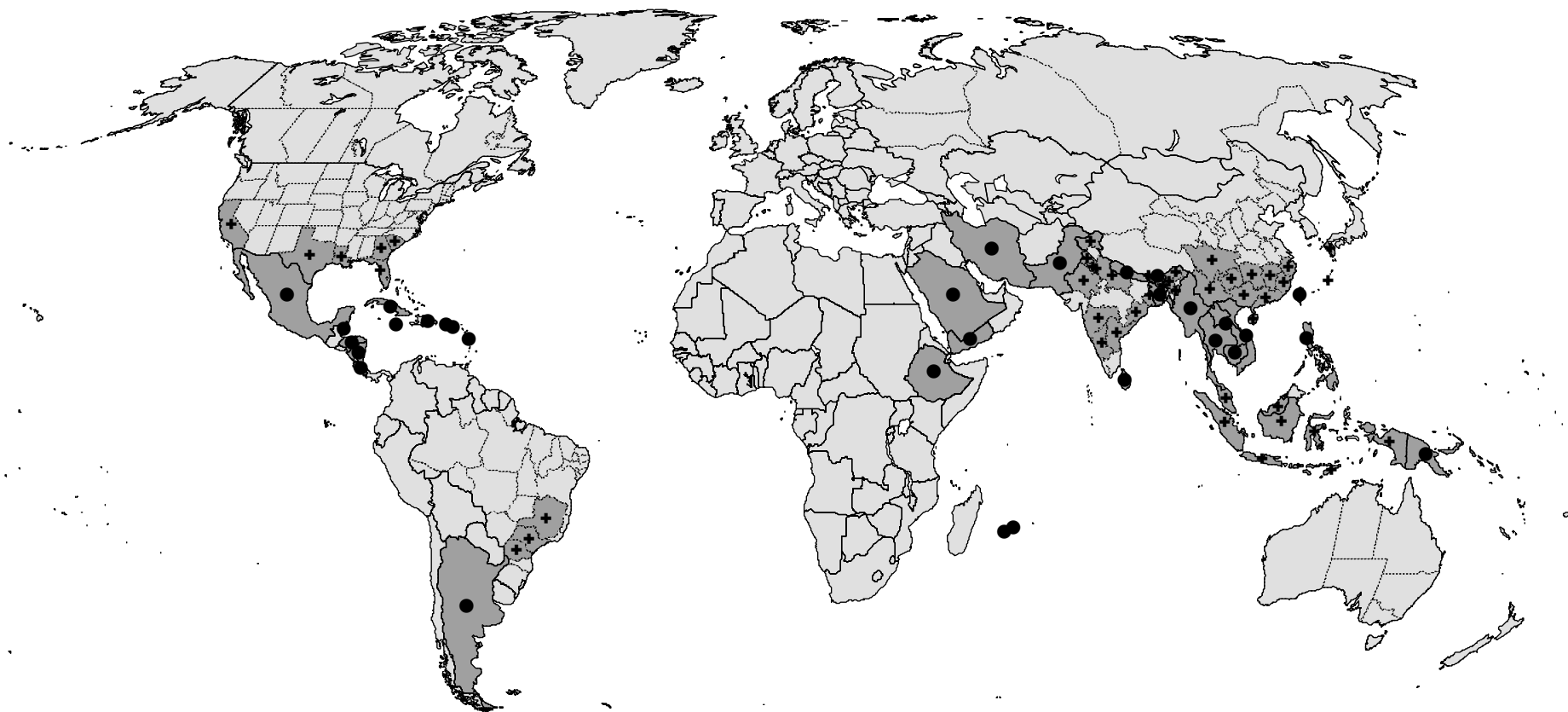
Edition 3

Issued October 2012

Candidatus Liberibacter asiaticus Jagoueix et al.

Bacteria: Proteobacteria: Rhizobiales

Hosts: Citrus spp., Fortunella spp., Murraya spp.



Present: national record



Present: subnational record

CABI/EPPO (2012) *Candidatus Liberibacter asiaticus*. Distribution Maps of Plant Diseases No. 766.
CABI Head Office, Wallingford, UK.

Candidatus Liberibacter asiaticus

Note: Syn. Candidatus Liberobacter asiaticum Jagoueix et al.

Records are based on bibliographic data from the CAB ABSTRACTS database, cultures in the IMI culture collection retained at CABI UK Centre (Egham) and plant quarantine information compiled by EPPO

X: Present, no details A: Present: widespread B: Present, restricted distribution C: Present, few occurrences (D): Absent, formerly present (E): Eradicated (F): Intercepted only

Bangladesh	-	X	Catling, H. D.; Garnier, M.; Bové, J. M. (1978) FAO Plant Protection Bulletin 26, 16-18.		Zhejiang	X	Lin, K. H.; Lin, K. H. (1956) Acta Phytopathologica Sinica 2, 14-38.
Bhutan	-	X	Ahlawat, Y. S.; Baranwal, V. K.; Thinlay; Doe Doe; Majumder, S. (2003) Plant Disease 87 (4), 448. [First record.]				Liu, L. H.; Yao, J. A.; Chong, Z. W.; Xie, L. Y. (2005) Fujian Journal of Agricultural Sciences 20 (2), 77-79.
			EPPO (2003) EPPO Reporting Service No. 2003/035. European and Mediterranean Plant Protection Organization, Paris, France. [Punakha Valley and Wangdue districts.]	East Timor	-	X	EPPO (2003) EPPO Reporting Service No. 2003/067. European and Mediterranean Plant Protection Organization, Paris, France.
Cambodia	-	X	Garnier, M.; Bové, J. M. (2000) In: Proceedings of the 14th Conference of the International Organization of Citrus Virologists (Ed. by Graça, J.V. da; Lee, R.F.; Yokomi, R.K.), 378-380. Riverside, California, USA.	India	-	B	Ahlawat, Y. S. (1997) Indian Phytopathology 50 (2), 192-193. Das, A. K.; Rao, C. N.; Shyam Singh (2007) Current Science 92 (12), 1759-1763. [Northeast.]
			Md-Sajedul Islam; Glynn, J. M.; Bai, Y.; Duan, Y. P.; Coletta-Filho, H. D.; Gopal Kuruba; Civerolo, E. L.; Lin, H. (2012) BMC Microbiology 12 (39). doi: 10.1186/1471-2180-12-39.		Andhra Pradesh	X	Baranwal, V. K.; Majumder, S.; Ahlawat, Y. S.; Singh, R. P. (2005) Indian Journal of Biotechnology 4 (4), 528-533.
China	-	X	Ding, F.; Deng, X. X.; Hong, N.; Zhong, Y.; Wang, G. P.; Yi, G. J. (2009) European Journal of Plant Pathology 124 (3), 495-503.				Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.
	Fujian	A	Liu, L. H.; Yao, J. A.; Chong, Z. W.; Xie, L. Y. (2005) Fujian Journal of Agricultural Sciences 20 (2), 77-79.				Gopal, K.; Gopi, V.; Kalyani, L.; Sreelatha, M.; Sreenivasulu, B. (2010) Archives of Phytopathology and Plant Protection 43 (7/9), 863-870.
			Shan, Z. J.; Feng, Z.; Zhou, G.; Deng, X. L. (2008) Journal of South China Agricultural University 29 (2), 25-29.				Gopal, K.; Pradeepthi, E. R.; Gopi, V.; Ahammed, S. K.; Sreenivasulu, Y.; Reddy, M. K.; Baranwal, V. K.; Purushotham, K. (2007) Acta Phytopathologica et Entomologica Hungarica 42 (1), 49-58.
	Guangdong	A	Chen, J.; Deng, X.; Sun, X.; Jones, D.; Irey, M.; Civerolo, E. (2010) Phytopathology 100 (6), 567-572.		Arunachal Pradesh	X	Bhagabati, K. N.; Ahlawat, Y. S.; Chakraborty, N. K.; Borthakur, B. (1989) Indian Phytopathology 42, 552-555.
			Deng, X.; Lou, Z.; Feng, Z.; Li, H.; Chen, J.; Civerolo, E. L. (2008) Plant Disease 92 (2), 314. [On Atalantia buxifolia.]		Assam	X	Ahlawat, Y. S. (1997) Indian Journal of Agricultural Sciences 67, 51-57.
			Lin, K. H.; Lin, K. H. (1956) Acta Phytopathologica Sinica 2, 14-38.		Delhi	X	Baranwal, V. K.; Mazumder, S.; Singh, J.; Suryanarayana, V.; Ghosh, D. K.; Ahlawat, Y. S. (2004) Indian Phytopathology 57 (2), 164-168.
			Shan, Z. J.; Feng, Z.; Zhou, G.; Deng, X. L. (2008) Journal of South China Agricultural University 29 (2), 25-29.				Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.
	Guangxi	A	Gottwald, T. R.; Aubert, B.; Xue-Yuan, Z. (1989) Phytopathology 79 (6), 687-693.		Haryana	X	Singh, J. P.; Gupta, O. P. (1972) Haryana Journal of Horticultural Sciences 1 (1-4), 23-25.
			Lin, K. H.; Lin, K. H. (1956) Acta Phytopathologica Sinica 2, 14-38.		Jammu and Kashmir	X	Baranwal, V. K.; Mazumder, S.; Singh, J.; Suryanarayana, V.; Ghosh, D. K.; Ahlawat, Y. S. (2004) Indian Phytopathology 57 (2), 164-168.
			Liu, L. H.; Yao, J. A.; Chong, Z. W.; Xie, L. Y. (2005) Fujian Journal of Agricultural Sciences 20 (2), 77-79.		Karnataka	X	Adkar-Purushothama, C. R.; Maheshwar, P. K.; Janardhana, G. R. (2011) Australasian Plant Disease Notes 6 (1), 26-27.
			Shan, Z. J.; Feng, Z.; Zhou, G.; Deng, X. L. (2008) Journal of South China Agricultural University 29 (2), 25-29.				Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.
	Guizhou	X	Shan, Z. J.; Feng, Z.; Zhou, G.; Deng, X. L. (2008) Journal of South China Agricultural University 29 (2), 25-29.				Pillai, K. G.; Samuel, D. K.; Reddy, M. K. (2007) Entomon 32 (4), 291-295.
	Hainan	A	Lin, K. H.; Lin, K. H. (1956) Acta Phytopathologica Sinica 2, 14-38.		Maharashtra	X	Baranwal, V. K.; Mazumder, S.; Singh, J.; Suryanarayana, V.; Ghosh, D. K.; Ahlawat, Y. S. (2004) Indian Phytopathology 57 (2), 164-168.
	Hunan	X	Ding, F.; Deng, X.; Hong, N.; Zhong, Y.; Wang, G.; Yi, G. (2009) European Journal of Plant Pathology 124 (3), 495-503.				Das, A. K. (2009) Current Science 96 (7), 890-892.
			Hu, W. Z.; Wang, X. F.; Zhou, Y.; Li, Z. A.; Tang, K. Z.; Zhou, C. Y. (2011) Journal of Plant Pathology 93 (1), 211-214.				Das, A. K.; Shivankar, V. J.; Shyam Singh (2002) Indian Journal of Agricultural Sciences 72 (3), 188-191.
	Jiangxi	X	Hu, W. Z.; Wang, X. F.; Zhou, Y.; Li, Z. A.; Tang, K. Z.; Zhou, C. Y. (2011) Journal of Plant Pathology 93 (1), 211-214.				Ghosh, D. K.; Das, A. K.; Shyam Singh (2003) Journal of Mycology and Plant Pathology 33 (1), 69-72.
			Lin, K. H.; Lin, K. H. (1956) Acta Phytopathologica Sinica 2, 14-38.		Manipur	X	Bhagabati, K. N.; Ahlawat, Y. S.; Chakraborty, N. K.; Borthakur, B. (1989) Indian Phytopathology 42, 552-555.
			Liu, L. H.; Yao, J. A.; Chong, Z. W.; Xie, L. Y. (2005) Fujian Journal of Agricultural Sciences 20 (2), 77-79.				Das, A. K.; Kumar, A. (2010) Plant Disease 94 (3), 375.
	Sichuan	X	EPPO (2011) EPPO Reporting Service No. 2011/177. European and Mediterranean Plant Protection Organization, Paris, France.		Meghalaya	X	Bhagabati, K. N.; Ahlawat, Y. S.; Chakraborty, N. K.; Borthakur, B. (1989) Indian Phytopathology 42, 552-555.
			Hu, W. Z.; Wang, X. F.; Zhou, Y.; Li, Z. A.; Tang, K. Z.; Zhou, C. Y. (2011) Journal of Plant Pathology 93 (1), 211-214.				
	Yunnan	X	Dong, P.; Bao, G. L.; Ran, Z. W.; Chen, H. R.; Li, F. (2011) Journal of Yunnan Agricultural University 26 (5), 607-611.				

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X: Present, no details A: Present: widespread B: Present, restricted distribution C: Present, few occurrences (D): Absent, formerly present (E): Eradicated (F): Intercepted only

Orissa	X	Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.	Laos	-	X	Garnier, M.; Bové, J. M. (2000) In: Proceedings of the 14th Conference of the International Organization of Citrus Virologists (Ed. by Graça, J.V. da; Lee, R.F.; Yokomi, R.K.), 378-380. Riverside, California, USA.
Punjab	X	Ahlawat, Y. S. (1997) Indian Journal of Agricultural Sciences 67, 51-57. Kapur, S. P.; Cheema, S. S.; Dhillon, R. S. (1988) Journal of Research, Punjab Agricultural University 25 (2), 216-220. Md-Sajedul Islam; Glynn, J. M.; Bai, Y.; Duan, Y. P.; Coletta-Filho, H. D.; Gopal Kuruba; Civerolo, E. L.; Lin, H. (2012) BMC Microbiology 12 (39). doi: 10.1186/1471-2180-12-39.	Malaysia	-	B	
Rajasthan	X	Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.	Peninsular Malaysia		X	Garnier, M.; Bové, J. M. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 388-391. Department of Plant Pathology, University of California, Riverside, USA. Khairulmazmi, A.; Kamaruzaman, S.; Habibuddin, H.; Jugah Kadir; Syed Omar, S. R. (2008) International Journal of Agriculture and Biology 10 (4), 417-421. [Selangor and Terangganu.] Khairulmazmi, A.; Kamaruzaman, S.; Habibuddin, H.; Jugah, K.; Syed, Omar, S. R. (2008) Research Journal of Agriculture and Biological Sciences 4 (1), 103-111. Lim, W. H.; Shamsudin, O. M.; Ko, W. W. (1990) MAPPS Newsletter 13 (4), 56-58.
Sikkim	X	Raychaudhuri, S. P.; Nariana, T. K.; Ahlawat, Y. S.; Grierson, W. (1979) Proceedings of the 1977 International Citrus Congress, Florida, USA 3, 914-918. International Society of Citriculture.	Sarawak		X	Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.
Uttar Pradesh	X	Bové, J. M.; Garnier, M.; Ahlawat, Y. S.; Chakraborty, N. K.; Varma, A. (1993) Proceedings of the 12th Conference of the International Organization of Citrus Virologists, 258-263. Department of Plant Pathology, University of California, Riverside, USA.	Myanmar	-	X	Garnier, M.; Bové, J. M. (2000) In: Proceedings of the 14th Conference of the International Organization of Citrus Virologists (Ed. by Graça, J.V. da; Lee, R.F.; Yokomi, R.K.), 378-380. Riverside, California, USA.
West Bengal	X	Mukhopadhyay, S. (1985) The dieback of mandarin oranges in Darjeeling District. Bidhan Chandra Krishi Viswavidyala, West Bengal, India, 12 pp. Raychaudhuri, S. P.; Nariana, T. K.; Ahlawat, Y. S.; Grierson, W. (1979) Proceedings of the 1977 International Citrus Congress, Florida, USA 3, 914-918. International Society of Citriculture. [Darjeeling.]	Nepal	-	A	Budathoki, K.; Pradhanang, P. M. (1992) Acta Horticulturae 292, 51-59. [Western hill districts.] Regmi, C.; Garnier, M.; Bové, J. M. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 259-267. Department of Plant Pathology, University of California, Riverside, USA.
Indonesia	-	X				
Irian Jaya	X	Davis, R. I.; Jacobson, S. C.; Rahamma, S.; Gunua, T. G. (2000) Australasian Plant Pathology 29 (3), 226. [As Candidatus Liberobacter asiaticum.]	Pakistan	-	X	Catara, A.; Azzaro, A.; Moghal, S. M.; Khan, D. A.; Goren, R. (ed); Mendel, K. (1988) Citriculture. Proceedings of the Sixth International Citrus Congress, Tel Aviv, Israel 2, 957-962. Balaban Publishers, Rehovot, Israel. [Northwest Frontier and Punjab Provinces, symptoms only.] Garnier, M.; Bové, J. M. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 388-391. Department of Plant Pathology, University of California, Riverside, USA. Luck, R. F.; Gumpf, D. J.; Morse, J. G. (1996) A summary of citrus pest problems in the Near East. FAO Plant Production and Protection Paper No. 135, pp 309-349.
Java	A	Aubert, B.; Garnier, M.; Guillaumin, D.; Herbagyandono, B.; Setiobudi, L.; Nurhadi, F. (1985) Fruits 40 (9), 549-563. Salibe, A. A.; Tirtawidjaja, S. (1984) Summa Phytopathologica 10 (1-2), 135.	Philippines	-	A	Bove, J. M. (2006) Journal of Plant Pathology 88 (1), 7-37. Garnier, M.; Bové, J. M. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 388-391. Department of Plant Pathology, University of California, Riverside, USA. Gonzales, C. I. (1989) Extension Bulletin ASPAC, Food and Fertilizer Technology Center 284, 15-21. [Widespread since the 1950s.]
Kalimantan	X	Aubert, B.; Garnier, M.; Guillaumin, D.; Herbagyandono, B.; Setiobudi, L.; Nurhadi, F. (1985) Fruits 40 (9), 549-563.				
Nusa Tenggara	A	Bové, J. M.; Erti Dwiastuti, M.; Triviratno, A.; Supriyanto, A.; Nasli, E.; Becu, P.; Garnier, M. (2000) Proceedings of the Fourteenth IOCV Conference, Insect-Transmitted Prokaryotes. [http://www.ivia.es/iocv/archivos/ProceedingsXV/Proceedings%20XIV%20Conference/200-206.pdf. North Bali.]	Saudi Arabia	-	X	Bové, J. M.; Garnier, M. (1984) Proceedings of the 9th Conference of the International Organization of Citrus Virologists, 109-114. Department of Plant Pathology, University of California, Riverside, USA. Luck, R. F.; Gumpf, D. J.; Morse, J. G. (1996) A summary of citrus pest problems in the Near East. FAO Plant Production and Protection Paper No. 135, pp 309-349.
Sulawesi	X	Aubert, B.; Garnier, M.; Guillaumin, D.; Herbagyandono, B.; Setiobudi, L.; Nurhadi, F. (1985) Fruits 40 (9), 549-563.				
Sumatra	A	Aubert, B.; Garnier, M.; Guillaumin, D.; Herbagyandono, B.; Setiobudi, L.; Nurhadi, F. (1985) Fruits 40 (9), 549-563. Salibe, A. A.; Tirtawidjaja, S. (1984) Summa Phytopathologica 10 (1-2), 135.	Sri Lanka	-	X	Garnier, M.; Bové, J. M. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 388-391. Department of Plant Pathology, University of California, Riverside, USA.
Iran	-	B				
Japan	-	B				
Kyushu	B	Dai, K.; Ikeshiro, T.; Matsuura, T.; Kimura, S.; Hamagami, A.; Fujiwara, Y.; Kobashigawa, Y.; Miyakuni, S. (2005) Research Bulletin of the Plant Protection Service 41, 53-57.	Taiwan	-	A	Matsumoto, T.; Wang, M. C.; Su, H. J. (1961) Proceedings of the 2nd Conference of the International Organization of Citrus Virologists, 121-125. Department of Plant Pathology, University of Florida, Riverside, USA. Tsai, C. H.; Su, H. J.; Liao, Y. C.; Hung, T. H. (2006) Plant Disease 90 (10), 1360. [On kumquat (Fortunella margarita) in Yilan County.]
Ryukyu Archipelago	X	Iwanami, T.; Uechi, N.; Kawano, S. (2009) Kyushu Plant Protection Research 55, 68-75. Ooishi, T.; Toyosato, T.; Moromizato, C.; Tamashiro, H.; Uema, K.; Taniguchi, M.; Kawamura, F. (2006) Kyushu Plant Protection Research 52, 66-70. [Okinawa.] Shinohara, K.; Yuda, T.; Nishimoto, H.; Hamashima, A.; Hashimoto, S.; Tokimura, K.; Satou, T. (2006) Kyushu Plant Protection Research 52, 6-10. [Amami islands.] Subandiyah, S.; Iwanami, T.; Tsuyumu, S.; Ieki, H. (2000) Plant Disease 84, 15-18.	Thailand	-	X	Jantasorn, A.; Paradornuwat, A.; Chowpongpan, S.; Chunwongse, J.; Thaveechai, N. (2007) Proceedings of the 45th Kasetsart University Annual Conference, Bangkok, Thailand, 30 January-2 February 2007. Subject: Plants 218-225.

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X: Present, no details A: Present, widespread B: Present, restricted distribution C: Present, few occurrences (D): Absent, formerly present (E): Eradicated (F): Intercepted only

			Liu, L. H.; Yao, J. A.; Chong, Z. W.; Xie, L. Y. (2005) Fujian Journal of Agricultural Sciences 20 (2), 77-79.		Florida	B	Chen, J.; Deng, X.; Sun, X.; Jones, D.; Irey, M.; Civerolo, E. (2010) Phytopathology 100 (6), 567-572.	
			Prommintara, M. (1990) Proceedings of the Asia-Pacific International Conference on Citriculture, 96-99.					
			Somporn, L.; Thaveechai, N.; Chowpongpan, S.; Thamchaipeneet, A.; Paradornuwat, A. (2007) Proceedings of the 45th Kasetsart University Annual Conference, Bangkok, Thailand, 30 January-2 February 2007. Subject: Plants 226-233.				NAPPO (2010) Phytosanitary Alert System: Confirmation of Citrus Greening (Candidatus Liberibacter asiaticus) in the Virgin Islands. http://www.pestalert.org/oprDetail.cfm?oprID=430&keyword=liberibacter%20asiaticus.	
Vietnam	-	B	Bové, J. M.; Chau, N. M.; Trung, H. M.; Bourdeaut, J.; Garnier, M. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 258-266. Department of Plant Pathology, University of California, Riverside, USA.		Georgia	C	Qureshi, J. A.; Rogers, M. E.; Hall, D. G.; Stansly, P. A. (2009) Journal of Economic Entomology 102 (1), 247-256.	
			Md-Sajedul Islam; Glynn, J. M.; Bai, Y.; Duan, Y. P.; Coletta-Filho, H. D.; Gopal Kuruba; Civerolo, E. L.; Lin, H. (2012) BMC Microbiology 12 (39). doi: 10.1186/1471-2180-12-39.				NAPPO (2010) Phytosanitary Alert System: Confirmation of Citrus Greening (Candidatus Liberibacter asiaticus) in the Virgin Islands. http://www.pestalert.org/oprDetail.cfm?oprID=430&keyword=liberibacter%20asiaticus.	
			Nguyen Minh Chau; Le Thi Thu Hong (2007) JIRCAS Working Report No. 55, 41-46.					
			Whittle, A. M. (1992) FAO Plant Protection Bulletin 40 (3), 75-81.					
Yemen	-	B	Bové, J. M.; Garnier, M. (1984) Proceedings of the 9th Conference of the International Organization of Citrus Virologists, 109-114. Department of Plant Pathology, University of California, Riverside, USA.		Louisiana	C	NAPPO (2008) Phytosanitary Alert System: Confirmation of Huanglongbing or Citrus Greening ('Candidatus Liberibacter asiaticus') in Louisiana - United States. http://www.pestalert.org/oprDetail.cfm?oprID=321&keyword=liberibacter%20asiaticus. [Algiers, Orleans Parish. First record.]	
			Luck, R. F.; Gumpf, D. J.; Morse, J. G. (1996) A summary of citrus pest problems in the Near East. FAO Plant Production and Protection Paper No. 135, pp 309-349.				NAPPO (2010) Phytosanitary Alert System: Confirmation of Citrus Greening (Candidatus Liberibacter asiaticus) in the Virgin Islands. http://www.pestalert.org/oprDetail.cfm?oprID=430&keyword=liberibacter%20asiaticus. [Orleans and Washington Parishes.]	
AFRICA								
Ethiopia	-	X	Saponari, M.; Bac, G.; Breithaupt, J.; Loconsole, G.; Yokomi, R. K.; Catalano, L. (2010) Plant Disease 94 (4), 482.		South Carolina	C	NAPPO (2009) Phytosanitary Alert System: Confirmation of Citrus Greening in Charleston County, South Carolina. http://www.pestalert.org/oprDetail.cfm?oprID=373&keyword=liberibacter%20asiaticus. [First record.]	
Mauritius	-	B	Garnier, M.; Jagoueix, S.; Toorawa, P.; Grisoni, M.; Mallessard, R. et al. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 392-394. Department of Plant Pathology, University of California, USA.				NAPPO (2010) Phytosanitary Alert System: Confirmation of Citrus Greening (Candidatus Liberibacter asiaticus) in the Virgin Islands. http://www.pestalert.org/oprDetail.cfm?oprID=430&keyword=liberibacter%20asiaticus. [Beaufort and Charleston Counties.]	
Reunion	-	B	Aubert, B.; Quilici, S. (1984) Proceedings of the 8th Conference of the International Organization of Citrus Virologists, 100-108. Department of Plant Pathology, University of California, Riverside, USA.		Texas	C	EPPO (2012) EPPO Reporting Service No. 2012/074. European and Mediterranean Plant Protection Organization (EPPO), Paris, France. [San Juan (Hidalgo county). Under eradication.]	
			Etienne, J.; Quilici, S.; Marival, D.; Franck, A. (2001) Fruits (Paris) 56 (5), 307-315. [Detected in 1967.]				NAPPO (2012) Phytosanitary Alert System: APHIS Confirms Citrus Greening (Candidatus Liberibacter asiaticus) in Texas. http://www.pestalert.org/oprDetail.cfm?oprID=512. [San Juan area of Hidalgo County.]	
			Garnier, M.; Jagoueix, S.; Toorawa, P.; Grisoni, M.; Mallessard, R. et al. (1996) Proceedings of the 13th Conference of the International Organization of Citrus Virologists, 392-394. Department of Plant Pathology, University of California, USA.					
			Gottwald, T. R.; Aubert, B.; Xue-Yuan, Z. (1989) Phytopathology 79 (6), 687-693.					
NORTH AMERICA								
Mexico	-	B	NAPPO (2010) Phytosanitary Alert System: Detection of Huanglongbing (Candidatus Liberibacter asiaticus) in the Municipalities of Mazatlan and Escuinapa, Sinaloa, Mexico. http://www.pestalert.org/oprDetail.cfm?oprID=448&keyword=liberibacter%20asiaticus. [Sinaloa.]		Belize	-	B	Manjunath, K. L.; Ramadugu, C.; Majil, V. M.; Williams, S.; Irey, M.; Lee, R. F. (2010) Plant Disease 94 (6), 781.
			NAPPO (2010) Phytosanitary Alert System: Detection of Huanglongbing (Candidatus Liberibacter asiaticus) in the Municipality of Calakmul, Campeche, Mexico. http://www.pestalert.org/oprDetail.cfm?oprID=423&keyword=liberibacter%20asiaticus. [Campeche.]		Costa Rica	-	B	EPPO (2012) EPPO Reporting Service No. 2012/014. European and Mediterranean Plant Protection Organization (EPPO), Paris, France.
			NAPPO (2010) Phytosanitary Alert System: Detection of Huanglongbing (Candidatus Liberibacter asiaticus) in the Municipality of Tecoman, Colima, Mexico. http://www.pestalert.org/oprDetail.cfm?oprID=427&keyword=liberibacter%20asiaticus. [Colima.]					ProMED (2011) Huanglongbing, citrus - Costa Rica: 1st report. Archive Number: 20110223.0593. http://www.promedmail.org. [North.]
					Cuba	-	A	Luis, M.; Collazo, C.; Lauger, R.; Blanco, E.; Pena, I.; Lopez, D.; Gonzalez, C.; Casin, J. C.; Batista, L.; Kitajima, E.; Tanaka, F. A. O.; Salari, R. B.; Teixeira, D. C.; Martins, E. C.; Bové, J. M. (2009) Journal of Plant Pathology 91 (3), 709-712.
								Martínez, Y.; Lauger, R.; Batista, L.; Luis, M.; Iglesia, A.; Collazo, C.; Peña, I.; Casín, J. C.; Cueto, J.; Tablada, L. M. (2009) Plant Pathology 58 (2), 389. [First record.]
USA	-	B			Dominica	-	C	EPPO (2012) EPPO Reporting Service No. 2012/166. European and Mediterranean Plant Protection Organization, Paris, France. [Under official control.]
	California	C	EPPO (2012) EPPO Reporting Service No. 2012/074. European and Mediterranean Plant Protection Organization (EPPO), Paris, France. [Los Angeles County. Under eradication.]					
			NAPPO (2012) Phytosanitary Alert System: APHIS Confirms Citrus Greening (Candidatus Liberibacter asiaticus) in California. http://www.pestalert.org/oprDetail.cfm?oprID=516. [Hacienda Heights, Los Angeles County. First record.]		Dominican Republic	-	B	IPPC (2009) IPPC Official Pest Report, No. DO-1/1. FAO, Rome, Italy. https://www.ippc.int/IPP/En/default.jsp
CENTRAL AMERICA & CARIBBEAN								

Records are based on bibliographic data from the CAB ABSTRACTS database, cultures in the IMI culture collection retained at CABI UK Centre (Egham) and plant quarantine information compiled by EPPO

X: Present, no details A: Present: widespread B: Present, restricted distribution C: Present, few occurrences (D): Absent, formerly present (E): Eradicated (F): Intercepted only

Honduras	-	C	Matos, L.; Hilf, M. E.; Camejo, J. (2009) Plant Disease 93 (6), 668. [Province of Puerto Plata.] ProMED (2010) Huanglongbing, citrus - Nicaragua, Honduras: 1st reports. Archive Number: 20100419.1272. http://www.promedmail.org .
Jamaica	-	A	Brown, S. E.; Oberheim, A. P.; Barrett, A.; McLaughlin, W. A. (2011) New Disease Reports, 24, 25. http://www.ndrs.org.uk/article.php?id=024025 . [Cleome rutidosperma, Pisonia aculeata and Trichostigma octandrum. First record.] EPPO (2012) EPPO Reporting Service No. 2012/014. European and Mediterranean Plant Protection Organization (EPPO), Paris, France.
Nicaragua	-	C	ProMED (2010) Huanglongbing, citrus - Nicaragua, Honduras: 1st reports. Archive Number: 20100419.1272. http://www.promedmail.org .
Puerto Rico	-	B	Estevez de Jensen, C.; Vitoreli, A.; Roman, F. (2010) Phytopathology 100 (6 Suppl.), S34. NAPPO (2009) Phytosanitary Alert System: Expansion of Federal quarantine area for citrus greening due to the detection in the Commonwealth of Puerto Rico. http://www.pestalert.org/oprDetail.cfm?oprID=407&keyword=liberibacter%20asiaticus . [Municipalities of Carolina, Ceiba, Culebra, and San Sebastian.] NAPPO (2010) Phytosanitary Alert System: Confirmation of Citrus Greening (Candidatus Liberibacter asiaticus) in the Virgin Islands. http://www.pestalert.org/oprDetail.cfm?oprID=430&keyword=liberibacter%20asiaticus .
United States Virgin Islands	-	B	NAPPO (2010) Phytosanitary Alert System: Confirmation of Citrus Greening (Candidatus Liberibacter asiaticus) in the Virgin Islands. http://www.pestalert.org/oprDetail.cfm?oprID=430&keyword=liberibacter%20asiaticus . [St. Croix.]

SOUTH AMERICA

Argentina	-	C	ProMED (2012) Huanglongbing, citrus - Argentina: first report, (Misiones). Archive no. 20120917.1296650. http://www.promedmail.org [Andresito area of Misiones.]
Brazil	-	X	Coletta Filho, H. D.; Targon, M. L. P. N.; Takita, M. A.; Negri, J. D. de; Pompeu, J. Jr; Machado, M. A.; Amaral, A. M. do; Muller, G. W. (2004) Plant Disease 88 (12), 1382. [First record.]
Minas Gerais		X	EPPO (2009) EPPO Reporting Service No. 2009/200. European and Mediterranean Plant Protection Organization (EPPO), Paris, France. [Reported in 241 municipalities in São Paulo, Paraná and Minas Gerais states.] Lopes, S. (2009) Phytopathology 99 (6), S 156.
Parana		X	EPPO (2009) EPPO Reporting Service No. 2009/200. European and Mediterranean Plant Protection Organization (EPPO), Paris, France. [Reported in 241 municipalities in São Paulo, Paraná and Minas Gerais states.] Lopes, S. (2009) Phytopathology 99 (6), S 156.
Sao Paulo		X	Bove, J. M.; Ayres, A. J. (2007) IUBMB Life 59 (4/5), 346-354. EPPO (2009) EPPO Reporting Service No. 2009/200. European and Mediterranean Plant Protection Organization (EPPO), Paris, France. [Reported in 241 municipalities in São Paulo, Paraná and Minas Gerais states.] Lopes, S. A.; Frare, G. F.; Camargo, L. E. A.; Wulff, N. A.; Teixeira, D. C.; Bassanezi, R. B.; Beattie, G. A. C.; Ayres, A. J. (2010) Plant Pathology 59 (6), 1044-1053. Teixeira, D. C.; Wulff, N. A.; Martins, E. C.; Kitajima, E. W.; Bassanezi, R.; Ayres, A. J.; Eveillard, S.; Saillard, C.; Bove, J. M. (2008) Phytopathology 98 (9), 977-984.

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Papua New Guinea	-	B	Davis, R. I.; Gunua, T. G.; Kame, M. F.; Tenakanai, D.; Ruabete, T. K. (2005) Australasian Plant Pathology 34 (4), 517-524. [Vanimo, Sandaun Province.] EPPO (2003) EPPO Reporting Service No. 2003/067. European and Mediterranean Plant Protection Organization, Paris, France. [Sandaun Province.] ProMED (2003) Citrus huanglongbing - Papua New Guinea (Sandaun). Archive no.: 20030528.1307. http://www.promedmail.org . [Sandaun Province.]
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Vectored by the Asian citrus psyllid (*Diaphorina citri*).

References to the Indian states of Bihar, Gujarat, Himachal Pradesh, Kerala, Madhya Pradesh and Tamil Nadu, and also to Hong Kong (China) in the previous editions of this map cannot be traced.