

## SUPPLEMENTARY DATA

**TABLE S1.** Hybridization with single probes specific to plant virus species

| Family                   | Genus                | Virus  | References                                     |
|--------------------------|----------------------|--|--|
| <i>Alphaflexiviridae</i> | <i>Potexvirus</i>    | <i>Cymbidium mosaic virus</i> (CyMV)                           | Chia et al., 1992                              |
| <i>Alphaflexiviridae</i> | <i>Potexvirus</i>    | <i>Papaya mosaic virus</i> (PMV)                               | Roy et al., 1988                               |
| <i>Alphaflexiviridae</i> | <i>Potexvirus</i>    | <i>Potato virus X</i> (PVX)                                    | Baulcombe et al., 1984; Nikolaeva et al., 1990 |
| <i>Amalgamaviridae</i>   | <i>Amalgavirus</i>   | <i>Southern tomato virus</i> (STV)                             | Puchades et al., 2017                          |
| <i>Betaflexiviridae</i>  | <i>Carlavirus</i>    | <i>Potato virus M</i> (PVM)                                    | Nikolaeva et al., 1990                         |
| <i>Betaflexiviridae</i>  | <i>Carlavirus</i>    | <i>Potato virus S</i> (PVS)                                    | Nikolaeva et al., 1990                         |
| <i>Betaflexiviridae</i>  | <i>Citivirus</i>     | <i>Citrus leaf blotch virus</i> (CLBV)                         | Galipienso et al., 2004                        |
| <i>Bromoviridae</i>      | <i>Cucumovirus</i>   | <i>Cucumber mosaic virus</i> (CMV)                             | Juan et al., 2007                              |
| <i>Bromoviridae</i>      | <i>Ilarvirus</i>     | <i>Apple mosaic virus</i> (ApMV)                               | Saade et al., 2000                             |
| <i>Bromoviridae</i>      | <i>Ilarvirus</i>     | <i>Parietaria mottle virus</i> (PMoV)                          | Galipienso et al., 2005                        |
| <i>Bromoviridae</i>      | <i>Ilarvirus</i>     | <i>Prune dwarf virus</i> (PDV)                                 | Saade et al., 2000                             |
| <i>Bromoviridae</i>      | <i>Ilarvirus</i>     | <i>Prunus necrotic ringspot virus</i> (PNRSV)                  | Sánchez et al., 1998                           |
| <i>Bromoviridae</i>      | <i>Ilarvirus</i>     | <i>Tobacco streak virus</i> (TSV)                              | Stenger et al., 1987                           |
| <i>Caulomoviridae</i>    | <i>Badnavirus</i>    | <i>Citrus yellow mosaic virus</i> (CYMV)                       | Gopi et al., 2010                              |
| <i>Closteroviridae</i>   | <i>Ampelovirus</i>   | <i>Grapevine leafroll-associated closterovirus 3</i> (GLRaV-3) | Saldarelli et al., 1994                        |
| <i>Closteroviridae</i>   | <i>Closterovirus</i> | <i>Citrus tristeza virus</i> (CTV)                             | Narváez et al., 2000                           |
| <i>Geminiviridae</i>     | <i>Begomovirus</i>   | <i>Abutilon mosaic virus</i> (AbMV)                            | Horns and Jeske, 1991                          |
| <i>Geminiviridae</i>     | <i>Begomovirus</i>   | <i>Tomato leaf curl New Delhi virus</i> (ToLCNDV)              | Alfaro-Fernández et al., 2016                  |
| <i>Geminiviridae</i>     | <i>Begomovirus</i>   | <i>Tomato yellow leaf curl Sardinia virus</i> (TYLCSV)         | Alfaro-Fernández et al., 2016                  |
| <i>Geminiviridae</i>     | <i>Begomovirus</i>   | <i>Tomato yellow leaf curl virus</i> (TYLCV)                   | Alfaro-Fernández et al., 2016                  |
| <i>Luteoviridae</i>      | <i>Luteovirus</i>    | <i>Barley yellow dwarf virus</i> (BYDV)                        | Figueira et al., 1997                          |
| <i>Ophioviridae</i>      | <i>Ophiovirus</i>    | <i>Citrus psorosis virus</i> (CPSV)                            | Martín et al., 2004                            |
| <i>Potyviridae</i>       | <i>Ipomovirus</i>    | <i>Cucumber vein yellowing virus</i> (CVYV)                    | Rubio et al., 2003                             |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Bean common mosaic virus</i> (BCMV)                         | Bijaisoradat and Kuhn, 1988                    |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Bean yellow mosaic virus</i> (BYMV)                         | Tracy et al., 1991                             |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Clover yellow vein virus</i> (CYV)                          | Tracy et al., 1991                             |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Papaya ringspot virus</i> (PRSV)                            | Juan et al., 2007                              |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Peanut mottle virus</i> (PeMoV)                             | Bijaisoradat and Kuhn, 1988                    |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Plum pox virus</i> (PPV)                                    | Palkovics et al., 1994                         |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Potato virus Y</i> (PVY)                                    | Nikolaeva et al., 1990                         |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Watermelon mosaic virus</i> (WMV)                           | Juan et al., 2007                              |
| <i>Potyviridae</i>       | <i>Potyvirus</i>     | <i>Zucchini yellow mosaic virus</i> (ZYMV)                     | Juan et al., 2007                              |
| <i>Secoviridae</i>       | <i>Comovirus</i>     | <i>Squash mosaic virus</i> (SqMV)                              | Juan et al., 2007                              |
| <i>Secoviridae</i>       | <i>Fabavirus</i>     | <i>Broad bean wilt virus 1</i> (BBWV-1)                        | Ferriol et al., 2015                           |
| <i>Secoviridae</i>       | <i>Fabavirus</i>     | <i>Broad bean wilt virus 2</i> (BBWV-2)                        | Ferriol et al., 2015                           |
| <i>Secoviridae</i>       | <i>Fabavirus</i>     | <i>Cucurbit mild mosaic virus</i> (CuMMV)                      | Ferriol et al., 2015                           |
| <i>Secoviridae</i>       | <i>Fabavirus</i>     | <i>Gentian mosaic virus</i> (GeMV)                             | Ferriol et al., 2015                           |
| <i>Secoviridae</i>       | <i>Fabavirus</i>     | <i>Lamium mild mosaic virus</i> (LMMV)                         | Ferriol et al., 2015                           |
| <i>Secoviridae</i>       | <i>Nepovirus</i>     | <i>Arabis mosaic virus</i> (ArMV)                              | Jelkman et al., 1988                           |
| <i>Tombusviridae</i>     | <i>Carmovirus</i>    | <i>Carnation mottle virus</i> (CarMV)                          | Sánchez-Navarro et al., 1996                   |
| <i>Tombusviridae</i>     | <i>Carmovirus</i>    | <i>Melon necrotic spot virus</i> (MNSV)                        | Gosalvez et al., 2003                          |
| <i>Tospoviridae</i>      | <i>Orthospovirus</i> | <i>Tomato spotted wilt virus</i> (TSWV)                        | Huguenot et al., 1990                          |
| <i>Virgaviridae</i>      | <i>Tobamovirus</i>   | <i>Cucumber green mottle mosaic virus</i> (CGMMV)              | Francki and Palukaitis, 1986                   |
| <i>Virgaviridae</i>      | <i>Tobamovirus</i>   | <i>Odontoglossum ringspot virus</i> (ORSV)                     | Chia et al., 1992                              |
| <i>Virgaviridae</i>      | <i>Tobamovirus</i>   | <i>Tobacco mosaic virus</i> (TMV)                              | Sela et al., 1984                              |
| <i>Virgaviridae</i>      | <i>Tobravirus</i>    | <i>Tobacco rattle virus</i> (TRV)                              | Van der Vlugt et al., 1988                     |

**TABLE S2.** PCR assays with conserved primers for plant virus families and genera

| <b>Family</b>  | <b>Genera</b>   |
|--|---|
| <i>Alphaflexiviridae</i>   | <i>Potexvirus</i> (van der Vlugt et al., 2002)  |
| <i>Aspiviridae</i>   | <i>Ophiovirus</i> (Vaira et al., 2003)  |
| <i>Bromoviridae</i> (Untiveros et al., 2010)   | <i>Bromovirus</i> + <i>Cucumovirus</i> (Seo et al., 2014)<br><i>Cucumovirus</i> (Choi et al., 1999)<br><i>Ilarvirus</i> (Untiveros et al., 2010; Candresse et al., 1997; Saade et al., 2000)  |
| <i>Betaflexiviridae</i>  | <i>Carlavirus</i> (Badge et al., 1996; Nie et al., 2008)<br><i>Capillovirus</i> (Foissac et al., 2005)<br><i>Foveavirus</i> (Dovas and Katis, 2003b; Foissac et al., 2005)<br><i>Trichovirus</i> (Saldarelli et al., 1998; Foissac et al., 2005)<br><i>Vitivirus</i> (Dovas and Katis, 2003b) |
| <i>Caulimoviridae</i>  | <i>Badnavirus</i> (Thomson et al., 1996),<br><i>Caulimovirus</i> (Pappu and Druffel, 2009)  |
| <i>Closteroviridae</i>   | <i>Ampelovirus</i> (Maliogka et al., 2008),<br><i>Crinivirus</i> + <i>Closterovirus</i> (Tian et al., 1996)<br><i>Closterovirus</i> (Karasev et al., 1994; Saldarelli et al., 1998; Dovas and Katis, 2003a),<br><i>Crinivirus</i> (Wintermantel and Hladky, 2010)                             |
| <i>Fimoviridae</i> (Elbeaino et al., 2013)   |   |
| <i>Geminiviridae</i>   | <i>Begomovirus</i> (Rojas, 1993; Deng et al., 1994; Reddy et al., 2005),<br><i>Mastrevirus</i> (Rybicki and Hughes, 1990; Willment et al., 2001)  |
| <i>Luteoviridae</i> (Chomič et al., 2010)  | <i>Polerovirus</i> (Lotos et al., 2014)<br><i>Luteovirus</i> + <i>Polerovirus</i> (Robertson et al., 1991)  |
| <i>Potyviridae</i> (Gibbs and Mackenzie, 1997; Chen and Adams, 2001)   | <i>Potyvirus</i> (Pappu et al., 1993; Colinet et al., 1994; Van der Vlugt et al., 1999; Hsu et al., 2005; Ha et al., 2008; Zheng et al., 2010)  |
| <i>Secoviridae</i>   | <i>Comovirus</i> + <i>Fabavirus</i> + <i>Nepovirus</i> (Maliogka et al., 2004),<br><i>Fabavirus</i> (Panno et al., 2014)<br><i>Nepovirus</i> (Wetzel et al., 2002)<br><i>Torradovirus</i> (Verbeek et al., 2012)  |
| <i>Tombusviridae</i>   | <i>Betacarmovirus</i> + <i>Dianthovirus</i> + <i>Tombusvirus</i> (Morozov et al., 1995)   |
| <i>Tospoviridae</i> (Mumford et al., 1996; Chu et al., 2001; Okuda and Hanada, 2001; Hassani-Mehraban et al., 2016; Bald-Blume et al., 2017) |   |
| <i>Tymoviridae</i> (Sabanadzovic et al., 2000)   |   |
| <i>Virgaviridae</i>  | <i>Tobamovirus</i> (Letschert et al., 2002; Dovas et al., 2004; Li et al., 2018)  |

**TABLE S3.** LAMP assays for plant viruses

| Family   | Genus                    | Virus  | Reference  |
|--|--------------------------|--|--|
| <i>Alphaflexiviridae</i>                         | <i>Potexvirus</i>        | <i>Cymbidium mosaic virus</i> (CymMV)<br><i>Pepino mosaic virus</i> (PepMV)                                | Lee et al., 2011<br>Bhat et al., 2013                                      |
| <i>Amalgaviridae</i>                             | <i>Amalgavirus</i>       | <i>Southern tomato virus</i> (STV)   | Elvira-Gonzalez et al., 2017   |
| <i>Betaflexiviridae</i>                          | <i>Carlavirus</i>        | <i>Lily symptomless virus</i> (LSV)  | He et al., 2016  |
| <i>Bromoviridae</i>                              | <i>Cucumovirus</i>       | <i>Cucumber mosaic virus</i> (CMV)<br><i>Tomato aspermy virus</i> (TAV)                                    | Bhat et al., 2013<br>Liu et al., 2010a                                     |
|  | <i>Ilarvirus</i>         | <i>Prunus necrotic ringspot virus</i> (PNRSV)  | Zong et al., 2014  |
| <i>Caulimoviridae</i>                            | <i>Badnavirus</i>        | <i>Banana streak virus</i> (BSV)<br><i>Piper yellow mottle virus</i> (PYMV)                                | Peng et al., 2012a<br>Bhat et al., 2013                                    |
|  | <i>Tungrovirus</i>       | <i>Rice tungro bacilliform virus</i> (RTBV)  | Le et al., 2010  |
| <i>Closteroviridae</i>                           | <i>Closterovirus</i>     | <i>Citrus tristeza virus</i> (CTV)   | Ghosh et al., 2019   |
|  | <i>Crinivirus</i>        | <i>Cucurbit chlorotic yellows virus</i> (CCYV)<br><i>Tomato chlorosis virus</i> (ToCV)                     | Wang et al., 2014<br>Kil et al., 2015                                      |
| <i>Geminiviridae</i>                             | <i>Begomovirus</i>       | <i>Tomato leaf curl Sinaloa virus</i> (ToLCSiV)  | Herrera-Vásquez et al., 2018   |
|  |                          | <i>Potato yellow mosaic Panama virus</i> (PYMPV)   | Herrera-Vásquez et al., 2018   |
|  |                          | <i>Tomato leaf curl Bangalore virus</i> (ToLCBaV)  | Arutselvan et al., 2017  |
|  |                          | <i>Tomato yellow mottle virus</i> (TYMoV)  | Herrera-Vásquez et al., 2018   |
|  |                          | <i>Tomato yellow leaf curl virus</i> (TYLCV)<br><i>Squash leaf curl virus</i> (SLCV)                       | Fukuta et al., 2003b<br>Kuan et al., 2010                                  |
| <i>Luteoviridae</i>                              | <i>Luteovirus</i>        | <i>Barley yellow dwarf virus</i> (BYDV)  | Zhao et al., 2010  |
|  | <i>Polerovirus</i>       | <i>Potato leafroll virus</i> (PLRV)  | Leone et al., 1997; Ahmadi et al., 2013                                    |
| <i>Nanoviridae</i>                               | <i>Babuvirus</i>         | <i>Banana bunchy top virus</i> (BBTV)  | Peng et al., 2012b   |
| <i>Phenuiviridae</i>                             | <i>Tenuivirus</i>        | <i>Rice grassy stunt virus</i> (RGSV)  | Le et al., 2010  |
|  |                          | <i>Rice stripe virus</i> (RSV)   | Le et al., 2010  |
| <i>Potyviridae</i>                               | <i>Bymovirus</i>         | <i>Wheat yellow mosaic virus</i> (WYMV)  | Zhang et al., 2011   |
|  | <i>Potyvirus</i>         | <i>Sugarcane mosaic virus</i> (SCMV)   | He et al., 2016  |
|  |                          | <i>Japanese yam mosaic virus</i> (JYMV)  | Fukuta et al., 2003a   |
|  |                          | <i>Plum pox virus</i> (PPV)  | Nie, 2005; Varga and James, 2006;<br>Olmos et al., 2007; Zhao et al., 2012 |
|  |                          | <i>Potato virus Y</i> (PVY)  | Przewodowska et al., 2015  |
|  |                          | <i>Sorghum mosaic virus</i> (SrMV)   | He et al., 2016  |
|  |                          | <i>Tobacco etch virus</i> (TEV)  | Zhao et al., 2012  |
| <i>Tobacco vein banding mosaic virus</i> (TVBMV) | Zhao et al., 2012        |  |  |
| <i>Reoviridae</i>                                | <i>Fijivirus</i>         | <i>Rice black-streaked dwarf virus</i> (RBSDV)<br><i>Southern rice black-streaked dwarf virus</i> (SRBSDV) | Le et al., 2010<br>Zhou et al., 2012                                       |
|  | <i>Oryzavirus</i>        | <i>Rice ragged stunt virus</i> (RRSV)  | Le et al., 2010  |
|  | <i>Phytoreovirus</i>     | <i>Rice gall dwarf virus</i> (RGDV)<br><i>Rice dwarf virus</i> (RDV)                                       | Le et al., 2010<br>Le et al., 2010   |
| <i>Rhabdoviridae</i>                             | <i>Nucleorhabdovirus</i> | <i>Rice transitory yellowing virus</i> (RTYV)  | Le et al., 2010  |
| <i>Secoviridae</i>                               | <i>Comovirus</i>         | <i>Bean pod mottle virus</i> (BPMV)  | Wei et al., 2012   |
|  | <i>Torradovirus</i>      | <i>Tomato torrado virus</i> (ToTV)   | Budziszewska et al., 2016  |
| <i>Sequiviridae</i>                              | <i>Waikavirus</i>        | <i>Rice tungro spherical virus</i> (RTSV)  | Le et al., 2010  |
| <i>Tospoviridae</i>                              | <i>Orthotospovirus</i>   | <i>Tomato spotted wilt virus</i> (TSWV)  | Fukuta et al., 2004  |
| <i>Virgaviridae</i>                              | <i>Tobamovirus</i>       | <i>Tobacco mosaic virus</i> (TMV)  | Liu et al., 2010b  |

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