

Table S1: Phytoplasma groups and their distribution, hosts, symptoms and vectors in the Middle East

Plant	Province/District	Symptoms	16Sr Group/subgroup	Vector status	Detection method	GenBank acc. No.	Reference
Iran							
Fruit crops							
Almond (<i>Prunus dulcis</i>)	Fars, Chaharmahal-O- Bakhtiari, Isfahan	Sever proliferation, little leaves, internode shortening, leaf necrosis, dieback	IX-C II-C XII-A VI-D	<i>Frutioidea bisignata</i>	SA*, RFLP	DQ195209 DQ195210	(Salehi et al., 2006; Zirak et al., 2009a)
<i>Citrus aurantifolia</i>	Sistan and Baluchestan, Hormozgan, Kerman	Proliferation of axillary shoots, little leaves, yellowing, internode shortening	II-B	<i>Hishimonus phycitis</i>	RFLP, EM, TEM, SA	U15442	(Bove and Garnier, 2000)
<i>Prunus scoparia</i>	Fars, Kerman, Kohgiluye and Boyer Ahmad, Isfahan,	Yellowing, witches' broom	IX-B	UK	SA, RFLP	KM235725	(Salehi et al., 2015b)
GF-677*	Fars	Witches' broom, internode shortening, little leaves, proliferation of slender upright shoots, stunting, dieback	IX-B	UK	SA, RFLP	JF781493-4	(Salehi et al., 2011a)

Peach (<i>Prunus persica</i>)	Isfahan, Chaharmahal-O-Bakhtiari, Tehran, Kurdistan	Yellowing, resetting, leaf rolling, little leaf, bronzing of foliage	II-C XII-A VI-A IX-D IX-B	UN	SA, RFLP	FJ204393-6	(Zirak et al., 2010b; Salehi et al., 2020)
Russian Olive tree (<i>Elaeagnus angustifolia</i>)	Urmia, Azarbaijan Sharghi	Little leaves, axillary shoot proliferation, internode shortening, witches' broom, resetting, dieback	I-A	<i>Macropsis infuscata</i>	SA	EU886968	(Rashidi et al., 2010a; Hajizadeh et al., 2017)
Grapevine (<i>Vitis vinifera</i>)	Isfahan, Chaharmahal-O-Bakhtiari, Yazd, Markazi, Hamedan, Qazvin, Lorestan, Markazi, Fars	Leaf rolling, leaf yellowing, leaf reddening, decline, thickening and downward rolling of leaves, vein chlorosis, necrosis, shoot dieback, stunting	XII-A II-B VII-A IX-C I-B	<i>Psammotettix alienus</i> <i>Agallia ribauti</i>	SA, RFLP	KJ637201-7 KX267563 KX247852 KY745782	(Mirchenari et al., 2015; Salehi et al., 2016a; Babaei et al., 2019; Zamharir et al., 2019)
Sweet cherry (<i>Prunus avium</i>)	Isfahan, Tehran	Leaf rolling, witches' broom, rosetting	I-B II-B	UN	SA, RFLP	FJ204397-8	(Zirak et al., 2010a)
Plum (<i>Prunus domestica</i>)	Tehran, Isfahan, Chaharmaha-O-Bakhtiari, Mazandran	Leaf rolling, little leaf, resetting, yellowing, shoot proliferation	II-B XII-A X-F	UK	SA, RFLP	FJ409624 FJ204400 KF739403	(Zirak et al., 2009b; Allahverdi et al., 2014)
Apricot (<i>Prunus armeniaca</i>)	Fars	Leaf yellowing, inward leaf curl, scorch of leaf margins, shortened	IX-B II-C	UK	SA, RFLP	KY014991-3	(Salehi et al., 2018c; Rasoulpour et al., 2019)

		internodes, rosette, decline, stunting					
Pomegranate (<i>Punica granatum</i>)	Fars, Khorasan	Yellowing, little leaf, internode shortening, witches' broom, decline, small and malformed fruits, dried and discolored seeds Redenning and thickening of veins, dieback	II-D III-A	UK	SA, RFLP	KT265695	(Karimi et al., 2015; Salehi et al., 2016b)
Pistachio (<i>Pistachia vera</i>)	Qazvin, Kerman, Khorasan Razavi, Qom, Yazd	Sever witches' broom, stunted growth, leaf resetting, leaf narrowing, yellowing, malformation, proliferation	XII-A IX II	UK	SA, FLP	GQ379222 MF037208	(Ghayeb Zamharir and Mirabolfathi, 2011; Ghayeb Zamharir, 2018b)
Pear (<i>Prunus communis</i>)	Fars, Isfahan, Tehran, Khorasan	Grown reduction, leaf curl, abnormal reddening of foliage, defoliation and slow decline	X-C X-B I-B	UN	SA, RFLP	DQ471321 KC902810 KC902808	(Salehi et al., 2008b; Hashemi-Tameh et al., 2014b)
Apple (<i>Malus domestica</i>)	Isfahan, Chaharmahal-O- Bakhtiari	Defoliation, dieback, fruit anomalies, leaf rolling, little leaf, proliferation, resetting, stipule	I II-B	UK	SA, RFLP	KC902794- 9	(Hashemi-Tameh et al., 2014a)

		enlargement, yellowing, decline					
<i>Citrus sinensis</i>	Hormozgan, Kerman, Sistan nad Baluchestan	Decline, yellowing	II-B IX	<i>Diaphorina citri</i>	SA	MN104092	(Abbasi et al., 2019)
<i>Citrus reticulata</i>	Hormozgan, Kerman	Vein clearing, mottling, leaf yellowing,	II-B	<i>Hishimonus phycitis</i>	SA		(Djavaheri and Rahimian, 2004)
<i>Citrus medica</i>	Kerman	Witches' broom	II-B	UN	SA		(Azadvar et al., 2015)
Limequat (<i>Citrus aurantifolia</i> × <i>Fortunella</i>)	Hormozgan	Witches' broom, little leaf, internode shortening	II-B	UN	SA	KY171947	(Faghihi et al., 2017)
Date palm (<i>Phoenix dactylifera</i>)	Khuzestan	Streak yellow leaves	VI-A VII-A	UN	SA	KX374967	(Ghayeb Zamharir and Eslahi, 2019)
<i>Prunus armeniaca</i>	Sistan –O- Baluchestan	rosette	IX-B	UN	SA		(Zamharir and Nazari, 2019)
Chikoo (<i>Manilkara zapota</i>)	Hormozgan	Fasciation, little leaves, internode shortening	II-B	UN	SA	KY171945	(Bagheri et al., 2017)
Oleaster (<i>Elaeagnus angustifolia</i>)	Qazvin, Azarbaijan Sharghi, Isfahan	Proliferation, witches' broom	II-C	UN	SA	MN877915	(Zamharir and Mohammadipour, 2016)
Barberry (<i>Berberis vulgaris</i>)	Khorasan	Stem fasciation, little leaf	II-C	UN	SA, VRFLP	KT879852	(Tavanaei et al., 2016)
Vegetables and Peas							
Tomato (<i>Solanum lycopersicon</i>)	Bushehr, Fars, Markazi,	Witches' broom, long, curved spindly shoots,	II-D XII-A I-B	UK	SA, RFLP	KC182528	(Salehi and Hosseini, 2016)

	Ardabil, Kurdistan, Khorasan, Azarbaijan Gharbi, Azarbaijan Sharghi, Kermanshah, Urmia	little leaves, big bud, swollen and virescence bud, bushy	VI-A IX-E				
Cabbage (<i>Brassica olearacea</i>)	Fars	Stunting, little leaves, yellowing, opening the head, proliferation of the buds, witches' broom	VI-A	<i>Circulifer haematoceps</i>	SA, RFLP	DQ195214	(Salehi et al., 2007b)
Potato (<i>Solanum tuberosum</i>)	Isfahan, Tehran, Chaharmahal-O- Bakhtiari, Hamedan, East Azerbaijan, Kermanshah, Alborz	Little leaf, leaf rolling, stunting, slight purple top, discoloration of newly growth, swollen node, formation of aerial tubers	VI-A I-B XII-A VI-D	UK	SA, RFLP	FJ427296-7 EU649681 EU661607	(Hosseini et al., 2011)
Cucumber (<i>Cucumis sativus</i>)	Yazd, Kerman, Urmia; Fars, Tehran	Proliferation of short spindly shoot along the stem, little leaves, shortening internodes, fruit cracking, virescence, phyllody, branch	II-M VI-A	<i>Orosius albicinctus</i>	SA, RFLP	KR822804 GQ861500	(Salehi et al., 2015c; Zibadoost et al., 2016; Esmailzadeh- Hosseini et al., 2019)

		malformation, witches' broom					
Squash (<i>Cucurbita</i> sp.)	Yazd, Urmia	Proliferation of short spindly shoot along the stem, little leaves, shortening internodes, fruit cracking, virescence, phyllody, branch malformation, witches' broom	II-D VI-A	<i>Orosius albicinctus</i>	SA,RFLP	KR822805	(Salehi et al., 2015c; Zibadoost et al., 2016)
Garden beet (<i>Beta vulgaris</i>)	Yazd	Narrow leaves grown from crown, internode shortening, excessive growth of axillary buds, stunting, yellowing with gradual reddening of the lower leaves	II-E	<i>Orosius albicinctus</i>	SA, RFLP	DQ327722	(Mirzaie et al., 2007)
Spinach (<i>Spinacia oleracea</i>)	Kerman	Yellowing, proliferation	I-B	UK	SA, RFLP	GQ861505	(Tazehkand et al., 2010a)
Eggplant (<i>Solanum melongena</i>)	Hormozgan	phyllody	IX-C	UK	SA, RFLP	JX464669	(Tohidi et al., 2015)
Onion (<i>Allium cepa</i>)	Isfahan	Flower malformation	I-B	UK	SA, RFLP	HM626107	(Sichani et al., 2014)

lettuce (<i>Lactuca sativa</i>)	Isfahan	Leaf deformation	I-B IX-B	<i>Neoliturus fenetratus</i>	SA, RFLP	JQ015290	(Salehi et al., 2007a; Sichani et al., 2014)
Carrot (<i>Daucus carota</i>)	Yazd, Isfahan	Little leaf, yellowing, proliferation, stunting of taproot, virescence, phyllody, reddening, witches' broom	II-C I-L	<i>Orosius albicinctus</i>	SA, RFLP	HQ286477	(Salehi et al., 2016c)
Bell pepper (<i>Capsicum annum</i>)	Hormozgan	Yellowing, big bud, little leaf, virescence	II-D	UN	SA	KR706433-4	(Faghihi et al., 2016)
<i>Capsicum frutescens</i>	Urmia	Dwarfing, witches' broom, little leaves	VI-B	UN	SA	KT807466	(Zibadoost et al., 2016)
Red cabbage (<i>Barssica oleracea</i>)	Urmia	Little leaf	VI-D		SA	KT807469	
<i>Phaseolus vulgaris</i>	Urmia	Little leaf	VI-A		SA	KT807468	
Faba bean (<i>Vicia faba</i>)	Fars, Bushehr	Proliferation of axillary buds from the stem, little leaf, flower virescence, phyllody, proliferation, flower sterility	II-D	<i>Orosius albicinctus</i>	SA, RFLP	KU501295	(Salehi et al., 2016e)
<i>Eruca sativa</i>	Yazd	Crown proliferation, witches' broom, little leaf, flower	I-B	UN	SA, VRFLP	KT626568	(Esmailzadeh Hosseini et al., 2015)

		virescence, phyllody, sterility and stunting					
Scallion (<i>Allium cepa</i>)	Yazd Isfahan	Flower malformation	I-L	UN	SA, RFLP	HM626109	(Sichani et al., 2014)
Parsley (<i>Petroselinum crispum</i>)	Yazd	Development of short spindly shoots from crown buds, little leaf, yellowing, witches' broom, stunting, phyllody and virescence	II-D	UN	SA, RFLP	KU501295	(Salehi et al., 2016d)
Soybean (<i>Glycine max</i>)	Golestan, Mazandran	Bud proliferation, aborted seed pods,	VI-B	UN	SA	MG992479-80	(Ghayeb Zamharir and Aldaghi, 2018)
Ornamental plants							
Tagetes (<i>Tagetes patula</i>)	Markazi	Witches' broom, virescence, early decline, purpling of leaves	I-B	UK	SA, RFLP	NA	(Babaie et al., 2007a)
Swan plant (<i>Gomphocarpus physocarpus</i>)	Markazi	Witches' broom, dwarfing, yellowing and purpling	I-B	UN	SA, RFLP	NA	
Periwinkle (<i>Cartharanthus roseus</i>)	Markazi	Yellowing, dwarfing, witches' broom, phyllody	I-A	UN	SA, RFLP	NA	
Tanacetum (<i>Tanacetum partenium</i>)	Markazi	Phyllody, stunting	I-B	UN	SA, RFLP	NA	

Cockscomb (<i>Celosia argenta</i>)	Markazi	Dwarfing, leaf yellowing, phyllody, dieback	VI-A	UN	SA, RFLP	NA	
Black-eyed Susan (<i>Rudbeckia hirta</i>)	Markazi	Phyllody, dwarfing, virescence	I-A	UN	SA, RFLP	NA	
Tickseed (<i>Cereopsis lanceolata</i>)	Markazi	Dwarfing, witches' broom, phyllody	I-B				
Aegean wallflower (<i>Erysium cheiri</i>)	Kerman	Witches' broom, phyllody	II	UK	SA, RFLP	GQ861503	(Tazehkand et al., 2010b)
Gaillardia	Markazi	phyllody	I-B	UK	SA, RFLP	HQ286479,	(Sichani et al., 2014)
China aster	Markazi	Yellowing and stunting	I-B	UK	SA, RFLP	HQ286480	(Sichani et al., 2014)
<i>Zinnia elegans</i>	Hormozgan	Phyllody, virescence, witches' broom, little leaf, yellowing	II-D	<i>Austroagalia sinuata</i>	SA	KY501142	(Hemmati and Nikooei, 2017; 2019a)
<i>Petunia hybrida</i>	Sistan and Baluchestan	Witches' broom, yellowing, little leaf, phyllody, virescence	II-B	UK	SA	JX570935	(Faghihi et al., 2014)
Marigold (<i>Calendula officinalis</i>)	Yazd	Little leaves, yellowing, phyllody, virescence, proliferation and sterility of flower,	II-D	UK	SA	KU297202	(Esmailzadeh Hosseini et al., 2011a)

		proliferation of axillary buds, witches' broom, stunting					
<i>Chrysanthemum morifolium</i>	Markazi	Little leaves, stunting, reddish and chlorotic discoloration	IX-D	UN	SA, RFLP	KC176800	(Ghayeb Zamhari, 2017)
<i>Phoenix canariensis</i>	Khuzestan	Leaf yellowing	II-D	UN	SA, RFLP	KX088466	(Azimi et al., 2016)
<i>Cota tinctoria</i>	Hormozgan	Witches' broom, stunting, twisting of the shoots, little leaf	VI-A	<i>Orosius albicinctus</i>	SA	MG569790	(Hemmati et al., 2018)
<i>Petunia violacea</i>	Hormozgan	Witches' broom, little leaves, phyllody, virescence	II-D	<i>Orosius albicinctus</i>	SA, VRFLP	MH450237	(Hemmati et al., 2019b)
Mexican aster <i>Cosmos bipinnatus</i>	Hormozgan	Phyllody, virescence, little leaf, stunting	II-D	UN	SA	MF186858	(Nikooei et al., 2017)
<i>Rosa canina</i>	Zanjan	Stunting, shortening internode, witches; broom, yellow leaves, little leaves,	XII	UN	SA		(Shahverdi et al., 2016)
<i>Narcissus tazetta</i>	Khuzestan	Proliferation of the petals, virescence, phyllody	XII-A	UN	SA, RFLP	KY315180	(Gholami et al., 2018)
<i>Eucalyptus camaldunensis</i>	Fars, Khozestan	Proliferation of auxiliary buds, yellowing, witches' broom, reddening	I-B XII-A	UK	SA, VRFLP	KT992689 KX685876	(Azimi et al., 2017a; Baghaee-Ravari et al., 2018)

		and reduction in leaves, decline and death					
Black locust (<i>Robinia pseudoacacia</i>)	Khorasan, Fars	Yellowing, little leaves,	IX-C II-D	UN	SA, VRFLP	KX553989-92	(Karimzade et al., 2018)
White willow (<i>Salix alba</i>)	Alborz, Hamedan	Witches' broom	IX-D VI-A	UN	SA	KX500119 AY390261	(Ghayeb Zamhari, 2017; Ghayeb Zamharir, 2018a)
<i>Conocarpus erecta</i>	Khuzestan	Little leaf, leaf roll, stem fasciation	II-D	UN	SA	KX088465	(Azimi et al., 2017b)
Babylon willow (<i>Salix babylonica</i>)	Isfahan, Markazi, Yazd, Azarbaijan Gharbi	Witches' broom, proliferation of axillary shoots	XII VI-A	UN	SA	MF185361-2	(Ghayeb Zamharir and Taheri, 2017; Shahryari and Allahverdipour, 2018)
<i>Albizia lebeck</i>	Kerman	Shoot proliferation, short internode, witches' broom, twig dieback	II-D	UN	SA, VRFLP	MN121115	(Salari and Azadvar, 2019)
<i>Euonymus japonicus</i>	Tehran	Little leaves, bushy growth	XII-A	UN	SA	GQ273961	(Rashidi et al., 2010b)
<i>Juniperus procubens</i>	Golestan	Witches' broom	VI-A	UN	SA, RFLP	MH422510	(Ghayeb Zamharir et al., 2019)
<i>Tamarix aphylla</i>	Yazd	Proliferation of the shoots, shortened internode, little leaf	II-D	UN	SA, RFLP	MF422724	(Esmailzadeh Hosseini et al., 2017)

<i>Cupressus sempervirens</i>	Tehran	Witches' broom, abnormal shoot proliferation, dieback	II-D	UN	SA	KU647632	(Bahari et al., 2016) Bahari et al., 2016
Oilseed and industrial crops							
Sesame (<i>Sesamum indicum</i>)	Yazd, Fars, Kerman	Witches' broom, phyllody, virescence, yellowing, stem proliferation	II-D II-A VI-A IX-C	<i>Orosius albicinctus</i> ; <i>Neolitrus haematoceps</i>	SA, RFLP		(Salehi et al., 2017)
Rapeseed (<i>Brassica napus</i>)	Fars, Qazvin, Yazd, Isfahan, Kerman	Phyllody and virescence	I-B	<i>Circulifer haematoceps</i>	SA, RFLP	FJ594960	(Salehi et al., 2011b; Asghari Tazehkand et al., 2017)
Sunflower (<i>Helianthus annuus</i>)	Kerman, Isfahan, Yazd, Fars, Urmia	Witches' broom, little leaves, proliferation of axillary shoot, phyllody	VI II-D	UK	SA, RFLP	GQ861502 KJ016231	(Salehi et al., 2009a; Tazehkand et al., 2010a; Salehi et al., 2015a)
Canola (<i>Brassica napus</i>)	Kerman	Witches' broom, phyllody, malformation of pistil	I-C	UK	SA, RFLP	GQ861504	(Tazehkand et al., 2010b)
Safflower (<i>Carthamus tinctorius</i>)	Fars Yazd	Floral virescence, phyllody, proliferation of axillary buds, little leaf	VI-C	UK	SA, RFLP	DQ88948	(Salehi et al., 2008a)
Hemp (<i>Cannabis sativa</i>)	Yazd Fars	Stunting, Yellowing, witches, broom	XII-A IX-C	UK	SA, RFLP	KT245224	(Sichani et al., 2011)

							(Rasoulpour et al., 2017)
Weeds							
Bermuda grass (<i>Cynodon dactylon</i>)	Fars	White leaves	XIV-A XIV-B	<i>Exitianus capicola</i>	RFLP, SA	EF44488 DQ195216	(Salehi et al., 2009b)
Milk weed (<i>Asclepias curassvica</i>)	Central	Witches' broom, dwarfing, phyllody	VI-A	UN	SA, RFLP	NA	(Babaie et al., 2007b)
Prickly lettuce (<i>Lactuca serriola</i>)	Central, Fars, Isfahan	Apical necrosis, witches' broom, decline, Little leaves, proliferation of buds in the crown, reddening of old leaves	I-B IX-B	<i>Neotalitrus fenetratus</i>	SA, RFLP	NA	(Babaie et al., 2007b; Salehi et al., 2007a)
<i>Prosopis farcta</i>	Yazd	Small leaves, shortened internodes, proliferation of axillary buds	II-D	<i>Orosius albicinctus</i>	SA, RFLP		(Esmailzadeh Hosseini et al., 2011b)
<i>Cardaria draba</i>	Yazd	Dwarfing, virescence, phyllody, infertility flowers	II-D	<i>Orosius albicinctus</i>	SA, RFLP		(Esmailzadeh-Hosseini et al., 2011)
<i>Bidens alba</i>	Hormozgan	Phyllody, virescence, witches' broom, little leaves	IX	UK	SA	KY358007	(Hemmati et al., 2017)
Canadian horseweed	Urmia	Leaf malformation, witches' broom	VI-D	UK	SA, VRFLP	KT807470	(Zibadoost and Rastgou, 2016)

<i>(Conyza Canadensis)</i>							
Sophora root (<i>Sophora alopecuroides</i>)	Urmia, Tehran, Mazandran	Yellowing and little leaves, stunting	VI-D XII-A IX-C	UN	SA, VRFLP	KT807471, KF263685	(Allahverdi et al., 2017)
Common madder (<i>Rubia tinctorum</i>)	Urmia	Little leaf	VI-D	UK	SA, VRFLP	KT870472	(Zibadoost and Rastgou, 2016)
Niger seed (<i>Guizotia abyssinica</i>)	Yazd, Isfahan	phyllody	I-L	UN	SA, RFLP	HM626105	(Sichani et al., 2014)
<i>Convolvulus arvensis</i>	Yazd	Witches' broom, dwarfing	XXIX-B XII-Agra	UN	SA, VRFLP		(Esmailzadeh Hosseini et al., 2016b)
<i>Periploca aphylla</i>	Hormozgan	Witches' broom, proliferation, shortening internode, shoot dieback	XXX-A	UN	SA	GQ249159	(Faghihi et al., 2010)
<i>Artemisia sieberi</i>	Hormozgan	Witches' broom, little leaf	II-D	UN	SA, RFLP	MK299844	(Hemmati and Nikooei, 2019b)
<i>Aerva javanica</i>	Hormozgan	Leaf roll, witches' broom, shortening internode	II-D	<i>Austroagalia sinuata</i>	SA, VRFLP	MK322505	(Hemmati et al., 2019a)
<i>Cyperus</i> sp.	Hormozgan	Whitening of aerial plant parts, stunting	XI-B	UN	SA	MF136620	(Salehi and Esmailzadeh Hosseini, 2017)
<i>Onobrychis vicifolia</i>	Chaharmahal – O- Bakhtiari	Yellowing, little leaf, reddening of leaflet margin, witches' broom, dwarfing	IX-I	UN	SA, RFLP	KX461906	(Esmailzadeh Hosseini et al., 2016a)

<i>Suaeda aegyptiaca</i>	Hormozgan	Witches' broom, proliferation of axillary shoots, shortening internodes, yellowing, little leaves	VI-A	<i>Neoliturus pulcher</i> (Putative)	SA	KY411138-9	(Askari Seyahooei et al., 2017)
<i>Solanum nigrum</i>	Hormozgan	Witches' broom, little leaves, short internode, yellowing	II-D	UN	SA	GQ866886	(Samavi et al., 2012)
<i>Solanum surrattens</i>	Hormozgan	Witches' broom, little leaves, short internode, yellowing	II-D	UN	SA	GU550504	
<i>Convolvulus arvensis</i>	Fars, Lorestan, Yazd	Little leaves, yellowing, internode shortening, witches' broom, stunting	XII-A	UN	SA, VRLFP	MG010135-7	(Salehi et al., 2018a)
<i>Convolvulus glomeratus</i>	Hormozgan	Witches broom, little leaves	IX-J	<i>Orosius albicinctus</i>	SA	MG569789	(Nikooei and Hemmati, 2018)
<i>Traogopogon dubius</i>	Fars	Flower virescence, phyllody, crown proliferation, witches' broom	I-B	UN	SA	KR262955	(Salehi and Salehi, 2015)
<i>Sonchus oleraceus</i>	Yazd	Yellowing, reddening, shortening internodes, flower virescence, phyllody,	I-B	UN	SA	MG652627	(Salehi et al., 2018b)

		proliferation, witches' broom					
<i>Taraxacum officinale</i>	Hamedan	Virescence, phyllody, sterility of flowers, proliferation of axillary buds	XII	UN	SA, RFLP		(Nazarporian et al., 2016)
Field crops							
Johnson grass (<i>Sorghum halepense</i>)	Urmia	Little leaf	VI-A	UK	SA, VRFLP	KT807469	(Zibadoost and Rastgou, 2016)
Maize (<i>Zea mays</i>)	Urmia	Yellowing, dwarfing	VI-H		SA	KT807467	
White clover (<i>Trifolium repens</i>)	Isfahan	Little leaf, leaf reddening	II-C	UN	SA, RFLP	JQ710445	(Hosseini et al., 2013)
Alfalfa (<i>Medicago sativa</i>)	Fars, Yazd, Kerman, Sistan and Baluchestan, Bushehr, Khorasan, Hamedan, Isfahan, Urmia	Witches' broom, little leaf, internode shortening, flower virescence, phyllody, proliferation and sterility, leaf yellowing, leaf curling, death	II-D II-C II-A I VI-A XII	<i>Orosius albicinctus</i>	SA, RFLP	KT81661	(Salehi et al., 2011c; Esmailzadeh Hosseini et al., 2016c)
Oman							
Fruit crops							
<i>Citrus aurantifolia</i>	All Oman	Proliferation of axillary shoots, little leaves, yellowing, internode shortening	II-B "Candidatus Phytoplasma aurantifolia"	<i>Hishimonus phycitis</i>	RFLP, SA	U15442	(Bové et al., 1988; Zreik et al., 1995)

Vegetables and peas							
Tomato (<i>Solanum lycopersicon</i>)	Northern Oman	witches' broom, little leaf, big bud, phyllody and hardened thick stems	II-D	UN	SA	KX358566	(Al-Subhi et al., 2018)
Chickpeas (<i>Cicer arietinum</i>)	Northern Oman	Phyllody, yellowing and stunting	II-D	UN	RFLP, SA	KX358573	(Al-Saady et al., 2006; Al-Subhi et al., 2018)
Spinach	Northern Oman	phyllody and shoot proliferation	II-D	UN	SA	KX358567	(Al-Subhi et al., 2018)
Squash	Central Oman	stunting, yellowing plants female flowers showing an abnormal proliferation and phyllody. male flowers showing virescence	II-D	UN	SA	KX358565	(Al-Subhi et al., 2018)
Field pea	Northern Oman	phyllody and shoot proliferation	II-D	UN	SA	KX358571	(Al-Subhi et al., 2018)
Faba bean	Northern Oman	phyllody and shoot proliferation	II-D	UN	SA	KX358570	(Al-Subhi et al., 2018)
Eggplant (<i>Solanum melongena L.</i>)	Northern Oman	phyllody and shoot proliferation	II-D	UN	RFLP, SA	KX358572	(Al-Subhi et al., 2011; Al-Subhi et al., 2018)
Forage crops							
Alfalfa	All Oman	Proliferation of shoots, yellowing and reduction of	II-D	UN	RFLP, TEM, SA	AF438413 KX358564	(Khan et al., 2002; Al-Subhi et al., 2018)

		leaf size and stem tillering					
Oilseed crops							
Sesame (<i>Sesamum indicum</i>)	Northern Oman	phyllody, virescence, excessive development of short shoots and internodes and little leaves	II-D	UN	RFLP, SA	KX358563	(Al-Sakeiti et al., 2005; Al-Subhi et al., 2018)
Ornamental plants and weeds							
Beach naupaka (<i>Scaevola taccada</i>)	Northern Oman	witches' broom, malformation and reduced size of the leaves, short internodes and yellowing	II-D	UN	RFLP, TEM, SA	AB257291	(Al-Zadjali et al., 2012)
Arabian jasmine (<i>Jasminum sambac</i>)	Northern Oman	yellowing, die back, reduced leaf size, short internodes and proliferation of axillary shoots, reduced overall size, resulting in a bushy plant	II-D	UN	RFLP, TEM, SA	AB257290	(Al-Zadjali et al., 2007)
<i>Crotalaria aegyptiaca</i>	Northern Oman	witches' broom proliferation of shoots, reduced stem height, and an	II-W	UN	RFLP, TEM, SA	KY872734 KY872735 KY872736 KY872737	(Al-Subhi et al., 2017)

		increased number of leaves					
<i>Polygala mascatense</i>	Northern Oman	Stunted, small leaves, bushy growth and phyllody	II	UN	RFLP	NO	(Livingston et al., 2006)
Radish (<i>Raphanus sativus</i>)	Northern Oman	phyllody and virescence	VI	UN	RFLP, SA	NO	(Al-Subhi et al., 2008)
<i>Echinops spinosissimus</i>	Northern Oman	excessive leaf and shoot growth and stunting	IX	UN	SA	NO	(Al-Subhi et al., 2007)
<i>Cassia italica</i>	Northern Oman	witches'-broom, stunted growth and yellowing of leaves	XXIX	UN	RFLP, SA	EF666051	(Al-Saady et al., 2008)
Saudi Arabia							
Fruit crops							
Lime (<i>Citrus aurantifolia</i>)	Al-Hassa, Saudi Arabia	decline	II	UN	RFLP, SA	EU980537	(Alhudaib et al., 2009)
Date palm (<i>Phoenix dactylifera</i> L.)	Al-Madinah, Al-Qassim, Al-Hassa, Saudi Arabia	Al-Wijam, Stunting and yellowing increase through the years and yellow streaks appear on the petioles. Fruits and fruit stalk were reduced in size	I II	UN	RFLP, SA	DQ913090 MH157916 MH157918 MH155427 MH157915 KY622126	(Alhudaib et al., 2007; Alhudaib et al., 2008; Abhary and Al-Baity, 2018; Omar et al., 2018b)
Jojoba (<i>Simmondsia chinensis</i>)	Al-Qassim, Saudi Arabia	witches' broom and small leaves	II-D	UN	RFLP, SA	KY581663 KY581664	(Omar et al., 2017)
Vegetables and peas							

<i>Chenopodium morale</i> L.	Al-Hassa, Saudi Arabia	decline	II	UN	RFLP, SA	EU119389	(Alhudaib et al., 2009)
Eggplants (<i>Solanum melongena</i> L.)	Al-Qassim and Riyadh, Saudi Arabia	phyllody, little leaves and witches broom	II-X II-D	UN	RFLP, SA	MK465073 MK465072	(Omar et al., 2020)
Cabbage (<i>Brassica oleracea</i> L.)	Al-Qassim and Riyadh, Saudi Arabia	multiple heads and deformation of heads	II-X II-D	UN	RFLP, SA	MK465069 MK465068	(Omar et al., 2020)
Beetroot (<i>Beta vulgaris</i> L.)	Al-Qassim and Riyadh, Saudi Arabia	reddening, stunting and leaves proliferation	II-X	UN	RFLP, SA	MK465074	(Omar et al., 2020)
Celery (<i>Apium graveolens</i> L.)	Al-Qassim and Riyadh, Saudi Arabia	stunting and yellowing	II-X II-D	UN	RFLP, SA	MK465071 MK465070	(Omar et al., 2020)
Potato (<i>Solanum tuberosum</i>)	Al-Qassim, Saudi Arabia	aerial tubers and purple and small leaves	II-X	UN	RFLP, SA	MH423498	(Omar et al., 2018a)
Tomato (<i>Solanum lycopersicon</i>)	Alhasa, Eastern Province and Jizan, Saudi Arabia	Phyllody, yellowing, stunting and malformation	II-D	UN	RFLP, SA	KF 017472 KF 017473 KF 017474 KF 017475 KF 017476 HM584815	(Alhudaib and Rezk, 2011; Alhudaib and Rezk, 2014)
Carrot (<i>Daucus carota</i>)	Al-Qassim, Saudi Arabia	Fasciation , phyllody, hairy roots proliferation, yellow and purple leaves	II-D	UN	SA	LN898420 LN898421 LN898422 LN898423	(Omar, 2017)
Onion (<i>Allium cepa</i>)	Al-Qassim, Saudi Arabia	Yellow and twisting leaves	II-D	UN	SA	LN898434 LN898435 LN898436 LN898437	(Omar, 2017)

Faba bean (<i>Vicia faba</i>)	Al-Qassim, Saudi Arabia	Phyllody	II-D	UN	SA	LN898424 LN898425 LN898426	(Al-Saleh and Amer, 2014; Omar, 2017)
Green mustard (<i>Brassica juncea</i>)	Al-Qassim, Saudi Arabia	Stunting and curly leaf edges	II-D	UN	SA	LN898432 LN898433	(Omar, 2017)
Field crop							
Alfalfa (<i>Medicago sativa</i>)	Riyadh and Al- Qassim, Saudi Arabia	Stunting, yellows, witches' broom and phyllody	II-D	UN	SA	LN898427 LN898428 LN898429 LN898430 LN898431 JQ808130 JQ818819 JQ818820 JX646694 JX646695	(AL-Saleh et al., 2014; Omar, 2017)
Ornamental crops and weeds							
Conocarpus <i>Conocarpus lanceolatus</i>	Al-Qassim, Saudi Arabia	Witches' broom and little leaves	II-D	UN	SA	LT628541	(Omar and Alsohim, 2016)
Mexican fan palm (<i>Washingtonia robusta</i>)	Al-Qassim, Saudi Arabia	Stunting and yellowing increase through the years and yellow streaks appear on the petioles	II	UN	RFLP, SA	MH157917	(Omar et al., 2018b)
Zinnia <i>Zinnia magellan</i>	Al-Qassim, Saudi Arabia	Phyllody	II-D	UN	SA	LT628540	(Omar and Alsohim, 2016)

Jazania <i>Gazania rigens</i>	Al-Qassim, Saudi Arabia	Phyllody, yellows, proliferation	II-D	UN	SA	LN889977 LN889972	(Omar and Alsohim, 2016)
Hibiscus (<i>Hibiscus rosa- sinensis</i>)	Al-Qassim, Saudi Arabia	Witches' broom, leaf rolling, yellows, fasciation	II-D	UN	SA	LN889970	(Omar and Alsohim, 2016)
Albizia (<i>Albizia lebbek</i>)	Al-Qassim, Saudi Arabia	Yellows, short internodes	II-B	UN	SA	LN889988 LN889989	(Omar and Alsohim, 2016)
Marigold (<i>Calendula officinalis</i>)	Al-Qassim, Saudi Arabia	Phyllody, purple color	II-D	UN	SA	LN889978 LN889979 LN889980	(Omar and Alsohim, 2016)
Coleus (<i>Plectranthus scutellarioides</i>)	Al-Qassim, Saudi Arabia	Virescence, fasciation	II-D	UN	SA	LN889975 LN889976	(Omar and Alsohim, 2016)
Periwinkle (<i>Catharanthus roseus</i>)	Al-Qassim, Saudi Arabia	Virescence, yellows, witches' broom	II-D II-B	UN	SA	LN889971 LN889984 LN889985 LN889986	(Omar and Alsohim, 2016)
Weeds							
Bindweed <i>Convolvulus arvensis</i>	Al-Qassim, Saudi Arabia	Little leaves, proliferation, purple color, yellows	II-D	UN	SA	LN889974 LN889982 LN889983 LN889981	(Omar and Alsohim, 2016)
Parkinsonia (<i>Parkinsonia aculeata</i>)	Al-Qassim, Saudi Arabia	Witches' broom, yellows, dieback	II-D	UN	SA	LN889973 LN889990	(Omar and Alsohim, 2016)
Chicory <i>Cichorium intybus</i>	Al-Qassim, Saudi Arabia	bushy phenotype and stunt	IX-J	UN	RFLP, SA	KY986922	(Pérez-López et al., 2018)
Bermuda grass (<i>Cynodon dactylon</i>)	Al-Qassim, Saudi Arabia	whitening of the leaves, shortening of the stolons	XIV-A	UN	RFLP, SA	LT220876 LT220879 LT220880	(Omar, 2016)

Giant reed (<i>Arundo donax</i>)	Al-Qassim, Saudi Arabia	variegated leaves, yellows, stunting, little leaves and yellows	XIV-A	UN	RFLP, SA	LT220881	(Omar, 2016)
Cooba (<i>Acacia salicia</i>)	Al-Qassim, Saudi Arabia	variegated leaves, yellows, stunting, little leaves and yellows	XIV-A	UN	RFLP, SA	LT220884	(Omar, 2016)
sand olive (<i>Dodonaea angustifolia</i>)	Al-Qassim, Saudi Arabia	variegated leaves, yellows, stunting, little leaves and yellows	XIV-A	UN	RFLP, SA	LT220882 LT220883	(Omar, 2016)
<i>Plantago lanceolata</i> L.	Al-Hassa, Saudi Arabia	decline	II	UN	RFLP, SA	EU119398	(Alhudaib et al., 2009)
Syria							
Tomato	Syria (Homs)	Twisting, yellowing, reddening of leaves, phyllody, virescence, woody of the stem	VI-A	UN	SA, RFLP		(Khalil et al., 2019)
Grapevine Vitis	Cost	Yellowing, leaf rolling, red coloration	XII VI	UN	SA		(Contaldo et al., 2011)
Sesame	Hama	Phyllody, virescence, witches' broom, formation of dark exudates on floral parts and yellowing, shoot apex fasciation, short internode	UN	<i>Orosius albicinctus</i> (Putative)	SA		(Khabbaz et al., 2013)

Iraq							
Vegetables and peas							
Eggplant (<i>Solanum melongena</i>)	Basra	Witches broom, phyllody, viresence, proliferation, stunting	II-D	UN	SA	KX008308	(Alkuwaiti et al., 2017)
Tomato (<i>Solanum lycopersicon</i>)	Al-Zubair Basra	Witches broom, phyllody, viresence, proliferation, stunting	II-D	UN	SA	KU724309	(Alkuwaiti et al., 2017)
Cowpea (<i>Vigna unguiculata</i>)	Al-Jadriya Baghdad	Flat stem	XIV-D	UN	SA	MK367419	(Al-Kuwaiti et al., 2019)
Field crops							
Alfalfa (<i>Medicago sativa</i>)	Al-Jadriya Baghdad	Little leaves, internode shortening	II-D	UN	SA	MK367415	(Al-Kuwaiti et al., 2019)
Ornamental crops and weeds							
Sand olive (<i>Dodanaea viscosa</i>)	Al-Jadriya Baghdad	Witches' broom	XIV-A	UN	SA	MK367411	(Al-Kuwaiti et al., 2019)
Mallow (<i>Malva</i> sp.)	Al-Nassiriya	Witches' broom	II-D	UN	SA	KY284836	(Alkuwaiti et al., 2017)
Bermuda grass	Baghdad	White leaf	XIV-A	UN	SA, VRFLP	KY284842	(Alkuwaiti et al., 2017)
Arabic jasmine (<i>Jasminum sambac</i>)	Baghdad	Phyllody and virescence	UN	UN	EM	UA	Al-Kuwaiti et al., 2015

Egypt							
Fruit crops							
Date palm (<i>Phoenix dactylifera</i>)	Al-Giza	Yellow longitudinal streak on leaves and midribs	I	UN	SA	KF826615	(Alkhazindar, 2014)
Mango		Phyllody, virescence,	UN	UN	EM	UA	(El-Banna and El-Deeb, 2001)
Vegetables and peas							
Onion	Al-Gharbia	Streak yellow, twisting	II-D	UN	SA, VRFLP	LT715991	(El-Sisi et al., 2017)
eggplant	Elminia	Malformed leaves, virescence, phyllody	II-D	UN	SA	FR257842	(Omar and Foissac, 2012)
tomato	Al-Sharqiya	Stunting, yellowing, purplish leaves, intense proliferation of lateral buds, hypertrophic calyxes, virescence, little leaves	II-D	Empoasca decipiens	SA	FR822700	(Omar and Foissac, 2012)
Squash	Al-Sharqiya	Stunting and virescence, phyllody,	II-D	UN	SA	FR822704	(Omar and Foissac, 2012)
Sugar beet (<i>Beta vulgaris</i>)	Al-Sharqiya	Stunt, chlorotic and necrotic leaves and petioles	UN	UN	EM, PCR	UA	(Shazly et al., 2016)
Oilseed crops							
Sesame		Virescence, phyllody, witches' broom,	UN	UN	EM, PCR	NA	(Hamed et al., 2014)

Field crops							
Sugarcane	Al-Sharghia	Yellow leaves	I-B	UN	SA, RFLP	JN223446	(Elsayed and Boulila, 2014)
Ornamental crops and weeds							
<i>Opuntia objecta</i>	Al-Gharbia	Proliferation, cylindrical of cladodes	II-D	UN	SA, VRFLP	LT715993	(El-Sisi et al., 2017)
Periwinkle	Kafrelsheikh	Yellowing, witches' broom, virescence	I II-D	UN	SA, VRFLP	LT715996	(El-Sisi et al., 2017)
<i>Orbia gigantean</i>		fasciation	II	Un	SA	HG421073	(Omar et al., 2014)
<i>Senecio stapeliiformis</i>		fasciation	II	UN	SA	HG421072	(Omar et al., 2014)
<i>Crassula argentea</i>	Al-Gharbiya	Fascinated leaves with trumpet bell shape	II-D	UN	SA	HG421074	(Dewir et al., 2016)
Weeds							
<i>Euphorbia coerulescens</i>		fasciation	II	UN	SA	HG421070	(Omar et al., 2014)
Jordan							
Fruit crops							
peach	Al-Jubiha	Yellow or reddish, rolling upward longitudinally along the mid-vein	I	UN	SA, RFLP		(Anfoka and Fattash, 2004)
grapevine		Yellowing, leaf discoloration and curling, berry shriveling, irregular maturation of wood	XII-A	UN	SA, RFLP	KC835139	(Salem et al., 2013)
Vegetables							

tomato	Al-Mafriq	Leaf proliferation of lateral shoots, hypertrophic calyxes and greening of flower petals	VI-A	UN	SA, RFLP		(Anfoka et al., 2003)
Potato		Leaf reddening, deformed tubers	II-B	UN	SA	MH085230-2	(Salem et al., 2019)
Lebanon							
Fruit crops							
Almond		Early flowering, stunted growth, leaf resetting, die-back, off-season growth, proliferation of slender shoots, witches' broom	IX-B	<i>Tachycixius viperinus</i> , <i>Asymmetrasca decedens</i>	SA, RFLP, TEM		(Abou-Jawdah et al., 2003; Abou-Jawdah et al., 2014)
Pear		Premature reddening, upward rolling of the leaves, premature defoliation and reduce shoot growth	X-C	UN	SA, RFLP		(Choueiri et al., 2007)
Grapevine		Witches' broom	XII-A	UN	SA, RFLP		(Salar et al., 2007)
<i>Malus domestica</i>		Shortening internodes	IX-C		SA, RFLP	KP851765	(Casati et al., 2016)
<i>Malus sylvestris</i>		Virescence	IX-C		SA, RFLP	KP851766	
<i>Pistacia paaestina</i>		Witches' broom	IX-C		SA, RFLP	KP851768	
Vegetables							

Potato		Heavy proliferation, purplish leaves, hypertrophic calyxes	VI-A	UN	SA, RFLP	AM260488	(Choueiri et al., 2007)
Tomato		Witches broom, little leaves, internode shortening	VI-A	UN	SA, RFLP	AM260489	(Choueiri et al., 2007)
Ornamental crops							
<i>Opuntia monacantha</i>		Stem and shoot proliferation,	II-C	UN	SA, RFLP	AY939815	(Choueiri et al., 2005)
<i>Geranium purpureum</i>		Little leaf	IX-C		SA, RFLP	KP851763	(Casati et al., 2016)
Weeds							
<i>Bryonia multiflora</i>		Dwarfing	IX-C	UN	SA, RFLP	KP851762	(Casati et al., 2016)
<i>Inula viscosa</i>		Witches' broom	IX-C		SA, RFLP	KP851764	
<i>Osyris alba</i>		Phyllody	IX-C		SA, RFLP	KP851767	
<i>Rhamus punctate</i>		Virescence	IX-C		SA, RFLP	KP851769	
<i>Scolymus maculatus</i>		Witches' broom	IX-C		SA, RFLP	KP851770	
<i>Sinapis arvensis</i>		Witches' broom	IX-C		SA, RFLP	KP851771	
<i>Solanum nigrum</i>		virescence	IX-C		SA, RFLP	KP851772	
Turkey							
Fruit crops							
apple	Ankara	Enlarged stipules, rosette formed	X-A	UN	SA		(Canik and Ertunc, 2007)

		growth of shoots, small fruits,					
Grapevine	Antalia	Sever redness, inward curling of leaves	XII I-B IX	UN	SA	UA	(Canik et al., 2011)
Sweet cherry (<i>prunus avium</i>)	Usak	Proliferation of the branches, off- season flowering, decline	I-B	UN	SA, RFLP	KF476062	(Çaglayan et al., 2013)
Cereals and forage crops							
maize	Adana	Yellowing, short internodes, small corncobs	XIV-A	UN	SA, RFLP	HE599395	(Çağlar et al., 2019)
Vegetables and peas							
Tomato	Adana	Big bud	XII-A VI-A	UN	SA	UA	(Sertkaya et al., 2007)
Pepper	Adana	stolbur	VI-A	UN	SA	UA	
eggplant	Adana	Little and yellowing leaves	VI-A	UN	SA	UA	
Potato	Uzurun	Stunting, upward leaf rolling with reddish or purplish coloration, chlorosis, swollen nodes, proliferation axillary buds, aerial tubers, early plant decline	XII-A	UN	SA, RFLP	HM485579	(Eroglu et al., 2010)
Oilseed crops							

sesame	Adana	phyllody	VI-A IX-C II-D	<i>Orosius albicinctus</i>	SA	UA	(Sertkaya et al., 2007; Catal et al., 2013)
Ornamental crops							
periwinkle	Adana	phyllody	VI-A	UN	SA	UA	(Sertkaya et al., 2007)
<i>Ligustrum avalifolium</i>	Adana	Leaf yellowing, witches' broom, dieback, decline	II-A	UN	SA, VRFLP	HE649494	(Çağlar and Elbeaino, 2013; Çağlar et al., 2013)
Weeds							
<i>Corchorus olitorius</i>	Adana	Phyllody, littleleaves, short internodes	II-D	UN	SA, RFLP	KM103728	(Özdemir and Cagiran, 2015)
Bermuda grass	Adana	Light green to yellow streaks on the leaves, bushy growth and stunting	XIV	UN	SA	HE599391	(Çağlar et al., 2013)
Israel							
Fruit crops							
Apricot	Neot Smadar		XII-A	UN			(Gera et al., 2011)
Grapevine	North, central, south Golan, Arad		I III XII-A	<i>Hyalestes obsoletus</i> , <i>Circulifer oreintalis</i>	SA		(Klein et al., 2001; Orenstein et al., 2001)
Papaya	Kfar Maimon		XII-A	UN	SA		(Gera et al., 2005)
Sweet cherry	Galon		VI	UN	SA		(Weintraub et al., 2007)
Vegetables							

Carrot	Beit She'an		I III V	<i>Circulifer haematoceps</i> , <i>Neoliturus fenestratus</i>	SA		(Weintraub and Orenstein, 2004)
pepper	Sharon		XII-A	UN	SA		
Ornamental crops							
<i>Anemone</i> sp.	Galilee		VI	UN	SA		(Weintraub et al., 2007)
<i>Catharanthus roseus</i>	Eilat		VI	UN	SA		
<i>Celosia</i> sp.	Sharon	General yellowing, witches' broom, phyllody	I III	UN	SA		(Tanne et al., 2000)
<i>Cosmos</i> sp.	Sharon		VI	UN	SA		(Weintraub et al., 2007)
<i>Cyclamen</i> sp.	Besor		XII-A	UN	SA		
<i>Gypsophila</i> sp.	Arava	Shoot proliferation, little leaves, yellowing, poor flower set	II	UN	SA		(Gera et al., 2007)
<i>Lavandula</i> sp.	Afula		VI	UN	SA		(Weintraub et al., 2007)
<i>Lisianthus</i> sp.	Besor		XII-A	UN	SA		
<i>Limonium</i> hybrids	Arava	Leaf yellowing, narrow leaves, small and white flower, phyllody	II V IX	<i>Circulifer oreintalis</i>	SA		Weintraub et al., 2004
<i>Mirabilis jalapa</i>			II	UN	SA		(Sobolev et al., 2007)
<i>Verbena encelioides</i>	Galilee		VI	UN	SA		(Weintraub et al., 2007)
<i>Mirabilis jalapa</i>	Sharon	Small yellow leaves, distorted flower	II	UN	SA		(Sobolev et al., 2007)
Kuwait							

Date palm (<i>Phoenix dactylefera</i>)	Mishref	Lethal yellowing, leaf yellowing, brown leaves	IV-A	UN	EM, PCR, TEM	UA	(Al-Awadhi et al., 2002)
Washingtonia robusta	Mishref	Lethal yellowing, leaf yellowing, brown leaves	IV-A	UN	SA	UA	
UAE							
<i>Citrus aurantifolia</i>	All UAE	Proliferation of axillary shoots, little leaves, yellowing, internode shortening	II-B “ <i>Candidatus Phytoplasma aurantifolia</i> ”	UN	PCR	NO	(Garnier et al., 1991)
SA: sequence analysis; RFLP: Restriction Fragment Length Polymorphism, VRFLP: Virtual Restriction Fragment Length Polymorphism; EM: Electron Microscopy, TEM: Transmission Electron Microscopy; UN: Unknown							

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