Supplementary Materials

Table 1 Barcodes and counts for A, B and AB

A-Barcode	Count	B-Barcode	Count	AB-Barcode	Count
A-RP1	9186	B-RP1	27	AB-RP1	5143
A-RP10	75	B-RP10	10340	AB-RP10	7120
A-RP11	8959	B-RP11	50	AB-RP11	5204
A-RP12	2	B-RP12	3559	AB-RP12	2462
A-RP13	3857	B-RP13	2	AB-RP13	2281
A-RP14	16	B-RP14	9911	AB-RP14	6641
A-RP15	1	B-RP15	0	AB-RP15	4
A-RP16	2	B-RP16	10	AB-RP16	6
A-RP17	2	B-RP17	5	AB-RP17	2
A-RP18	4	B-RP18	4	AB-RP18	1
A-RP19	344	B-RP19	1	AB-RP19	68
A-RP2	4	B-RP2	8342	AB-RP2	5180
A-RP20	11	B-RP20	9	AB-RP20	11
A-RP21	30	B-RP21	18	AB-RP21	20
A-RP22	4	B-RP22	7	AB-RP22	2
A-RP23	4273	B-RP23	3	AB-RP23	2349
A-RP24	4	B-RP24	1650	AB-RP24	1298
A-RP25	163	B-RP25	11	AB-RP25	122
A-RP26	50	B-RP26	33	AB-RP26	32

Table 1 Barcodes and counts for A, B and AB (Cont.)

A-RP27	7	B-RP27	45	AB-RP27	26
A-RP28	24	B-RP28	53	AB-RP28	16
A-RP29	67	B-RP29	48	AB-RP29	65
A-RP3	17	B-RP3	598	AB-RP3	4
A-RP30	116	B-RP30	5	AB-RP30	46
A-RP31	5	B-RP31	124	AB-RP31	81
A-RP32	4	B-RP32	6	AB-RP32	3
A-RP33	11	B-RP33	4	AB-RP33	6
A-RP34	4	B-RP34	4	AB-RP34	4
A-RP35	15	B-RP35	171	AB-RP35	24
A-RP36	107	B-RP36	109	AB-RP36	122
A-RP37	5	B-RP37	20	AB-RP37	7
A-RP38	193	B-RP38	421	AB-RP38	359
A-RP39	55	B-RP39	12	AB-RP39	36
A-RP4	120	B-RP4	12	AB-RP4	63
A-RP40	46	B-RP40	6	AB-RP40	22
A-RP41	10	B-RP41	5	AB-RP41	4
A-RP42	32	B-RP42	4	AB-RP42	8
A-RP43	96	B-RP43	4	AB-RP43	38
A-RP44	4	B-RP44	3	AB-RP44	1
A-RP45	30	B-RP45	3	AB-RP45	7
A-RP46	7	B-RP46	27	AB-RP46	19

Table 1 Barcodes and counts for A, B and AB (Cont.)

A-RP47	53	B-RP47	101	AB-RP47	93
A-RP48	1	B-RP48	3	AB-RP48	2
A-RP5	6731	B-RP5	3	AB-RP5	3855
A-RP6	9	B-RP6	18142	AB-RP6	10954
A-RP7	613	B-RP7	4	AB-RP7	328
A-RP8	2	B-RP8	11	AB-RP8	11
A-RP9	16821	B-RP9	12	AB-RP9	9740
unmatched	7591	unmatched	15776	unmatched	6223
Total	59783	Total	69718	Total	70113

Table 2 Barcodes and counts for C, D and CD

C-Barcode	Count	D-Barcode	Count	CD-Barcode	Count
C-RP1	105	D-RP1	32	CD-RP1	579
C-RP10	10953	D-RP10	7	CD-RP10	5311
C-RP11	22736	D-RP11	894	CD-RP11	14653
C-RP12	5	D-RP12	7877	CD-RP12	1168
C-RP13	1463	D-RP13	882	CD-RP13	790
C-RP14	13939	D-RP14	29	CD-RP14	6892
C-RP15	5	D-RP15	4281	CD-RP15	2329
C-RP16	106	D-RP16	6376	CD-RP16	3878
C-RP17	6	D-RP17	47	CD-RP17	37
C-RP18	1	D-RP18	115	CD-RP18	13
C-RP19	70	D-RP19	237	CD-RP19	1782
C-RP2	8	D-RP2	37	CD-RP2	34
C-RP20	24	D-RP20	303	CD-RP20	237
C-RP21	121	D-RP21	9	CD-RP21	31
C-RP22	1	D-RP22	107	CD-RP22	65
C-RP23	36	D-RP23	80	CD-RP23	119
C-RP24	8	D-RP24	1794	CD-RP24	979
C-RP25	449	D-RP25	22	CD-RP25	255
C-RP26	46	D-RP26	75	CD-RP26	65
C-RP27	58	D-RP27	47224	CD-RP27	27522
C-RP28	26	D-RP28	25623	CD-RP28	11811

Table 2 Barcodes and counts for C, D and CD (Cont.)

C-RP29	64	D-RP29	11	CD-RP29	141
C-RP3	10876	D-RP3	104	CD-RP3	148
C-RP30	4	D-RP30	4	CD-RP30	4
C-RP31	19	D-RP31	23	CD-RP31	12
C-RP32	12	D-RP32	75	CD-RP32	54
C-RP33	93	D-RP33	1	CD-RP33	374
C-RP34	8	D-RP34	1	CD-RP34	3
C-RP35	80	D-RP35	31	CD-RP35	48
C-RP36	131	D-RP36	163	CD-RP36	205
C-RP37	55	D-RP37	19	CD-RP37	32
C-RP38	833	D-RP38	82	CD-RP38	328
C-RP39	93	D-RP39	769	CD-RP39	471
C-RP4	217	D-RP4	39	CD-RP4	115
C-RP40	48	D-RP40	68	CD-RP40	159
C-RP41	47	D-RP41	24	CD-RP41	28
C-RP42	81	D-RP42	35	CD-RP42	58
C-RP43	207	D-RP43	9	CD-RP43	103
C-RP44	6	D-RP44	9	CD-RP44	17
C-RP45	30	D-RP45	42	CD-RP45	20
C-RP46	3	D-RP46	40	CD-RP46	5
C-RP47	15	D-RP47	34	CD-RP47	845
C-RP48	8	D-RP48	9	CD-RP48	2

Table 2 Barcodes and counts for C, D and CD (Cont.)

C-RP5	15475	D-RP5	18	CD-RP5	6987
C-RP6	48	D-RP6	27	CD-RP6	44
C-RP7	1250	D-RP7	16	CD-RP7	571
C-RP8	1	D-RP8	7	CD-RP8	2
C-RP9	45993	D-RP9	21	CD-RP9	21931
unmatched	10387	unmatched	43488	unmatched	24806
Total	136250	Total	141220	Total	136063

Table 3 Barcodes and counts for E, F and EF

Barcode	Count	Barcode	Count	Barcode	Count
E-RP1	740	F-RP1	6	EF-RP1	265
E-RP10	20	F-RP10	51	EF-RP10	1063
E-RP11	81	F-RP11	42	EF-RP11	65
E-RP12	6	F-RP12	1	EF-RP12	6
E-RP13	56	F-RP13	3	EF-RP13	10
E-RP14	20	F-RP14	2	EF-RP14	8
E-RP15	21	F-RP15	11	EF-RP15	29
E-RP16	93	F-RP16	10	EF-RP16	28
E-RP17	14	F-RP17	3	EF-RP17	6
E-RP18	10	F-RP18	5	EF-RP18	5
E-RP19	4	F-RP19	17	EF-RP19	3
E-RP2	27	F-RP2	17	EF-RP2	396
E-RP20	26	F-RP20	3	EF-RP20	12
E-RP21	8	F-RP21	1	EF-RP21	13
E-RP22	0	F-RP22	12	EF-RP22	7
E-RP23	26	F-RP23	2	EF-RP23	9
E-RP24	6	F-RP24	4	EF-RP24	0
E-RP25	222	F-RP25	10	EF-RP25	94
E-RP26	750	F-RP26	26	EF-RP26	206
E-RP27	74	F-RP27	20	EF-RP27	104
E-RP28	78	F-RP28	14	EF-RP28	37

Table 3 Barcodes and counts for E, F and EF (Cont.)

E-RP29	3078	F-RP29	515	EF-RP29	1100
E-RP3	342	F-RP3	10	EF-RP3	173
E-RP30	5812	F-RP30	6	EF-RP30	1650
E-RP31	84957	F-RP31	21	EF-RP31	24985
E-RP32	9856	F-RP32	95	EF-RP32	3194
E-RP33	13364	F-RP33	1	EF-RP33	4445
E-RP34	13404	F-RP34	2	EF-RP34	4307
E-RP35	42	F-RP35	3744	EF-RP35	504
E-RP36	164	F-RP36	1885	EF-RP36	1949
E-RP37	188	F-RP37	7272	EF-RP37	7266
E-RP38	36	F-RP38	8394	EF-RP38	6470
E-RP39	11	F-RP39	7	EF-RP39	9
E-RP4	41	F-RP4	16	EF-RP4	23
E-RP40	524	F-RP40	11	EF-RP40	244
E-RP41	40	F-RP41	12982	EF-RP41	10654
E-RP42	45	F-RP42	7397	EF-RP42	7668
E-RP43	14	F-RP43	2	EF-RP43	3
E-RP44	5	F-RP44	6	EF-RP44	33
E-RP45	314	F-RP45	1387	EF-RP45	257
E-RP46	110	F-RP46	16	EF-RP46	48
E-RP47	11	F-RP47	80	EF-RP47	86
E-RP48	37	F-RP48	45	EF-RP48	41

Table 3 Barcodes and counts for E, F and EF (Cont.)

E-RP5	5	F-RP5	3	EF-RP5	5
E-RP6	43	F-RP6	9	EF-RP6	33
E-RP7	10	F-RP7	8	EF-RP7	18
E-RP8	32	F-RP8	0	EF-RP8	94
E-RP9	13	F-RP9	5	EF-RP9	8
unmatched	10795	unmatched	12809	unmatched	25525
Total	145575	Total	57508	Total	103158

Table 4 Barcodes and counts for G, H and GH

Barcode	Count	Barcode	Count	Barcode	Count
G-RPI1	26	H-RPI1	13974	GH-RPI1	6446
G-RPI10	5	H-RPI10	5	GH-RPI10	5
G-RPI11	80	H-RPI11	62	GH-RPI11	68
G-RPI12	9	H-RPI12	71	GH-RPI12	76
G-RPI13	89	H-RPI13	1	GH-RPI13	136
G-RPI14	114	H-RPI14	30	GH-RPI14	214
G-RPI15	16221	H-RPI15	1	GH-RPI15	7853
G-RPI16	18054	H-RPI16	93	GH-RPI16	8102
G-RPI17	142	H-RPI17	3	GH-RPI17	54
G-RPI18	12	H-RPI18	1	GH-RPI18	18
G-RPI19	5	H-RPI19	0	GH-RPI19	2
G-RPI2	155	H-RPI2	24272	GH-RPI2	10226
G-RPI20	9	H-RPI20	17	GH-RPI20	23
G-RPI21	14	H-RPI21	21833	GH-RPI21	8219
G-RPI22	3	H-RPI22	9840	GH-RPI22	3877
G-RPI23	17	H-RPI23	14	GH-RPI23	7
G-RPI24	2	H-RPI24	16	GH-RPI24	12
G-RPI25	21	H-RPI25	5	GH-RPI25	17
G-RPI26	42	H-RPI26	9	GH-RPI26	42
G-RPI27	8	H-RPI27	13	GH-RPI27	16
G-RPI28	31	H-RPI28	10	GH-RPI28	21

Table 4 Barcodes and counts for G, H and GH (Cont.)

G-RPI29	111	H-RPI29	69	GH-RPI29	102
G-RPI3	10320	H-RPI3	17	GH-RPI3	80
G-RPI30	12	H-RPI30	442	GH-RPI30	199
G-RPI31	12	H-RPI31	656	GH-RPI31	104
G-RPI32	11	H-RPI32	52	GH-RPI32	31
G-RPI33	15	H-RPI33	6	GH-RPI33	1
G-RPI34	9	H-RPI34	18	GH-RPI34	5
G-RPI35	2226	H-RPI35	19	GH-RPI35	1476
G-RPI36	179	H-RPI36	219	GH-RPI36	141
G-RPI37	30	H-RPI37	130	GH-RPI37	6
G-RPI38	5	H-RPI38	5	GH-RPI38	17
G-RPI39	349	H-RPI39	143	GH-RPI39	177
G-RPI4	4690	H-RPI4	18	GH-RPI4	2183
G-RPI40	0	H-RPI40	51	GH-RPI40	24
G-RPI41	7	H-RPI41	2	GH-RPI41	5
G-RPI42	3	H-RPI42	77	GH-RPI42	7
G-RPI43	37	H-RPI43	0	GH-RPI43	9
G-RPI44	8	H-RPI44	17	GH-RPI44	7
G-RPI45	59856	H-RPI45	33	GH-RPI45	30857
G-RPI46	330	H-RPI46	62	GH-RPI46	182
G-RPI47	5	H-RPI47	234	GH-RPI47	154
G-RPI48	1317	H-RPI48	8	GH-RPI48	35

Table 4 Barcodes and counts for G, H and GH (Cont.)

G-RPI5	10	H-RPI5	3	GH-RPI5	3
G-RPI6	24	H-RPI6	38	GH-RPI6	21
G-RPI7	13	H-RPI7	11818	GH-RPI7	8330
G-RPI8	12	H-RPI8	1644	GH-RPI8	810
G-RPI9	9	H-RPI9	58	GH-RPI9	18
unmatched	9830	unmatched	18370	unmatched	21606
total	124489	total	104479	total	112024

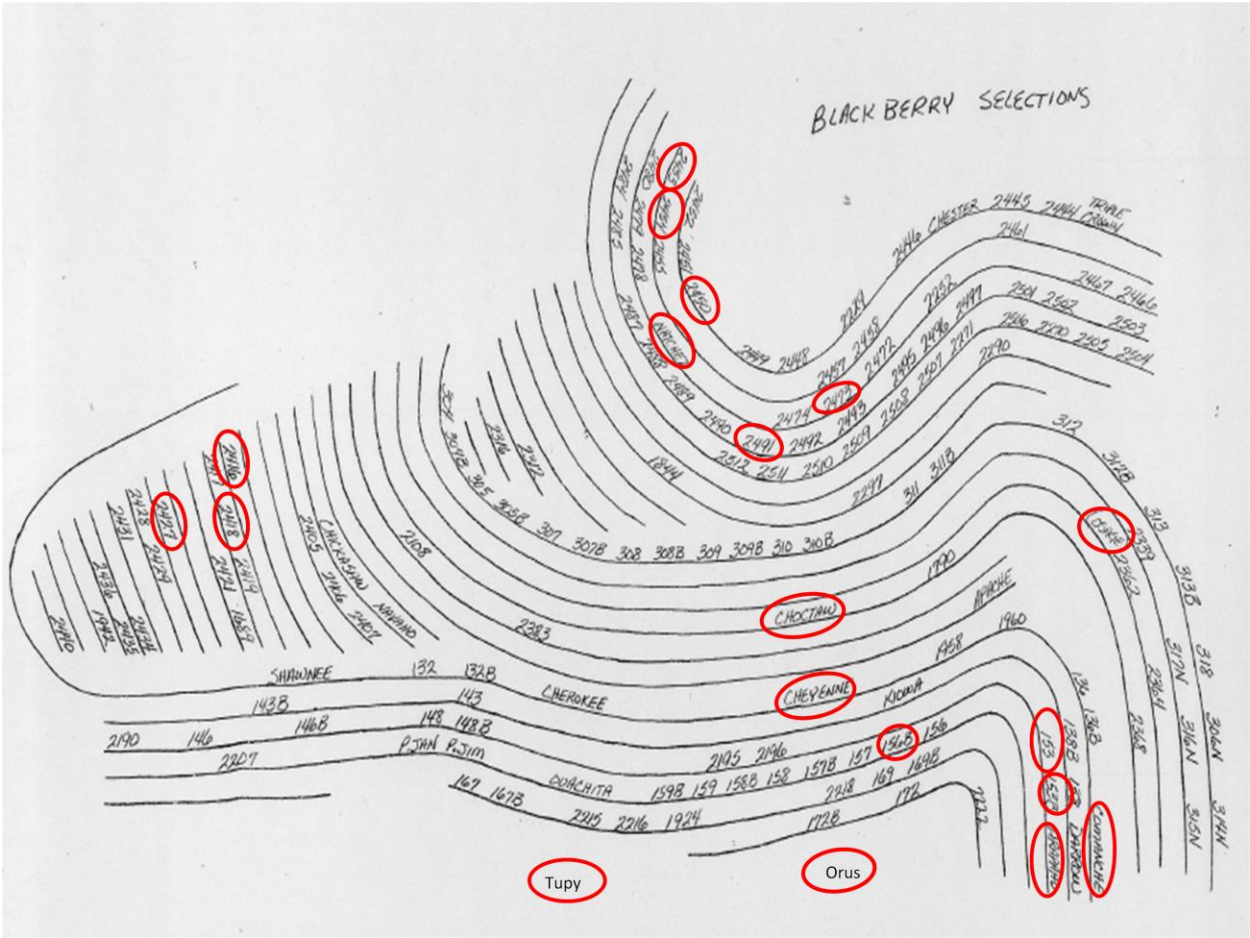

Figure 1: Map showing blackberry sample selection from Clarksville field.

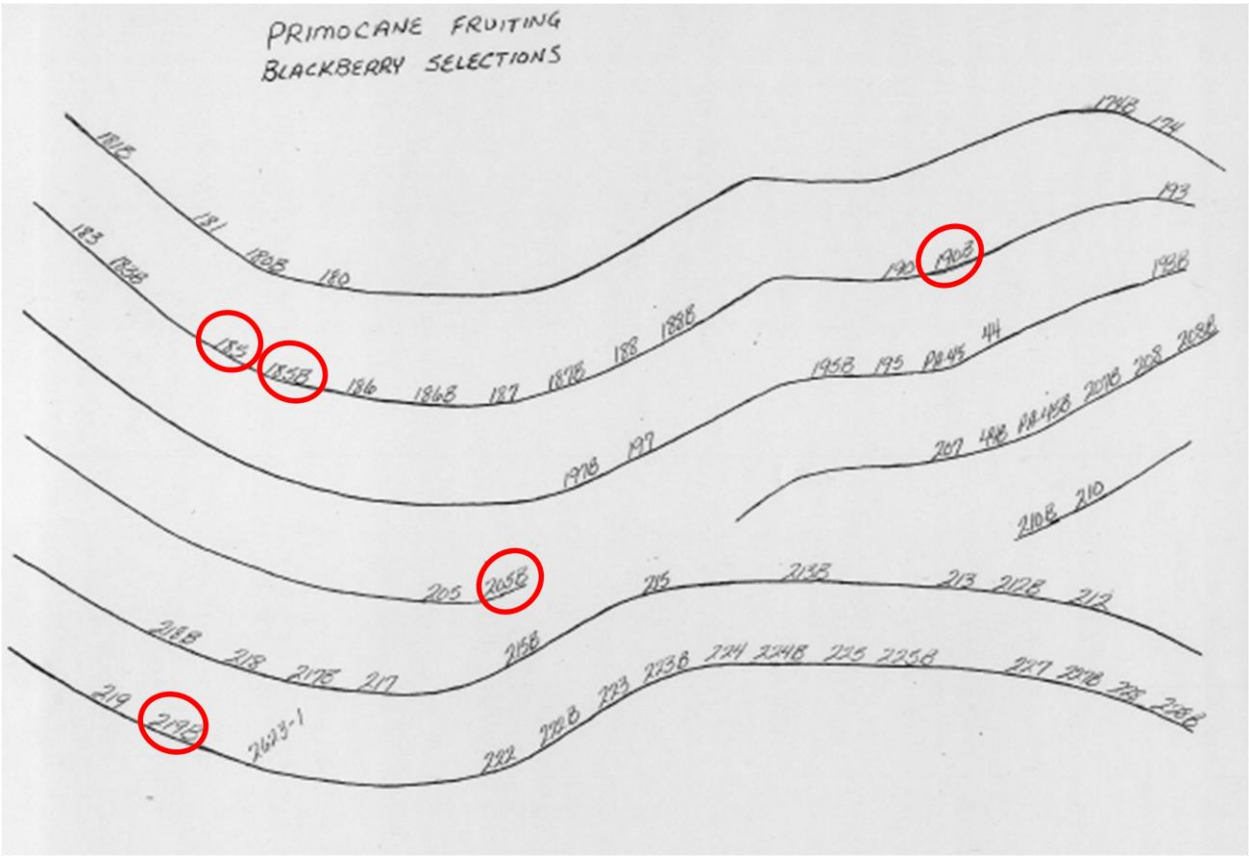

Figure 2: Map showing blackberry sample selection from Clarksville field.

Table 5. GenBank accession numbers for potential new viruses obtained using Sanger Sequencing

Taxonomic name	Strain	Isolate	GenBank accession number
Blackberry fijivirus B	ARK1	UA-A1	KU258091
Blackberry fijivirus B	ARK1	UA-A2	KU258092
Blackberry fijivirus B	ARK1	UA-A3	KU258093
Blackberry fijivirus B	ARK1	UA-A4	KU258094
Blackberry fijivirus B	ARK1	UA-A5	KU258095
Blackberry fijivirus B	ARK1	UA-A6	KU258096
Blackberry fijivirus B	ARK1	UA-A7	KU258097
Blackberry fijivirus B	ARK1	UA-A8	KU258098
Blackberry fijivirus B	ARK1	UA-A9	KU258099
Blackberry fijivirus B	ARK1	UA-A10	KU258100
Blackberry fijivirus B	ARK1	UA-A11	KU258101
Blackberry fijivirus B	ARK1	UA-A12	KU258102
Blackberry fijivirus B	ARK1	UA-A13	KU258103
Blackberry fijivirus B	ARK1	UA-A14	KU258104
Blackberry fijivirus B	ARK1	UA-A15	KU258105
Blackberry fijivirus B	ARK1	UA-A16	KU258106
Blackberry fijivirus B	ARK1	UA-A17	KU258107
Blackberry fijivirus B	ARK1	UA-A18	KU258108
Blackberry fijivirus B	ARK1	UA-A19	KU258109
Blackberry fijivirus B	ARK1	UA-A20	KU258110

Table 5. GenBank accession numbers for potential new viruses obtained using Sanger Sequencing (Cont.)

Blackberry fijivirus B	ARK1	UA-A21	KU258111
Blackberry fijivirus B	ARK1	UA-A22	KU258112
Blackberry fijivirus B	ARK1	UA-A23	KU258113
Blackberry fijivirus B	ARK1	UA-A24	KU258114
Blackberry fijivirus B	ARK1	UA-A25	KU258115
Blackberry fijivirus B	ARK1	UA-A26	KU258116
Blackberry carlavirus A	ARK2	UA-B1	Ku258117
Blackberry carlavirus A	ARK2	UA-B2	KU258118
Blackberry marafivirus A	ARK3	UA-C1	KU258119
Blackberry marafivirus A	ARK3	UA-C2	KU258120
Blackberry marafivirus A	ARK3	UA-C3	KU258121
Blackberry marafivirus A	ARK3	UA-C4	KU258122
Blackberry marafivirus A	ARK3	UA-C5	KU258123
Blackberry marafivirus A	ARK3	UA-C6	KU258124
Blackberry iflavirus A	ARK4	UA-D2	KU258125
Blackberry iflavirus A	ARK4	UA-D3	KU258126
Blackberry iflavirus A	ARK4	UA-D4	KU258127
Blackberry iflavirus A	ARK4	UA-D5	KU258128
Blackberry iflavirus A	ARK4	UA-D6	KU258129
Blackberry iflavirus A	ARK4	UA-D7	KU258130
Blackberry iflavirus A	ARK4	UA-D8	KU258131

Table 5. GenBank accession numbers for potential new viruses obtained using SangerSequencing (Cont.)

Blackberry iflavirus A	ARK4	UA-D9	KU258132
Blackberry iflavirus A	ARK4	UA-D10	KU258133
Blackberry iflavirus A	ARK4	UA-D1	KU258134
Blackberry iflavirus B	ARK5	UA-E1	KU258135
Blackberry iflavirus B	ARK5	UA-E2	KU258136
Blackberry iflavirus B	ARK5	UA-E4	KU258137
Blackberry iflavirus B	ARK5	UA-E3	KU258138
Blackberry iflavirus B	ARK5	UA-E5	KU258139
Blackberry iflavirus B	ARK5	UA-E6	KU258140
Blackberry iflavirus B	ARK5	UA-E7	KU258141
Blackberry iflavirus B	ARK5	UA-E8	KU258142
Blackberry iflavirus B	ARK5	UA-E9	KU258143
Blackberry iflavirus B	ARK5	UA-E10	KU258144

Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing)

>Seq1_SangerSeq_BYVaV
GGGGATTTAATATCTGTTTACGCTGTTGTTTTCCTTTAGTAGCTACACCTCTCTGCAA ATAATTAGCTGCTAAATCATCGTCTGATATATTAGTCAAAGCACCGTTAGTGAAATC TGAAGTAGCATCCCAAAATTGAGATGTCGTTCCATGCTTAGCTGCTAAGTGCCCATC ACTCTTGATCTTACCTGTAGCCTTCACAACTTCCACTTGTCCCTCAATACCTCTAAGA TATTGTCTTAAAGGATTGGCAACGTCCGTGAAGTTTCCTTTCAA
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>Seq3_SangerSeq_BYVaV
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Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing) (Cont.)

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>Seq5_SangerSeq_BYVaV
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Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq7_SangerSeq_BYVaV
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>Seq9_SangerSeq_BYVaV
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Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq10_SangerSeq_BYVaV
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>Seq11_SangerSeq_BYVaV
TGTCGCCAATCCTCTAACTGTTAATATCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCAACTAGCAGCTAAACATGGAACAACATCTCAATTTTGGGATGCTGCTTTGATCCTTTCATTACTAGCTACACCTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACCGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAACTTA
>Seq12_SangerSeq_BYVaV
ATTGATCCTCTAAGACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGCAGCTAAACATGGAACAACATCTCAATTTTGGGACTGCTTTGATCCTTTCATTAGTAAAATTCGTTATGAACTAGCTAGAGCTACACCTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAACTT

Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq13_SangerSeq_BYVaV
GGCCATTGATCCTCTAAGACAATATGGCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGCAGCGGTAAACATGGAACAACATCTCAATTTTGGGACTGCTTTGATCCTTTCATTAGTAGCTACACCTCTCGATGTGCAAATGAGCGGCATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACGTTAGTGAAATCTGAAGTAGCATCATTAACGTCACAAATCGCAGGAAACGTATGAAACTT
>Seq14_SangerSeq_BYVaV
GATCCTCTAATCCTCTAAGACAATATCTTCGAGGTATAAATGCGTTGTTAGAGGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGAAATTCGTTATGGAACAACATCTCAATTTTGGGATGCTGCTTTGATCCTTTCATTAGTAGCTACACCTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACCGTTAGTGCCCGTTGTAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAACTTA
>Seq15_SangerSeq_BYVaV
AGATCCTCTAAGACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGCAGCTAAACATGGAACAACATCTCAATTTTGGGACTGCTTTGATCCTTTCATTAGTAAAATTCGTTATGAATTGATCCTCTAAGACAATACTAGCTAGAGCTACACCTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAACTT

Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq16_SangerSeq_BYVaV
TGTCGCCAATCCTCTAAGACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGCAGCTAAACATGGAACAACATCTCAATTTTGGGATGCTGCTTTGATCCTTTCATTAGTAGCTACACCTTTTAATGTCGTCAAATTGCCATGGATGCGCGCCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACCGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAACTTA
>Seq17_SangerSeq_BYVaV
GTCAAGTGGAAGTTGTGAGGCTACAGGTAAGTTAAAGTGATGGGCATCTAGCAGCTAAACTTAGCATGGAACAACAGNGACGTGTCGGGTCGCTGCTTTGATCCTTTCATTAATAGCTACACCTCTCGGCAATAATTAGCTGCTAATTATTTGCAGAGAGGTGTAGCTACTAAAGGAAAACAACAGCGCAAACAAATATATAATGTCTCATCGTCTGATATATTATTAGCGCTAGCTAGCTAGCTTAAGTCAAAGCACCGTTAGTGAAATCTGAAGTAGCATCTCACAAAACGCAGGAAACGTATGAACTTA
>Seq18_SangerSeq_BYVaV
CGCAACCTCTAAGACAATATCTTGGTATAGTCTTCGAGGTATAGGGGCGTCAAGTGGAAGTTGTGAAGGGTTCACAGGTAAGGTATAGAGACTCTATGGTGACGGTAATTCTAGCAGCTAAACATGGAACAAGACCAGGGTCGCTGCTTTGATCCTTTCATTAGTAGCTACACCTCTCGGCAATAATTAGCTGCTAATTATTTGCAGAGAGGTGTAGCTACTAAAGGAAAAAACAACAGCGCAAACAAATATATAATGTCTCACAAATCGCAGGAAACGTATGAACTTA

Table 6 Sequences of BYVaV detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq19_SangerSeq_BYVaV
TTTTATATAAGATCCTCTAAGACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGCAGCTAAACATGGAACAACATCTCAATTTTGGACTGCTTTGATCCTTTCATTAGTAAAATTCGTTATGAATTGATCCTCTAAGACAATACTAGGAGCTACACCTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATGTCAAAGCACGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAA
>Seq20_SangerSeq_BYVaV
GACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAGTTGTGAAGGCTACAGGTAAGATTAAGAGTGATGGGCATCTAGCAGCTAAACATGGAACAACATCTCAATTTTGGGATGCTGCTTTGATCCTTTCATTAGTAGCTACAATATATATCCCCCTTTTAATGTCGTCAAATTGCCATGGATGCGCGCCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAAAGCACCGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGA
>Seq21_SangerSeq_BYVaV
TGTCGCAACCTCTAAGACAATATCTTCGAGGTATAGTCTTCGAGGTATAGGGGCGTCAAGTGGAAGTTGTGAAGGGTTCACAGGTAAGGTATAGAGACTCTATGGTGACGGTAATTCTAGCAGCTAAACATGGAACAAGACCAGTCGGGTCGCTGCTTTGATCCTTTCATTAGTAGCTACACCTCTCGGCAATAATTAGCTGCTAATTATTTGCAGAGAGGTGTAGCTACTAAAGGAAAAAACAACAGCGCAAACAAATATATAATGTCTCACAAATCGCAGGAAACGTATGAACTTA

Table 7 Sequences of BVY detected by RT-PCR (By Sanger Sequencing)

>Seq1_SangerSeq_BVY
AATTATACCTAAAAGGAGGAATTATATGGCCGAAGGCGGAAAGATGCATCCAAAGA AATGCCTACCCGAGGAGTTGAATGCGATAGTGACACTGCTACAAATGAATATATCTG AGGAGCAGATAAGCAGTTGTAATGCAGCACTCATCCATGAGAAGTGGGGAGATCTG GATAGTGATACAAGTAGTAAACTGAGTGAGTTCTATAAGGAACCATCCATATTAAC GCCAACACTGCTACAAATGAATATATCAACACGAACTCACTGTGGTGGGGAGATCT GGATAGTGATTTCTATGGTTGAGAAGATGAGGTCTATGAATTGGCCGGTCGATTAGA TTTGCGGCACCGCAATGCATTGAGGATATTGTAGGAGTAAGGCTCCATGGCAGAAC AGTGACGCATGGTTTTTCTCGAAAGACCCAACATTGGACTGCAACCCTACGGGCACC ATCCCATTTACTATGACACACACCCATGGAATGA
>Seq2_SangerSeq_BVY
TTGACAAAGTCGAACCTGAGGAAATCCCACATTTTGTGCAGCAGAATCCAAACATA ACCATGATTATAGATTTCCAAAGTGATCGCACAAAAGCTGACGGTTTTGTAAAGCAT GGGATTAATCGATAGCTTCCTCTGAGAAACGCCTCACTGATCCAAGAGCTACCAACT CTATGCGTTGATGCGTGTGCAAATATACGTAGCTAGCTAGCTAGCATCTTATATATT ATGTTGTACAGTACTTTTTCCGGGAGATGAAAAGTCACATAAAGGGTGGTTATACAT GGGCAGGACCATCAGATGATATGGAACGAGAGTTCGGACCAGAATGGGGAACTGA GAGTGGAACAAAATCATCAATGGATAGAGAAAGAGAGAGCAGAGGAGAAGGCTCC ATGGCAGAACAGTGACGCATGGTTTTTCTCGAAAGACCCAACATTGGACTGCAACCC TACGGGCACCATCCCATTTACTATGACACACACCCATGGAATGA

Table 7 Sequences of BVY detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq3_SangerSeq_BVY
TTTGGCTAAAAGGAGGAATTATATGGCCGAAGGCGGAAAGATGCATCCAAAGAAAT GCCTACCCGAGGAGTTGAATGCGATAGTGACACTGCATGGTTACAAATGAATATATC TGAGGAGCAGATAAGCAGTTGTAATGCAGCACTCATCCATGAGAAGTGGGGAGATC TGGATAGTGATACAAGTAGTAAACTGAGTGAGTTCTATAAGGAACCATCCATATTAA CGCCAACACTGCTACAAATGAATATATCAACACGAACTCACTGTGGTGGGGATCGA TCTGGATAGTGATTTCTAGTCTGGTTGAGAAGATGAGGTCTATGAATTGGCCGGTCG ATTAGATTTGCGGCACCGCAATGCATTGAGGATATTGTAGGAGTAAGGCTCCATGGC AGAACAGTGACGCATGGTTTTTCTCGAAAGACCCAACATTGGACTGCAACCCTTATC GGCACCATCCCATTTAAGGCTGTATGACACACACCATGGAATGA
>Seq4_SangerSeq_BVY
ATACCTAAAAGGTTGGGGTGTTGAATTATATGGCCGAAGGCGGAAAGATGCATCCA AAGATGCCTACCCGAGGAGTTGAATGCGATAGTGACACTGCTACAAATGAATATAT CTGAGGAGCAGATAAGCAGTTGTAATGCAGCACTCATCCATGAGAAGTGGGGAGAT CTGGATAGTGATACAAGTAGTAAACTGAGTGAGTTCTATAAGGAACCATCCATATTA ACGCCAACACTTTACAAATGAATATATCAACACGAACTCACTGTGGTGGGGAGATCT GGATAGTGATTTCTTTATGGTTGAGAAGATGAGGTCTATGAATTGGCCGGTCGATTA GATTTGCGGCACCGCAATGCATTGAGGATATTGTAGGAGTTTTGGCTCCATGGCAGA ACAGTGACGCATGGTTTTTCTCGAAAGACCCAACATTGGACTGCAACCCTACGGGCA CCATCCCATTTACTATGACACACACCCATGAATGA

Table 7 Sequences of BVY detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq5_SangerSeq_BVY
TTATACCTAAAAGGAGGAATTATATGGCCGAAGGCGGAAAGATGCATCCAAAGAAA TGCCTACCCGAGGAGTTGAATGCGATAGTGACACTGCTACAAATGAATATATCTGAG GAGCAGATAAGCAAATTATACCTAAAAGGAGGTTGTAATGCAGCACTCATCCATGA GAAGTGGGGAGATCTGGATAGTGATACAAGTAGTAAACTGAGTGAGTTCTATAAGG AACCATCCATATTAACGCCAACACTGCTACAAATGAATATATCAACACGAACTCACT GTGGTGGGGAGATCTGGATAGTGATTTCTATGGTTGAGAAGATGAGGTCTATGAATT GGCCGGTCGATTAGATTTGCGGCACCGCAATGCATTGAGGATATTGTAGGAGTAAG GCTCCATGGCAGAACAGTGACGCATGGTTTTTCTCGAAAGACCCAACATTGGACTGC AACCCTACGGGCACCATCCCATTTACTATGACACACACCCATGGAATGA
>Seq6_SangerSeq_BVY
ACTTTAATTTATACCTAAAAGGAGGAATTATATGGCCGAAGGCGGAAAGATGCATC CAAAGAAATGCCTACCCGAGGAGTTGAATGCGATAGTGACACTGCTACAAATGAAT ATATCTGAGGAGCAGATAAGCAAATTATACCTAAAAGGAGCCAACACTGGTTGTAA TGCAGCACTCATCCATGAGAAGTGGGGAGATCTGGATAGTGATACAAGTAGTAAAC TGAGTGAGTTCTATAAGGAACCATCCATATTAACGCTACAAATGAATATATCAACAC GAACTCACTGTGGTGGGGAGATCTGGATAGTGATTTCTAATTGGCCTGGTTGAGAAG ATGAGGTCTATGAGGTCGATTAGATTTGCGGCACCGCAATGCATTGAGGATATTGTA GGAGTAAGGCTCCATGGCAGAACAGTGACGCATGGTTTTTCTCGAAAGACCCAACA TTGGACTGCAACCCTACGGGCACCATCCCATTTACTATGACACACACCCATGGAAT

Table 7 Sequences of BVY detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq7_SangerSeq_BVY
TTATACCTAAAAGGAGGAATTATATGGCCGAAGGCGGAAAGATGCATCCAAAGAA ATGCCTACCCGAGGAGTTGAATGCGATAGTGACACTGCTACAAATGAATATATCTG AGGAGCAGATAAGCAAATTATACAAAGGAGATATTAACGCCAACACGTTGTAATG CAGCACTCATCCATGAGAAGTGGGGAGATCTGGATAGTGATACAAGTAGTAAACT GAGTGAGTTCTATAAGGAACCATCCCACTGCTACAAATGAATATATCAACACGAAC TGTGGGGAGATCTGGATAGTGATTTCTATGGTTGAGAAGATGAGGTCTATGAATTG GCCGGTCGATTAGATTTGCGGCACCGCAATGCATTGAGGATATTGTAGGAGTAAGA CCCAACATGGCTCCATGGCAGAACAGTGACGCATGGTTTTTCTCGAAATGGACTGC AACCCTACGGGCACCATCCCATTTACTATGACACACACCCATGGAATGA
>Seq8_SangerSeq_BVY
TAAAGGAGGAATTATATGGCCGAAGGCGGAAAGATGCATCCAAAGAAATGCCTAC CCGAGGAGTTGAATGCGATAGTGACACTGCTACAAATGAATATATCTGAGGAGCA GATAAGCAAATTATACCTAAAAGGAGATATTAACGCCAACACTGTGGTGATCGGTT GTAATGCAGCACTCATCCATGAGAAGTGGGGAGATCTGGATAGTGATACAAGTAG TAAACTGAGTGAGTTCTATAAGGCACTGCTACAAATGAATATATCAACACGAACTG TGGGGAGATCTGGATAGTGATTTCTAATGGGCCTTGGTTGAGAAGATGAGGTCTAT GAATTGGCCGGTCGATTAGATTTGCGGCACCGCAATGCATTGAGGATATTGTAGGA GTAAGACCCAACATGGCTGAGGCTCCATGGCAGAACAGTGACGCATGGTTTTTCTC GACTGCAACCCTACGGGCACCATCCCATTTACTATGACACACACCCATGGAATGA

Table 7 Sequences of BVY detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq9_SangerSeq_BVY
TCGAACCTGAGGAAATCCCACATTTTGTGCAGCAGAATCCAAACATAACCATGATTA TAGATTTCCAAAGTGATCGCACAAAAGCTGACGGTTTTGTAAAGCATGGGATTAATC GATAGCTTCCTCTGAGAAACGCCTCACTGATCCAAGAGCTACCAACTCTATGCGTTG TTATATATTATGTTGTACAGTAATTCTGATGCTCTTTTTCCGGGAGATGAAAAGTCAC ATAAAGGGTGGTTATACATGGGCAGGACCATCAGATGATATGGAACGAGAGTTCGG ACCAGAATGGGGAACTGAGAGTGGAACAAAATCATCAATGGATAGAGAAAGAGAG AGCAGAGGAGAAGGCTCCATGGCAGAACAGTGACGCATGGTTTTTCTCGAAATCGT AGACCCAACATTGGACTGCAACCCTACGGGCACCATCCCATTTACTATGACACACAC CCATGGAATGA
>Seq10_SangerSeq_BVY
CGCGTATTATTTGTGCAGCAGAATCCAAACATAACCATGATTATAGATTTCCAAAGT GATCGCACAAAAGCTGACGGTTTTGTAAAGCATGGGATTAATCGATAGCTTCCTCTG AGAAACGCCTCACTGATCCAAGAGCTACCAACTCTATGCGTTGTTATATATTATGTT GTACAGTAATTCTGGATCGATGCTCTTTTTCCGGGAGATGAAAAGTCACATAAAGGG TGGTTATACATGGGCAGGACCATCAGATGATATGGAACGAGAGTTCGGACCAGAAT GGGGAACTGAGAGTGGAACAAAATCATCAATGGATAGAGAAAGAGAGAGCAGAGG AGAAGGCTCCATGGCAGAACAGTATGCTATGCTAGCTATGACGCATGGTTTTTCTCG AAATCGTAGACCCAACATTGGACTGCAACCCTACGGGCACCATCCCATTTACTATGA CACACACCCATGGAATGA

Table 8 Sequences of BVX detected by RT-PCR (By Sanger Sequencing)

>Seq1_SangerSeq_BVX
GGAGAGGAGAAGCGTGATTGTCGGTAGTGGTTTGAGAAGAAGAGAGATCTCATCAG ATCAGTTTGCAGAGAGTGTTAAGCACATTAGTAGCGTCAGGCTGTAGCAAAATGGCT GATGTGGACAACTTTACCTCTATCTTTCATGCGAGGTCACACTCCAACTATGGCTGT AAAGAAGCGCTTCAGAAGTTTCTTAGAGAATAATGAAAGACTTGAAAAGCCATGGT TAAATGTGAGTACATGCCGTTTGGGGAAAACCTGGCCAACTTTTTCATCTCAAAGTT AAACTTCAAAGGGAACTATCTCGAAGTCTCAATGAATGAATTCAAGGAGAACTTCTT TAAGAAAGATGAAGCTAAAACTATCAGGTCAGATCCAGATTGGAAAAAGAATAGAA ATCTTCCTGTTCATGAAGCAACAAGTCGACTCTGCAAAAAAAGCCATCGCAGGTCAA ACCA
>Seq2_SangerSeq_BVX
ATTTGTAAGGAGAAAAGCGTGATTGTCGGTAGTGGTTTGAGAAGAAGAGTAGAGAT CTCATCAGATCAGTTTGCAGAGAGTGTTAAGCACATTAGTAGCGTCAATGGCTGATG TGGACAACTTTACCTCTATCTTTCATGCGAGGTCACACTCCAACTCAGACAGGGCCA CTTTCAAAATGGCTGTAAAGTAGAGAATAATGAAAGACTTGAAAAGCCATGGTTAA ATATCGTGTGAGTACATGCCGTTTGGGGAAAACCTGGCCAACTAAAGTTAAACTTCA AAGGGAATGTCAATGACTATCTCGAAGTCTCAATGAATGAATTCAAGGAGAACTTCT TTAAGAAAGATGAAGCTAAAACTATCAGGTCAGATCCAGATTGGAAAAAGAATGAA ATCTTCCTGTTCATGAAGCAGAGAAAAGATACTCAGAGGCCATCGCAGGTCAAACC A

Table 8 Sequences of BVX detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq3_SangerSeq_BVX
GGAGAAAAGCGTGATTGTCGGTAGTGGTTTGAGAAGAAGAGTAGAGATCTCATCAG ATCAGTTTGCAGAGAGTGTTAAGCACATTAGTAGCGTCAGGCTGTAGCAAAATGGC GATGTGGACAACTTTACCTCTATCTTTCATGCGAGGTCACACTCCAACTCAGACAGG GCCACTTTCAAAAAGCCATGGTTAAATATCGTGTGAGTACATGCCGTTTGGGGAAAA CCTGGCCAACTCAAAGTTAAACTTCAAAGGGAATGTCAATGACTATCTCGAAGTCTC AATGAATGAATTCAAGGAGAACTTCTTTAAGAAAGATGAAGCTAAAACTATCAGGT CAGATCCAGATTGGAAAAAGAATGAAATCTTCCTGTTCATGAAGCAACAAGTCGAC TCTGCAAAAAAATAGAGAAAAGATACTCAGAGGCCATCGCAGGTCAAACCA
>Seq4_SangerSeq_BVX
GGAGAAATTGTCGGTAGTGGTTTGAGAAGAAGAGAGATCTCATCAGATCAGTTTGC AGAGAGTGTTAAGCACATTAGTAGCGTCAACCTGTGAGGCTATAGCAAAATGGCTG ATGTGGACAACTTTACCTCTATCTTTCATGCGAGGTCACACTCCAACTCAGACAGGG CCACTTTCAAAGTAAGCCATGGTTAAATATCGTGTGAGATACATGCCGTTTGGGGTG AAAACCTGAGTCGCCAACTCAAAGTTAAACTTCAAAGGGAATGTCAATGACTATCTC GAAGTCTCAATGAATGAATTCAAGGAGAACTTCTTTAAGAAAGATGAAGCTAAAAC TATCAGGTCAGATCCAGATTGGAAAAAGAATGAAATCTTCCTGTTCATGAAGCAAC AAGTCGAATGTGCTCTGCAAAAAAATACCAGAAAAGATACTCAGAGGCCATCGCAG GTCAAACCA

Table 8 Sequences of BVX detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq5_SangerSeq_BVX
TATCTAAAATTGTCGGTAGTGGTTTGAGAAGAAGAGAGATCTCATCAGATCAGTTTG CAGAGAGTGTTATCGGCACATTAGTAGCGTCAGGCTATAGCAAAATGGCTGATGTG GACAACTTTACCTCTATCTTTCATGCGAGGTCACACTCCAACTCAGACAGGGCCACT TTCAAAGTAATTCCTATATATAGGTGAGTAGTAAGCCATGGTTAAATATCGTGTGAG TACATGCCGTTTGGGGTGAAAACCTGAGTCGCCAACTCAAAGTTAAACTTCAAAGG GAATGTCAATGACTATCTCGAAGTCTCAATGAATGAATTCAAGGAGAACTAATGTCT TTAAGAAAGATGAAGCTAAAACTATCAGGTCAGATCCAGATTGGAAAAAGAATGAA ATCTTCCTGTTCATGAAGCAACAAGTCGAATGTGCTCTGCAAAAAAATACCAGAAA AGATACTCAGAGGCCATCGCAGCAAACCA
>Seq6_SangerSeq_BVX
TAATTGTCGGTAGTGGTTTGAGAAGAAGAGAGATCTCATCAGATCAGTTTGCAGAG AGTGTTATCGGCACATTAGTAGCGTCAGGCTATAGCAAAATGGCTGATGTGGACAA CTTTACCTCTATCTTTCATGCGAGGTCACACTCTTTATATCGTAGTCGATGCCAACTC AGACAGGGCCACTTTCAAAGTAAGCCATGGTTAAATATCGTGTGAGTACATGCCGTT TGGGGTGAAAACCTGAGTCGCCAACTCAAAGTTAAACTTCAAAAACGTGGGAATGT CAATGACTATCTCGAAGTCTCAATGAATGAATTCAAGGAGAACTTCTTTAAGAAAGA TGAAGCTAAAACTATCAGGTCAGATCCAGATTGGAAAAAGAATGAAATCTTCCTGTT CATGAAGCAACAAGTCGAATGTGCTCTGCAAAAAAATACCAGAAAAGATACTCAGA GGCCATCGCAGGTCAAACCA

Table 8 Sequences of BVX detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq7_SangerSeq_BVX
AAATAGTGGTTTGAGAAGAAGAGAGATCTCATCAGATCAGTTTGCAGAGAGTGTTA TCGGCACATTAGTAGCGTCAGGCTATAGCAAAATGGCTGATGTGGACAACTTTACCT CTATCTTTCATGCGAGGTCACACTCTTTAGTTACGTATCGATGCCAACTCAGACAGG GCCACTTTCAAAGTAATGTAAGCCATGGTTAAATATCGTGTGAGTACATGCCGTTTG GGGTGAAAACCTGAGTCGCCAACTCAAAGTTAAACTTCAAAAACGTGGGAATGTCC TATCTCGAAGTCTCAATGAATGAATTCAAGGAGAACTTCTTTAAGAAAGATGAAGCT AAAACTATCAGGTCAGATCCAGATTGGAAAAAGAATGAAATCTTCCTGTTCATGAA GCAACAAGTCGAATGTGCTCTGCTACCAGAAAAGATACTCAGAGGCCATCGCAGGT CAAACCA
>Seq8_SangerSeq_BVX
GAGATCTCATCAGATCAGTTTGCAGAGAGTGTTATCGGCACATTAGTAGCGTCAGGC TATAGCAAAATGGCTGATGTGGACAACTTTACCTCTATCTTTCATGCGAGGTCACAC TCTTTAGTTACGTATCGATGCCAACTCAGACAGGGCCACTTTCAAAGTAATGTAAGC CATGGTTAAATATCGTGTGAGTACATGCCGTTTGGGGTGAAAACCTGAGTCGCCAAC TCAAAGTTAAACTTCAAAAACGTGGGAATGTCCTATCTCGAAGTCTCAATGAATGAA TTCAAGGAGAACTTCTTTAAGAAAGATGAAGCTAAAACTATCAGGTCAGATCCAGA TTGGAAAAAGAATGAAATCTTCCTGTTCATGAAGCAACAAGTCGAATGTGCTCTGCT ACCAGAAAAGATACTCAGAGGCCATCGCAGGTCAAACCA

Table 8 Sequences of BVX detected by RT-PCR (By Sanger Sequencing) (Cont.)

>Seq9_SangerSeq_BVX
TTGTTGAGATCTCATCAGATCAGTTTGCATGTAGAGAGTGTTATGCAAAATGGCTGA TGTGGACAACTTTACCTCTATCTTTCATGCGAGGTCACACTCTTTAGTTACGTATCTA ACCTAGGATGCCAACTCAGACAGGGCCACTTTCAAAGTAATGTAAGCCATGGTTAA ATATCGTGTGAGTACATGCCGAACGTGTATTTGGGGTGAAAACCTGAGTCGCCAACT CAAAGTTAAACTTCAAAAACGTGGGAATGTCCTATCTCGAAGTCTCAATGAATGAAT TCAAGGAGAATGCACTTCTTTAAGACTATCAGGTCAGATCCAGATTGGAAAAAGAA TGAAATCTTCCTGTTCATGAAGCAACAAGTCGAAAACCATGTGCTCTGCTACCAGAA AAGATACTCAGAGGCCATCGCAGGTCAAACCA
>Seq10_SangerSeq_BVX
ATTTAGCTAGCTGAATATATTGTTGAGATCTCATCAGATGTGTCAGTTTGCATGTAG AGAGTGTTATGCAAAATGGCTGATGTGGACAACTTTACCTCTATCTTTCATGCGAGG TCACACTCTTTAGTTACGTATCTAACCCAACTCAGACAGGGCCACTTTCAAAGTAAT GTAAGCCATGGTTAAATATCGAGTACATGCCGAACGTGTATTTGGGGTGAAAACCTC TAGGATGGAGTCGCCAACTCAAAGTTAAACTTCAAAAACGTGGGAATGTCCTATCTC GAAGTCTCAATGAATGAATTCAAGGAGAATGCACTTCTTTAAGACTATCAGGTCAGA TCCAGATTGGAAAAAGAATGAAATCTTCCTGTTCATGAAGCAACAAGTCGAAAACC ATGTGCTCTGCTACCAGAAATACTCAGAGGCCATCGCAGGTAACCA

Table 9 Sequences of BVBaV detected by RT-PCR (By Sanger Sequencing)

>Seq1_SangerSeq_BVBaV
ATTAATTTAGCTGACATCAGAGAGTCGGACATTTATGATGAAAGGTTTATGGTGCCG CGACAAAGTCGAAGCATTAAAAGTTAACTCTCGACTAAATGCTCTTATGTTTAGTTT AATTGATCTGATAAGGAGATGGGTCGGTTACCGACAAAGGAAACTTTAATGCGGTG GTAGGCCTGAAACTTTTCCTGCTGTATAGCACAGTTAAACACCCAACACTCAA
>Seq2_SangerSeq_BVBaV
TTACGATTTAGCTGACATCAGAGAGTCGGACATTTATGATGAAAGGTTTATGGACAA AGTCGAAGCATTAAAAGTTAACTCTCGACTAAATGCTCTTATGTTTAGTTTAATTGAT CTGATAAGGAGATGGGTCGGTTACCGACAAAGGAAACTTTAATGCGGTTGGTAGGC CTGAAACTTTTCCTGCTGTATAGCACAGTTAAACACCCAACACTCAA
>Seq3_SangerSeq_BVBaV
TCAGAGATCGTAGAGTCGGACATTTATGATGAAAGGTTTATGGACAAAGTCGAAGC ATTAAAAGTTAACTCTCGACTAATATAAATGCTCTTATGTTTAGTTTAGGAAGCGAT GGGTCGGTTACCGACAAAGGAAAGGTAGGCCTGATCCAACTTTTCCTGCTGTATAGC ACAGTAGCTATAAACACCCAACACTCAATCCAGC

Table 10 Sequences of viruses detected in LSS

>Seq1_A25M_Blackberry vein banding associated virus
ACCCACCTCCGCCCGTGATAGGTGCGTCGGGAAGCTTAGTTGACGTTGGAGGGCTGTGTTTCAGTGCTACCGGGGCTAGGTTGGGCTCTGCGTTGTTCAAGTTGAGCAGGGTGTTGTTCGAATCCAAGATCTGGGACATTTTCTACAGAGACCCCAGCACTTACAAGGGTGGCATCCAGAAAGTTTTGGGTTCGGCGCTGGTGAGGCTGCGGAAGTTAAAAGCGGTGTGGTTCGCAGCGTATGGAGGCGTGGTTAACGTGATTCCCGTGCGTGGTGGTACTTTTAACAATAGGCCAAGCAACCTCGCGTTGCAGTTGTGCGACCCATTTGGCGTAGATGATGGCGATACTGAGTTCATGA
>Seq2_A25M_Blackberry virus Y
GTTCCCAGTCCTCTCAACAACACCAATGCCAGAGATACTTGTCCATCATGAGAGTCAATCGATACATATACCAGATTGTTTGGGCACAGCCACATCAGGATATCATAGGCTGAATATCGTGACTCCATGTGATTTTATCCTTTGATCAAGAGCTACCAACTCTGATCA
>Seq2_ A25M_Blackberry virus Y
AGTTAGGTGCAGTGAAATTATTCCACCGCACTGTAACTGAAAGAGCAATGCCTTCACTAGGTCAGTGGTCTACATTACGTCACCTTGCAACCTGGGTGTTAAACCTTGTAGCCATGTTCCCAGTCCTCTCAACA
>Seq3_ A25M_Blackberry virus Y
CACCGCACTGTAACTGAGAGAGCAATGCCTCATTAGGTCAATGGCCACATACGACACCTTGCACCTGGGTGTTAAATCTTGTAGCCATGCTCCCAGTCCTCTCAACAACACCAATGCCGG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq4_ A25M_Blackberry virus Y
TCAATGCATTGTGGTGCCACCATAGATTTCATCTTTTCAACTACACAGTGAGCTCGCGTTGTGTACGTTAATATCGATGGTTCTTTATAGAACTCACTCAATTTACTGCTCGTGTCACTG
>Seq5_ A25M_Blackberry virus Y
AAATCGCGTGTACCATCATAAACCTGCACCAGCGCAGTGTTATACTTAGCGCCACCCAAGTATTTATCGAGTTCATCATTCCATGGATGTG
>Seq6_ A25M_Blackberry virus Y
GAACACACCACCACTTGCGTCAGTCGGGACTTCGAAATCATATCGACCATCATATACAGTTGTATTGTCATCACATGTGTACAATGTTTCGACTGCTGTTTCTGTGTGATATGGCAATTTTTCCCCTTCCGGCAGATCG
>Seq7_ A25M_Blackberry virus Y
TAGTTTCATCTATAAAGTCAAAGCAGTACGGGAAGTAAATTGCTCGCTTCACGTTACGTACAACTGCTTGTCGAGGTACGTATTGTGGATTATGCTCCCGTTGGATTTGGATATAATCGATAGCTTCCTCTGAGAAACGCCTCACTGATCCAAGAGCTACCAACTCTATCAC
>Seq8_ A25M_Alphacryptovirus
AGATGGGCATGGCATCGAGAGGATGCGCGATTTCTTGTAGCGTAACGTCAGTACCGAAGATGGTACGGAAGTTCGTAAGAAAGAACACATTTGACATGCTTTATCTTCAGTTGAAGATGACCATTGGTAGTCAAA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq9_ A25M_Alphacryptovirus
GGTGTAGACTCGCTTGAGGATGTAGTGGAGGCGGGCGCTGAGGAGGTCGAGATCGATGTCGTGGACGACCGGGGCGGAGAGGGTGTTGTATGGAGTGAGGCGGAGGCGGCCGTCGGCTAT
>Seq10_ A25S_Blackberry virus Y
AGAGTTGGTAGCTCTTGATCAGGTTGTTGACAAAGTTGAGCCTAAGGAAATTCCACATTTTGTACAGCAGAATCCAAACATAACTATGATTATAGATTTTCAGAGTGATCGCACAAAAGCTGATGGTTTTGTAAAGCATGGCATTAATGGAATTTATAATTACACAAAGATAGCTAGTGATACTTTTTCTCTTTTGCTAATTGCGTGCGTTGTCATATATTATGTTGTACTAGTAC
>Seq11_ A25S_Blackberry virus Y
AATTGGTGGACAACTTCTAGCGCATCTGGTGTTAAGATAGTTTCATCTATGAAGTCAAAGCAGTACGGGAAATAAATTGCTCGTTTCACATTACGTACAACTGCTTGCCGAGGTACGTATTGTGGGTTATGTTCCCGTTGGATTTGGATGTAATCGATAGCTTCCTCTGAGAAACACCTCATTATTTTCCGTAATTCCACTGATCAAGAGCTACCAACTCTTAGC
>Seq12_ A25S_Blackberry yellow vein associated virus
TTGGCAACGTCCGTGAAGTTTCTTTCAAAATGTCCAGGATCCGGCTAGTTTTCCAAGTGTACACAGTCTCTCCAACTTTGAAGGTATTCGTGAGGT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq13_ A27M_Blackberry virus Y
AGTTTGACTAGTCAATACTGGTTGCGGTACAGGTTCGGATGTTACAGGTGGGTTAAC TGGTGGTGTCTCTGTGCCGCTTGACGATTGGAAATCAATGATGAACACACCACCACT TGCGTCAGTCGGAACTTCGAAATCATATCGACCGTCATACACAGTTGTATTATCATC ACATGTATATAATGTTTCGACTGCTGTTTCTGTGTGGTATGGCAATTTTTCCCCTTCC GGCAGATCGATATCGTACCGATTCACTATGAGCCATTCATAATACTTGCGCAGCCAA TATGTTAGGTCATCATATCCCCATGATCAAGAGCTACCAACTCT
>Seq14_ A27M_Blackberry virus Y
ATAGACACCACCCAACACCATCTTAACAGGACAGCAGCAGCAGCAGTTAATGCCTA AGACATCTCAACCTCATCAGCTAGAACCAGTCTTAACTCCCATTGGAGTTCAGCAGC CAACATTTGGTACGTTTGGGATGCCACAAGCACAACAAACAACAACAGAGCCTGTT ATCGCAGCGGCACGAGTGAGAGGTAAGCAAAAGGAAGGCGACACAAGTTTAAGCC AAGTGCGTGACCACCGGCGACTATGATCAAGAGCTACCAACTCTGATC
>Seq15_ A27M_Blackberry yellow vein associated virus
TCTGAACATAGTGCACAACATCGCCCCAGCCATCAATAAAGTTGCAAAATTGTTCTT TAGACATACAAAGTTTCGCAACTTCGCATGGCTGTGAACAGAG
>Seq6_ A27M_Blackberry yellow vein associated virus
GTGCTTGGCTATATCCTCCTCAGAATAGGTACAACCCATGTCGCGGTTGACATTCAA GAAGTCATTGATGTCACCCGTAGTAAAAGGCTTATATCTGAGCGCGCTACCTTTCCA ATCTAAGTTTGAGAAAA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq17_ A27M_Marafivirus
CAGATGTTGTCATCATAGGTGCCCGGCTCTCCGGTGAGGCGCATGCAGGTGAGGGG CCCGAACTGGGTGGAAATGGAGGTCCTGAGGTGGACGTGGAGATCGATCAGGTGTT GGGGAATGCTCAGGCGCTGCATCTTCAGGCGCTCAAGGACCACGGCCTCACCATGTT GGCTTTGGTCGAACGCGGTGTAGTCGTTGGCGACGTGGACCGCGTTGGTTAGGTGAG AGGCGCACCAGTCCGAGAGCTCGAAAGGGGTGTGGGAGGCGTGGATGTAGATGTGA TCAAGAGCTACCAACTCTGGCTAC
>Seq18_ A27M_Carlavirus
ACGGTGACATTGTATTTATCGCCATTTAAAAGACTTATTTGATTGGTCTTCAAAAGGT AACCATTGGCGATCTGCTGGTTATAAGCCTCACTAGTGCAACCATCGGGGTAGTAAT TGAAGGTACCATCCTTTAAGATGTCAAAGGAATAGACTGTTGGGTTGCAACTAACAG AGAAGCCACCTAAGATCTCAACAGGGTAGATAACAGAAGCCAAAATGATGTTGGGT CTTGTTGAGTTTAGGAAATGGCAGAGCTTCTCCTTGTTCCAGTGGTGCAGTTCATCAT GGAAGAAATTAATTACCTTGAAAACCTTGTAAAGAGGTAAAGGTATCAAAGTTCTCT ACACCGGGGCTGGAACGGTAGGTGATCTTATTACTGGAGGTTGAGGGGAGGCCATA TCTAAAGAAATCCTTTGAATCTATTATTCTATTGATAACATTTAAAGAATTTATGGAC ATAATCGACTCTAAGATAGCTACTTTAGACGGTTTTATTGAAACTAA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq19_ A27M_Pararetrovirus
AGGACTTTGACCTCTCTTTGGTATTCATCTTCTGATTCTGTATCAGATTCTAAGGAGC TATCTTCTTCTGTAGAGTAGGCTGAATAGATAGACTGACTATCCTCTTCATCTGAATA AACTACTTCATAGCCTTTCAGATTAGCCTCTTCTACTATGTCTTCGTATTTTTCGAAT AGAAGAGGTTTAGTAGTTCTTTTATTTTTCTGAGGACATTCATTTGCATAGTGTCCTT CTGCCTTGCAGAGCCAGCACCTGCATTTCTTCTTTTCTGCCTTTTCTGTTGGCTTTGAT TTTTTGAAAA
>Seq20_ A27S_Blackberry virus Y
AGCTAAGAGTTGGTAGCTCTTGATCTACATCTTTGGGGACAGAACACGCAACAGAG CAGAGCTTGAATACATGTCCCTGACGGGAATTGAACGTGAGGGCATCTATATACCG AAGCTAAGTCGAGAGCGCATCAGTTCAATAGTCCAATGGCGGAGAAAAGGAGACAC GCGAGCCATGTTTGACGCACTCAATGCAGCCATTTTAGAATCATGGGGATATGATGA TCTAACATATTG
>Seq21_ A27S_Blackberry virus X
GCAGAGTTGGTAGCTCTTGATCACACCACCAAGTCTGCAGCGATGTGAACAAGTGGT TTTTCGACACTTCTGGTCAAGGCGCTCAAAAACATTCTCCTCTGAGGCCAGTAGAGA TTGTCTTG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq22_ A27S_Iflavirus(TMaV-like)
CGATAGTGACGTGCGAACTGACCTGCTACGTATTCCTGAAACTCGTAATACGTCATTACGAGTGGCTCAAACCCGGCACTAGCGTCAGTGCAATCTTTGTACTTTCGAAATTCGAGATGTCCAAAAACCTTCAAAACCTCATCTGGAATCTCTTCCATATTTTTATTCACATACTCTGGCTTTAGTGTAGCATGGAATACTACATTCCTCCTACGTAAATTGGCTTGCTCACAATGGTTCAGAGAGGTAAGATGCCGCGCAAAAGCGTCATTCGTAAGAAGCAACAAACCAAGTGGGTTTGCATAGCACTTCTTGTCTTCCAAATGAGCCATTGGTGGCGTGTATAGTTGATCAGTGCACAGATTAAAAAGGTCGTCCGTTTCTGCTCGAATACTTTCTTTGTCAGTGCGCTGGCCATAGTCGTCCGTTATTATAAATTTTTGGTCGCGATAGTTCGTCCAATATGGTGCACCAGACTGCCGAGTGTACGCCAATCCTGAAGCACTAACTCCACACT
>Seq23_ A27S_Totivirus
AGGCCATACGACACAATGCATCGAGTTTGTTACGTTCTAAACTATTCTTTGCTCTATACAGCCAAAAGTTTTCAAACTTCATCTTCCTAGGTTTGGCTCCCATAGCTAAAGCCCGCGTGAACAGTCCTATACCTATGCGCTCTATCTCCGGCCTTTTGAATTTAGCTAAGTTGGGCTTCTGTCTATTATTCCTCTCGCTCTGCCAGCTTATCTCTCCTACCCCTCGGTTTACTAGGACTTCTAGCTCAAAAAACGGGTGTCAAATCTAGCGCTACCAAGTTTTGCAGCGCCTTGAGTCTCAGTGTGAATCTTTCTTTGACCTGCTTTGCGAAGTCCATGGTACTCACAAACTCCCAGTGATCAAGAGCTACCAACTCTGAT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq24_ A27S_Blackberry virus Y
CCATTCCTCTGTATTCGCTGTCCCCATGTTTATTGGAGTTTTTTAAACATAGTTCAAC TCGCCTTTTGTAAAGTCATTTAATTACTGGTTTTGACGCATTAGGCCAAAGTTCAACA ACAACATCAACATTTAAAGTAACGCCATTCTCTACTATATTGGTTGCAACCAAAATA TAGGGGCTCTCCATCAACTTCCATCACAGGTGAATATTATTTACATTTGCTACTGTTC TAGCA
>Seq25_ A27S_Blackberry virus Y
ATTCCCTCGTTGTTAGAGGGCGGAATGTAGTGAGTGGTCACGTCACTAACGCACTCA ACTTGCAACAAGATTGCTTAGCTGACGATTACTTGCAGTATAGTGAGGAGTTACAAC CATTGCATGATGATTTGTCGGAATTGAAACCTCTGAATGTCATCAACAACGAGTTAA TTAGGCAGAATATGCACATAACAACACTGTACAGTAACATGAGCAAGTTGCAAAAT GATGCCCTT
>Seq26_ A27S_Blackberry virus Y
TTATCCCGTTTAAGAGCATATTCTGGACCGTAACTTCTCGCTCCATATCGTCCGATGG TCCTCGCCCACGTGTAACCCACCCTTAACTAAGTCTTGTTATCACGAAGGTGTAGCC GACTTCCTTCTTGTTTCCTACTTGTCCTCTAAACGTTATATTGTTTTCTATCTCTACGG AAAACGTACTGTACAACATAATATATGACA
>Seq27_ A27S_Blackberry virus Y AGAGGCGCTCCTCACGCTAGAACATAAAAAGAGCTGTGAATTGGCATCAGCAAAGA AGATCTCACTAGCGCGAAACATGCAAGTGCACGTCAAACAAGAAGTGGTTGCAAGA TTGATCAGCCAACAAAATTCAATATCTGTACCAATTGCAACGCTATCATCGTGCGTT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq28_ A27S_Blackberry virus Y
TACGGGCACCACCCCATTACTATGACTACACACCCATGGGATGAACGAGCTTGATA AATACTTAGGTGGTAGGCTAAGTACAATACCGCGCTAGGTGCAAGTGTACGATGGT ACCGACGTGACTTACCATACCATAAACGATGACGA
>Seq29_Blackberry virus Y
GTAGGCCACTGACCTAGTGAAGGCATTGCTCTTTCAGTTACAGTGCGGTGGAATAAT TTCACTGATTCATCAGGCACTAGGAGGTACATGTGTAAAAATATTGTAGAGAAGCAT AACCCTTCCAGTGGTACGTGCACACGACCCC
>Seq30_ A27S_Blackberry virus Y
ATTGGCGGCCAGGCGAGGACATCGGAACCCATAAAGGTCTTCACGGAAAAGAAGGA AGTTATTGGTAACGTGGTAACTTGCACTGGAACTGGTTTCTCAGTAGCTGATGCTAA GGAGGCGAAGGCACTTTT
>Seq31_ A27S_Blackberry virus Y
ATGGTGATGATCTAATATTTGCCATCCATCCTGATCGAGAGAGCATACTCAATGGGT TCACTCACCTATTTGCACATCTTGGCTTGAACTACATCTTTGAGGACAGAACACGCA ACAGAGCAGAGC
>Seq32_ A27S_Blackberry virus Y
ATGTGTGTATGGTAGCCGTTAAAGCAGGTCTATAATTGTATATTCTGGGTTGTGTTAT GATTGGGTTTGCCTTTAAGTACTCGTCTACCAGTCCTTGCGTTTGTCCTTGGTCACAT CAGGTAATGCTAATTCGTCAATAATGGCTGCTCTCCCTGAGGTTTGACTCGTTTGGTG GTGCCAAATCACTCATCATGCCGTACTAGTTCGTTCTGGGCTTGTCGCCGGTGGTCA CGTCACTTGGCTTAAACTTAGTGTCGCCTTCCTTTTGCTTTACCTCTTCACTCGTGCCG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq33_ A27S_Blackberry virus Y
GGAGGAAAGGAGACACGCGAGCTATGTTTGTCGCACTCAATGCAGCCATTTAAGAA TCAGTGGGTATATGATGATCTAACATATTGGCGTACGCAAGTATTATGAGTGGTCTT ATAATG
>Seq34_ A27S_Blackberry virus Y
AGCGGGAGCAAGTGCGGTGTGATGTTTTTAACAAAGGAGCTAACATTCTCGTGTATG TTGCAAGTTATAACGATGTTGACAGAATGTCTGCGCTGTTGTTGGAACGTGGTTT
>Seq35_ A27S_Blackberry virus Y
AATTTTTACCACGCTGTGCGTAACCCAAGTTGCTGGCCGAATATCGATAACTTTTCC GCAACCACGATGCGAACAGTTGAGCGCCAGGGTCGCTCACTCTCGCAAACTAAACG CTGGGTACCAATCGCAGAAGCTCG
>Seq36_ A27S_Blackberry virus Y
TCATGCGTCGCGACATCATGATTTCTGGATTCGACTTTGTCTAAGCTGAGAGTCTTTG TATGCTGTTATCCGTATGTGTTCCATTTGTTTGTTGCGTGTTCATTGTTACTGCTTTGG TCACTTGCGTTGTACGGAAAATCAGCGAAAAACTTTCCACAAACTTTTCGCACGTAA TCAACCGCGCTCTCCCCATTCGTGTGTCGTTGT
>Seq37_ A29S_Blackberry virus Y
AGCGGTGCGATCTTAGGTAATGCCGGTTTGTGATCCTGCGCTAAGGTCGGGTAGTAG CCATCAACCTCCGCTGCAAACTCACCAAAGTTAATTGTAGTCTTAGTTTGCAACTTA CTCTGAGCTTCCTGAAATTGCTTATTATCTCCCCTCCTGCTCTCGTTTGT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq38_ A29S_Blackberry virus Y
ACGTGTGCCATCATAAACCTCGCACCAGCGCAGTGTTGTACTTAGCGCCACCCAAGTATTTATCGAGTTCATCATTCCTATGGATGTGTTTCATAATAAATGGGATGGTGCCCGTATTGTAGTGTTGGGTCCTTCGAGAAGAACCATGCTGTTCTACCGTGGAGCCTCACTCCTACGGTATCTTCAATGCATTGTGGTGCCGACCATAGATTTCATCTTTTCAACTACACAGTGAGCTCGCGTTGTGTACGTTAATATCGATGGTTCCTTATAGAACTCACTCAATTTACTGCTCGTGTCACTGTCCACATCTCCCCACTTCTCATGTACGGGTGTTGCATCACAACTACTTATCTGCTCCTCGTCACTGATCAAGAGCTACCAACTCTTAGC
>Seq39_ A29S_Blackberry virus Y
CCCTCCTGCTCTCGTTTGTTGTCACACGAGCTTCTGCGATTGGTACCCAGCGTTTATTTGCAGAGTGAGCGACCTGGCGCTCAACTGTTCGCATCTGGTTGCGGAAAGTTATCGATATTCGGCCAGCACTTGGGTTACGCACAGCGTGGTAAAAATTT
>Seq40_ A29S_Blackberry virus Y
CTCTGGCATTGGTGTTGTTGAGAGGACTGGGAACATGGCTACAAGGTTTAACACCCAGGTTGCAAGGTGACGTAATGTAGGCCACTGACCTAGTGAAGGCATTGCTCTTTCAGTTACAGTGCGGTGGAATAATTTCACTGATTCATCAGGCACTAGGAGGTACATGTGT
>Seq41_ A29S_Blackberry virus Y
CCAGTCCTCTCAACAACACCAATGCCAGAGATACTTGTCCATCATGAGAGTCAATCGATACATATACCAGATTGTTTGGGCACAGCCACATCAGGATATCATAGGCTGAATATCGTGACTCCATATGATTTTATCATCCGATGATCAAGAGCTACCAACTCTTAGC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq42_ A29S_Blackberry virus Y
CCCCTTGTAGAGGTAGTTCAATTATGATATCATCCCACATCGTTCTCACACGTAATGTGTTTGGAGCCGGATCCGCACACTTGTTACTGAGCACCACACCACTACTGTTTGTAGTACAGCTGGCTGATGTGCACGTTGCCC
>Seq43_ A29S_Blackberry virus Y
GAATCCAAACATAACTATGATTATAGATTTTCAGAGTGATCGCACAAAAGCTGATGGTTTTGTAAAGCATGGCATTAATGGAATTTATAATTACACAAAGATAGCTAGTGATACTTTTT
>Seq44_ A29S_Blackberry virus Y
TTCGACTTCTTCTGTTATCTCCTTAGCTGTCGCCCGAGGGTCCATGTCGATTTTTACACCTGTAACAGGATCAAACAGTTGTAACACATCGTAATCTGCGACATCAAACCCATAAAACACTTGAAAAGGTGCTAATTTAACACCCATATTGGTCCTAGGCTGAATTCTCTCCCGCATATGTTTCTTCGCCTTC
>Seq45_ A29S_Blackberry virus Y
CACGTCCTCTCGATTTACTCCCCCTTTCTTAACGAATGTTGCTTGAATCTTCTCTGGCATGTGAGTGTCCGACCAGACTTCCCTATTGAATGGTGTGTCTTCAACT
>Seq46_ A29S_Blackberry virus Y
CACAAGTTTAAGCCAAGTGCGTGACCACCGGCGACTAAGCCCAGAACGAATAGTACGGCATGATGATGATTTGGCACCTGATCAAGAGCTACCAACTCTTAGC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq47_ A29S_Blackberry virus Y
AGTTGGTAGCTCTTGATCACCGACACCACCCAACACCATCTTAACAGGACAGCAGC AGCAGCAGTTAATGCCTAAGACATCTCAACCTCATCAGCTAGAACCAGTCTTAACTC CCATTGGAGTTCAGCAGCCAACATTTGGTACGTTTGGGATGCCACAAGCACAACAA ACAACAACAGAGCCTGTTATCGCAGCGGCACGAGTGAGAGGTAAGCAAAAGGAAG GCGACACAAGTTTAAGCCAAGTGCGTGACCACCG
>Seq48_ A29S_Iflavirus(TMaV-like)
CGATAGTGACGTGCAAACTGACCTGCTACGTATTCCTGAAACTCGTAATACGTCATT ACGAGCGGCTCAAACCCGGCACTAGCGTCAGTGCAATCCTTGTACTTTCGAAATTCA AGATGTCCAAAAACCTTCAAAACCTCATCTGGAATCTCTTCCATATTTTTATTCACAT ACTCTGGCTTTAGCGTAGCATGGAATACTACATTCCTCCTACGTAAATTGGCTTGCTC ACAATGGTTCAAAGAGGTAAGATGCCGCGCAAAAGCGTCATTCGTAAGAAGCAACA AACCAAGTGGGTTTGCATAGCACTTCTTATCTTCCAAATGAGCCATTGGTGGCGTGT ATAGTTGATCAGTGCACAGATTAAAAACGG
>Seq49_ B30M_Blackberry yellow vein associated virus
GGAGCTTTTCACTGTTACTATTCATCTGATCAGTCTCTACTTCTCGATCTTTTGGTAGT TTTTCCCTATTTGCGAGAGAGAATGGTAGACTTTCTCACTTCTGTATAAGGTACAAA GATTTTCTTGTTCTTTTTGTCTTTCTAAAAGAGGAGAATATAGAGGATAAGAGAAAG AAATTGTATGAGTATTTAATTAAAATTTAAACTATAAATGCTTCTTATATAGGACGA GAGCTGGTGGTAGGGATTTTGTCTATACTAGCAAATTAACAAAGTCAAACGGAAGA ACAAAATTACTTATACTAATGATTACCAATGACTTAGGAATTGCTTTAAGTTGCGAG TACATTTAACATGTAATAAAGTATCGAGCCAGATACTACATGAGTAAGAGCTTCCTT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq50_ B30S_Iflavirus(SV-like)
ACAGTACCGAGTTTATGTTCAGTTGTAAATTTTATTTCATCTAAAGGCACCCACCGAT TTGTTAATGCGTCAAAACTATGTACAGGCTCACTGCTCGCAAGCTTGGACAAGTCTG TTGCTTCGGGAACGGTAAACATAATCGCCGCCTCATCGCGAGATATTAATGTATTTC CCGCCTTTGAAGTGGCTTGATTATGTTCATCTAGTCCAGTATTGACATTATCCATCTG TGTTTGCACCCCTTCATGCGTTGTATTCGGGGTTGCACCACAAATGGGTACTAAAAA TACCTGGCACAAAGCTGCGTCAGTGTTAAGACGCGCTTGTTTCTTTGAACTTGCCGTT GCCCAAACCATTACAGTTGATTTGGGTGCCTTGAGGATCCGGGTGACCTTCCATTCT TTCCTGGAGGGTCCTCGGTTCTCGTCTCTCTACCTCCTTTCGACTCAAAGAGCTTATT CCGGTTTGTAGCCAGCTAATTAAAAACTA
>Seq51_ B31M_Blackberry yellow vein associated virus
GATCAGGGGGGGAAATAAAAGAAAATTCGATAACATTTGGTCTATTTTTAAGAGAG AATGATATTATGGATTTAAAAATCAATAATAAAATGTTTAAATCTATTAGATTAAAG ATATCGACTATTCAATTGTCGTTCAATCAAGACCTGCTCCATCACCTTTCTCCCTTCT CTTAAGGAGAGTATTTGAAGCTGCAATCAATCACCAAACCAGTCTTCTCCATCACCA CCACTCACCTCTGCCACAATCACCCAATAACTTCCTCTGCAACTCACATCTGATCAA GAGCTACCAACTCTATCAC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq52_ B31S_Blackberry virus X
AGTGAAACGCATGACGGAGAGACCTCCCAGCCCACATTTTAGATTGAGCTTTAGATT CCTGTAGTCACTTAGATCAGACTCGGTCCAGCCAATATGCTTAAGCAGACTCAATTC AAAGGCAAGAATTTTATGATCTTGAGAGGCATCAAAAGCAGAATAATCGTTCTCCA GACCCTCTCGAAAAGTTGGTGCAGATTGAACGAATAAGTTCAAACTATCGAAGTCCT TTCTGTTGTGCACATACCAGTTCTTAGGAAGATTTGCGGACAAGACTTTTTCGGTGCT ACGACAGAGAGCAGAGAACCTCCAGAGAACTTCATGTTGAAAGCAGCTGATGGTTT GTCCGGCAATCGCATCGGAGTATCTTTTCTCGATCTTTTTACAGAGCTGTTGCTTCAT GAACAAGAAGATCTCATTTTTCTTCCAATCTGGGTCTGATC
>Seq53_ B31S_Alphacryptovirus
GGCAATTCACCAAGATTTACATCGAAGTGTTCGACGATGAATCGGGTGTCGGAAGTC GGGCGACGACCGATCTGAGTTTCGTTGGCAGTGGGTCGTGCATTGGGATAAACCCA AGCAGACATCATGCCAGGTGAGGCTGGGAGAGACATTGGGATACAGGCACCTAGAC CAGTGATGGGGATGCTCTGCAGAGGGACAGTGCCACGAAAGAACGTTGCATACGTT TGCATGCACGTATTGACGGCGGTGAACCAGTCATATTTGTCGTGGTTGTCAGAGCCA GCGAATCCAAACATTTTACCCC
>Seq54_ B48M_Blackberry virus Y
AGTGGCATCAGAGTTGGTAGCTCTTGATCATGCACGAAACCCCCCACGCGGTACTCT TGGCAACCGTTTCTTCCGATTTCAGTTGACAAAAATGAATAAAATCATATGGATCAC GATATTCAGCCTATG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq55_ B48M_Blackberry virus Y
CCTCGTTGTTAGAGGGCGGAATGTAGTGAGTGGTCACGTCACTAACGCACTCAACTT GCAACAAGATTGCTTAGCTGACGATTACTTGCAGTATAGTGAGGAGTTACAACCATT GCATGATGATTTGTCGGAATTGAAACCTCTGAATGTCATCAACAACGAGTTAATTAG GCAGAATATGCACATAACAACACTGTACAGTAACATGAGCAAGTTGCAAAACTGAT GCCCTTGCAACAAACGGCGGAAACTGAAGTTGCCACTGTTTGGTGTCGCTCAATTGG TTGTGAACCAACTTAAATACAATACAACGACACACGAATGGGAGAGCGCGGTGATT ACGTGCGAAAGTTTGTGGGAAACGTTTTTCGCTGATTTTCCGACAACGCAAGTGCCA AAGCAGTACATGACACGCACAACAAATGGACACATACGGATAACAGCATACAAAG CTCTCAGCTTGACAAGTGATCCAGAAATCATGATGTCGCGACGCATGACTCAACCAA TGTTGACGACAGCAAAGCAAGCTGATTGTGTATTCCAATCAACCACAGGGGCAACG TGCACATCAGCCAGCTGTACTACAAACAGTAGTGGTGTGGTGCTCAGTAACAAGTGT GCGGATCCGGCTCCAAACACATTGCGTGTGAGAACGATGTGGGATGATATCATAATT GAACTACCTCTACAAGGGGGTCGTGTGCACGTACCACTGGAAGGGTTATGCTTCTCT ACAATATTTTTACACATGTACCTCCTAGTGCCTGATGAATCAGTGAAATTATTCCACC GCACTGTAACTGAAAGAGCAATGCCTTCACTAGGTCAGTGGCCTACATTACGTCACC TTGCAACCTGGGTGTTAAACCTTGTAGCCATGTTCCCAGTCCTCTCAACAACACCAA TGCCAGAGATACTTGTCCATCATGAGAGTCAATCGATACATATACCAGATTGTTTGG GCACAGCCACATCAGGATATCATAGGCTGAATATCGTGACTCCATGTGATTTTATCC TTTGATCAAGAGCTACCAACTCTGATCAGGCGTGATAGAGTTGGTAGCTCTTGATCA GAAATGATGCTTATGAGAGTGCTATTCTATTCAAAGCCAAGACCAAGTGGCTTCATG ATAAGAGACTCAAGGTGAAGGAATTTGCCCCTGCTCAGAAGGTG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq56_A-Unmatched_Blackberry virus Y
GCTCCATGGCAGAACAGCATGGTTTTTTCTTCTAAACGACCCACTCACTGCAGTACG GGCACCCACCCCATTTATTATGATACACACCCACTGGGAGTGACGAGCTTGATAAAT ACTTAGGTGGTGACTAAGTACAATACCGCGCGTGGTGCAGTGTACGATGGTACGCGT GTACTTACCATACCAATAAAGATGACGACGCCCTGTTATGACATTAACCAACAACTA CCTAACTTCGCACTGTCAATGTTCGTTCGGTCGACGGGCGTAGTTTGTGCATCAGAC AAAGAAGTAAAAGGTAGGTTAGTAGTAGAAACTAACGTACCCGT
>Seq57_ A-Unmatched_Blackberry virus Y
TCACTGATTCATCAGGCACTAGGAGGTACAATGTGTAAAAATATTGTAGAGAAGCA TTAACCCTTACCAGTGGTACGTTGCACACGACCCCCTTGTAGAGGTAGTTCAATTAT GATATCATCCCACATCGTTCTCACTACGCAATGTGTTTAGGAGCCGGATCCGCACAC TTGGTTACTGAGCACCACACCACTACTGGTTTGTAAGTACAGCTGGCTGATGTGCAC GTTTGCCCCTGTGGTTGATTGGAATACACAAT
>Seq58_ A-Unmatched_Blackberry virus Y
AAAGAACATAGAGGTTTTAAGTAACATGCGGTCAACTCTTGTTGGATACAGGCAGG TTGTTGACAAAGTTGAGCCTGAGGAAATTCCACATTTTGTACAGCAGAATCCAAACA TAACTATGATTATAGATTCTCAGAGTGATCGCACAAAAGCTGATGGTTTTGTAAAGC ATGGCATTAATGGGATTTATAATTACACAAAGATAGCTAGTGATACTTTTTCTCTTTT GCTAATTGCGTGCGTTGTCATATATTATGT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq59_ A-Unmatched_Blackberry virus Y
TCACTGATTCATCAGGCACTAGGAGGTACATGTGTAAAAATATTAGTAGAGAAGCA TAACCCTTCCAGTGGTACGTGCACACGACCCCCTTGTAAGAGGTAGTTCAATTATGA TATCATCCCACTATCGTTCTCACACGCAATGTGTTTGGAGCCGGATCCGCACACTTGT TACTGAGCACCACACCACTACTGTTTGTAGTACAGCTGGCTGATGTGCACGTTGCCC CTGTGGTTGATTGGAATACACAAT
>Seq60_ A-Unmatched_Blackberry virus Y
CCCTTAATAAGCTTGTTATCACGAAGGTGTGACCGATTCCTTCTGTTTCCACTTGTCC TCAACGTTATATGGTTTTCATCTCTCGGAAAAGTACTGTACACATAATATATGACAA CGCACGCAATTAGC
>Seq61_ A-Unmatched_Blackberry virus Y
AAACGCTGGGTACCAATCGCAGAAGCTCGTGTGACAACAAACGAGAGCAGGAGGG GGGATAATAAGCAATTTCAGGAAGCTCAGAGTAAGTTGCAAACTAAGACTACAATT AACTTTGGTGAGTTTGCAGCGGAGGTTGATGGCTACTACCCGACCTTAGCGCAGGAT CACAAACCGGCATTACCTAAGATCATGATGATC
>Seq62_ A-Unmatched_Blackberry virus Y
AGCTTTGTATGCTGTTATCCGTATGTGTCCATTTGTTGTGCGTGTCATGTACTGCTTT GGCACTTTGCGTTGTCGGAAAATCAGCGAAAAACTTTCCCACAAACTTTCGCACGTA ATCACCGCGCTCTCCCATTCGTGTGTCGTTGTATTGTATTTAAGTGGTTCACAACCAA TTGAGCGACACCAAACAGTGCAACTTCATTTCCGCCT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq63_ A-Unmatched_Blackberry virus Y
AGCAAGGGAACAAGTCACTAGGAGCGCGGGGTAAATTATATGGTGATGTGGATGCA ACAGCGCTTTTGTTGCAGACAGACCCAGGTTCACTCGATAGGAGTATTATGATTGTT GAGACTGAACTCGTTGCACAGCGTTCAAAACTAGAGGATTTAAATCATCATGTGCAT GAGTCAACCGGCATGTTTCAACGGTATG
>Seq65_ A-Unmatched_Blackberry virus Y
CAGCGGGTATCTGACCAAACTTCCCTATTGAATGGTGTGTCTTCGACTTCTTCTGTTA TCTCCTTAGCTGTCGCCCGGAGGGTCCATGTCGATTTTTACACCTGTAACAGGATCA AACAGTTGTAACACATCGTATCTGCGACATCAAACCCATAAAACACTTGAAAAGGT GCTAATTTAACGACCCATATTGGTCCTAGGCTGAATTCTCTCCGCATATGTTTCTTCG CCTTCTTCTCTGAGAATTTATCCCGTTTAAGAGCATATTCTGGACCGAATTCTCGCTC CATATCGTCCGATGGTCCTGCCCACGTGTAACCACCCTTAATAAGCTTGTTATCACG AAGGTGT
>Seq66_ A-Unmatched_Blackberry vein banding associated virus
TTCGGCGCTGGTGAGGCTGCGGAAGTTAAAAGCGGTGTGGTTCGCAGCGTATGGAG GCGCGGTTAACGTGATTCCCGTGCGTGGTGGTACTTTTAACAATAGGCCAAGCAACC TCGCGTTGCAGTTGTGCGACCCATTTGGCGTAGATGATGGCGATACTGAGTTCATGA CGCCGGAACCCGACACTACTGCCGTTGAACACAGCGTTGACGTATGGTGGTATCTGT CAGGGGGTATTGCGATCGCGCTCTCATTGACAGTTCTAGGAGGTGCGCTGTACGTTA CTTACCGCGGCTTACGGTTCACATGCAAAAAAATTAGTCGGGGCTAAGCCATCAGTA GTGAGGATGAAAGGTCGGATGAGGGAGTATGTCGGCTCCGCAGCTGGTCTGTGGGG TTCGTGAT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq67_ A-Unmatched_Blackberry vein banding associated virus
CACCCACCTCCGCCCGTGATAGGTGCGTCGGGAAGCTTAGTTGACGTTGGAGGGCTG TGTTTCAGTGCTACCGGGGCTAGGTTGGGCTCTGCGTTGTTTAAGTTGAGCAGGGTG TTGTTCGAATCCAAGATCTGGGACATTTTCTACAGAGACCCCAGCACTTACAAGGGT GGCATCCAGAA
>Seq68_ B-Unmatched_Blackberry virus Y
GATCAGACCGAGAGACCACGTCTGATATCATTTTAGCAGCAACCAGGGCCCTCCGA CGATTGAGGCATGCTCATAGTAACGTACAACGAGTTCACAATTCGGACATAACATTC GGCACAAGTGGGGCAATATTACCTTGGAGCTGGCTTGCTCATGACGTTGTTGTTGAG GGACCAGTCCAAGATTCCCTCGTTGTTAGAGGGCGGAATGTAGTGAGTGGTCACATC ACTAACGCACTCAACTTGCAACAAGATTGCTTAGCTGACGATTACTTGCAG
>Seq69_ B-Unmatched_Blackberry virus Y
GGTGACGTAATGTAGGCCACTGACCTAGTGAAGGCATTGCTCTTTCAGTTACAGTGC GGTGGAATAATTTCACTGATTCATCAGGCACTAGGAGGTACATGTGTAAAAATATTG TAGAGAAGCATAACCCTTCCAGTGGTACGTGCACACGACCCCCTTGTAGAGGTAGTT CAATTATGATATCATCCC
>Seq70_ B-Unmatched_Blackberry virus Y
TTAAGGGTGGTTACACGTGGGCAGGACCATACGGACGATATGGAGAGAGAACTTCG GTCCAGAATATGCTCTAAATGGGATAAATCTCAGAGAAGAAGCGAAGAACATATGC GGGAGAGAATTCAGCCAGGACCAATATGGGGTATAAATTAGCACCTTTTTACAAGG TGTT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq71_ B-Unmatched_Blackberry virus Y
ATCAGCTCGGTATGTTGGTAAGAAAAGAACAACATTTAGATGGAATAAGTGAGGAG CAATTTTGTGATGAATTCGTTGCATACCTGTTGTCGAATTAAGACAAAATAAATTAG TGAATGGAAGTGTGGAAAAGGCTCGCTCAAGGCAGAATTACGATCT
>Seq72_ B-Unmatched_Blackberry virus Y
TCCTGTAAATTGCTTATTCTCTCCCCCTCCTGCTCTCGTTTGTTGTCACATGAGCTTCT GCGATTCGGTACCCAGCGTTTATTTGCAGAGTGAGCGACCTGGCGCTCAACTGTTCG CATCTGGTTGCGGAAAGTTATCGATATT
>Seq73_ B-Unmatched_Blackberry virus Y
TCTAGTCAATACTGGTTGCGGTGCAGGTTCGGATGTTACAGGTGGGTTAACTGGTGG TGTATCTGTGCCACTTGATGATTGGAAATCAATGATGAACACACCACCACTTGCGTC AGTCGGGACTTCGAAATCATATC
>Seq74_ B-Unmatched_Blackberry virus Y
CGCCCGTGCCAACGACATTGACAGTGCGAATTGGATTGTTGGTAATGTCATAACAGG GCTCGTCATCTTTATGGTATGGTAAGTCACGCGTACCATCGTACACTTGCACCAGCG CGGTATTGTACTTAGCACCACCTAAGTATTTATCAAGCTCGTCATCCCATGGGTGTGT ATCATAATAAATGGGGTGGTGCCCGTACTGCAGTGAT
>Seq75_ B-Unmatched_Blackberry virus Y
GAATCCAAACATAACTATGATTATAGATTTTCAGAGTGATCGCACAAAAGCTGATGG TTTTGTAAAGCATGGCATTAATGGAATTTATAATTACACAAAGATAGCTAGTGATAC TTTTTCTCTTTTGCTAATTGCGTGCGTTGTCATATATTATGTTGTACAG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq76_ B-Unmatched_Blackberry virus Y
GCACCACACCACTACTGTTTGTAGTACAGCTGGCTGATGTGCACGTTGCCCCTGTGG TTGATTGGAATACACAATCAGCTTGCTTTGCTGTCGTCAACATTGGTTGAGTCATGC GTCGCGACATCATGATTTCTGGATCACTTGTCAAGCTGAGAGCTTTGTATGCTGTTAT CCGTATGTGTCCATTTGTTGTGCGTGTCATGTACTGCTT
>Seq77_ B-Unmatched_Blackberry virus Y
GATCACCGTTTCTTCCGATTTCAGTTGCAAAAATGATAAAATCACATGGGGTCACGA TATTCAGCCTATGATATCCTGATGTGGCTGTGCCCAAACAATCTGGTATATGTATCG ATTGACTCTCATGATGGACAAGTATCTCTGGCATTGGTGTTGTTGAGAGGACTGGGA ACATGGCTACAAGGTTTAACACCCAGGTTGCAAGGTGACGTAATGTAGGCCACTGA CCTAGTG
>Seq78_ B-Unmatched_Blackberry virus Y
TTAAGGGTGGTTACACGTGGGCAGGACCATCGGACGATATGGAGCGAGAATTCGGT CCAGAATATGCTCTTAAACGGGATAAATTCTCAGAGAAGAAGGCGAAGAAACATAT GCGGGAGAGAATTCAGCCTAGGACCAATATGGGTGTTAAATTAGCACCTTTTCAAGT GTTTTATGGGTTTGATGTCGCAGATTACGATGTGTTACAACTGTTTGATCCTGTTACA GGTGTAAAAATCGACATGGACCCTCGGGCGACAGCTAAGGAGATAACAGAAGAAGT CGAAGACACACCATTCAATAGGGAAGTTTGGTCAGATACCCACATGCCAGAGAAGA TTCAAGCAACATTTGTTAAGAAAGGGG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq79_ B-Unmatched_Blackberry virus Y
TCGGGACTTCGAAATCATATCGACCATCATATACAGTTGTATTGTCATCACATGTGTACAATGTTTCGACTGCTGTTTCTGTGTGATATGGCAATTTT
>Seq80_ B-Unmatched_Pararetrovirus
TCCCACGACTATCGTGAGAGTTGGTAGCTCTTGATCATTCTTCAAACTGATGCTAGTGACAATTACTGTCCGGAATAGTCTTGGCTAGAGCTCCAAACACTAACATCGAAAAAATTTGTAAATTCTGTAGTGGTAAATTTAACTCTGCAGAACAAAATTATCCCACAGGGGAAAAAGAAATCTTAGCGGTCAAGAAAACCATTCTGAATGCTCCAGCCTTTTAGGAAAGACTTTTATAGTCCGA
>Seq81_ C47S_Iflavirus(TMaV-like)
TAATAATGGATGACTATGGCCAGCGCACTGACAAAGAAAGTATTCGAGCAGAAACGGATGATCTTTTTAATCTGTGCACAGATCAACTATACACGCCACCAATGGCTCATTTGGAAGACAAGAAATGCTATGCAAACCCACTTGGTTTGTTGCTTCTTACGAGTGACGCTTTTGCGCGGCATCTTACCTCTCTGAACCATTGTGAGCAAGCCAATTTGCGTAGGAGGAATGTAGTATTCCATGCTACGC
>Seq82_ C47S_Blackberry yellow vein associated virus
GAGTTGGTAGCTCTTGATCAGTGGGATGTTCTGAATCAAGAGAATAAGAAGAAATTTGAGTGTTGCATGAAGAAATATTGTAGCCATCATCACTGGTTGCTGAACCCAAACCGGAGGGCTACTTTTTATGGGTTTTCTTCATATCTATGGTACAGGCAAGTCTAAAATTCAATTCTACACTCCACAAAGAATAAGTAGACTGAAAACACCTCACAAATACCTTACAAATTGGAGAG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq83_ C2M_Pararetrovirus
CATATTGGAGCAGTCCAAGTAGGCATAAAATTATTAGCCCGAGAAGGCATAGATTG TTCGGTTCTATGTGTCTTACAAGACAATAGAATATCAGATTTTCAGAAAAGCCTGTT AGGAACACTTGAAGCATCCTTGTGCAACCAAATTGCATACTTCAATTGTTTCCCGAA CTTTACAACAAGTCTGCGAGATGCGACACACTCACTATGATCAAGAGCTACCAACTC TAC
>Seq84_ C2S_Blackberry virus X
GGGGACTAGATATCTCTTTGAGTCTAGAAGATCTGATGGTTGGGCCCACACAGCCTT CAAGGTGCCATGTCTGAGGAGCGATAAATTGAGCTTAGAGAGTCTGAGAAACACTG CTATTCTTTGCCCCTCTAGGGAATTTAGAGATCAGATCTCCCTGTTGGATAACTCGGA TTTTGATGACTTGAATCCAGGAGCTAGAAGGGATAAGTGCACCATAGCTACCTACAC TGAAGTCCAGGGCATGACCTTTGATAGGATTACAATTTGTCTTTCAAGGCAATCTCT TTTGGCTTCGGAGGAGAACATCCTTAGTGCTCTGACCAGAAGTGTT
>Seq85_ C2S_Blackberry virus X
AACATCCTTAGTGCTCTGACCAGAAGTGTTAGAAAACCTCTTGTCCACATCTCTTCTG ATTTGGAAGGGGTAACACTTGAGGAGAGTAGGGAGAACAGTAGTTTAGAAATTAAT TTATTAGGAAGGGTTGGAGGTCCGTTGGATGCCGAGAGATCT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq86_ C2S_Pararetrovirus
TTAAAGAGTGTACTGCATCTTGCAGACTAGTTGTGAAGTTCGGGAAACAGTTGAAGTATGCAATCTGATTGCATAAAGATGCTTCAAGTGTTCCTAACAGACTTTTTTGGAAATCTGTTATCCTATTGTCTTGTAAGACACATAGAACTGAACAATTTATGCCTTCTCTGGCTAAAAGTTTTATGCCTACTTGGACTGCTCCAATATGCATGAATTCATATTTTCTTTCTTTCGCCTTTGCGACTTCACTTGGTGTTATCATTAGGAGATCCGTTTCTCCTGTTGTTGCTGGAGTTGTAAACTCTAAAACTTTGAATTGATGGCTATCCAATAATTCGAAGTTTCCTCTTTTTGATCAAGAGCTACCAACTCTGGC
>Seq87_ C6M_Blackberry virus X
GCATAGGAGAGAAGAGAAAAGGTGGTTGTCGTAGGCAGTGGCATAAGGAGAAGAGAGATCTCATCTGATCAATTTGCTGAAAGTGTTAAGCACATAAGCAGTGTTTTGTCTGATGTGGACAATTTCACTTCCATCTTCCCTAGGCACTCTAACTCGGACAGAGCTACCTTCAAAATGGCTGTCAAGAAGAGATTGAGGTTCAGAAGTTTCTTAGAAAACCCATGAAAGACTTGAGAAGTATATGCCTTTTGGTGAGAACTTGGCTAACTTCTTCATCTCGAAACTCAACTTCAAAGGAAATGTGTCTGACTACCTGGAGGTCTCCATGAATGAGTTCAAAGAAAACTTCTTCAAGAAGGATGAAGCTACTATTGTCAGAAATTCAGCTAGATCAGATCCAGATTGGAAAGAGAAATGAGATCTTCTTGTCATGTAAGA
>Seq88_ C6M_Iflavirus(TMaV-like)
AGGACCAAGTGGTATTGGCAAATCATTTTTAGCTCATGATTTACTCCTTGCACTGCACAAGCAGATTGGTGTTGGAGTTAGTGCTTCAGGATTGGCGTATACTCGGCAGTCTGGTGCACCATATTGGACGAACTATCGCGACCAGAAATTTA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq89_ C6M_Iflavirus(TMaV-like)
ATAATAATGGGTGACTATGGCCAGCGCACTGACAAAGAAAGTATTCGAGCAGAAAC GGATGATCTTTTTAATCTGTGCACAGATACAACTATACACGCCAACCAATGGCTCTA TTTAGGAAGAAC
>Seq90_ C6S_Blackberry vein banding associated virus
CTAAGAGTTGGTAGCTCTTGATCAGATTGGTGTGAAGGAGAGTGAGACTCGGGTAA GCGGTAGCGGCACTCCGCCTGCCATGGAGCAGAAGGTTGTAAGCTTGAGACCCCGA GAAGCCCAAATCGAGAGGCCAACACCAGGAGTACTAGGAGGGAAAACGCACATAT ACCGGTTTGGACGGA
>Seq91_ C6S_Blackberry vein banding associated virus
TTTGGATTTGAGGATAGCATTATGGAAGGCACGTCGACGTGTATTGGCGAGTGAGGC TTATCCTTCACGGACTAGGTTTGAGGCGTGAGGTGGTTTTGTTTTCTTTGCGTTTCTC TTCTTTTATTCTTTCCTATTCTCGCTTTCTTGTTTACTTTCCATCCCGTTTCTGTGTGGT AGCTAACTAG
>Seq92_ C6S_Iflavirus(TMaV-like)
TGGTGTTAGAGTTAGTGCTTCAGGATTGGCGTACACTCGGCAGTCTGGTGCACCATA TTGGACGAACTATCGCGACCAGAAATTTATAATAATGGACGACTATGGCCAGCGCA CCGACAAAGAAAGTATTCGAGCAGAAACGGACGACCTTTTCAATTTGTGCACTGATC AATTATACACGCCACCAATGGCTCATTTGGAAGACAAGAAGTGCTATGCAAACCCA CTTGGTTTGTTGCTTCTTACGAATGACGCTTT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq93_ C6S_Iflavirus(TMaV-like)
TTTGCGCGGCATCTTACCTCTCTGAACCATTGTGAGCAAGCCAATTTGCGTAGGAGG AATGTAGTATTCCATGCTACGCTAAAGCCAGAGTATGCGAATAAAAGTATGGAAGA GATTCCAGATGAGGTTTTGAAGGTTTTTGGACATCTTGAATTTCGAAA
>Seq94_ C-Unmatched_Blackberry yellow vein associated virus
CTACTTATCTCCCTAGATTCGGTCTTAGTGTAGGGTATCGACATAGGTTTCCTGACAA TAATTCTAGGATTACCAAACAAACCTAAGTCCATGAGTGGATGAGAATTACAATCTA TGTAGACCATAGACCCCGAATCTTCTTGAGCATGTTGCATAGAGCAGCCAAAAGAC ACTGAATTCCTCAGATCCTTATCAATGA
>Seq95_ C-Unmatched_Iflavirus(TMaV-like)
ACTATCGCGACCAGAAATTTATAATAATGGACGACTATGGCCAGCGCACCGACAAA GAAAGTATCCGAGCAGAAACGGACGACCTTTTCAATTTGTGCACTGATCAATTATAC ACGCCACCAATGGCTCATTTGGAGACAAGAAGTGCTATGCAAACCCACTTGGTTTGT TGCTTCTTACGAATGACGCTTTTGCGCGGCATCTTACCTCTCTGAACCATTGTGAGCA AGCCAATTTGCGTAGGAGGAATGTAGTATTCCATGCTACGCTAAAGCCAGAGTATGC GAATAAAAGTATGGAAGAGATTCCAGATGAGGTTTTGAAGGTTTTTGGACATCTTGA ATTTCGAAAGTACAAAGATTGTACTGACGCTAGTGCCGGGTTTGAGCCAC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq96_ C-Unmatched_Iflavirus(TMaV-like)
TCAGTGGGTCGCGTTTTGTCAAAAGCTGAAGAACATGAAATTGATATGCGAGTTTGT CCAGTGCGTGTGGTTCCATTTGTGTTTTGTATTGAAGGACCAAGTGGTATTGGCAAA TCATTTTTAGCTCATGATTTACTCCTTGCACTGCACAAGCAGATTGGTGTTGGAGTTA GTGCTTCAGGATTGGCGTATACTCGGCAGTCTGGTGCACCTATATTGGACGAACTAT CGCGACCAGAAATTTATAATAATGG
>Seq97_ C-Unmatched_Pararetrovirus
GGGTTAACAGCAATGTTATCACCTAAAACTAGTTCTAAGAGAACTTGGAAATTTACA TAGGATGATGAAAAGATAATTAAACAGATAAAAGATCTGTGTAAAAATCTTCCTCCT CTACAACAACCCGAAGAGAATGATGAAATCATTCTTCAAACTGATGCTAGTGACAA CTACTGGTCGGGAATAGTGTTAGCTAAAACCCCAGGCACTAACATCGAAAAAATTT GTAAATTTTGCAGTGGTAAATTCAACTCTGCAGAACAAAATTATCCCACAGGGGAA AAAGAAATTTTAGCAGTAAAGAAAACAATTTTAAACTCTCCCGCATTTTTAGGAAAA CTTTTACAGTTCGTACTGATTGTGCTAGAGTAAAAAATTTCAAAAATTTTAAACTTG ATAAAGCTGCTGATAGGGGAAGATTAG
>Seq98_ C-Unmatched_Pararetrovirus
TCACGTGGAGTGTGTCGCATCTCGCAGACTTGTTGTAAAGTTCGGGAAACAATTGAA GTATGCAATTTGGTTGCACAAGGATGCTTCAAGTGTTCCTAACAGGCTTTTCTGAAA ATCTGATATTCTATTGTCTTGTAAGACACATAGAACCGAACAATCTATGCCTTCTCG GGCTAATAATTTTATGCCTACTTGGACTGCTCCAATATGCATAAATTCATATTTTCTT TCTTTAGCTCTTGCTACTTCGCTAGGTGTGATCATTTGGAGATCTGATCAAGAGCTAC CAACTCTTTAGGCCC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq99_ D5M_Iflavirus(TMaV-like)
CGATAGTGACGTGCGAACTGACCTGCTACGTATTCCTGAAACTCGTAATACGTCATT ACGAGTGGCTCAAACCCGGCACTAGCGTCAGTGCAATCTTTGTACTTTCGAAATTCA AGATGTCCAAAAACCTTACAAAACCTCATCTGGAATCTCTTCCATATTCTTATTCACA TACTCTGGCTTTAGTGTAGCATGGAATACTACATTCCTCCTACGTAAATTGGCTTGCT CACAATGGTTCAGAGAGGTAAGATGCCGCGCAAAAGCGTCATTCGTAAGAAGCAAC AAACCAAGTGGGTTTGCATAGCACTTCTTGTCTTCCAAATGAGCCATTGGTGGCGTG TATAGTTGATCAGTGCACAGAT
>Seq100_ D5M_Blackberry yellow vein associated virus
GGTGCTTGGCTATATCCTCCTCAGAATAGGTACAACCCATGTCGCGGTTGACATTCA AGAAGTCATTGATGTCACCCGTAGTAAAAGGCTTATATCTGAGCGCGCTACCTTTCC AATCTAAGTTTGAGAAAATAGTTCTTCTGGTCGGAAACGGAAGCTCTTACTTCACTG AGATCTGGTCTCGATCTTATTACATGTAAATAGACTGGCAACCTTAAAGTCAATTAC CTAACGTACATTGGTAATCATTGTATAAGTAAATTTGTTCTCCGTTTCGACTTTGTTA ATTAGTCTGTAATAGTACAAAACTACCCTACCCAACCACGCTCTCGTCCTATATAAG GAAGCATTTCTAGTTTAAAACTTTTTAAACTTAAATACTCATACAATTTACTTTCTCT ATCCTCTATATCTCTCTTTGTAAAGCAAAGACAGAAATACTTTGACCTTATCAGAAG TGAGAAGTACTACCATCTCTCTCGCAAATACGGGTAAAAAC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq101_ D14M_Blackberry virus X
ACTGCCATCTTGAAGGTCGCTCTGTCTGAGTTGGAATGTCTTGGGAAAATGGAAGTG AAATTGTCCACATCAGACAGAACGCTGCTTATGTGCTTGACGCTCTCGGCAAATTGA TCAGATGAGATCTCCCTTCTCCTTATTCCACTGCCAACAACGACAACCTTCTCCCTTC TCTCCTTTGCCACAAGAGCTGCCAGATGTTCTGAATCAGAGAAGAAACTAGGGGAT GGGATGGTCTTTAAGGAACAGATGGCTTCAATCACCAACTCATCTTCTGCAGTAGGT TCTTCAACCAACTCCTCTCTAAGGATATCAGCAAAAGCCATTAGAGCATAGTCAAAC TGGGCTTTGTCAAAGAAACTGCTTCCGACAGATGAGGAATTAACAATCTTCAAATTC CATTTGAGACATAAATCCCTTGCATCAATAGCTTCTCCCTTATT
>Seq102_ D14M_Blackberry virus X
CGGACATCACACTGCTTATGTGCTTGACACTTTCAGCAAATTGATCGGATGAAATTT CTCTCCTTCTCAGACCACTCCCTACGACAACACTCTTCTCACGTCTTTCCTTTGCGAT AAGGGATGACAGATGCTCTGAATTTGAGAAGAAACTGGGAGAAGGAATAGTCTTTA AGGAACAGATAGCCTCTATGACTAATTCGTCTTCT
>Seq103_ D14M_Pararetrovirus
AAATATGAATTTATGCATATTGGAGCAGTCCAAGTAGGCATAAAATTATTAGCCCGA GAAGGCATAGATTGTTCGGTTCTATGTGTCTTACAAGACAATAGAATATCAGACTTT CAGAAAAGTCTGTTAGGAACACTTGAAGCATCCTTGTGTAACCAAATTGCATACTTC AATTGTTTCCCGAACTTCACAACAAGTCTGCGAGATGCAACACACTCAACATGATCA AGAGCTACCAACTCTCCA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq104_ D14S_Blackberry virus X
GAGTTTACAATCTTGAGGTTCCATTTCAGACAGAGATCTCTGGCATCCAAGGCCTAC CCTTCAAAGATATCTTAGAACTCGATTTTCACCCATCTCTTCTAGGGTTACCCCTTCC AGATCAGAGGCGACGTGAACAAGCGGCTTCTCTACACTCCTGGTAAGGGCACTCAA GATGTTCTCCTCTGAAGCCAAGAGAGACTGTCTAGATAAACAGATAGTGATTCTGTC AAAAGTCATGCCCTGAACCTCTGTGTAAGTAGCAATGATGCATTTGTCTCTCTTTGCT CCTGGATTCAGATCATCGAAATCTGAACTGTCCAACATGGAGATTTGGTCTCTGAAC TCCAAT
>Seq105_ D7S_Pararetrovirus
AGAGTGTGTTGCATCTCGCAGACTTGTTGTGAAGTTCGGGAAACAATTGAAGTATGC AATTTGGTTACACAAGGATGCTTCAAGTGTTCCTAACAGACTTTTCTGAAAGTCTGA TATTCTATTGTCTTGTAAGACACATAGAACCGAACAATCTATGCCTTCTTGGGCTAAT AATTTTATGCCTACTTGGACTGCTCCAATATGCATAAATTCATATTTTCTTTCTTTAG CTCTAGCTACTTCGCTTGGTGTGATCAAGAGCTACCAACTCTCCGT
>Seq106_ D5S_Blackberry yellow vein associated virus
CTCTAGCTATGTTGGAGAGTTGGTAGCTCTGGATCAGTCACGGGTGCTGAACAACCG AGGCACTTTTAAGGTTTCTCATATCTATGGTTCAGGCAAGTCGTAAATCAATCTACA TCCGACGAAGAATGTAGACTGAAACACCTTACGAATACCTTCAAAAGTTGGAGAGA CTGTGTACACTTGGAAAAACTGCCGGATTCCTGGA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq107_ D-Unmatched_Blackberry vein banding associated virus
ATAGGTGGTAAGCGAGCTGGTGTCTTTGGTGGCGAGAAAGTACAAGGAGTCGGGAT GGACTTACGCGGCCCTATGCGCTATTCACGTGATGACGGCAAACTTTTCGCAGTTTT GCCGCTTATACTTCGATAGAGGGTGTGGGTCGGCGCTGGTTCCCAGGCGTCCAAGAG GGAGGTTGTCTTCGAGAGCTTT
>Seq108_ E15M_Nanovirus
AGGCCGGCCATGACAGGCAAAGGCGAGTATAAGGTGGGGTATCGATTAGGATCCGG CAAGAGCCATAATCCGGTTCAACCTGAGAAGAAGCTTCAATTGGTACATGATGATG ATGATGATGATGGCTTCCTTCAGTCGCGGCTGAAGAAACTTAACCTGGTTGATGTAG TAGTTAGCGATGAAGAAGAAGAAGAAGAAGATGAAAACGATAGTATGGAGTTGTGT AGGTTCCATGGTAACAGAGAATTGAAGTACCCCAATGCTCCATTTTATGCTCCTTCT AGAATCCTACTCAAGGAACATACA
>Seq109_ E15M_Pararetrovirus
TTAAAGAGTGTACTGCATCTTGCAGACTAGTTGTGAAGTTCGGGAAACAGTTGAAGT ATGCAATCTGATTGCATAAAGATGCTTCAAGTGTTCCTAACAGACTTTTTTGGAAAT CTGTTATCCTATTGTCTTGTAAGACACATAGAACTGAACAATTTATGCCTTCTCTGGC TAAAAGTTTTATGCCTACTTGGACTGCTCCAATATGCATGAATTCATATTTTCTTTCT TTCGCCTTTGCGACTTCACTTGGTGTTATCATTAGGAGATCCGTTTCTCCTGTTGTTG CTGGAGTTGTAAACTCTAAAACTTTGAATTGATGGCTATCCAATAATTCGAAGTTTC CTCTTTTTGATCAAGAGCTACCAACTCTGGC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq110_ E15S_Trichovirus
AGTCGGGCTATGATATTCTTTTTGCCTTTCTTGCATCTCTGGATTTGGAAAAGAATCA GTCAACCATCCCACGAGGAAAAAAGATCAACTTCATCAAGGATGAAGTAATCAAAA TCACTCAAGAAAGTGGTGAAGAAAGGCTCAAACGTGATTGCCTTTGAAGAGGAACT CCCTAGTTTCTTGGTCCAGTCATCACAAAGGAACTTTCTGGGACAAACAACCAAGGC ATTCAGCTCTCTTTCAAGCAAGAACTTCATAACACCGTGTGACTTTCCACAACCTGC AAAACCAAAGATTACCCTTATGTCAATGGTCATGGTGCTCTGTTTGAACAGGTAATC CATTAGGTTTATGAAGTTTTTCCTCTTGTATATAGCAGGCATAACCCCTAATTCCCCT GATGCAACTTGATCGCAACTTTACTGGCATATTTTTCATCTATGGTGAAGTTGATCTT CGTTGCAGCTT
>Seq111_ E15S_Blackberry virus X
ATGATTGGGGGTGACTGCAGAAGAGATAGGAGAGAATAGAGTCCTTCAGTATCTGC TAAAAGGGGAGCCTCTGGATGCTAGGGATTTGTGCCTTAAATGGAATTTGAAGATCG TCAACTCCTCAACCGTTGGAAGCAGTTTCTTCGATAAAGCTCAGTTCGACCATGCCC TCATGGCTTTTGCTGATATTCTGAAAGAAGAGTTGGTTGAGGAACCTACCGCAGAGG ATGAGTTAGTGATCGAGGCTATTTGCAGCTTGAAAACTATCCCTTCTCCCAGTTTCTT CTCTGATTCTGAGCACCTGGCAGCCTTAGTAGCTAAGGAAAGAAGAGAGAGGGTGG TTGTTGTCGGCAGCGGAATGAGGCGTAGAGAGATCTCATCTGATCAATTCGCCGAAA GCGTAAAGCACATAAGCAGTGTCTTATCTGATGTGGACAAT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq112_ E16M_Pararetrovirus
CATATTGGAGCAGTCCAAGTAGGCATAAAATTATTAGCCCGAGAAGGCATAGATTG TTCGGTTCTATGTGTCTTACAAGACAATAGAATATCAGATTTTCAGAAAAGCCTGTT AGGAACACTTGAAGCATCCTTGTGCAACCAAATTGCATACTTCAATTGTTTCCCGAA CTTTACAACAAGTCTGCGAGATGCGACACACTCACTATGATCAAGAGCTACCAACTC TAC
>Seq113_ E17M_Blackberry virus X
GATTGAGGTTCAGAAGTTTCTTAGAAAACCATGAAAGACTTGAGAAGTATATGCCTT TTGGTGAGAACTTGGCTAACTTCTTCATCTCGAAACTCAACTTCAAGGGAAATGTGT CTGACTACCTGGAGGTCTCCATGAATGAGTTCAAGAAACTTCTTCAAGAAGATGAAG CTACTATTGTCAGAAATTCAAGCTAGATCAGATCCAGATTGGAAGAGAAATGAGAT CTTCTGTTCAATGAAAC
>Seq114_ E17M_Blackberry virus X
AGCATAGGAGAGAAGAGAAAAGGTGGTTGTCGTAGGCAGTGGCATAAGGAGAAGA GAGATCTCATCTGATCAATTTGCTGAAAGTGTTAAGCACATAAGCAGTGTTTTGTCT GATGTGGACAATTTCACTTCCATCTTCCCTAGGCACTCTAACTCGGACAGAGCTACC TTCAAAATGGCTGTCAAGAAGAGATTGAGGTTCAGAAGTTTCTTAGAAAACC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq115_ E-Unmatched_Blackberry yellow vein associated virus
GGAGCTTTTCACTGTTACTATTCATCTGATCAGTCTCTACTTCTCGATCTTTTGGTAGTTTTTCCCTATTTGCGAGAGAGAATGGTAGACTTTCTCACTTCTGTATAAGGTACAAAGATTTTCTTGTTCTTTTTGTCTTTCTAAAAGAGGAGAATATAGAGGATAAGAGAAAGAAATTGTATGAGTATTTAATTAAAATTTAAACTATAAATGCTTCTTATATAGGACGAGAGCTGGTGGTAGGGATTTTGTCTATACTAGCAAATTAACAAAGTCAAACGGAAGAACAAAATTACTTATACTAATGATTACCAATGACTTAGGAATTGCTTTAAGTTGCGAGTACATTTAACATGTAATAAAGTATCGAGCCAGATACTACATGAGTAAGAGCTTCCTTTTCGCCCAGAGAACCAATTTTCTCAAACCTTAAGAATTGGGAAAAGGTAAGCGCCGCTCAGATATAAACGTACCCGTTTTACCTAACGGGTTGACAACTCAATACGAACTTCGTTGGATAGTACA
>Seq116_ F18M_Carlavirus
ACGGTGACATTGTATTTATCGCCATTTAAAAGACTTATTTGATTGGTCTTCAAAAGGTAACCATTGGCGATCTGCTGGTTATAAGCCTCACTAGTGCAACCATCGGGGTAGTAATTGAAGGTACCATCCTTTAAGATGTCAAAGGAATAGACTGTTGGGTTGCAACTAACAGAGAAGCCACCTAAGATCTCAACAGGGTAGATAACAGAAGCCAAAATGATGTTGGGTCTTGTTGAGTTTAGGAAATGGCAGAGCTTCTCCTTGTTCCAGTGGTGCAGTTCATCATGGAAGAAATTAATTACCTTGAAAACCTTGTAAAGAGGTAAAGGTATCAAAGTTCTCTACACCGGGGCTGGAACGGTAGGTGATCTTATTACTGGAGGTTGAGGGGAGGCCATATCTAAAGAAATCCTTTGAATCTATTATTCTATTGATAACATTTAAAGAATTTATGGACATAATCGACTCTAAGATAGCTACTTTAGACGGTTTTATTGAAACTAA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq117_ F18M_Blackberry yellow vein associated virus
AATGCGCGCCAATCCTCTAAGACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAG TTGTGAAGGCTACAGGTAAGATGCGTGATTAAGAGTGATGGGCATCTAGCAGCTAA ACATGGAACAACATCTCAATTTTGGGATGCTGCTTTGATCCTTTCATTAGTAGCTACA CCATGCTGCATTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAA AGCACCGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAAC TTA
>Seq118_ F19S_Blackberry yellow vein associated virus
CTCTAGCTATGTTGGAGAGTTGGTAGCTCTGGATCAGTCACGGGTGCTGAACAACCG AGGCACTTTTAAGGTTTCTCATATCTATGGTTCAGGCAAGTCGTAAATCAATCTACA TCCGACGAAGAATGTAGACTGAAACACCTTACGAATACCTTCAAAAGTTGGAGAGA CTGTGTACACTTGGAAAAACTGCCGGATTCCTGGA
>Seq119_ F21M_Fijivirus
GACTGATCGATCAGTTCATGTGTACATGAGCTTGGGACCTAGGGTGCTTCTCAATCA GTTCGCATTGATCAGACTGGCCTATTCACTAGTTTAATTTAATGTTCATGGAGGTGAC TAACATTCCCATATTATAGCTAGGGTATTGTATATTTTAAAAGCTTAGCTGTGCGTTT TTGTAACCAAATGACCTTCAGTTGTCAACCTTATACAAATTACTCAAATCTTAATTGT TTATGGATATAATAAATTACTCTGCCATATATGGATTGATAATGTGAGGAAAAAAAT TAGATTACTCAAGTGACTCCAGGCTCCTACCAAACGATTTGACCACCGGGTTGATTC TATATATACTATTGTTTTCTTACAGTATCATTTGGTCATAGGTAAATTTGACTGAAGC ATATGGCCAAGTGCTTTTCATATGCATCTGATATATGTTTCTTCTTGTGATT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq120_ F-Unmatched _Blackberry yellow vein associated virus
AATGCGCGCCAATCCTCTAAGACAATATCTTCGAGGTATAGAGGGTCAAGTGGAAG TTGTGAAGGCTACAGGTAAGATGCGTGATTAAGAGTGATGGGCATCTAGCAGCTAA ACATGGAACAACATCTCAATTTTGGGATGCTGCTTTGATCCTTTCATTAGTAGCTACA CCATGCTGCATTCTCGGCAATAATTAGCTGCTAATTCATCGTCTGATATATTAGTCAA AGCACCGTTAGTGAAATCTGAAGTAGCATCTCACAAATCGCAGGAAACGTATGAAC TTA
>Seq121_ G23S_Pararetrovirus
CTGAGCGAAGTAGCTAGAGCTAAAGAAAGAAAATATGAATTTATGCATATTGGAGC AGTCCAAGTAGGCATAAAATTATTAGCCCGAGAAGGCATAGATTGTTCGGTTCTATG TGTCTTACAAGACAATAGAATATCAGACTTTCAGAAAAGTCTGTTAGGAACACTTGA AACATCCTTGTGTAACCAAATTGCATACTTCAATTGTTTCCCGAACTTCACAACAAG TCTGCGAGATGCACACACTCTTTAAGATTAAGAGTAAAAACCAAATGGCATTGCCAT GAAAGAAAACCATGCAAGAACTTGCAATAGTATATAGAGTTTACTATGAATTGATG AGCACGACAGTAGAACCAAAAACCAAGATATCAAATGTCCCTGGTTTAACTACCGG CTTTCTCACCAACCCAACGAAACTGCTCAGAGCAG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq122_ G26M_Rhabdovirus
GGTTAGATGTGTTGAAAGATAAAGCTTGTTCTCCATCTCTGGAAGAATTGAGAGCGA GTCTAAAAGGTGACCTTAAATTGGATTTCAATTATAAGAGATCTCTAGCGGTTTTCTT AGGAAACGATTACGGAAATCCAGCTGAATTCCTTCAAAAAATAGATGGATCCGGAT TAGCTAGGAATTGGTTGCTCATAGGGCTTGCTAAGAAGAACGTGAATTAAATCCTGC ACCTAGATTATTTTCTCTGATGACCATGCCGATCAAGAGCTACCAACTCTTTAGGCA TGACATAGATTGGTAGCTCTTGATCCCAGCCGGCCACGTCACCATTGTCCCAACTCC AGGTCTGGCCACCTGATTCCCCTCTCGAGCCTGGCCAAACCGAGTCGTCGTCCACCA CAGCTTCACCGTCACCTTCTTCATC
>Seq123_ G26S_Blackberry yellow vein associated virus
ATCCATCCAAACCGTACCCTCCTTAACACTGCAGCCAACCCCAAATCTCTTCCCAAT CCACAATCAATGACCTCAATCACAACCCAACCACAAAACAGAACCCATTCAGCTCC AATCAGTACCAACCTGCCGCCATTCAAACCCAATCTCCAAAGCACCCATTATCCGTA AACACAACCAAACCGTTCCACACTGATCAAGAGCTACCAACTCTTGACCATGAATG AAGAGTTGGTAGCTCTTGATCACTTCTGATAAGGTCAAAGATTTCTTGCTTTTGCTTT CAAAAGAGGAGATATAGAGGATAAGAGAAAGAAATTGTATGAGTATTTAATTAAAA TTTTAAAACTGAAAATGCTTCCTTATATAGGACGAGAGCTGGTGTAGGGATTTTGTC TATACTAGCAATTACAAAGTCAACGGAGACAAATTACTATCAATGATTCCAATGACT TGGAATTGCTTA

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq124_ G32S_Pararetrovirus
TGTAGGCCGAATAGATAGATTGACTATCTTCTTCATCTGAATAAACTACTTCATAGC CTTTCGGATTGGCCTCTTTTACTATGTCCTCGTATTCTTCGAATAGAAGAGCTTTAGT AGTTCTTTTATTTTTCTGAGGACATTCATTTGCATAGTGTCCTTCTGCCTTGCAAAGC CAGCATCTACATTTCTTCTTTTCTGCCTTTTCTGTTGGCTTTGATTTTTTGAAAAATCT CTTTTTCTTATGAGATCTTTTATCTCTAAAATTGGAGCTTCTTTTAAACTTCCAATTTT GTTTTGGTTTTATTAAACCTTTTAGAAAAGAATCTTTCCTTCTTTTCTTTCGAGGATA ATTATTCTGATGACATCCCCAATTTGTTGGAACATCAAGAATTTTATAGCAAAAATT CTCGTTGTTCCAACAAATCGG
>Seq125_ G32S_Pararetrovirus
AAGTTTACAACTTCCAGAAACTGAAGCAGACTTACAGTTTTTTCACCTTAATGATCA AGAGCTACCAACTCTATGTCATGGACGGAGAGTTGGTAGCTCTTGATCAGTGGGAGT GTGTCGCATCTCGCAGACTTGTTGTAAAGTTCGGGAAACAATTGAAGTATGCAATTT GGTTGCACAAGGATGCTTCAAGTGTTCCTAACAGGCCTTTCTGAAAATCTGATATTC TATTGTCTTGTAAGACACATAGAACCGAACAATCTATGCCTTCTCGGGCTAATAATT TTATGCCTACTTGGACTGCTCCAATATGCATAAATTCATATTTTCTTTCTTTAGCTCTT GCTACTTCGCTAGG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq126_ G-Unmatched_Iflavirus(TMaV-like)
TGGGTCGCGTTTTGTCAAAAGCTGAAGAACATGAAATTGATATGCGAGTTTGTTCAG TGCGTGTGGTTCCATTTGTGTTTTGTATTGAAGGACCAAGTGGTATTGGCAAATCATT TTTAGCTCATGATTTACTCCTTGCACTGCACAAGCAGATTGGTGTTGGAGTTAGTGCT TCAGGATTGGCGTATACTCGGCAGTCTGGTGCACCATATTGGACGAACTATCGCGAC CAGAAATTTATAATAATGGATAACTATGGCCAGCGCACTGACAAAGAAAGTATTCG AGCAGAAACGGATGATCTTTTTAATCTGTGCACAGATCAACAATACACGCCACCAAT GGCTCATTTGGAAGACAAGAAATGCTATGCAAACCCACTTGGTTTGTTGCTTCTTAC GAATGACGCTTTTGCGCGGCATCCTACCTCTCTGAACCATTGTGAGCAAGCCAATTT GCGTAGGAGGAATGTAGTATTCCATGCTACGCTAAAAGCCAGAATATGTGAATAAA AACATGGAAGAGATTCCAGATGAGGTTTTGAAGGTTTTTGGACATCTCGAATTTCGA AAGTACAAAGATTGCACTGACGCTAGTGCCGGGTTTGAGCCACTCGTAATGACGTAT TACGAGTTTCAG
>Seq127_ G-Unmatched Blackberry virus X
AGTGAAACGCATGACGGAGAGACCTCCCAGCCCACATTTTAGATTGAGCTTTAGATT CCTGTAGTCACTTAGATCAGACTCGGTCCAGCCAATATGCTTAAGCAGACTCAATTC AAAGGCAAGAATTTTATGATCTTGAGAGGCATCAAAAGCAGAATAATCGTTCTCCA GACCCTCTCGAAAAGTTGGTGCAGATTGAACGAATAAGTTCAAACTATCGAAGTCCT TTCTGTTGTGCACATACCAGTTCTTAGGAAGATTTGCGGACAAGACTTTTTCGGTGCT ACGACAGAGAGCAGAGAACCTCCAGAGAACTTCATGTTGAAAGCAGCTGATGGTTT GTCCGGCAATCGCATCGGAGTATCTTTTCTCGATCTTTTTACAGAGCTGTTGCTTCAT GAACAAGAAGATCTCATTTTTCTTCCAATCTGGGTCTGATC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq128_ G-Unmatched Pararetrovirus
CTATATACTATTGCAAGTTCTTGCATGTTTTCTTTCATGGCAATGCCATTTGGTTTTTA CTCTTAATCTTAAAGAGTGTGTCGCATCTCGCAGACTTGTTGTAAAATTCGGGAAAC AATTGAAGTATGCAATTTGGTTACACAAGGATGCTTCAAGTGTTCCTAACAGACTTT TCTGAAAATCTGATATTCTATTGTCTTGTAAGACACATAGAACCGAACAATCTATGC CTTCTCGGGCTAATAATTTTATGCCTACTTGGACTGCTCCAATATGCATAAATTCATA TTTTACTTCTTTAGCTCTAGCTACTTCGCTAGGCGTGATCATTAGGAGATC
>Seq129_ H38M_Pararetrovirus
GGAGATGGAGAAGAGGTACAGTGGCTGGTGGTTGTAACGGTGGTGGTAGTGATCAA GAGCTACCAACTCTGTTTCGCGTACGAGAGTTGGTAGCTCTTGATCACGCCTAGCGA AGTAGCAAGAGCTAAAGAAAGAAAATATGAATTTATGCATATTGGAGCAGTCCAAG TAGGCATAAAATTATTAGCCCGAGAAGGCATAGATTGTTCGGTTCTATGTGTCTTAC AAGACAATAGAATATCAGATTTTCAGAAAAGCCTGTTAGGAACACTTGAAGCATCC TTGTGCAACCAAATTGCATACTTCAATTGTTTCCCGAACTTTACAACAAGTCTGCGA GATGCGACACACTCAC

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq130_ H38S_Pararetrovirus
GGAGATGGAGAAGAGGTACAGTGGCTGGTGGTTGTAACGGTGGTGGTAGTGATCAA GAGCTACCAACTCTGTTTCGCGTACGAGAGTTGGTAGCTCTTGATCACACTCTCTGA AGTAGCAAAAGCGAAAGAAAGAAATTATGAATTTATGCATATTGGAGCAGTCCAAG TAGGCATAAAATTATTAGCCAGAGAAGGCATAAATTGTTCAGTCCTATGTGTCCTAC AAGACAATAGGTTAACAGATTTTCAAAAAAGTCTGTTAGGAACACTTGAAGCATCC CTATGCAATCAGATTGCATACTTCAACTGTTTCCCGAACTTCACTACAAGCCTAAAA AGATGCAGTCCAATCTTTAAGGTTAAGAGTAAAAACAGATGGCATAAGCATGAGAG AAAACCTGCAAGAATTAGCCATAGTATACAGAGTATACTACAAATTGATGAGTACT ACGGTAGAACCAAGGACCAAGATATCAAATATCCCTGGTCTTACTACTGGATTCATC ACAAATCCAAGAA
>Seq131_ H43M_Pararetrovirus
TGTAGGCCGAATAGATAGATTGACTATCTTCTTCATCTGAATAAACTACTTCATAGC CTTTCGGATTGGCCTCTTTTACTATGTCCTCGTATTCTTCGAATAGAAGAGCTTTAGT AGTTCTTTTATTTTTCTGAGGACATTCATTTGCATAGTGTCCTTCTGCCTTGCAAAGC CAGCATCTACATTTCTTCTTTTCTGCCTTTTCTGTTGGCTTTGATTTTTTGAAAAATCT CTTTTTCTTATGAGATCTTTTATCTCTAAAATTGGAGCTTCTTTTAAACTTCCAATTTT GTTTTGGTTTTATTAAACCTTTTAGAAAAGAATCTTTCCTTCTTTTCTTTCGAGGATA ATTATTCTGATGACATCCCCAATTTGTTGGAACATCAAGAATTTTATAGCAAAAATT CTCGTTGTTCCAACAAATCGG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq132_ H43S_Pararetrovirus
GGAGTGTGTCGCATCTCGCAGACTTGTTGTAAAGTTCGGGAAACAATTGAAGTATGC AATTTGGTTGCACAAGGATGCTTCAAGTGTTACCTAACAGGCTTTTCTGAAAATCTG ATATTCTATTGTCTTGTAAGACACATAGAACCGAACAATCTATGCCTTCTCGGGCTA ATAATTTTATGCCTACTTGGACTGCTCCAATATGCATAAATTCATATTTTCTTTCTTTA GCTCTTGCTACTTCGCTAGGCGTGATCATTAGGAGATCTGTTTCTCCTGTAGTTAACG GGGTAATTGTGAACTCTAGCGTCTAGAACTGATGGCTATCTAGTAATTCTAGATAGC CACGTGATCAAGAGCTACCAACTCTCAGATCACGAAACAGAGTTGGTAGCTCTTGAT CATCGGGGCG
>Seq133_ H45M_Pararetrovirus
TGTGGCTTCTTCTCAAATTTTGAAGATTGAGATTTTGAGTACTTCGATTTATTTCTTC AAAATTTACGTCACTTCTTCTGTGACCTTCAAATCTTAGACTAATATTTCCAGTCTTT TTGTCTTGATAGGACTTTGGTTTAGTAAAACCAGGGACATTTGAAATCTTGGTTTTTG GTTCTACTGTCGTACTCATCAATTTATAGTATACTCTATATACTATTGCAAGTTCTTG CATGTTTTCTTTCATGGCAATGCCATCTGTTTTTACTCTTAATCTTAAAGAGTGTGTC GCATCTCGCAGACTTGTTGTAAAGTTCGGGAAACAATTGAAGTATGCAATTTGGTTG CACAAGGATGACTTCAAGTGTTCCTAACAAGCTTTTCTGAACATCTGATATTCTATTG TCTTGTAAGACACATAGAACCGAACAATCTATGCCTTCTCGGGCTAATAATTTTATG CCTACTTGGACTGCTTCAATATGCATAAATTCATATTTCTTTCTTTAAGCTCTGCTATT TTGCTAGGCGTGATCATTAGGAGATCTGTTTTCT

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq134_ H45S_Pararetrovirus
GGTTTGGACTATGAAAGTCTTTCCTAAAAAAGGCTGGAGCATTCAAAATGGTTATCT TAATCGCTAAAATTTCTTTTTCCCCTGTGGGATAATTCTGTTCTGCAGAGTTAAATTT ACCACTGCAAAATTTACAAATTTTTCGATGTTAGTGTTTGGAGTTCTTGCCAGAACTA CTCCTGACCAATAGTTATCACTAGTATCAGTTTGAAGGATGATTTCGTCATTCTCTTC AGGTTGTTGTAAGGGAGGTAGATTTTTGCACAGATCTTTTATCTGCCTCACTATTTTC TCATCATCTTCTGAGAGATTCCAAGCTTTCTTGGAACTTGGTTTTAGGAGATAACATT GCTATTAATCCTGATATTTTGGGAATAAAACCCCTCCAAAAATTATGACTCCTAAAA ACCTCTGTAGGCTTTTAAGCGTCAGGAAATCTGTCTGA
>Seq135_ H-Unmatched_Pararetrovirus
GTTAGAGGCAATTGATCAAGAGCTACCAACTCTCGTACGGGATCTGAGAGTTGGTA GCTCTTGATCAGGTGGAGTGTGTCGCATCTCGCAGACTTGTTGTAAAGTTCGGGAAA CAATTGAAGTATGCAATTTGGTTGCACAAGGATGCTTCAAGTGTTCCTAACAGGCTT TTCTGAAAATCTGATATTCTATTGTCTTGTAAGACACATAGAACCGAACAATCTATG CCTTCTCGGGCTAATAATTTTATGCCTACTTGGACTGCTCCAATATGCATAAATTCAT ATTTTCTTTCTTTAGCTCTCGCTACTTCGCTAGGCGTGATCATTAGGAGATCTGTTTCT CCTG

Table 10 Sequences of viruses detected in LSS (Cont.)

>Seq136_ Unmatched_Blackberry vein banding associated virus
GGGCTAACCGCTCATGAAAAATAAACCCCCCAGCATTAAAGTCTCCGACAAGCCTT CCACGCGAACATTTCGAGCTCATCACACCTACCACAGCCAGCAGCCTTAGCAACAG CTTGTTCCGCACTGACCATGGCCTTCTCTGATCCCGACACACTTAGCCCCAGCCCAC AGAGGTTGCATTAACTGCGGGTAAGACTTCCCCACTATGTTCTTAGCCTTAACGTCC GGCGCCGGTTTAGTCTCAGGCACAAAAGCACTCTCCACCTGCTCTACTGGTTTTTCCT TCTCCACGGCAAGAACGAATATCTTCAACCCCAAACCGTAGGAGCCTTGCGCAAGC AGGAGATGTCTATAGACGACTCCGAGTCACTCACGACAAAGAAGACAAGTGCGACG ACCCGCTAGTGCTCTCTTCCGTTTCACCGATCCGA