

CMD Breeding activities in Thailand

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TME3 and C33 are planting for general yield trial in 3 locations comparing with commercial varieties

Suwan Farm field trial



TDI field trial



Khao Hin Sorn field trial



Suwan Farm field trial

No.	Varieties	Germination	Plant	Fresh root weight				Starch content			
		(%)	height	(kg/rai)	(%)			(%)	(%)		
			(cm)		R1	KU50	HB80		R1	KU50	HB80
1	MKUC50-7-21	100 a	307 ab	12,071 a	200	185	117	18.5 a	157	171	142
2	HB 90	100 a	310 ab	11,010 ab	182	168	107	19.1 a	162	177	147
3	MKUC50-3-102	100 a	292 ab	10,619 ab	176	162	103	12.4 bc	105	115	95
4	HB 80	100 a	267 bc	10,311 ab	171	158	100	13.0 bc	110	120	100
5	Rayong 9	98 a	319 a	9,393 b	155	144	91	13.7 b	116	127	105
6	HB 60	100 a	280 ab	9,274 b	153	142	90	13.0 bc	110	120	100
7	KU 50	98 a	229 cd	6,542 c	108	100	63	10.8 bc	92	100	83
8	Rayong 1	100 a	295 ab	6,044 c	100	92	59	11.8 bc	100	109	91
9	TME3	96 a	271 abc	5,896 c	98	90	57	10.9 bc	92	101	84
10	C33	43 b	201 d	2,347 d	39	36	23	10.0 c	85	93	77
Mean		93.5	277	8,351				13.3			
F-Test		**	**	**				**			
CV		4.02	8.98	13.64				13.73			

No.	Varieties	Starch content			
		(%)	(%)		
			R1	KU50	HB80
1	MKUC50-7-21	18.5 a	157	171	142
2	HB 90	19.1 a	162	177	147
3	MKUC50-3-102	12.4 bc	105	115	95
4	HB 80	13.0 bc	110	120	100
5	Rayong 9	13.7 b	116	127	105
6	HB 60	13.0 bc	110	120	100
7	KU 50	10.8 bc	92	100	83
8	Rayong 1	11.8 bc	100	109	91
9	TME3	10.9 bc	92	101	84
10	C33	10.0 c	85	93	77
Mean		13.3			
F-Test		**			
CV		13.73			

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			R1	KU50	HB80
1	MKUC50-7-21	12,071 a	200	185	117
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6	HB 60	9,274 b	153	142	90
7	KU 50	6,542 c	108	100	63
8	Rayong 1	6,044 c	100	92	59
9	TME3	5,896 c	98	90	57
10	C33	2,347 d	39	36	23
Mean		8,351			
F-Test		**			
CV		13.64			

TDI field trial

No.	Varieties	Germination	Plant	Fresh root weight				Starch content			
		(%)	height	(kg/rai)	(%)			(%)	(%)		
			(cm)		R1	KU50	HB80		R1	KU50	HB80
1	MKUC50-7-21	100 a	194 b	5,133 a	159	145	175	23.5 ab	133	128	193
2	Rayong 9	99 a	215 ab	3,862 ab	119	109	132	19.2 abc	108	105	157
3	HB 90	92 a	196 b	3,653 b	113	103	125	22.1 ab	125	121	181
4	MKUC50-3-102	99 a	205 ab	3,627 b	112	103	124	26.5 a	150	145	217
5	KU 50	97 a	197 b	3,538 b	109	100	121	18.3 abc	103	100	150
6	Rayong 1	99 a	228 a	3,236 b	100	91	110	17.7 abc	100	97	145
7	HB 80	100 a	202 b	2,929 b	91	83	100	12.2 c	69	67	100
8	TME3	96 a	164 c	2,916 b	90	82	100	19.6 abc	111	107	161
9	HB 60	96 a	209 ab	2,689 b	83	76	92	15.4 bc	87	84	126
10	C33	71 b	152 c	1,129 c	35	32	39	NA	-	-	-
Mean		94.7	196.1	3,271				19.4			
F-Test		**	**	**				**			
CV		5.99	7.35	29.19				27.88			

No.	Varieties	Fresh root weight			
		(kg/rai)	(%)		
			R1	KU50	HB80
1	MKUC50-7-21	5,133 a	159	145	175
2	Rayong 9	3,862 ab	119	109	132
3	HB 90	3,653 b	113	103	125
4	MKUC50-3-102	3,627 b	112	103	124
5	KU 50	3,538 b	109	100	121
6	Rayong 1	3,236 b	100	91	110
7	HB 80	2,929 b	91	83	100
8	TME3	2,916 b	90	82	100
9	HB 60	2,689 b	83	76	92
10	C33	1,129 c	35	32	39
Mean		3,271			
F-Test		**			
CV		29.19			

No.	Varieties	Starch content			
		(%)	(%)		
			R1	KU50	HB80
1	MKUC50-7-21	23.5 ab	133	128	193
2	Rayong 9	19.2 abc	108	105	157
3	HB 90	22.1 ab	125	121	181
4	MKUC50-3-102	26.5 a	150	145	217
5	KU 50	18.3 abc	103	100	150
6	Rayong 1	17.7 abc	100	97	145
7	HB 80	12.2 c	69	67	100
8	TME3	19.6 abc	111	107	161
9	HB 60	15.4 bc	87	84	126
10	C33	NA	-	-	-
Mean		19.4			
F-Test		**			
CV		27.88			

Khao Hin Sorn field trial

No.	Varieties	Germination	Plant	Fresh root weight					Starch content			
		(%)	height	(kg/rai)	(%)				(%)	(%)		
			(cm)		R1	KU50	HB80			R1	KU50	HB80
1	MKUC50-7-21	99 a	261 bc	6,556 a	212	142	183		15.1 ab	151	112	111
2	MKUC50-3-102	100 a	278 ab	6,311 ab	204	137	176		16.7 a	167	124	123
3	HB 90	99 a	238 c	5,433 bc	176	118	151		13.9 b	139	103	102
4	Rayong 9	70 b	281 a	4,922 cd	159	107	137		16.7 a	167	124	123
5	KU 50	100 a	260 bc	4,604 cde	149	100	128		13.5 b	135	100	99
6	Rayong 11	99 a	279 ab	4,038 def	131	88	113		15.9 ab	159	118	117
7	HB 60	93 a	259 bc	4,033 def	131	88	112		14.5 ab	145	107	107
8	HB 80	99 a	257 bc	3,589 ef	116	78	100		13.6 b	136	101	100
9	Rayong 1	70 b	264 b	3,089 f	100	67	86		10.0 c	100	74	74
10	TME3	69 b	211 d	1,962 g	64	43	55		10.0 c	100	74	74
Mean		89.7	258.8	4,454					14			
F-Test		**	**	**					**			
CV		8.06	5.69	15.15					10.86			

No.	Varieties	Fresh root weight			
		(kg/rai)	(%)		
			R1	KU50	HB80
1	MKUC50-7-21	6,556 a	212	142	183
2	MKUC50-3-102	6,311 ab	204	137	176
3	HB 90	5,433 bc	176	118	151
4	Rayong 9	4,922 cd	159	107	137
5	KU 50	4,604 cde	149	100	128
6	Rayong 11	4,038 def	131	88	113
7	HB 60	4,033 def	131	88	112
8	HB 80	3,589 ef	116	78	100
9	Rayong 1	3,089 f	100	67	86
10	TME3	1,962 g	64	43	55
Mean		4,454			
F-Test		**			
CV		15.15			

No.	Varieties	Starch content			
		(%)	(%)		
			R1	KU50	HB80
1	MKUC50-7-21	15.1 ab	151	112	111
2	MKUC50-3-102	16.7 a	167	124	123
3	HB 90	13.9 b	139	103	102
4	Rayong 9	16.7 a	167	124	123
5	KU 50	13.5 b	135	100	99
6	Rayong 11	15.9 ab	159	118	117
7	HB 60	14.5 ab	145	107	107
8	HB 80	13.6 b	136	101	100
9	Rayong 1	10.0 c	100	74	74
10	TME3	10.0 c	100	74	74
Mean		14			
F-Test		**			
CV		10.86			

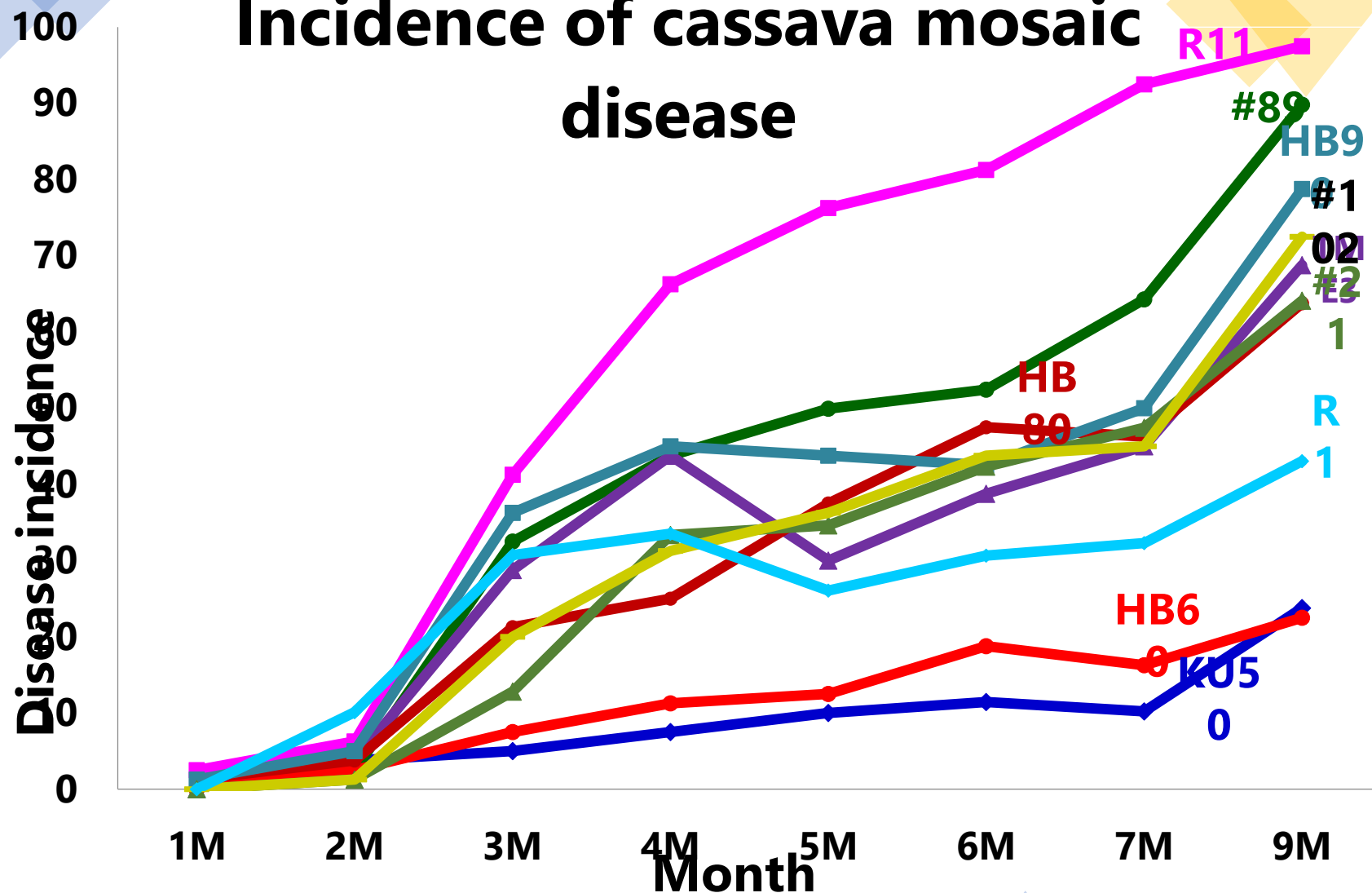
Yield comparison between commercial varieties and TME3 for general yield trial in spreading CMD field at Sa Kaeo province



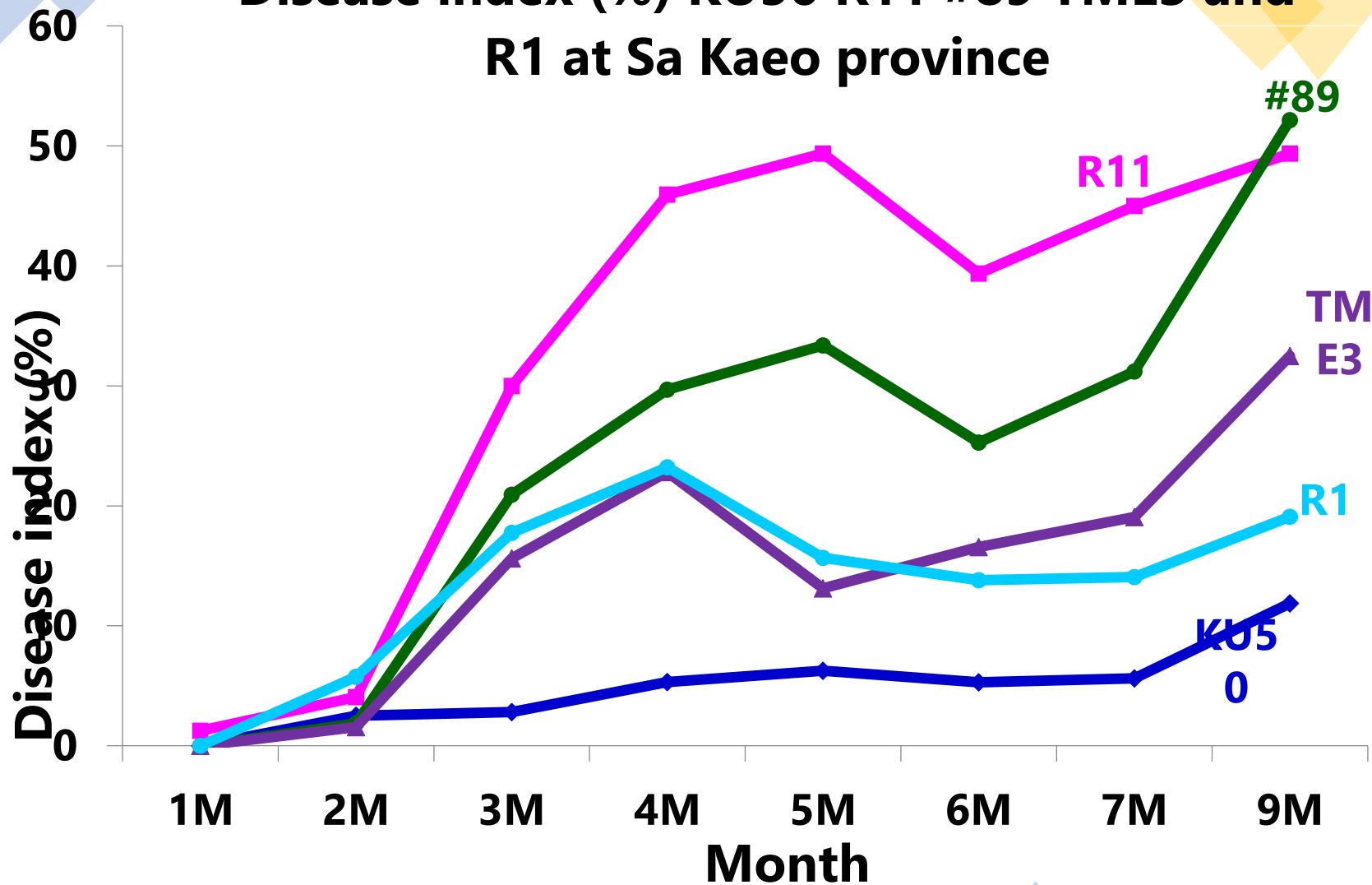
Yield comparison between commercial varieties and TME3 for general yield trial in spreading CMD field at Sa Kaeo province harvesting on 10 month

Var.	Starch content	Fresh root weight
	(%)	(kg/rai)
KU 50	13.3 bc	3,893 a
MKUC50-7-21	11.2 cd	3,778 a
MKUC50-3-102	12.2 bcd	3,674 a
HB 90	16.8 a	3,659 a
#89	<10.0 d	3,535 a
HB 80	12.0 cd	3,458 a
HB 60	10.7 d	3,173 a
Rayong 1	<10.0 d	2,830 ab
Rayong 11	14.3 b	2,613 ab
TME3	<10.0 d	1,876 b
Mean	12.05	3,248
F-Test	**	*
CV (%)	10.56	20.47

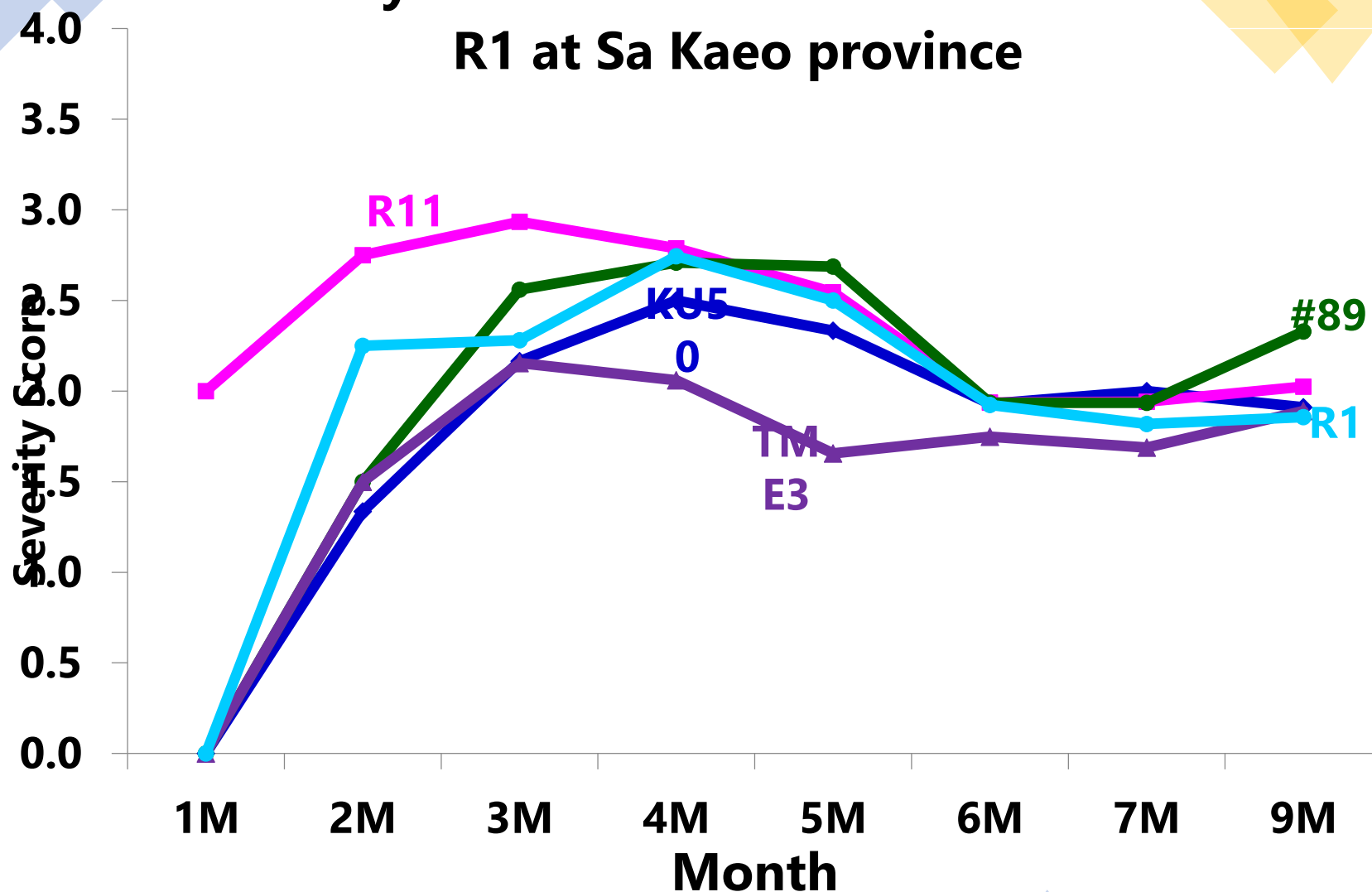
Incidence of cassava mosaic disease



Disease index (%) KU50 R11 #89 TME3 and R1 at Sa Kaeo province



Severity score of KU50 R11 #89 TME3 and R1 at Sa Kaeo province



Thank You

Acknowledgements



RESEARCH
PROGRAM ON
Roots, Tubers
and Bananas



Australian Government
Australian Centre for
International Agricultural Research

