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Erratum

Evidence of the presence of two serotypes of rice yellow mottle sobemovirus in Côte d'Ivoire

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Owing to an error in the production process two sentences of page 174 of the above mentioned article have mistakenly been interchanged.

The text as it should have been printed is presented overleaf.

The publishers extend their apologies for any inconvenience to the authors and readers.

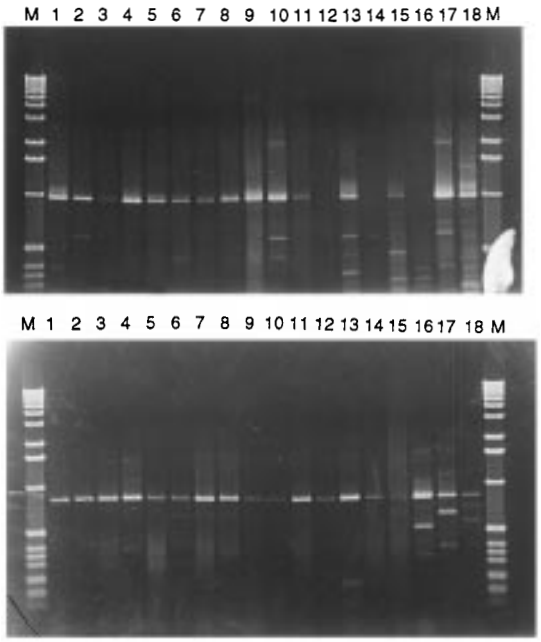

Figure 3. Ethidium bromide stained 1% agarose gel of RT-PCR products amplified with primers I and II (top), and with primers A and B (bottom) from leaf extracts of plants infected with S2 isolates (lanes 2–11: C1, C3, C4, C5, C7, C8, C9, C13, C16, C17), S1 isolates (lanes 12–17: C2, C6, C11, C12, C15, C25). An isolate from Mali was in lane 1 and one from Madagascar in lane 18. The 1 kb DNA ladder from Gibco are in lanes M.

of responses: i.e. amplification was always successful with the purified preparation of the isolate C1 (S2), but often failed with that of C6 (S1) (data not shown). A new pair of primers (A and B), was designed on the basis of the conserved sequences of isolates amplified successfully and sequenced with primers I and II. With these primers, all S1 isolates were readily amplified to give the expected 870 bp band (Figure 3). The S2 isolates were also amplified (Figure 3), as well as the isolates with the additional serological patterns from Madagascar, Kenya and Tanzania (data not shown).

Biological tests

RYMV-Mg polyclonal antiserum was used as primary antibody in indirect DAS-ELISA as it detected S1 and S2 isolates similarly in DAS-ELISA (see above). MAbs A (and F), specific for S1, and MAb D specific for S2 were used as secondary antibody to assess virus titre of S1 or S2 isolates. The non-discriminant MAb C quantified the overall virus titre, independently of the serological properties of the isolates.

A similar pattern of reactions was observed among isolates of the same serogroup. The S1-specific MAbs A and F only detected RYMV in plants singly inoculated with C2, C6, C12 or C15 of the S1 serogroup. The S2-specific MAb D only detected RYMV in plants singly inoculated with C1, C8, C13 or C17 of the S2 serogroup. The patterns of results of single vs. double inoculations obtained with isolate couples C6 vs. C1, C2 vs. C13, C15 vs. C8, C12 vs. C17 were similar. Only C12 (S1) vs. C17 (S2) details which are representative and typical of all S1/S2 pairing are presented in Table 3. A specific pattern of reaction was found in plants co-inoculated with the S1 and S2 isolates; reactions with MAbs A and F were consistently lower than those of plants singly inoculated with the S1 isolate only, and even lower than that of the S1/S2 mixture. Overall, the MAbs A and F S1-specific reactions in doubly inoculated S1/S2 plants were significantly lower than of S1 singly inoculated plants ($p < 0.001$ after one-way variance analysis). This occurred both with the highly susceptible cultivar Bouaké 189 and with the partially resistant ITA 212. This was apparent also in tests 14 and 28 days post inoculation (dpi), and there was a similarly lower S1 virus titre in plants doubly inoculated at these two stages (Table 3). Even when the S2 isolate was inoculated one week later than S1, lower S1 content in doubly infected plants was apparent, although only 28 dpi (Table 4). By contrast, S2-specific reactions with MAb D in singly and in doubly inoculated plants (Tables 3 and 4) were similar (non-significant difference after one-way variance analysis).

Fifteen isolates including five S1 and 10 S2 were inoculated. Symptom score and virus content were assessed 14 dpi as described earlier. Differences of symptom expression and virus content among plants infected with different RYMV isolates were apparent both in the susceptible ITA 212 cultivar and in the resistant cultivar Moroberekan (data not shown). Virus content and symptom expression were positively correlated ($r = 0.56$, $p < 0.05$). By contrast, there was no significant relationship between serotype and virus content or symptom expression. There was no relation either between isolate severity and dominance in co-inoculation tests. For instance, the S2 isolate C13 which induces mild symptoms dominates in co-inoculation over the severe S1 isolate C15.

Table 3. Virus titre in rice cultivars singly or doubly inoculated with S1 and/or S2 serotypes of RMYV and assessed in TAS-ELISA** tests with S1-specific (A, F), S2-specific (D) and non-specific (C) MAbs

MAbs	Cultivars	dpi***	Isolates			
			S1*	S2*	S1 + S2¶	S1 − S2¶
A	Bouaké 189	14	3.83	0.20	1.89	3.90
		28	3.64	0.16	1.73	3.51
	ITA 212	14	3.27	0.18	1.18	2.58
		28	3.87	0.26	1.04	3.89
F	Bouaké 189	14	0.92	0.08	0.42	0.62
		28	1.17	0.13	0.43	0.72
	ITA 212	14	0.65	0.09	0.28	0.53
		28	1.13	0.13	0.42	0.70
D	Bouaké 189	14	0.10	0.62	0.71	0.34
		28	0.13	0.80	0.81	0.36
	ITA 212	14	0.13	0.46	0.59	0.29
		28	0.14	1.72	2.18	0.92
C§	Bouaké 189	14	2.82	3.00	3.30	2.98
		28	3.75	3.72	3.77	3.73

*Results given were obtained from inoculation with isolate C12 of S1 and C17 of S2.
**Positive–negative threshold was set to 0.3.
***Number of days post inoculation when the ELISA was done.
¶S1 + S2 indicates the ELISA responses of a co-inoculation of C12 and C17; S1−S2 indicates the ELISA response of a mixture (v : v) of C12 and C17 sap extracts.
§Only Bouaké 189 was tested with MAb C.

Table 4. Virus titre in rice singly or doubly inoculated with S1 and/or S2 serotypes, assessed in TAS-ELISA tests with S1-specific (A), S2-specific (D) and non-specific (C) MAbs, with and without a one week time lag (l) between the two inoculations

MAbs	dpi§	Isolates*				
		Single inoculation		Double-inoculation		
		S1	S2	S1 + S2**	S1 + S2 (l)***	S2 + S1 (l)¶
A	14	2.55	0.18	0.93	2.91	1.03
	28	2.44	0.28	1.71	1.51	1.33
D	14	—	—	—	—	—
	28	0.91	1.33	1.39	1.62	1.61
C	14	3.88	3.69	3.63	3.87	3.86
	28	3.97	3.89	3.99	3.89	3.98

*Results given were obtained from inoculation with isolate C12 of S1 and C17 of S2.
**Plants simultaneously inoculated with S1 and S2.
***Plants inoculated first with S1, and one week later with S2 (l).
¶Plants inoculated first with S2, and one week later with S1 (l).
§Number of days post the first inoculation when the ELISA test was done.
— not tested.