

Resistance to soil-borne wheat mosaic virus (SBWMV) in durum wheat. H Lapierre¹, H Prud'homme¹, M Fouchard¹, D Hariri¹, F Limouzin² (¹ INRA, unité de pathologie végétale, F-78026 Versailles cedex; ² Coopérative de la Franciade, F-41021 Blois, France)

Two durum wheat cvs (Seti and Prodigal) have been tested for their resistance to SBWMV. In field conditions SBWMV was not detected in roots of these cvs during 2 successive growing cycles. In 1994 no mosaic symptoms were observed in these cvs. In 1995 mosaic symptoms were found in the cv Prodigal and rarely in the cv Seti. However, SBWMV was detected in low concentration and infrequently in cv Prodigal and was not detected at all in cv Seti.

Under laboratory conditions, we compared the susceptibility of cvs Prodigal and Seti with Ixos a susceptible cv and a bread wheat cv (Gascogne) resistant to transport of SBWMV from roots to shoots. SBWMV was not detected in the 2 resistant durum wheat cvs 17 d after seed germination at 15°C in infected soil. At the same date the roots of cvs Ixos and Gascogne showed a high viral concentration. However, after 27 d SBWMV was detected in the roots of cv Prodigal with moderate OD values compared with those of cv Ixos. In cvs Seti and Gascogne the OD values were extremely low or zero. When wheat seedlings were infected at 15°C for 1 week and then transferred to 20°C, SBWMV was detected earlier in the leaves of cvs Ixos and Prodigal and even in the leaves of cv Gascogne but not in cv Seti. Preliminary observations showed that *Polymyxa graminis* cystosori were present in lower concentrations in cvs Prodigal and Seti than in cv Ixos.

Soil-borne wheat mosaic virus (SBWMV) on Triticale in Italy. M Turina¹, C Rubies-Autonell¹, V Vallega² (¹ Istituto di Patologia Vegetale, Via Filippo Re 8, I-40126, Bologna; ² Istituto Sperimentale per la Cerealicoltura, Via Cassia 176, I-00191 Rome, Italy)

Soil-borne wheat mosaic virus (SBWMV) was first reported in Italy in 1960 on cultivars of common wheat (*Triticum aestivum*) grown in the Po Valley area (Canova and Quaglia, 1960). Subsequent surveys showed that SBWMV is widespread not only in northern Italy, but also in the central regions of the country and in certain areas of the south where the predominant crop is durum wheat (*T durum*).

In the current season (1994–1995) SBWMV was also detected in plants of cv Trica, a newly released Triticale (x *Triticosecale*) on trial at the experimental farm at Ozzano, near Bologna. Seed of this cultivar was planted on October 18 (1994). On March 23, plants of cv Trica exhibited a slight chlorotic mottling, particularly in the distal portions of its younger leaves. Some of the plants showing chlorotic mottling were also stunted. Within each experimental plot (42 sq m), infected triticale plants were distributed in differently sized patches. Leaf symptoms remained clearly distinguishable until about April 10. Extracts from symptomatic leaves of cv Trica analyzed with immunosorbent electron microscopy (ISEM) revealed the presence of SBWMV particles.

To date, SBWMV on triticale has been identified in the USA, Germany and France. Moreover, reports from USA and Germany suggest that SBWMV causes less severe losses on Triticale than on wheat crops (Kucharek *et al*, 1988; Huth and Lesemann, 1994). On the other hand, SBWMV is widespread in Italy, and this signifies that assaying the reactions of commercial cultivars of Triticale to this virus is of importance, particularly in view of the fact that some of these cvs are officially recommended. Moreover, because Triticale and wheat are both susceptible to SBWMV, rotations entailing a close succession of these crops should be avoided in order to prevent more severe soil infestations.

Studies aimed at comparing SBWMV isolated from Triticale and common wheat cultivars are in progress.

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Resistance of old French cultivars of bread wheat to soil-borne wheat mosaic virus (SBWMV) and wheat yellow mosaic virus (WYMV). M Fouchard¹, D Hariri¹, H Prud'homme¹, I Lebrun¹, J Koenig², H Lapierre¹ (¹ INRA, unité de pathologie végétale, F-78026 Versailles cedex; ² INRA, domaine de Crouëlle, amélioration des plantes, F-63039 Clermont-Ferrand cedex 2, France)

Soil-borne wheat mosaic virus was reported for the first time in the 1920s (McKinney, 1923) in USA and with indication of its presence since the