Table I. Characteristics of the crosses used. Steyer and Froidmont.

7 268.004 and 7 267.004	(Vixen x Mosar) x Classica *yd2 ym1 ym1*
8 263.002 and 8 263.001	Mélusine x Vixen *ym1 yd2*
6 258.002	Vixen x Mosar *yd2* complementary genes
Nordic/Mielmont/Astrid and Express	

The first selection was made for the BaYMV; 7 268.004 and 7 267.004 are sister lines.

vested and the yield parameters were recorded for individual plants of each cultivar.

The average yield of the well-known varieties including Express and Nordic was reduced by BYDV infection by up to 0.1, compared with the control; these cultivars were even susceptible to a late infection (15 March) with viruliferous aphids. However, the lines under selection were already tolerant from the seedling growth.

Brome streak mosaic virus isolated from barley in south France. W Huth [1], DE Lesemann [1], R Götz, HJ Vetten [1], E Maiß [1], G Proeseler [2], P Signoret [3] *([1] Institut for Biochemistry and Plant Virology, Messeweg 11/12, D-38104 Braunschweig; [2] Institute for Epidemiology and Resistance, Theodor-Roemer-Weg 4, D-06449 Aschersleben, Germany; [3] INRA, 2, place Pierre-Viala, F-34060 Montpellier cedex, France)*

A potylike virus (11-Cal) was isolated from barley collected near Castelnaudary (southern France) and compared with some other rymo- and potyviruses. Using a crude plant extract, the virus was easily mechanically transmissible to barley, wheat and some other grasses. It is an unstable virus which lost the infectivity after lyophilisation or storage in a desiccator. *Aceria tulipae* has been found to be a natural vector of 11-Cal (Götz *et al,* 1995).

Isolate 11-Cal is serologically unrelated to wheat streak mosaic virus (WSMV) isolates from USA (WSMV-type), Russia, Iran and Italy. Isolate 11-Cal induced type II cytoplasmic cylindrical inclusions whereas those of WSMV isolates are clearly different being of types III or IV. Furthermore, 11-Cal is serologically related neither to the mite-transmitted *Agropyron* mosaic and ryegrass mosaic rymoviruses nor to the aphid-transmitted cocksfoot streak mosaic potyvirus. The coat protein sequences of 11-Cal and WSMV show a homology of about 50% (Huth *et al,* 1982).

Isolate 11-Cal is serologically closely related or identical to brome streak mosaic virus (BrSMV), which was first described in 1982 in Croatia (Milicic *et al,* 1982) as a pathogen of *Hordeum murinum* and *Bromus mollis* as well as to isolates supposed to be WSMV which have been isolated in the former German Democratic Republic (WSMV-Asl) (Rabenstein and Stanarius, 1981) and in France respectively. The molecular weights of the coat proteins (11-Cal *ca* 38 kDa; Asl *ca* 38 kDa) and the nucleic acids (3.2 x 10^6 kDa) of BrSMV, 11-Cal and WSMV-Asl differ from those of WSMV-type (*ca* 42 kDa and 2.8 x 10^6 kDa, respectively). Cells infected either by 11-Cal or by WSMV-Asl form morphologically identical inclusion bodies. Based on serological reactions and physico-chemical properties it is concluded that 11-Cal and the virus isolates formerly supposed to be WSMV are isolates of BrSMV.

BrSMV has mainly been found as pathogen of wild growing grasses (*H murinum* and *Bromus* spp). Only in France in several regions has BrSMV been found as pathogen of a cereal crop. In Germany 2 different sites are known where BrSMV occurs. At one site nearly 2 thirds of all *H murinum* plants were found to be infected by BrSMV but not any wheat plant on an immediately adjacent field. It is supposed that the virus is much more widerly spread than known today but since cereal plants rarely become infected it is mostly overlooked.

Götz R, Huth W, Maiß E (1995) Molecular analysis of the coat protein region of different viruses on Poaceae belonging to the potyviridae. *agronomie* 15, 491-494

Huth W, Götz R, Lesemann DE, Maiß E, Proeseler G, Vetten HV, Signoret P (1994) Brome streak mosaic virus – ein bisher übersehenes Virus des Getreides? *Mitt Biol Bundesanst* 301, 216

Milicic D, Mamula D, Plazibat M (1982) Some properties of brome streak mosaic virus. *Acta Bot Croat* 41, 7-12

Rabenstein F, Stanarius A (1981) Ein neuer Stamm des Weizenstrichelmosaik-Virus (wheat streak mosaic virus) von *Hordeum murinum* L und *Bromus sterilis* L. *Nachrichtenbl Dtsch Pflanzenschutzdienstes* 35, 191-192