New alleles of *pale yellow9* found in viviparous stocks in Maize Coop phenotype-only collection

--Jackson, JD

This report summarizes allele testing of viviparous stocks characterized only by phenotype in the Maize Genetics Coop Stock Center collection. Here pale kernels linked to the viviparous trait characterized all stocks. They had previously given negative results in tests with *vp9*. Since *y9* is also characterized by pale endosperm and is slightly viviparous, allelism tests were next conducted with this stock. The *y9* stock also gives green to pale green seedlings and plants. This and zebra striping had been noticed previously in the phenotype-only stocks. Crosses were made as follows: [+/vp*]@ X *y9* and +//+/vp* X *y9*. Ears were scored for the segregation of pale kernels. In all crosses, pale kernels were selected and planted in the field for observation. Seedlings were pale green and had white-tipped leaves. These pale green zebra plants grew to maturity.

New designations have been assigned to these alleles and these have been placed in the main collection. It is expected that with further sorting and allelism testing of viviparous stocks characterized by phenotype only, additional alleles of *y9* will be discovered. Stocks with this same phenotype that were found to complement y*9* will be tested for allelism with other stocks associated with a pale endosperm phenotype.

Previous designation	allelism test with *y9*	New designation	MGCSC: stock number
lw-8513*	5 positive	*y9-8513*	X34C
pale y-vp-83-3124-33*	3 positive	*y9-83-3124-33*	X34D
pale-y-vp-85-3240-5*	3 positive	*y9-85-3240-5*	X34E
pale y-vp-85-3267-6*	3 positive	*y9-85-3267-6*	X34F
pale-y-vp-86-1316-27*	3 positive	*y9-86-1316-27*	X34G
vp-86-1573-27*	7 positive	*y9-86-1573-27*	X34H
y-vp-87-2340-36*	7 positive	*y9-87-2340-36*	X34I
lw-82-1*	3 positive	*y9-82-1*	X34J
y-pg-pale y*-84-5275-14*	3 positive	*y9-84-5275-14*	X34K
y-pg-pale y*-85-3042-7*	3 positive	*y9-85-3042-7*	X34L
y-pg-pale y*-85-3078-41*	3 positive	*y9-85-3078-41*	X34M
y-pg-pale y*-85-3562-31*	1 positive	*y9-85-3562-31*	X34N
y-pg-pale y*-85-86-3533-9*	4 positive	*y9-85-86-3533-9*	X07CB
y-pg-pale y*-86-1151-7*	2 positive	*y9-86-1151-7*	X07CC
y-pg-pale y*-87-2160-16*	7 positive	*y9-87-2160-16*	X07CD