

It may be concluded that the pollen restoration system in the variety *Amarillo La Molina* of the Peruvian Coast is made up of at least two complementary dominant factors. No restoration of male fertility is effected when the zygote carries either one of these two factors in the homozygous recessive state. There is also evidence, that two duplicate dominant factors may be also operating as a substitute pollen restoring system in this variety.

Alexander Grobman

2. Pollen restoration in Caribbean and Southern U.S.A. maize.

Nine selected lines derived from parental Cuban varieties or hybrids were crossed to the "T" source of male-sterility. Of these, only one line FF(MS)14-2 proved to be a pollen restorer. Three F₂ families derived by selfing the F₁ of the cross FF(MS)14-2 x M.Sterile, gave the following pooled phenotypic segregation ratio:

	Sterile	Semi-fertile	Fertil
Observed	17	3	36
3:1 Calculated	15.25	44 44.75	

A good fit to the one dominant restorer factor hypothesis was obtained.

The following S₁ line [M.Sterile x FF(MS)14-2]-3 derived from the cross male sterile x homozygous restorer was testcrossed to a male sterile plant, giving a perfect 9 fertile: 7 sterile progeny ratio, pointing to the possibility that the basic restoring system may be also made up in this material of two complementary genes.

A study was conducted to determine the system of restoration of Ky-122, furnished by the North Carolina Expt. Station in the form of MS x (T-115xKy-122) by crossing it with the local form of male sterile Am1M x (203 MS x 61M) and studying segregation in 4 F₂ progenies. The following pooled ratio was obtained that fits closely a 2 complementary genes hypothesis:

	Sterile	Semi-fertile	Fertil
Observed	32	3	32
Calculated (9:7)	29.3	35 37.7	

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