Pooling the frequencies for all three races, the following distribution is obtained:

Chromosome No. and arm

1		2		3		4		5		6		7		8		9		10	
S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L	S	L
.31	.16	.38	.46	.27	.27	0	.77	.07	.23	0	1.0	.23	.85	0	.61	.61	.69	0	.07

Each figure shows the frequency of presence of each knob (not considering the fact that there is more than one knob per arm in some chromosomes) per chromosome arm in percent of all collections studied; i.e.: .38 for chromosome 2 short arm, means that 38 percent of all collections studied for presence of knobs in that position showed a knob there.

A comparison of the three races discloses that there is a consistent high frequency of presence of knobs at chromosome 4 Long arm, 6 Long arm, 7 Long arm, 8 Long arm, and 9 both Short and Long arm. A good differential between races may prove to be chromosome 3 Short arm, with a frequency of knobs of .47 for Perla and zero for both Alazan and Arizona.

Extremely low frequencies of knob presence were found up to now for chromosome 4 Short arm, 5 Short arm, and 10 Long arm, where knob presence has been previously reported elsewhere.

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3. Test for sugary endosperm gene in Chullpi, Andean sweet corn.

Two ear selections of the Andean sweet corn race Chullpi were crossed to Pajimaca, a tropical sweet corn from Cuba, originated by transfer of su_1 (sugary endosperm - 1 in chromosome 4) from North American varieties. All F_1 ears in both crosses showed sugary kernels, indicating that Chullpi carries at least su_1 prevalent in North American sweet corn.

A secondary observation made on the ears of the F_1 plants indicated the presence of a variegated pericarp pattern, which is known to be entirely absent in either parent. This would indicate the presence of a Controlling element (such as McClintock's Activator) introduced in the cross from one of the parents. Tests for presence and origin of this Controlling element will be made.