

following categories of cytological variations were found:

1. occasional tetraploid sectors in the sporophytic tissues,
2. triploids,
3. trisomics,
4. translocation heterozygotes,
5. accessory chromosomes and
6. occasional inversion bridges.

The frequencies of the more common variants are given below:

Table 1
Frequencies of the different classes of chromosomal variants in two populations of Coix aquatica

Population	Triploid	Per cent aberrant plants		
		Trisomic	Interchange	Accessory Chromosomes
Madhya Pradesh	5	5	20	15
Orissa	5	-	25	10

The triploids were probably the resultants of mating between diploid gametes produced in the tetraploid sectors and of gametes from the normal plants. The trisomics would originate in the progeny of the triploids. Translocations were variable and involved sometimes up to six or eight of the ten chromosomes. The most usual situation, however, was a translocation complex of four chromosomes. The role of these variations in the evolution of Coix is under further study.

J. Venkateswarlu
R. S. K. Chaganti

4. Spontaneous interchange in Coix lachryma-jobi.

During a cytological study in different populations of Coix lachryma-jobi ($n=10$), occurrence of a spontaneous translocation involving four chromosomes was recorded in a single plant of a population raised from seed collected from plants growing wild in the University campus. This is the first record of the occurrence of an interchange in this species. Naturally occurring

translocation heterozygotes have been reported earlier in C. aquatica (Venkateswarlu, J., 1958, Cytological observations on spontaneously occurring ring and chain formation in Coix aquatica, J. Indian Bot. Soc. 37: 329-333; also see in this News Letter-"Spontaneous chromosomal variation in Coix aquatica", J. Venkateswarlu and R. S. K. Chaganti). The segment of interchange seemed to be long enough that a chain or ring of four chromosomes was present in almost all cells examined at diakinesis and metaphase I leading to a high pollen sterility.

J. Venkateswarlu
Panuganti N. Rao

5. Chromosome knobs and B-chromosomes in maize types from North Eastern Frontier Area (NEFA) of India.

During the course of a cytogenetic survey of maize types cultivated in the Himalayan tracts of India, some maize types from the area formed by a part of Assam and Nagaland have been analyzed. One type M 36, from Nagaland has been observed to possess six knobs, one each in the long arms of chromosomes 4, 5, 7 and 8, and one each in the short arms of chromosomes 2 and 9. Following the knob in chromosome 8 there is a prominent chromomere. In another maize type from Assam (M 103) only three knobs have been found, one each in the long arms of chromosomes 7 and 8 and one in the short arm of chromosome 9. Except the knob in chromosome 9 which is terminal, all other knobs are interstitial in both M 36 and M 103. In another Naga type (M 37) one pair of B-chromosomes has been encountered in one plant. B-chromosomes during meiosis did not pair with A-chromosomes and showed the phenomena of precocious division, lagging and non-disjunction.

J. Venkateswarlu