

W. F. GRANT

Genetics Laboratory, Macdonald Campus of McGill University, Ste. Anne de Bellevue, Quebec, Canada

Studies in progress include:

- A. A cytogenetic study of diploid species, their hybrids and induced amphidiploids in the Lotus corniculatus group.

A study of chromosome pairing relationships in hybrids of putative diploid progenitor species of L. corniculatus and in their amphidiploids. The latter have potential for providing new germ plasm for improving this forage species (Birdsfoot trefoil).

- B. Aneuploids in cytogenetic analyses of Lotus corniculatus.

Plants with primary trisomics for five of the six possible chromosomes have been obtained in L. pedunculatus. The analysis of plants with an extra chromosome will permit the study of the mode of inheritance of specific characters on these chromosomes.

- C. Cytophotometric analyses of species and hybrids in the Lotus corniculatus group.

By means of an integrating microdensitometer, a comparative study of the DNA absorbance (Feulgen stain) of the nuclei from species and hybrids in the L. corniculatus group is being undertaken.

- D. Induction of haploid Lotus plants by means of anther culture.

Haploids of the tetraploid forage species, L. corniculatus have considerable interest both economically and theoretically.

E. Chromatography and electrophoresis analyses of species relationships.

Progress reports will be given in the next Newsletter.