**P-138 (131)**
**INVESTIGATION OF POLYPLOIDY INDUCTION ON SEED QUALITY AND QUANTITY TRAITS OF CALENDULA (CALENDULA OFFICINALIS L.)**

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This experiment have been investigated to evaluate the effect of polyploidy level on quality and quantity seed traits and yield of yellow and orange genotype in order to is an oil seed crop. Spraying of 0.06% colchicin concentration in two true grown of stage was used to induction of tetraploid plants. Diploid and tetraploid-colchicine induced of Calendula were having three types of seed: nugget, winged and hook. The results showed that increased yield of plant but decreased seed per plant, 1000 seed weight, % germination and germination rate with increasing ploidy level in both yellow and orange genotype, irrespective of the seed-form. Number of nugget-form seed was significantly increased.

Keywords: Polyploidy induction, Seed type, Germination, Plant yield