

The R_f values of the first 3 anthocyanins determined with the BAW solvent are reported in Table 2. They appear to be rather constant in each of the tissues so far analyzed, thus suggesting that no qualitative change in the chemical composition takes place in the various tissues. On the other hand, qualitative changes are observed after substitution of Pr with pr (see Table 3) and C_1 with c_1 . In the latter case, anthocyanin biosynthesis is blocked in the aleurone while it occurs in the plant tissues leading to three different anthocyanins. Their R_f values in BAW are 0.34, 0.41 and 0.48 respectively. Table 4 shows the pigment distribution observed in plants carrying different R allelic combinations.

We are presently involved in the chemical identification of the various anthocyanins and in the genetic control of their biosynthesis in sporophytic tissues.

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1. Notes on tinged in chromosome 10.

The tinged character (Maize News Letter 40:106) was poorly expressed in all F_2 , backcross, and increase progenies the past summer. In previous years it had been well expressed as seedlings, and still classifiable as adult plants. The character is not allelic to \underline{g}_1 .

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2. Effects of colchicine treatment on multiple interchange heterozygotes.

Stocks homozygous for the T5-7-1-9-10 and T3-2-4-6-8 interchanges were crossed with normal stocks to produce F_1 's with $\odot 10$; and with each other for 2 $\odot 10$. The F_1 's were treated as seedlings with colchicine solutions of various strengths. Plants with sectors that extruded anthers and shed pollen were found among the treated F_1 plants from the three crosses. Examination of pollen from these sectors with a pocket microscope indicated that more than half was normal in appearance, and considerably larger than the normal haploid pollen. These sectors are presumed to be $4n$. Some selfed seed was obtained. In untreated plants normal pollen was less than 10% in plants with a $\odot 10$, considerably less in plants with 2 $\odot 10$.

The cross giving 2 $\odot 10$ may be used to test the effectiveness of agents and conditions for inducing polyploidy.

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