

as is observed with IAA in other systems⁸ was not seen in the present investigation. The elongation of *Avena* coleoptile by IAA is believed to involve an increase in cytoplasmic protein synthesis. However, in the present study, the levels of ethanol-soluble and proteinous nitrogen in the coleoptile segments were not affected by various concentrations of caffeic acid. These observations demonstrate that the effect of caffeic acid on increase in the length of maize coleoptile is not *via* IAA. Extrapolating these observations, it may also be concluded that induction of rhizogenesis by caffeic acid is independent of IAA action.

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Pathogenicity test was performed by inoculating the healthy orange fruits by the method given by Granger and Horne¹, Koch's postulates were fully satisfied. The identity of the culture has been confirmed from Centraalbureau voor Schimmcultures, Baarn, Netherlands.

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AN UNRECORDED FRUIT ROT OF ORANGE (*CITRUS RETICULATA* BLANCO)

DURING frequent surveys of Kurukshetra market in December, 1978–January, 1979, a new fruit rot of orange (*Citrus reticulata* Blanco) was observed which caused severe storage losses of orange fruits. The symptoms started in the form of light brown colored water-soaked lesions changing to brown colored spots, 1–2 cm in diameter. After one week the whole of the infected portion was covered with creamish white fluffy mycelium.

Isolations were made on Potato Dextrose Agar and the fungus was identified as *Acremonium cymosum* W. Gams. Colony on P.D.A. growing luxuriantly, white; vegetative hyphae hyaline, septate, 2.5–3 µm wide; conidiophores simple phialides, hyaline arising laterally from hyphae, subulate, 10–15 µm long, 3–4 µm wide at the base; conidia hyaline, slimy, produced in globose heads, 15–30 µm in diameter, smooth walled, ovate showing slight curvature in the centre, unicellular, 6.5–16.8 × 3–4.5 µm.

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INTERCHANGE HETEROZYGOSITY IN *HEMEROCALLIS* LINN.

CONFIGURATION involving more than two chromosomes in otherwise, a diploid taxon is an indicator of an interchange hybridity. One such case has been discovered in a diploid cultivar of *H. fulva* (Specimen No. 1/4).

Male meiosis of this taxon was characterised by the presence of an interchange multiple—a ring or chain of four chromosomes plus 9 II at meiotic metaphase I. An analysis of 50 cells has been presented in Table I. As evident from Table I, the majority of the interchange multiples are rings (88.0%) and 12.0% are chains. Further rings were also observed disjuncting both alternate (24 ± 0.71) and adjacent (64.0 ± 0.3 , Fig. 1) while the chains showed only adjacent orientation.

Chiasmata frequency ranged from 14.8 ± 0.81 to 18.3 ± 0.3 and an average being 16.5 ± 0.39 per cell. Out of this only 8.6% chiasmata were terminalised giving a terminal coefficient of 0.61. An analysis also indicates that the ring multiples had 4 chiasmata all being interstitial. The consistent occurrence of interstitial chiasmata, in the ring multiples seems to delay chromosome movements resulting late disjunction of the ring interchange multiples at AI (Fig. 2). The chromosome segregation at Anaphase I and Anaphase II and subsequent course of meiosis was found to be regular. However, the taxon had yielded only 40 per cent stainable pollen grains.

The reduced fertility of this heterozygote seems to result from the higher frequency of adjacent orientations and/or the presence of interstitial chiasmata in the interchange multiple¹.

The nature of chromosomal heterozygosity could not be detected karyotypically, as there were 11 homomorphic pairs in the somatic complements.