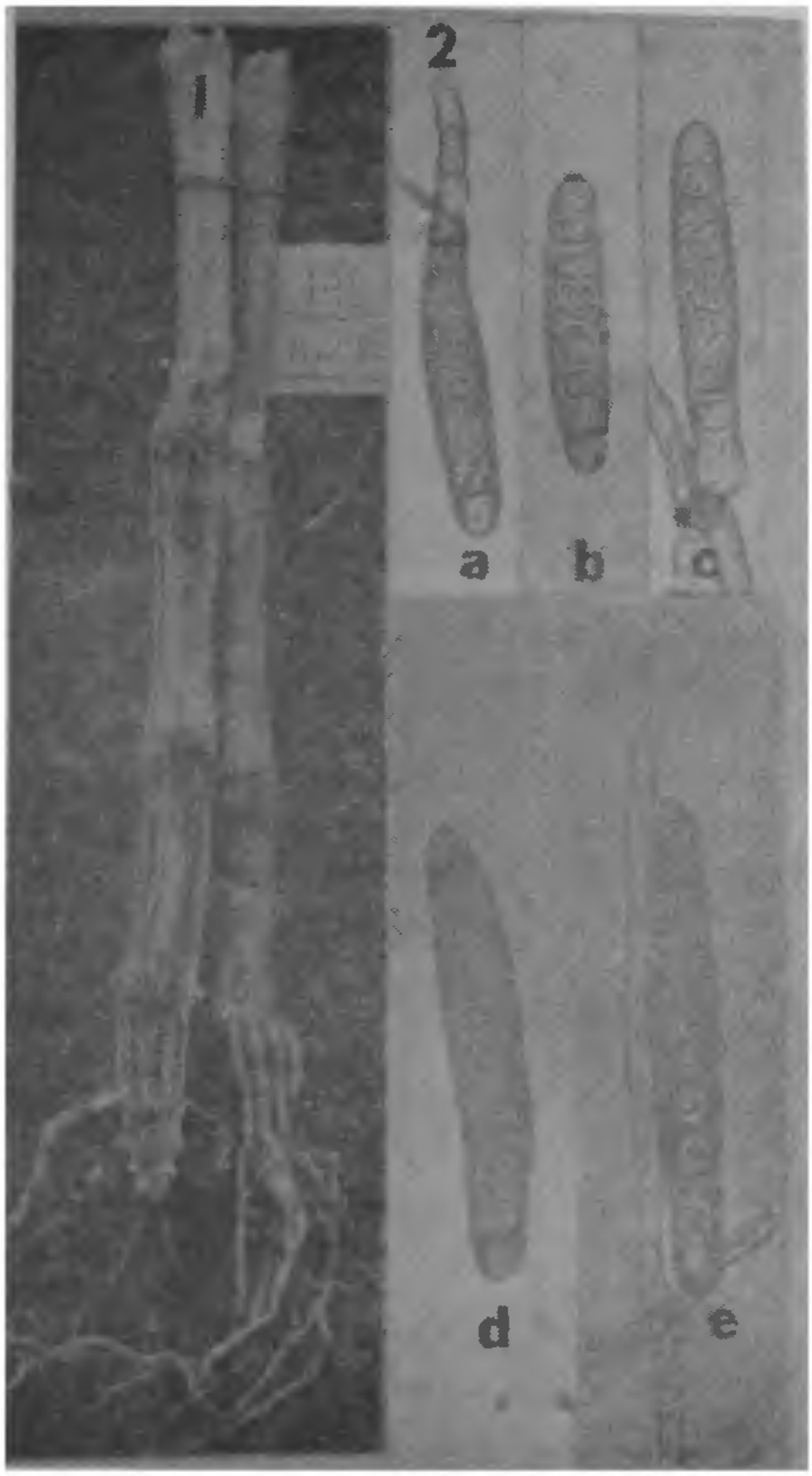

Figure 1. A longitudinally split stalk of a plant tooth-pick inoculated with *Exserohilum halodes*; tooth-pick in 2nd internode from above.

Figure 2a–g. Conidia of *Exserohilum halodes*; note hila in b, d, e and true thick septa separating the end cells. × 400 approx.

Isolated from stalk rot affected maize plants (*Kharif*, 1980), IARI, New Delhi.

Field inoculations with pure tooth-pick cultures of the pathogen were made at Hyderabad in eight experimental varieties on 19 February 1981 (about 35 plants-variety) and Delhi in hybrid Gange-5 on 3 June 1981. In the latter case as many as three tooth picks were inserted in three internodes of each plant near the ground level. Observations on 15 July showed diseased condition in all the inoculated plants. The same kind of symptoms appeared as described above and as observed occurring in naturally-infected plants (figure 1).

The disease is proposed to be given the common name of "jaundice stalk rot" because of the peculiar colour that the pathogen imparts to the affected parts of the plant.

Leonard[3] has merged *E. halodes* with *E. rostratum*. We believe the former should be maintained as a separate species though allied and phylogenetically related to the latter. This view also tends to be confirmed by a recent report of El. Shafie[4] who erected a new species (*Drechslera gedarefensis*) for a segregate of *E. halodes* isolated from sorghum grain because of the possession of slipper-shaped (constricted at the basal region) conidia.

19 September 1981

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OBSERVATIONS ON THE PROLONGED STAINING OF *ERIANTHUS* MICHX ROOTS IN LEUCO BASIC FUCHSIN

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ALTHOUGH basic fuchsin effectively stains the chromosomal DNA[1], one of the problems often faced is fading, that usually results with the increase of time under various circumstances[2]. In Sugarcane and allied genera, the loss in the intensity of stained chromosomes of root tip cells is noticed after 2–3 hr of staining in Leuco basic fuchsin at room temperature (27–32° C).

An attempt was made with *Erianthus* Michx, an allied genus of sugarcane, to see whether it is possible to overcome the fading effect as it would help to restrict refixation and other processes.

Clumps of *Erianthus* clones were planted in sand-filled pots. Fresh roots were excised upon their emergence. Fixation and squash preparations were made according to the schedule given by Sreenivasan[3]. Following hydrolysis in 1N HCl at 60° C for 13 minutes, root tips were washed and stained in Leuco basic

fuchsin at room temperature (27–32° C) before they were transferred to a freezer (−2° C to 0° C) where they were allowed to remain for a week. Subsequently, they were taken out and squash preparations were made after thawing (duration 8–12 min) at room temperature. Observations of nucleus and chromosomes indicate that the intensity of magenta colour of chromosomes brought about by Leuco basic fuchsin was similar to the preparations made out of freshly stained roots (figures 1 and 2). The-retainability of stain could be extended upto two weeks without alteration in the chromosome morphology.

Figure 1. Mitotic squash preparations from the root tips of *Erianthus* clone (SES 311 2n = 40) freshly stained roots.

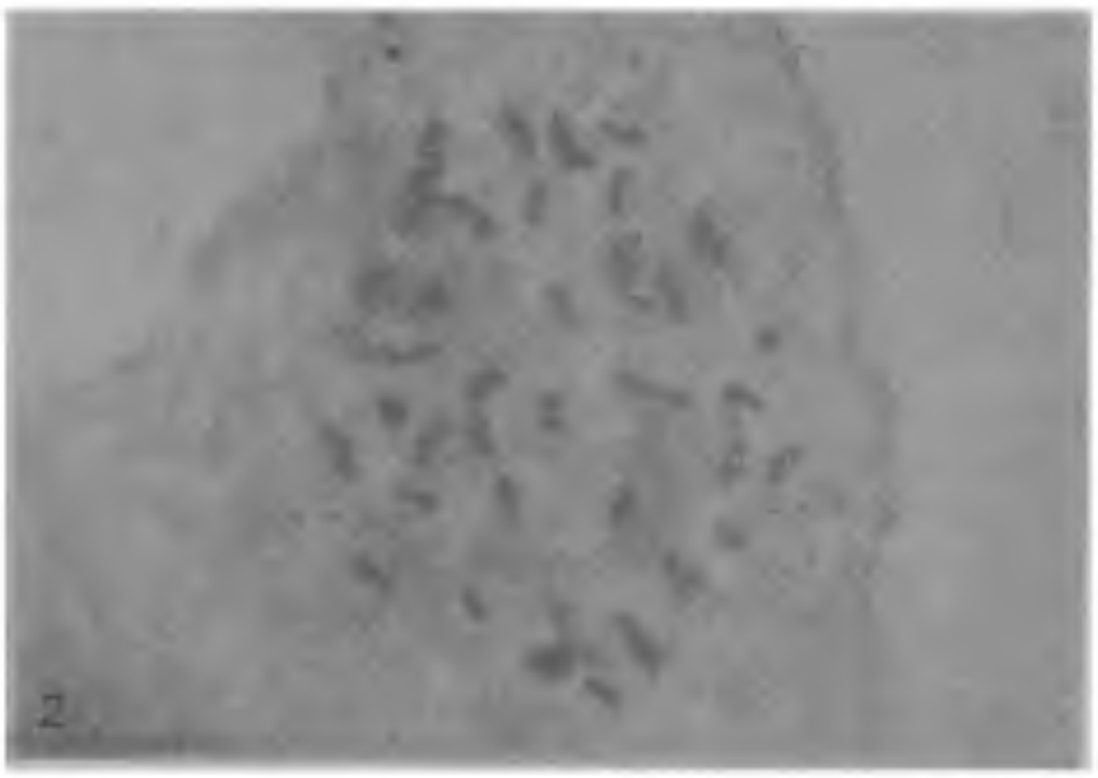

Figure 2. Mitotic squash preparations from the root tips of *Erianthus* clone (SES 79 2n = 40) preserved in Leuco basic fuchsin in freezer for a week. Note the intensity of the staining of chromosome.

Thanks are due to Shri R. Umeshwar Lala for help.

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ABSCISIC ACID—STIMULATED ROOTING IN HYPOCOTYL CUTTINGS OF COWPEA

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THE role of abscisic acid (ABA) in the control of growth and development in plant systems has been well documented[1–3]. With few exceptions, ABA inhibits the growth of whole plants or explanted organs and tissues. ABA is known[1] to promote growth in three instances: (a) parthenocarpic fruit development in rose; (b) promotion of hypocotyl elongation in cucumber; and (c) rooting of stem cuttings of mung-bean and ivy. The effect of ABA alone, or in conjunc-

TABLE 1

Effects of IAA and ABA individually and in combination on rooting in hypocotyl cuttings of cowpea

Treatment	Average number of roots per cutting on 17th day	Day on which visible root primordia appear on cuttings
1. Control	25.4 ± 1.6[a]	5
2. IAA (5 μg/ml)	40.8 ± 2.1[a]	5
3. ABA (1 μg/ml)	40.2 ± 1.8[a]	5
4. ABA (5 μg/ml)	35.6 ± 1.5[a]	6
5. ABA (1 μg/ml) + IAA (5 μg/ml)	45.3 ± 2.3[a]	4
6. ABA (5 μg/ml) + IAA (5 μg/ml)	37.8 ± 2.2[a]	5

[a]Refers to standard error.

Data presented are average of duplicate experiments, with 10 replications for each treatment.