from the production of normal gibberellin to an abnormal (and incidentally more active) homologue[16].

Department of Horticulture, S. ANNADURAI.
Tamil Nadu Agricultural K. G. SHANMUGAVELU.
University, Coimbatore 3,
July 7, 1977.

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MOSAIC DISEASE OF NASTURTIUM (*TROPAEOLUM MAJUS* L.)—A NEW RECORD FROM INDIA

MOSAIC disease of Nasturtium has been reported from California (Jensen[1], 1950) and Brazil (Silberschmidt[2], 1953); from India it is the first record. In the year 1976–77, the authors observed this disease in Taj nursery, Agra. Besides the typical mosaic symptoms, the infected Nasturtium plants showed vein clearing and cupping of leaves in both young and mature plants. The infected plants were stunted and excessively branched. The leaves were greatly reduced in size; lamina showed crinckling and lobed margin (Fig. 1. B.). The flowering was either absent or only few.

The virus is readily transmitted from host to host both by graft and sap prepared in phosphate buffer (pH–7·0, 0·02 M) and applied with carborundum powder as an abrasive. Out of the 8 plants (*viz.*, *Chenopodium amaranticolor* Coste and Regn, *C. album* L., *C. murale* L., *Gomphrena globosa* L., *Datura stramonium* L., *Nicotiana glutinosa* L., *N. tobacum* L. var. white burlev, *N. tobacum* L. var. xanthi), commonly used as local lesion hosts, the virus, gave chlorotic local lesions only on *Chenopodium amaranticolor* Coste and Regn, (Fig. 1 C) while all the others did not

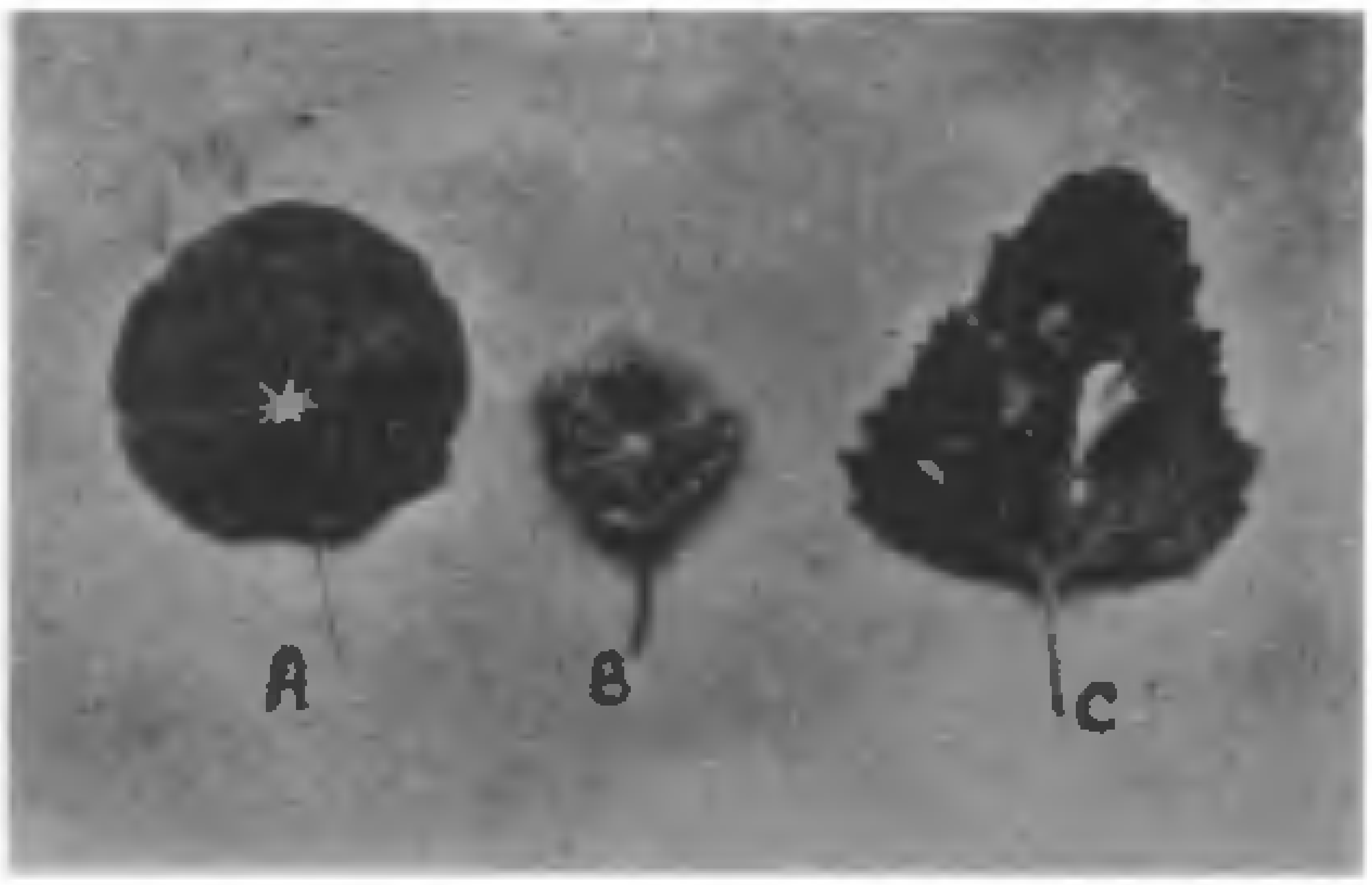

FIG. 1. A, Healthy leaf; B, Diseased leaf; and C, Local lesion on *C. amaranticolor* Coste and Regn.

show the presence of the virus when back inoculations were done on both the host as well as *Chenopodium amaranticolor* Coste and Regn.

Virus Research Lab., M. N. GUPTA.
Department of Botany, A. N. ROY.
Agra College, Agra 282002, KAMLESH C. GUPTA.
July 4, 1977.

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STUDIES ON DEGRADATION OF ANTIFUNGAL ANTIBIOTICS

THE use of antibiotics in plant disease control has assumed importance[5,6]. In India, antibiotics have given encouraging results in seed treatment against seed-borne diseases[1–4]. Although antibiotics have been evaluated for seed disinfection, no information is available about their behaviour when treated seeds are stored. Studies on this aspect are reported.

Paddy seeds were treated with piomy and aureofungin at 500 ppm. The biological activity of the antibitotics soon after seed treatment was determined by plating the seeds on potato-dextose-agar seeded with *Helminthosporium oryzae*. The inhibition zone was observed around the treated seeds indicating the presence of antibiotics. The treated and untreated seeds were stored in cloth bags at room temperature, for a period of one year. After this period the activity was reassessed by the same method. In all, three experiments were carried out, and the data based on these studies are presented in Table I.

TABLE I

Effect of seed treatment with antibiotics against H. oryzae *and seed germination*

Treatment	Efficacy soon after seed treatment	Per cent seed germination	Efficacy after one year seed storage	Per cent seed germination
Piomy	+	90	..	88
Aureofungin	+	91	..	85
Check		85		76

+ denotes effective — denotes ineffective

It is evident from Table I, that piomy and aureofungin are rendered biologically inactive on the seed after one year, suggesting their degradation in storage and consequent loss of fungicidal properties.

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Division of Mycology and Plant Pathology,
Indian Agricultural Research Institute,
New Delhi 110 012,
July 5, 1977.

DHARAM VIR.

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TOPOGRAPHICAL RELATIONSHIP BETWEEN THE BLASTOCYST AND THE UTERUS IN THE RHINOLOPHID BAT, *RHINOLOPHUS ROUXI* (TEMMINCK)

THE mammalian blastocyst bears a specific topographical relationship with the morphology of the uterus at the time of implantation, and this is usually constant within the family and sometimes within the order (Mossman[1,2,3]). Among the bats, the orientation of the embryonic mass of the implanting blastocyst is mesometrial in Megachiroptera (Keibel[4], Moghe[5], Mossman[1]), and antimesometrial in the Microchiroptera (Duval[6], Ramaswami[7], Wimsatt[8], Gopalakrishna[9]). Most of the earlier work on the embryology of Microchiroptera relates to members of the family Vespertilionidae. During the past 20 years the embryology of members of several families of Microchiroptera has revealed that the orientation of the embryonic mass differs not only in different families of Microchiroptera (Gopalakrishna[10,11], Gopalakrishna and Moghe[12]) but also in different individuals of the same species, in a few cases (Gopalakrishna and Khaparde[13], Gopalakrishna and Karim[14]). Where the orientation of the embryonic mass has been shown to be variable in the same species, the blastocysts described were at a very early stage of development, and the embryonic mass in all the cases was still spherical. Gopalakrishna and Khaparde[13], and Gopalakrishna and Karim[14] suggested that the embryonic knob in these bats may rotate within the blastocyst, as in the case of the mouse (Kirby, Potts and Wilson[15]).

While making a detailed study of the early development of the Rufous Horse-shoe Bat, *Rhinolophus rouxi*, the author examined eight late implanted bilaminar blastocysts, all nearly at the same stage of development. In every case the blastocyst was in a large implantation chamber of the uterus, and the wall of the blastocyst was in intimate contact with the endometrium since the uterine epithelium was lost from all sides of the implantation chamber. The embryonic area had expanded into a flat disc. Among the eight blastocysts, the embryonic disc was oriented towards the antimesometrial side in two, towards the mesometrial side in one, towards the lateral side in two, towards the medial side in two and between the lateral and mesometrial side in one.

Whereas the earlier descriptions of variable orientation of the embryonic mass referred to early blastocysts having spherical embryonic mass[13,14], the present study refers to advanced blastocysts with expanded embryonic disc. Hence the explanation that the embryonic mass may rotate within the blastocyst covering is not tenable in the present case. The final position of the placental disc in *Rhinolophus rouxi* is however invariably mesometrial (Gopalakrishna