

THE EFFECT OF NEAR ULTRA VIOLET (NUV) AND FLUORESCENT LIGHT ON
THE DEVELOPMENT AND SPORULATION OF FUNGI SEED-TRANSMITTED
IN RICE (ORYZAE SATIVA L.)

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The detection of seed-borne fungi is facilitated by exposing samples to near ultra violet (NUV) light which stimulates sporulation. Four different incubation conditions, three with illumination and the fourth in total darkness, were investigated with seed samples of rice, the seeds being placed on moist blotters laid in earthenware dishes in an air conditioned incubation room. Irradiation was provided by a bank of two 120 cm tubes held horizontally 40 cm above the seeded dishes and 20 cm apart from each other. The treatments were:

- (i) 12 hr NUV light alternating with 12 hr darkness.
- (ii) 12 hr NUV light (one tube) and fluorescent light (one tube) alternating with 12 hr darkness.
- (iii) 12 hr fluorescent light alternating with 12 hr darkness.
- (iv) Total darkness.
Light periods were controlled automatically by a time switch.

The seed-borne fungi detected in the samples were Trichoconis padwickii, Drechslera oryzae, Curvularia spp. and Fusarium spp. Differences were observed in their development under the different incubation conditions. Trichoconis padwickii was more abundant with 12 hr NUV/12 hr darkness than with other conditions. All three light treatments induced enhanced development of Drechslera oryzae. Variation in the development of species of Curvularia and Fusarium was observed indicating the influence of other factors besides illumination on their growth and sporulation.