1.0, and nitrofen at 2.0 kg/ha. For early-maturing varieties such as Pusa 33-30, yields were highest with 2,4-D IPE at 1.0 kg/ha, followed by yield with nitrofen. These treatments were statistically similar to the weed-free check and two hand weedings. ■

Leaf scald disease of rice in Sierra Leone

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Although leaf scald disease of rice incited by *Rhynchosporium oryzae* has long been present in West Africa, precise information about its economic significance is meager or entirely lacking.

From 1974 to the present the author has worked with the disease in farmers' fields and experimental plots. The following are general conclusions:

1. The disease is most severe in the uplands. Yield reductions from 9 to 12% were estimated from preliminary studies.

2. Severe infection (more than 25% leaf area desiccation) can occur in wet season paddy or irrigated rice. The disease appears insignificant on dry season crops.

3. Visible infection usually appears after the end of tillering. However, the disease has also been found in seedling nurseries.

4. Narrow-leaf varieties like ROK 3, PN 623-3, ADNY 8, and ROK 8 are less affected than broad-leaf varieties like IRAT 8, Moroberekan, LAC 23, and ROK 16.

5. Broadleaf varieties that retain water droplets on the leaf surface are more susceptible to the disease.

6. The disease is more severe on fertilized than unfertilized plots. This susceptibility under varying soil fertility levels was particularly striking in Sierra Leone's "On Farm Trials" network where upland plots received 60 kg N/ha, 40 kg P/ha, and 40 kg K/ha.

At the Rokupr Rice Research Station, studies on yield loss, epidemiology, plant canopy characteristics, spacing, and fertility levels in relation to disease severity, are in progress. Additionally, varietal screening for total performance including resistance to scald is continuing. ■

Rice diseases during kharif in Karnataka, India

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Rice blast caused by *Pyricularia oryzae* occurs every year in the main rice-growing areas of Karnataka state. Neck blast is usually more damaging than leaf blast. Out of 683 NSN entries screened for blast, only 35 were resistant at Ponnampet during 1978 kharif: IET6586, IET6731, IET6814, IET6868, IET6873, IET6876, IET6877, IET6880, IET6881, IET6882, IET6883, IET6884, IET6894, IET6899, IET6900, IET6907, IET6914, IET6916, IET6950, IET6951, IET6952, IET4554, IET5905, IET5909, IET5910, IET5911, IET6046, IET6260, IET4699, IET5735, IET6312, IET6663, IET6665, IET6667, and IET6669.

Brown leaf spot *(Helminthosporium oryzae),* the next most important disease, occurs throughout the state.

Udbatta disease *(Ephelis oryzae)* has increased in recent years. Severe infection of high yielding dwarf varieties caused considerable yield loss.

The problems of grain discoloration increased after the introduction of high yielding varieties. The discolored grains are associated with organisms like *P. oryzae, Trichoconis oryzae, and Dreschlera oryzae.*

Leaf scald due to *Rhynchosporium oryzae* has been observed in the past 7 to 8 years on high yielding varieties.

Other erratic and minor diseases like bacterial leaf blight *(Xanthomanas oryzae),* false-smut *(Ustilaginoidea virens),* sheath blight *(Corticium sasakii),* and sheath rot *(Acrocylindrium oryzae)* have also been observed. ■

Acquisition of rice tungro virus through parafilm membrane by *Nephotettix virescens* (Distant)

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The ability of 547 adult *Nephotettix virescens* to acquire the tungro virus from diseased leaves covered with parafilm was tested. After an acquisition access time of 1 to 4 days, 56 to 75% of the insects became infective on TNl seedlings (see table). In general, the percentage of infective insects increases as the acquisition access time lengthens from 1 to 4 days. But in this test it decreased on the third and fourth day because the diseased leaves became necrotic from continuous insect feeding, and started to decay. The parafilm membrane did not hinder acquisition feeding by the insect. The method may therefore be used for developing a bioassay of the virus. ■

Percentage of infective *N. virescens* after acquisition feeding on tungro-diseased leaves covered with parafilm. IRRI, 1979.

Acquisition access time (days)	Insects tested (no.)	Infective insects (%)
1	221	56
2	197	75
3	89	74
4	40	68

Field efficacy of stable bleaching powder to control bacterial blight of rice

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In a field trial during 1977 and 1978 kharif, stable bleaching powder (SBP) was tested for the control of bacterial blight of rice. Seedlings of Jaya were inoculated with a virulent isolate of *Xanthomonas oryzae* (Uyeda and Ishiyama) Dowson by the clipping method 3 weeks after transplanting. Three 15 kg/ha applications of SBP were spread on fields having 4.5 to 5.0 cm of standing water to provide 10 ppm chlorine. The first application was made 72 hours before inoculation and subsequent applications were at fort-nightly intervals. Disease incidence was recorded 2 weeks after the last application; the other observations were