GERMPLASM IMPROVEMENT

Genetic resources

Diseases and mycoflora of *Oryza indandamanica* Ellis.

M. M. Ansari, Central Agricultural Research Institute (CARI), Port Blair (present address: Plant Pathology Division, Central Rice Research Institute, Cuttack 753006); and T. V. R. S. Sharma, CARI, Port Blair, India

A new species of wild rice *O. indandamanica* was recently reported from Rutland, a small island of South Andaman in the Andaman and Nicobar group. To enable its use in breeding, knowledge of its tolerance or resistance to various diseases and pests is needed.

Samples of *O. indandamanica* collected from the Rutland locality exhibit typical symptoms of blast (Bl) and sheath blight (ShB) as well as necrotic areas on the leaves.

Isolations from ShB- and Bl-affected samples produced cultures of *Rhizoctonia solani* and *Pyricularia oryzae.* In addition, isolations from necrotic leaves revealed the presence of *Pestalotia, Fusarium,* and *Curvularia* spp.

Pathogenicity of *R. solani* and of *P. oryzae* were proved on *O. indandamanica* and on cultivated rice C14-S. However, the *Fusarium* sp., *Curvularia* sp., and *Pestalotia* sp. failed to produce typical necrotic symptoms. □

Genetics

External budding in rice aleurone grains

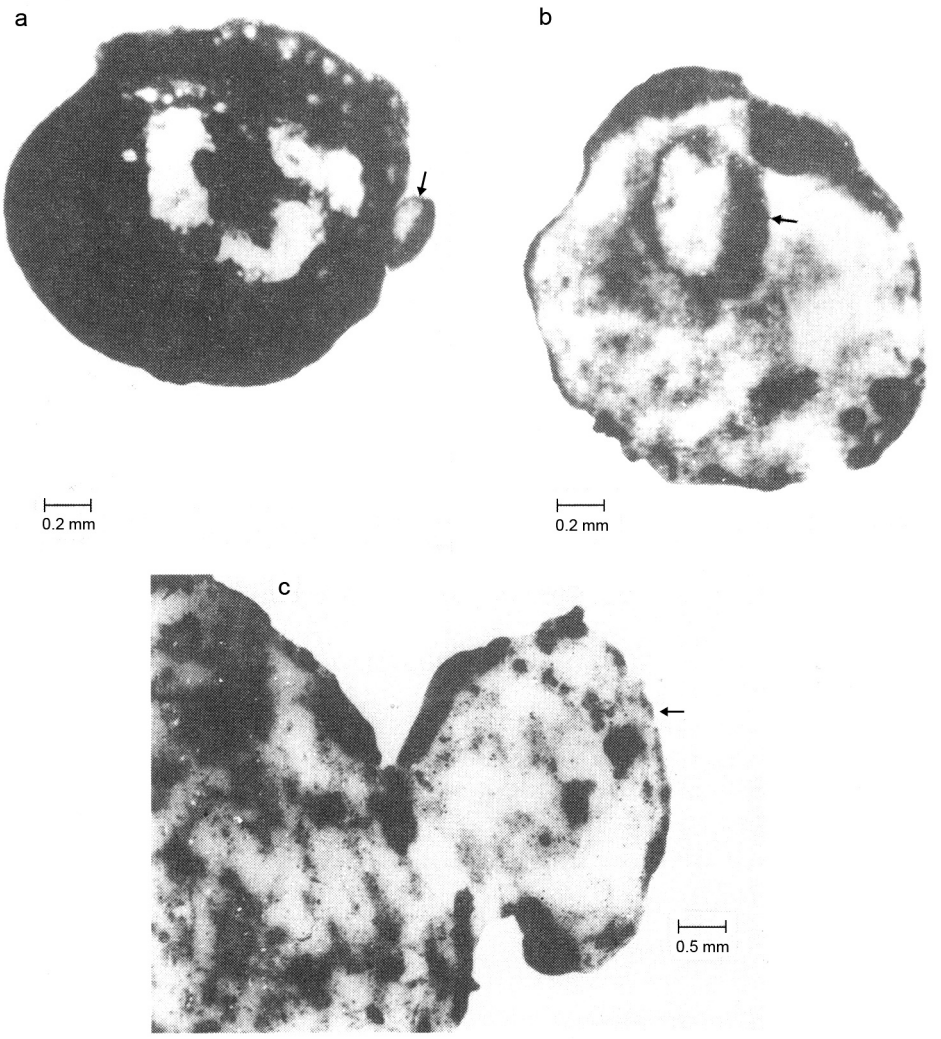
N. E. Alyoshin, E. R. Avakyan, E. V. Lebedev, V. E. Lebedev, and E. P. Alyoshin, All-Union Rice Research Institute, P.O. Belozernoe, Krasnodar 353204, USSR

The nature of aleurone grains (aleurone protein bodies) is an important problem in *Poaceae* cytology: Are the subcellular particles of vacuolar or plastid origin?

We have produced electron microscopy pictures that confirm plastid origin; they show external budding of rice aleurone grains.

Caryopses of Krasnodarsky 424 at 15-35 d after flowering were used. Ultramicrosections of the aleurone layer were fixed with gluteraldehyde and osmiate, contrasted with uranyl acetate, stained with lead-citrate, and studied under the electron microscope. Some aleurone grains showed external buds (see figure). In some sections, the ultramicrotomic knife went through the bud and made visible the connection of the grain and bud matrices.

Budding is the characteristic feature of the semi-autonomous compartments (mitochondria, plastids,



Electron microscopy pictures of the aleurone layer of Krasnodarsky 424 endosperm. a and b show external heads, c shows connection of grain and bud matrix.