

# Identifying *Pyricularia Orizae* on the Head Smut of Fonio (*Digitaria Exilis*) in Bauchi Nigeria

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## Abstract

During the rainy cropping season of 2003 in Bauchi, Nigeria, involving *nakusni* variety of *acha*, the local names for the cereal crop fonio (*Digitaria exilis* Stapf.), smutted heads of black sooty spores were observed at harvest on many of the 3 replication plots. Replacement of panicles by the smutted heads is a complete loss of grain yield, and undesirable. Smutted heads from each replication were sampled and surface sterilized using 70% alcohol. They were cultured in triplicate on potato dextrose agar plates which were placed on the laboratory table at  $27 \pm 2^\circ\text{C}$  for 7 days and observed daily. Greyish brown or ash colonies of mycelia were noted between 4-7 days on all the plates. Microscopic observation at magnification 10 and 40 of the mycelial strands, after having been scrapped off aseptically using an inoculating needle and placed on a sterile glass slide containing 3 drops of lactophenol cotton blue solution revealed hypopodia, septate hyphae, single conidia that is obclavate to lop shape which appeared 3-celled, the typical features for *Pyricularia orizae* Cav., a fungus known to be pathogenic for leaf spot and blight on several grasses including *Digitaria* species. Its identification here is quite unusual though not surprising, as 3 new smut species of Chinese rice blast isolates (*Pyricularia orizae* Cav.) have been reported by Lin Guo (Mycosystema 6: 51-55, 1993). This observation and the referred, strongly suggest its new potential for influencing smut pathogenesis in grasses, a detrimental process to grain yield. Genetic mutation in this pathogen, resulting from high environmental temperature prevalent during the growing season, is suspected to have accentuated this transformation. It is also the first such report on fonio, from Bauchi Nigeria.

## Keywords

Digitaria, Fonio, Pyricularia, Smut