ABSTRACT

RICHENLY NANOLOHY. Yield Trial of Upland Rice Lines Obtained from Anther Culture and Their Resistance to Blast Disease. Under supervision of MUNIF GHULAMAHDI as chairman, BAMBANG S. PURWOKO and SUGIYANTA as members of the advisory committee.

The objective of the research was to obtain high yielding and blast resistant line of upland rice. Research consisted of three experiments. First yield trial was conducted in Bogor from May-September 2008. Second trial was conducted in Sukabumi from November 2008-March 2009. Resistant study to blast disease was conducted in Sukabumi from November 2008-March 2009. Sixteen doubled haploid lines and four varities (Jatiluhur, Limboto, Batutegi and Cisokan) were used in the two trials. Genotypes IW-54, IW-67, WI-43, WI-44, GI-7, IG-19, IG-38, B13-2e (ranged 3.33-3.77 ton/ha) have the same yield or higher than control Batutegi (3.50 ton/ha), but they are lower than control Jatiluhur (4.71 ton/ha) and Limboto resistant control (5.35 ton/ha). Genotype IW-54, IW-56, IW-67, WI-43, WI-44, IG-7, O18b-1, GI-19, GI-38, B13-2a, B13-2d, B13-2e, dan D19-1 were resistant to leaf blast disease. Genotype IW-64, A3-2, and A3-7 were susceptible to blast based on disease incidence. Genotype A3-2 and A3-7 were susceptible to leaf and neck blast. IW-54, IW-67, WI-43, WI-44, GI-7, IG-19, IG-38, and B13-2e have blast resistance and high yield potential, low to medium amylase, low-high gelatinization temperature. It is suggested that those potential lines to be tested further for multication trials.

Keywords: Efficient test result, genotype, disease blast