Pengaruh mutagen etil metan sulfonat (EMS) terhadap pertumbuhan kultur in vitro iles iles (Amorphophallus muelleri blume) = Effects of ethyl methane sulphonate (EMS) on growth of lles iles (Amorphophallus mueller blume) in vitro cultures

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Abstrak

Amorphophallus muelleri blume (aracceae) is one of 27 amorphophallus species occur wild in Indonesia (Sumatra, Java, Flores and Timor). The species is valued for its glucoman content for use in food industry (health diet food), paper industry, pharmacy and cosmetics. The cultivation of A. mueller is hampered by limited genetic quality of seed. The species is triploid (2n=3x=39), the seed is developed apomictically, and pollen production is low. The species is only propagated vegetatively. This may explain that the species is difficult to bread conventionally and genetic variability in the existing landraces cultivars is rather limited. Induced mutation using ethyl methan sulfonate is one of techniques to increase genetic variation. The present research is aimed to determine lethal dosage (LD) 50% and 75% of EMS and to study effect of EMS on growth of A muelleri in vitro cultures for use in induced mutation program. Result of the experiment showed that LD-50 and LD-75 was observed at 0.875% EMS and 0.5% in induced mutation program. Result of the experiment showed that LD-50 and LD-75 was observed at 0.875 % EMS and 0.5% in induced mutation program. Result of the experiment showed that LD-50 and LD-75 was observed at 0.875 % EMS 0.5% EMS, respectively, number shoot, and percentage of rooting culture were decreasing as EMS level concentration increase.