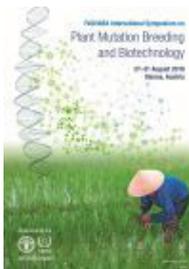


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INDUCE MUTATION FOR EARLY MATURITY IN PATHUMTHANI 1 (PTT1) RICE VARIETY

Phathumtani 1(PTT1) rice variety is famous and well known among Thai consumer for its soft and delicious taste with low amylose content, and high yield. The harvesting day is 120 days, and it is susceptible to rice blast disease and brown planthopper. The electron beam irradiation was used to induce mutation for early maturation and also for resistance to disease and insect pest. Phathumtani 1 was irradiated using electron beam at doses of 300 and 400 gray. It was found that, at M2 generation the harvesting period was reduced from 120 days to 113-115 days in 174 lines. The number of filled grains per panicle was of about 10-30 seeds. The characteristics regarding the plant height were varying from semi-dwarf to intermediate height. These 174 rice lines were screening for rice blast disease and brown planthopper resistance. In M3 generation, 11 lines were identified as quite resistant to the rice blast disease, while most of varieties were susceptible to blast and almost all mutant lines showed susceptibility to BPH. There were 7 lines which were early maturing and could be planted in the salt water intrusion areas during dry season where farmers could harvest before the period of salt water intrusion, or in the flood plain areas by planting before and after flood.

Country or International Organization

Thailand

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