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Transfer of synthetic cry 1 gene to selected rice (Oryza sativa L.) variety Bg 352

Rice (*Oryza sativa*) is the primer food crop of the world, serving as the major staple crop for about three billion people. In developing countries about 35-55% of the potential yield of rice is lost due to pests and diseases. When further yield increases though breeding is platauring, recovery of the loses become the focal point. Genome transformation through genetic engineering provides an ideal tool to introduce new traits such as pest and disease resistance. Low levels of gene expression is observed in pants, when genes rich in A+T are trans transferred, due to G+C codone bias nature in of plants. So the objective of this study was to transfer synthetic *cry* gene rich in G+C to rice variety Bg 352 to develop lepidopteran pest resistance. Bg 352 was selected out of six tested varieties based on callus formation and regeneration potential. Bg 352 calli were co-cultivated with *Agrobacterium tumefaciens* strain C58 carrying synthetic *cry*1 cloned recombinant vector P CAMBIA [30]. Transformation efficiency was checked by histochemical GUS analysis. Fifty three percent of the co-cultivated calli were GUS positive. T –DNA region of the P CAMBIA [30] has successfully integrated with Bg 352 genome.