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The Lingering Public Fear about Selectable Maker Genes in Genetically Modified Plants

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Selectable marker genes (SMGs) are chiefly used in plant genetic transformation procedures to select for transformation events among a much greater number of untransformed cells. Examples of these include the antibiotic and herbicide resistance genes, which express proteins that confer antibiotic and herbicide resistance, respectively, to transgenic plants. Due to the heightened public concerns about the continued needless presence of these SMGs in the plant as well as in their products, after transgenesis has been achieved, there has been increasing agitation for their removal from transgenic plants. The public is wary of the traits of the plants, their interaction with other plants and the environment with respect to their impact on health, nutrition and the eco-system.The truth is, the public fear about the risks of SMGs is largely unfounded [1] and this makes the task of persuading the public all the more difficult; as they may have formed opinions whether or not real threats exist. It appears that there are still gaps to be filled by the scientific community to fully persuade the general public beyond reasonable doubts about the harmlessness of the presence of SMGs in the plants in particular and transgenic plants in general. There should be a common ground for the two parties to relate if the heightened nerves are to be calmed. The gains of plant biotechnology, no doubt, outweigh the limitations and the perceived risks. The recent advances in producing marker-free plants [2,3] are steps in the right direction to further dispel the concerns of the public. Hence, the scientific community should do more to improve on these clean-gene technologies such that they do not leave room for doubts on biosafety.

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