

# **Would the Controversial Transgenic Crops Beneficial to the Economy of Papua New Guinea? Review of the Current Trend and Future Implications.**

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## **Abstract:**

The genetically modified crops (GMCs), called 'transgenic', continue to induce debate in Papua New Guinea (PNG) given the nature of its associated risks on natural environment, human life and agriculture. However, the version of the controversy arguably is seen as a challenge and can critically be evaluated to identify options in developing proper strategies to support livelihood and the economy of PNG. FAO reports that PNG population is growing rapidly by 3.2 per cent annually against low GDP (US\$606) compare to the world (US\$2000) by 69 per cent. In addition, climate change scenarios such as drought, high temperature, rise in sea level, and increase in pest and disease incidence are posing risk to human life and the economy of the country. The country's plans on how to support the ever growing population with healthy and nutritious foods and sustain the economy after the oil and gas are depleted remains one of the major challenges. Among improved agricultural technologies, including advance breeding approaches, transgenic technology (TT) adopted by third world countries had greatly improved the productivity, quality and economy of cereals and grains (e.g. corn and rice), legumes (e.g. soybean), wool and fibre (e.g. cotton) and other crops of commercial value. Here we review the experiences of TT adoption by developing countries to provide an insight into development of local varieties known with persistent pests and diseases for specific use in the long term given proper amendment of GMCs.

**Keywords:** climate change, economy, GMCs, native crops, population, transgenic.