# ABSTRACT

## Genetically Modified Organisms (GMOs) and Agricultural Trade: Prospects and Implications for the Caribbean

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Biotechnology is a key technology that can enhance food and nutrition security globally by positively impacting agricultural production. This thesis examines the impact of genetic modification on the global political economy of agriculture, and seeks to situate the Caribbean within this frame. The 'Gene Revolution' embodies challenges as well as opportunities for the region to develop its agrobiotechnology sector. However, the assessment of biotechnology's role in addressing food and nutrition insecurity must go beyond total acceptance or rejection, and weigh both its benefits and risks. This represents the conceptual position taken within the thesis, and is exemplified in the "bio-transformationalist" perspective. An international political economy approach serves to highlight the critical structures of biotechnology development required for success in the industry, specifically, security, production, finance and knowledge. It also brings to the fore those issues that impact developing countries which derive from the traditional global division of labour. The Caribbean occupies a peripheral position within each of the structures, but can be given credit for the strides made in terms of security (biosafety), and finance (commercial projects). Marginality in production is attributed to the absence of commercial production, while a general lack of awareness of GMOs is the major deficit within the knowledge structure. The research found that there is a role for biotechnology applied to Caribbean agriculture, but this is contingent upon the region improving its position within each of the afore-mentioned structures. Relevant legislation, capacity building, appropriate infrastructure, research and development funding, private sector involvement, public education and government support for the sector are all pre-requisites for success. Further, alternative production systems must be considered to address concerns associated with the application of genetic modification to food production.

**Keywords:** Michelle Cynthia John; GMOs; agricultural trade; bio-transformation; Caribbean