

**Protected Agriculture in the CARICOM Region:
The Current and Future Role of CARDI**

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With the recent thrust within the CARICOM Region to increase food production and productivity to satisfy local demand, technologies such as protected agriculture which have the potential to boost yields and provide high economic returns even at small scales are being embraced. Despite the demonstrated economic, social and environmental benefits of protected agriculture in the Region, many producers have been unable to sustain and/or optimize yields and maintain profitable enterprises. These observations are largely rooted in the use of inappropriate structures for the climatic conditions of the Region, pest outbreaks, the inadequate knowledge and skill of producers and limited industry support systems and services. The need for research and development interventions have therefore become increasingly necessary for alleviating these constraints and ensuring the establishment of a competitive and sustainable protected agriculture industry. Towards this goal, CARDI's research efforts seek to improve yield (quantity and quality) and the profitability of production systems through the generation, validation and demonstration of appropriate technologies. Specific areas of focus include economics of producing vegetables under various protected structures versus open field systems, low input protected systems, ventilation systems for optimizing the growing environment, growing media, market acceptable heat and pest tolerant crop varieties, fertility management regimes and IPM systems for major pests. With the recognition, that the creation of new and innovative technologies is only one aspect of developing a sustainable industry, the institute along with key partners has also sought to support industry development through the provision of appropriate infrastructure and capacity building in the areas of production and marketing systems. Such interventions are discussed in relation to improving the contribution of protected agriculture to food and nutrition security, improving cross-sectoral linkages and enhancing livelihoods along the value chain.

Key phrases: food and nutritional security, protected agriculture, research and development, vegetable production systems