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## Abstract

The 2007 Census of agriculture for the US Virgin Islands (USVI) indicates that production of vegetables decreased since 2002. Zucchini (Cucurbita pepo), a summer squash vegetable is grown commercially for fresh market within the USVI. Aquaponics links fish and vegetable crop production and offers several advantages over separate production systems. A large portion of the waste nutrients generated by the fish are recovered by crops rather than being discharged into the environment. The hydroponic component receives most of the nutrients at no cost, purifies the culture water and extends water use. Aquaponic systems produce leafy green vegetables best because of high nitrogen levels (excreted as ammonia, NH<sub>3</sub>) in fish waste. Specific nutrient deficiencies make production of fruiting vegetables more difficult. Previous observation trials revealed that bud abortion and Blossom End Rot (BER) in fruiting crops affected yield. The causative factor is that the fish waste does not provide a complete and balanced fertilizer. Foliar spray application of deficient nutrients can reduce the incidence of BER and are used in other production systems. This project proposes to conduct nutrient management studies in the aquaponic system for zucchini production specific to elimination of BER. Study of calcium, potassium, phosphorus and pH levels on the BER shall be conducted on productivity of zucchini in USVI's aquaponic system. The success of this project and subsequent transfer of knowledge and technology will help improve the quality of life of farmers, rural communities, and the USVI population as a whole.