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May 18 – 20, 2022

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Prospects for Commercial Cultivation of Quinoa in Guyana

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Quinoa (*Chenopodium quinoa* Wild.) is known for its botanical features, agronomic characteristics and importantly, its comparatively high nutritive value. This review targets an examination of Guyana's soil and climatic resources for their suitability for production of the quinoa crop. In 2013 (The International Year of Quinoa declared by the UN General Assembly), the Food and Agriculture Organisation (FAO) named quinoa a 'Superfood' and is currently working with countries out of the Andean region to improve food security by introducing and promoting this pseudo-cereal. Quinoa cultivation can also be a solution for farming communities to adapt to climate change. This paper provides a summary of research articles and review papers that cover a wide range of issues pertaining to plant breeding, germplasm evaluation and spread, crop management, harvesting and processing of quinoa. Two of the main sources of information were the FAO publication titled The State of the Art Report on Quinoa (2013) and the International Year of Quinoa (2013). Guyana's five physiographic regions were also examined for their suitability for the cultivation of the quinoa crop. The National Land Use Plan (2013) provided essential information in this regard. Research articles that dealt directly with crop performance under different ecological conditions were found and used. An assessment was made of ecological conditions existing in Guyana's five physiographic regions and their suitability for crop production. Countries in Eastern and Southern Africa did some germplasm screening and evaluation of different germplasm that were acquired from different parts of the globe. They gathered data on the morphological characteristic, phenological characteristics, the crop's reaction to abiotic and biotic factors, and the grain yield for each variety. This paper can serve as a precursor to the development of a national screening programme for quinoa germplasm. This review paper also highlights some of the challenges and opportunities that may be faced on the set of the proposed screening programme.

Keywords: Quinoa, Agronomic characteristics, Germplasm, Soil resources, Climatic conditions