

GIS based Land Suitability Modeling for the Selected Subtropical Fruit-Case of Limpopo Province, South Africa

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ABSTRACT Crop suitability defines the congruency between the crop requirements and the prevalent geo-environmental conditions. A study to evaluate the suitability of the selected subtropical crops (avocado, litchi, macadamia and, mango) was conducted with the mandate to evaluate the potential of the agribusinesses and agricultural enterprises in Limpopo Province. Crop suitability modeling was developed based on the incorporation of the agro-ecological parameters (soil, terrain and climate capability). The agro-ecological parameters were reclassified, weighted and, summed to institute the suitability model. The subsequent model enlightened that the optimal potential areas for the selected subtropical crops strongly correlate to the spatiality of the rainfall. The water intensive avocado exhibited limited potential area that correspond to Makhado and Thulamela, and Greater Tzaneen Municipality, that are renowned to experience a significant amount of precipitation in the province.