

Methodology for the estimation of land suitability for *Atriplex* L. [Amaranthaceae Juss. (s.l.)] cultivation in arid and semi-arid regions

Román-Figueroa, Celián

Herrera, Sebastián

Cortez, Donna

Uribe, Juan Manuel

Paneque, Manuel

Atriplex includes species with multiple purposes such as biomass for energy production, for bioremediation of soils contaminated with metals, or soil conservation. In Chile, 29 *Atriplex* species have been recorded, of which 21 are native. However, there are limited studies on these species. Agro-climatic zonation allows for determining the land aptitude *Atriplex* species cultivation according to the climatic conditions where their growth has been documented. The objective of this study was to establish the agro-climatic regions suitable for growing *Atriplex* in northern Chile by carrying out agro-climatic zonation. Our results revealed that an area of 4.89 million hectares is suitable for *Atriplex* growth, of which the Atacama region comprises the most (42.9%). Meanwhile, the best conditions for *Atriplex* growth, i.e. where it is adapted without thermal and hydric restriction, were registered in Arica and Parinacota and Coquimbo regions (7135 hectares).