

P285

Growth characteristics of halophytes and forage crops under salt concentrations

Jae-Hyeok Jeong^{1)*}, Woon-Ha Hwang¹⁾, Sung-Hyun An¹⁾, Han-Yong Jeong¹⁾, Hyeon-Seok Lee¹⁾,
Jung-Sun Baek¹⁾, Kyung-Jin Choi¹⁾, Geon-Hwi Lee¹⁾, Nam-Jin Chung²⁾, and Song Joong Yun²⁾

¹⁾ *Crop Production and Physiology Research Division, National Institute of Crop Science, Rural Development Administration, Jeonju Wanju 55365, South Korea*

²⁾ *Department of Crop Science & Biotechnology, Chonbuk National University, Jeonju 54896, South Korea*

Abstract

South Korea is largely dependent on imports of forage crops. In order to raise the self-sufficiency rate of forage crops, it is necessary to cultivate forage crops in 135,100 ha reclaimed land of South Korea. This study was conducted to investigate the growth of halophytes and forage crops in order to search for stable plants on reclaimed land. The plants were cultured in Hoagland solution and grown at 0%, 0.5%, 1.0% and 2.0% of salt concentrations. Plants with good growth at 0.5% of salt concentration were halophytes such as *Suaeda asparagoides* and *Salsola komarovii*. *Salicornia herbacea* and *Suaeda maritima* showed good growth at 2.0% salinity, and *Suaeda maritima* showed stable growth at all of salt concentrations. In conclusion, *Suaeda asparagoides* showed the best growth at 0.5% of salt concentration and was considered the most biomass at reclaimed land in Korea with less than 0.5% of salt concentration.

Keywords: halophyte, *Suaeda asparagoides*, growth, salt concentration

Corresponding author*

Jae-Hyeok Jeong

Address : 181, Hyeoksin-ro, Iseo-myeon, Wanju-gun, Jeollabuk-do, 55365 South Korea

Tel : +82-63-238-5265, Fax : +82-63-238-5255

E-mail : rodnf2010@korea.kr