

## INTISARI

Memfaatkan lahan marginal seperti lahan salin diharapkan mampu menaikkan produktivitas padi lahan sawah yang terkena salinitas melalui manajemen budidaya padi di guludan dan ledokan. Penelitian ini bertujuan untuk mengetahui perbedaan pertumbuhan dan hasil padi yang ditanam di guludan dan ledokan dengan pengairan salin dan non salin.

Penelitian dilaksanakan di lahan pertanian Dusun Baros Desa Tirtoharjo, Kecamatan Kretek, Kabupaten Bantul, Daerah Istimewa Yogyakarta pada bulan Oktober 2016 sampai dengan Februari 2017. Penelitian dilaksanakan menggunakan metode percobaan Rancangan Multilokasi (*Oversite*). Rancangan percobaan terdiri dari perlakuan salin (S1) dan non salin (S0) dengan sistem penanaman di bagian yang ditinggikan/guludan (A1) dan bagian ledokan (A0).

Pengairan salin menghasilkan nilai indeks luas daun, laju fotosintesis, laju transpirasi dan panjang akar yang lebih rendah di ledokan. Akan tetapi, konsentrasi  $\text{Na}^+$  dan konsentrasi prolin daun lebih tinggi di ledokan. Konsentrasi  $\text{K}^+$  daun semakin menurun seiring dengan meningkatnya konsentrasi  $\text{Na}^+$ . Meskipun hasil gabah kering giling di guludan tidak berbeda nyata dengan ledokan baik di lahan salin maupun non salin, tetapi umur panen padi di ledokan lebih cepat dibandingkan umur panen padi di guludan.

**Kata kunci** : Guludan, Ledokan, Padi (*Oryza sativa* L.), Salinitas,

## ABSTRACT

Utilization of marginal land (e.g. saline field) is expected to increase rice production. One of integrated approaches that can be applied is a raised- and sunken-bed system. This experiment aimed to investigate the growth and yield of rice under raised- and sunken-bed system as affected by saline irrigation and non saline irrigation.

This experiment was conducted at Baros, Bantul District, Yogyakarta from October 2016 to February 2017. The experiment was arranged in a multi-location (oversite) design, consisted of saline irrigation (S1) and non saline irrigation (S0) in a raised-bed (A1) and sunken-bed (A0) planting system.

The results showed that saline irrigation decreased leaf area index, photosynthetic rate, transpiration rate and root length of rice grown at sunken-bed. However, leaf  $\text{Na}^+$  concentration and leaf proline concentrations of rice at sunken-bed were higher than those at raised bed. The leaf  $\text{K}^+$  concentration decreased with increasing  $\text{Na}^+$  concentration. Although the dry grain yield of rice at sunken-bed was not significantly different from that of rice grown at raised-bed, saline and non saline irrigation could accelerate the harvesting age of rice at sunken-bed.

**Keywords:** Raised-bed, Rice (*Oryza sativa* L.), Salinity, Sunken-bed