Rice Research: Open Access

Short Communication Open Access

Salinity Effects on Seedling Growth and Characters of Different Rice Seedling

Mohammad Asima*

Research Institute of Green Science and Technology, Shizuoka University, Iran

Short Communication

Flood irrigation practices that square measure ordinarily utilized in American state throughout the first stages of rice (*Oryza sativa* L.) institution might contribute to salinity harm and eventually decrease yield. information of salinity effects on rice phanerogam growth and yield parts would improve management practices in fields and increase our understanding of salt tolerance mechanisms in rice.

Methods of Measurements for Salinity Sensitivity at Totally Different Growth Stages

Seedling survival rate was measured in 3 rows of seedlings [germinated from fifteen (no. row^{-1}) ×three (rows) = forty five seeds], that were every which way chosen from every replicate. The phanerogam survival rate was calculated because the share of live seedlings from germinated plants. At every harvest at phanerogam stage, fifteen seedlings of every replicate were every which way sampled from living plants. Once roots were removed, shoots of seedlings were dried in an exceedingly in an exceedingly (70°C) for one wk. The dry weights of seedlings were measured victimisation an balance with metric weight unit exactness [1].

Main culms of all living plants were labelled before tillering. Once harvest, main culms and panicles on main culms were separated from the opposite culms and panicles. Plants were bagged severally once roots were removed. Shoot dry weights of main culms and every one tillers were measured once kitchen appliance drying at 70°C for one week. Panicles on main culms were counted and weighed. Panicles on tillers were conjointly weighed. The subsequent yield parts were determined: primary branches per raceme, raceme length, spike variety per raceme, fertility, 1000 kernel weight, and grain dry weight per raceme. Among them, fertility was outlined because the share of stuffed spikelets relative to the overall variety of spikelets per raceme. Tiller variety per plant and grain dry weight per plant were conjointly measured. Tiller variety per plant was resolute on all tillers with emerged heads. All matured panicles (i.e., kernels were too exhausting to be damaged by the thumbnail) were hand threshed and weighed for grain dry weight per plant. The immature panicles weren't weighed. Harvest index was calculated as grain dry weight per plant divided by the overall surface biomass, that was the total of grain dry weight per plant and shoot dry weight per plant.

The rice eultivars big within the tropies and sub tropics may be loosely categorised as aromatic little grain, native coarse grain and fashionable high yielding varieties (HYV). The primary 2 classes square measure ancient rice, and square measure usually appetizing. The aromatic rice has higher value than HYV rice, nonetheless farmer's square measure unwilling to expand its cultivation attributable to the low yield potential. One chance to expand the cultivation of ancient rice is o t notice stress tolerant cultivars for growing in marginal land. The salinity tolerance of 9 rice cultivars representing 3 from every kind of aromatic little grains, native coarse grains and HYV varieties, was analysed at germination and early phanerogam stage. Seeds were placed for germination and also the seedlings were allowed to grow for 9 days at NaCl concentrations of zero, 50, 100, a hundred and fifty and two hundred millimeter. NaCl reduced the germination index (GI), speed of germination, phanerogam height and phanerogam dry matter weight. phanerogam characteristics were reduced quite GI [2].

Rice (*Oryza sativa L.)* is one among the most important staple crops, consumed by quite 1/2 the world's population. Production of rice should be magnified quantitatively and improved qualitatively to fulfill the necessities of the growing population within the 21st century and to keep up world food security. Though rice features a wide geographic distribution extending from 50 N to 35S, it's at risk of climatical changes resulting in low rice productivity. The apace ever-changing climate is inflicting totally different abiotic stresses, as well as periods of drought, frequent floods, ocean water inundations, etc. that cut back the yield potential of current rice varieties [3].

References

1. Zeng L, Shannon MC (2000) Salinity effects on seedling growth and yield components of rice. Crop Sci 40: 996-1003.
2. Khan MSA, Hamid A, Karim MA (1997) Effect of sodium chloride on germination and seedling characters of different types of rice (*Oryza sativa L.*). J Agron Crop Sci 179: 163-169.
3. Heenan DP, Lewin LG, McCaffery DW (1988) Salinity tolerance in rice varieties at different growth stages. Aust J Exp Agric 28: 343-349.

***Corresponding author:** Mohammad Asima, Research Institute of Green Science and Technology, Shizuoka University, Iran; Email: asima56@gmail.com

Received March 08, 2021; **Accepted** March 20, 2021; **Published** March 27, 2021

Citation: Asima M (2021) Salinity Effects on Seedling Growth and Characters of Different Rice Seedling. J Rice Res 9: 242.