Effect of seedling age and planting space on yield and yield components of rice (Neda variety)

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Abstract
Rice is the most important crop at the global level, as it used as a staple food in the most countries of the world. Achieving a sustainable increase in rice production can improve global food security and contribute to poverty alleviation. Selection of suitable planting density and seedling age are the most important factors for maximizing rice production. In order to study the effects of seedling age and planting spaces on yield and yield components of rice (Neda variety) a field experiment was carried out in field of Ghaemshahr Azad University. Experimental design was arranged in split plot in basis of Randomized Completely Block Design with four replication. Some agronomical traits such as total tiller number, fertile tiller number, panicle number per m², total spikelet per panicle, total strile spikelet per panicle, 1000 grains weight and grain yield were measured. Results showed that the effect of seedling age on total tiller number and panicle number per m² was significant at 0.01 probability level. Also seedling age had a significant effect on fertile tiller number at 0.05 probability levels. Planting spaces had a significant effect on total tiller, fertile tiller, panicle per m², total spikelet per panicle and grain yield. When the age of seedling is less than optimum, the tender seedlings may die in greater number due to high temperature and ultimately the plant population is reduced. For this variety transplanting in seedling age at 25 day and 15 cm×15 cm planting space for the best performance of yield attributes were recommended.

Key words: planting space, rice, seedling age, yield