

## **Abstract**

In order to investigate the effects of millet-bean intercropping an experiment was conducted in Education and Research Center for Agriculture and Natural Resources of Bampour, Sistan and Baluchistan province during 2015. The experimental design was split plot randomized complete block design with three replications. Nano fertilizer spraying at four levels including concentrations of 1, 2 and 3‰ at two stages of branching and flowering comprised main plots and five cropping patterns including millet sole cropping, bean sole cropping, 100 % millet+ 20% bean, 100 % millet + 40% bean, 100 % millet + 60 % bean as sub plots. Results of treatment interactions indicated that the greatest millet yield was achieved at 3‰ spraying and millet sole culture, while the least yield of millet was observed at no spraying and 100 % millet + 20 % bean. The greatest bean yield was achieved at 3‰ spraying and the least yield was achieved at no spraying. In addition, the greatest land equivalent ratio (1.8) was observed in 100% millet + 60 % bean, therefore it could be concluded that double intercropping used production resources more efficient in comparison with sole cropping.

**Keywords:** cereal-legume mixtures, nano fertilizer, iron, LER.



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