Correlation and Regression Analysis of Rice-Weed Ecosystem under Rainfed Upland Conditions.

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ABSTRACT

Field experiments were conducted at Agricultural College Farm, Naira for two consecutive kharif seasons of 2005 and 2006 to study the correlation and regression of the grain yield of rice on certain weed and crop parameters under rainfed upland conditions. The results revealed that the grain yield was highly negatively correlated with all the weed parameters except with the density of grasses, sedges and dicots and total weed density at 20 DAS, while the correlation was significantly positive with weed control efficiency. The correlation coefficient between grain yield and all crop parameters were significantly positive except with plant height at 20 DAS, while it was significantly negative with weed index. The regression analysis indicated that there was a negative linear relationship between grain yield and the density of all the three groups of weeds as well as with weed dry weight. The grain yield was reduced by 8.0 kg ha^{-1} with increase of every one gram of weed dry weight per m^2 at 40 DAS.

Key words : Rainfed Upland Rice, Rice-Weed Ecosystem