

# Comparison of Rice Breeding between Pedigree Method and Single Seed Descent

by

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## Summary

Three methods including, two pedigree and a single seed decent method were compared for selection the effectiveness of two rice cross combinations. Three methods were started from the same selected  $F_2$  plants in each cross combinations. In the frist method grain yield were tested from the  $F_3$  lines (pedigree 1, pd 1) from the  $F_4$  generations the ordinary method was used. Second method were followed tradisional pedigree method (pedigree 2, pd 2). For the single seed descent  $F_3$  and  $F_4$  population were come from a single seed which selected from the  $F_2$  and  $F_3$  plants (SSD). In the SSD method, the  $F_5$  lines were produced from the seeds of individual  $F_4$  plant. In  $F_6$  and  $F_7$  generations yield were compared in each cross of pd 1, pd 2 and SSD lines.

From the experimental results indicated that grain yield among  $F_6$  and  $F_7$  lines were no significant difference when three methods were used in both crosses. Grain yields of  $F_5$  selected lines were no significant difference between pd1 and pd2 method even though in pd1 method the  $F_5$  lines were selected from the high yield lines of  $F_3$ . Thus there were no significant effect of selection in early generation of  $F_3$ . This result concluded that there were no significant differences by using those three methods in selection. However, the SSD method gave advantage of saving labors and more efficient for land utilization.