SEMINARS

Seven seminars were organized in the year 2004 to 2005 with the participation of University faculty members, post-graduate students, researchers and scientists from home and abroad. Summary of the different seminar papers are given below:

SEMINAR- I

CULTIVATION OF RICE USING CLONAL TILLERS

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Summary

Rice crop suffers due to natural disasters and retransplanting with new seedlings from nurseries usually mitigates these losses. Such a planting is not feasible in some countries due to photoperiod and low temperature restrictions. An attempt was made in finding out clonal tillers and evaluating the performance of mother crop under different intensity of tiller removals and management practices as well as those separated tillers were tested for their performance at different densities.

The current recommendation of N dose (75 kg/ha) remains adequate for additional tiller production, growth and yield of the mother crop but the 50% reduction of light intensity reduced tiller production by 45.6% at its maximum tillering stage, and grain yield by 43.4%. Planting date variations had no influence on total tiller production though early transplanting (July 15) of mother crop showed higher grain yield (3.8t/ha). The photoperiod-insensitive variety RD23 produced higher number of tillers and grain yields compared to photoperiod-sensitive variety KDML 105. Separation up to 4 tillers/ hill did not have distinct negative effects on growth, yield parameters and yield of the mother crop but higher intensities of tiller separation beyond 4 tillers showed negative influences. The rate of new tiller production was higher with higher intensities of tiller separation but finally showed significantly lower tiller number. (Fig.2)

The yield of nursery seedlings were lower compared to the vegetative tillers transplanted on the same date (Table.2 and Fig.2) and showed a higher number of tillers per hill and higher tiller mortality.

Transplanting 2 vegetative tillers/ hill is adequate for increasing and stabilizing rice productivity in the flood-prone lowland ecosystem. In severe seedlings scarcity, transplanting of single clonal tiller/hill can also be practiced.

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Table 1. Grain yield of rice (mother crop) as affected by nitrogen rate, light intensity, planting date and tiller separation

Treatments	Grain yield (t/ha)
Nitrogen rate (kg/ha)	
0	2.8
75	3.6
120	3.8
Light intensity (%)	
100	4.0
50	2.7
Planting date	
July 15	3.8
July 30	3.3
August 14	3.0
Variety	
KDML 105 (photosensitive)	3.0
RD 23 (photoneutral)	3.8
Tiller separation (no./hill)	
0	3.0
2	3.1
4	3.5
6	3.7
8	3.8

Table 2. Performance of clonal tillers in different plant densities and its comparison with nursery seedlings

Treatments	Grain yield (t/ha)
Clonal tiller density	
Nursery seedlings (3/hill)	3.5
1 clonal tiller/hill	4.4
2 clonal tillers/hill	4.5
3 clonal tillers/hill	4.6
4 clonal tillers/hill	4.7

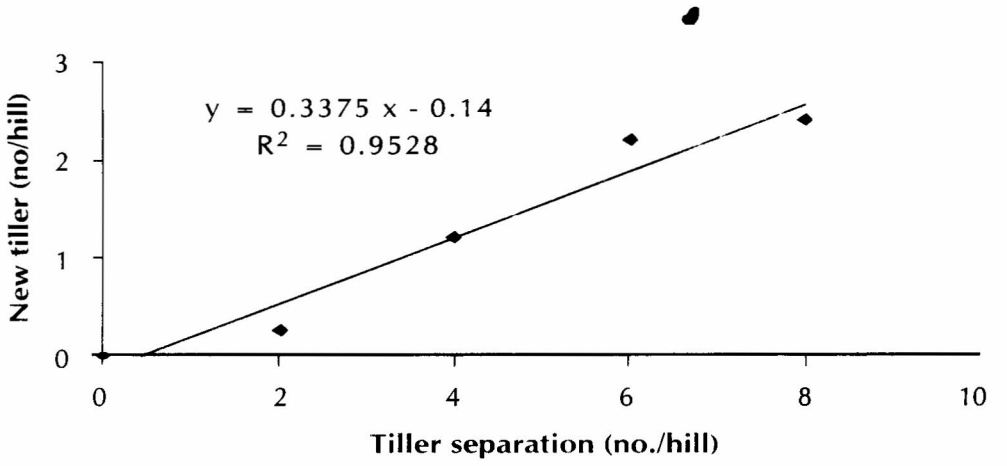

Figure 1. Relationship between intensity of tiller separation and new tiller production of transplanted rice

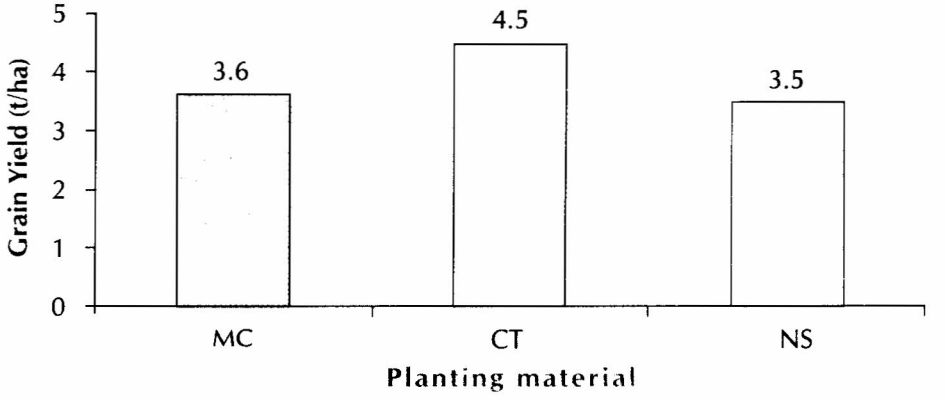

Figure 2. Grain yield of different planting materials (MC = mother crop; CT = clonal tiller and NS = nursery seedlings)