A study of plant spacing and initial cutting was conducted to determine their effect on dry matter yield and nutritive value of *Panicum maximum* TD 58 (purple guinea grass). Three consecutive cuts were made every 45 days. The experiment was carried out from April to December, 1992 on Pak-Chong Soil series. A split-plot in RCBD was used, main plot consisted of 3 spacing (at 30 x 30, 40 x 40, and 50 x 50 cm.) and sub-plots consisted of 4 initial cutting ages (6, 8, 10 and 12 weeks after emergence). Result showed that initial cutting age had no significant effect on dry matter yield of *Panicum maximum* TD 58. Initial cut at 6, 8, 10 and 12 weeks, after that harvested at 45 days interval gave accumulative dry matter yield of 1,964, 1,936, 2,088 and 2,162 kg/rai respectively. Planting with a spacing of 30 x 30 cm. and 50 x 50 cm. gave the highest total dry matter yield of 2,406 and 2,297 kg/rai respectively. The highest protein yield was obtained from the initial cut at 6 weeks after emergence (171 kg/rai) but was no significant difference from initial cut at 8 and 10 weeks (144 and 147 kg/rai, respectively). Planting with a spacing of 30 x 30 and 50 x 50 cm. gave the highest protein yield of 169 and 170 kg/rai, respectively.

Therefore, these results suggest that for the less input on seed and the optimum utilization of purple guinea grass, the grass should be planted at spacing of 50 x 50 cm. and initial cut at 6-10 weeks and then cut every 45 days.