

Effect of pre seeding gingerly (*Sessamum indicum*) cultivation on the growth and yield of subsequent rice crop

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Gingelly is one of the best crops to cultivate during *yala* season (May-Sept) in well drained paddy fields in under rainfed or limited water situations in the dry zone of Sri Lanka. However, farmers are reluctant to cultivate gingerly in paddy fields as they believe that it would adversely affect on subsequent rice crop. This is a serious constraint in promoting gingerly in paddy fields despite very high demand. Therefore, an experiment was conducted for three seasons from *yala* 1999 to study whether there is any adverse effect of preceding gingerly crop on the subsequent rice crop. In the first season (*maha* 1998/99) the entire experimental area was cultivated to rice (cv. Bg 300) to obtain uniform field conditions. In the second season (*yala* 1999) the following four pre seeding treatments: 1) fallow, 2) gingerly (all plant parts except grains incorporated to soil, 3) gingerly with rice stubbles (30 cm from the ground level) incorporated in to soil, 4) gingerly (no plant parts incorporated) were tested in a randomized complete block design with four replications, in the same experimental plots. Gingerly crop was harvested for grains. After extracting the seeds crop residue was incorporated in to soil by ploughing before the next crop. In the third season (*maha* 1999/2000), all plots were grown to rice (cv. Bg-300). The biomass production of gingerly, plant height, tiller count, yield and yield component of rice was recorded. The dry weight of roots, stumps, shoot, total weight and grain yield of gingerly was 0.2, 0.6, 3.4, 4.4 and 0.8 t/ha respectively. Grain yield of rice ranged from 4.5 - 5.2 t/ha. Any of the growth parameters, yield and yield parameters was not significantly ($p=0.05$) affected by the pre seeding treatment. Further, it shows that incorporation of gingerly residues as stump or whole plant parts had no significant effect on subsequent rice crop. These results suggest that cultivation of gingerly as a pre seeding crop has no adverse effect on subsequent rice crop grown in paddy fields.

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