B-21 : NITROGEN FERTILIZER AND RICE STRAW MANAGEMENT IN CHILLI (*Capsicum annuum* L.) CULTIVATION IN REDDISH BROWN EARTH

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Chilli (*Capsicum annuum* L.) is one of the important high value cash crops in the dry zone of Sri Lanka. The profitability of the crop has declined drastically during the last few years due to several reasons. Adaption of inappropriate and/or inefficient management practices especially for fertilizer and water could be an important reason in this regard.

An experiment was conducted in Redish Brown Earth (RBE) soils at the Regional Agricultural Research Centre at Maha Illuppallama and also in a farmer's field in the Mahaweli 'H' area to determine the suitable level and method of application of nitrogen fertilizer, and method of rice straw management in order to increase net return from chilli cultivation.

Results indicated that the application of 120 kg of nitrogen per hectare in four equal splits at 2, 4, 8 and 12 weeks after planting is sufficient to optimize the yield of chilli. Rice straw mulch at the rate of 5 tons per hectare increased the chilli yield in the farmer's field trial where longer irrigation interval were used. However, in the same location, incorporation of rice straw resulted in lower yield than could be possible due to increased infiltration of water.

It could be concluded that in RBE soils the application of 120 kg of nitrogen per hectare in four equal splits (2, 4, 8 and 12 weeks after planting) is adequate to optimize the chilli yield and income. Application of rice straw mulch at the rate of 5 tons per hectare is beneficial to the crop, especially when longer irrigation frequencies are to be used.