

**B-69: Effect of wind breaks on growth and yield of chilli during Yala season in the dry zone of Sri Lanka**

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Among many factors that affect growth and yield of chilli (*Capsicum annuum* L.) heavy winds prevalent during Yala season have been identified as a critical factor. Therefore investigations were carried out for 3 Yala seasons from 1990 Yala onwards in research fields at Maha Illuppallama and in the farmers' fields at Mahaweli H area to identify the effect of different wind breaks on the growth and yield of chilli cultivar MI-2 during Yala season in the dry zone of Sri Lanka.

2m high artificial wind barriers made with woven cadjan leaves were used during the first 2 seasons and crop barriers of pigeon pea, maize, and okra were

used in the third season. Both artificial and crop barriers were effective in reducing wind speed, and the percentage reduction was dependent upon distance from the barrier. The maximum reduction was observed at a distance of twice the height of the barrier. However, wind barrier was effective in reducing the wind speed up to a distance of 10 times of its height. 80% - 100% increase in soil moisture, 50% increase in plant canopy diameter, 20% increase in plant height, 50% reduction in the incidence of leaf curl complex, and 50% increase in chilli yield were recorded up to a distance of 8 m behind the wind barrier compared to the data at 30 m behind the wind break. Wind speed reduction recorded was 55% and 0% at distance 8 m and 30 m respectively. Among the crop barriers used, 2 rows of maize or okra were superior to other crops used, in increasing growth and yield of chilli by reducing wind speed.

Therefore, use of wind barriers at 15-20m intervals would be helpful in increasing growth and yield of chilli during Yala season in the dry zone of Sri Lanka. Use of crop barriers is more economical compared to artificial barriers.