

Effect of plastic mulch on growth and yield of chilli (*Capsicum annuum* L.).

ABSTRACT

In this work a field study was conducted to evaluate the effect of coloured plastic mulch on growth and yield of chilli from October 2005 to April 2006. The plastic mulches were transparent, blue, and black and bare soil was the control. Different mulches generated higher soil temperature and soil moisture under mulch over the control. Transparent and blue plastic mulches encouraged weed population which were suppressed under black plastic. Plant height, number of primary branches, stem base diameter, number of leaves and yield were better for the plants on plastic. At the mature green stage, fruits had the highest vitamin-C content on the black plastic. Mulching produced the fruits with the highest chlorophyll-a, chlorophyll-b and total chlorophyll contents and also increased the number of fruits per plant and yield. However, mulching did not affect the length and diameter of the fruits and number of seeds per fruit. Plants on black plastic mulch had the maximum number of fruits and highest yield. Thus, mulching appears to be a viable tool to increase the chilli production under tropical conditions.

Keyword: *Capsicum annuum*; Chilli; Growth; Plastic mulch; Yield; Yield attributes.