

B-46 Evaluation of chilli (*Capsicum annum* L) genotypes for drought tolerance

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An investigation to identify drought tolerant genotypes in chilli was conducted during May - June in a plant house at the Eastern University, located in Eastern Sri Lanka. The experiment included 11 genotypes as treatments, raised in pots filled with sandy regosols, arranged in a single factor RCBD with three replicates.

The soil was kept at field capacity in each treatment at the beginning of the experiment. The crop growth parameters measured were moisture loss of plants up to permanent wilting, time taken to reach permanent wilting point (PWP) and leaf wilting length were the measurements used to determine the drought tolerant characteristic of the genotype.

The results showed that the genotype PBC 474 was the most tolerant to drought followed by CO 0002 and PBC 534. PBC 474 reached PWP after 27 days of last irrigation. The other 2 genotypes reached PWP after 21 days. In 14 days, these 3 genotypes showed a moisture loss of less than 10%, expressed in terms of plant weight and it was significantly lower compared to that of 8 other genotypes that survived during the drought period.

The results reveal that varying response to moisture stress, reflecting the level of drought tolerance exist among chilli genotypes and selection could be positively approached for genotypes with tolerance such as PBC 474, CO 0002 and PBC 534.