

IDENTIFICATION OF MUNGBEAN GENOTYPES AGAINST WATERLOGGING STRESS AT VEGETATIVE GROWTH STAGE

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Executive Summary

The experiment was conducted in the Research Field of Sher-e-Bangla Agricultural University (SAU), Dhaka-1207 during the period of 1st week of March, 2022 to June 29, 2022 to evaluate the growth and yield performance of selected mungbean genotypes at variable irrigation management conditions. Thirty mungbean genotypes were evaluated under waterlogging and normal condition. Waterlogging was imposed at 30 days after sowing by transferring the pots in a water tub where water was maintained about 5 cm above the soil surface of pots. After four days (96 h), pots were removed from waterlogging and kept in normal condition until maturity. Waterlogging significantly affected growth and yield of mungbean genotypes. Waterlogging caused a drastic yield reduction in mungbean. The seed yield reduction was about 60% due to waterlogging as compare to control condition, however, genotypes showed variable response to waterlogging. Under waterlog condition the higher relative yield was found in G11, G8, G30, G7, G16 and G14 while that was lower in G2 and G17. Dry matter production also reduced by waterlogging. However, under waterlogging, G8, G7, G22, G2, G19 and G11 showed better dry matter production compared to other genotypes. Stress tolerance index (STI), yield index (YI) and relative yield (RY) of G16, G20, G7, G8, G11, G30 and G14 were higher than others. On the basis of yield, dry matter production, STI, YI and RY, genotypes G7, G8, G11, G12, G14, G16, G20, G22 and G30 could be selected as relatively tolerant genotypes against waterlogging stress.

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