

ABSTRACT

Experiment was conducted in Phycology Lab GCU, Lahore in order to study the effect of seaweed liquid fertilizer on the seedling and vegetative growth of Wheat (Faisalabad 2008) and Maize (DK 8148). The seaweed liquid fertilizer prepared in three concentrations 10%, 50% 100% and control (water). The parameters like GP (100), GI (2 ± 0), MGT (6 ± 0), GE (100 ± 0) and SVI (4308 ± 2814.6) were maximum at 10% SLF concentration for Wheat seeds and at 50% SLF concentration the Maize seeds show maximum growth in parameters like GP (66.6%), GI (1.32 ± 0.3), and MGT (4 ± 1), GE (66.6 ± 16.7), SVI (1061.2 ± 404.7) (Table 25). 10% SLF concentration proves effective in increasing TSL, RL, SL, and FW as compare 50%, 100% SLF concentration and control (Water) for both Wheat and Maize seedling (Table 26).

In vegetative growth experiment the soil pots plants show maximum growth as compare to washed and unwashed sand pots. The parameters like TPH (38.3 ± 5.5), GP (27.7), Chl. a (0.346), Chl. b (1.23) and LA (5.4 ± 2.7) increase with increase in SLF concentrations in plants of Wheat soil pots experiment from 10% to 100% SLF concentration as compare to washed and unwashed sand pots. TPH (39.5 ± 6) of washed sand pots is maximum at 50% SLF concentration as compare to control. The GP (83.3%) of washed sand pots is maximum at 50% SLF concentration as compare to control (27.7%). LA of washed sand pots is maximum at 10% SLF concentration as compare to control (0.9 ± 0.9). The amount of Chl. a (0.352mg) and Chl. b (1.164mg) in the plants of washed sand pots more as compare to control (water). The values of TPH (21.3 ± 0.1), GP (16.6%), Chl. a (0.339mg), Chl. b (1mg) and LA (1.5 ± 1.5) at 100% SLF concentration of plants of unwashed sand pots (Table 27).

The plants of Maize washed sand pots having maximum TPH (62.2 ± 2.3) as compare to control (30.3 ± 18.2). The GP and LA of Maize washed sand pots increased with increasing SLF concentrations from 10% (50%) to 100% (83.3%) as compare to control (22.2%). In 10% SLF concentration amount of Chl. a (1.050mg) as compare to control (0.152mg) in plants of washed sand pots. In 50% SLF concentration amount of Chl. b (2.137mg) as compare to control (0.589mg) in plants of washed sand pots. The plants of

Maize unwashed sand pots show maximum TPH (46.6 ± 1.2), GP (88.8%), and LA (12.6 ± 6.3) at 50% SLF concentration as compare to control (water). The plants of Maize unwashed sand pots having maximum amount of Chl. a (0.453mg) and Chl. b (1.519mg) at 100% SLF concentration as compare to control (Water). The plants of Maize soil pots show maximum growth as compare to washed and unwashed sand pots plants. The TPH (60.1 ± 2.9) of Maize soil pots is maximum at 10% SLF concentration as compare to control (31.6 ± 2.7). The GP (66.6%) and LA (38.6 ± 19.2) of Maize soil pots is maximum at 100% SLF concentration as compare to control (water). Plants of Maize soil pots having Maximum amount of Chl. a (4.379mg) and Chl. b (1.542mg) as compare to control (Water) (Table 28).