

**Effects of selected herbicides on growth and nitrogen fixing activity of
Stenotrophomonas maltophilia (Sb16)**

ABSTRACT

A study was carried out to determine the effects of paraquat, pretilachlor and 2, 4-D on growth and nitrogen fixing activity of *Stenotrophomonas maltophilia* (Sb16) and pH of Jensen's N-free medium. The growth of Sb16 and pH of medium were significantly reduced with full (X) and double (2X) doses of tested herbicides, but nitrogen fixing activity was decreased by 2X doses. The nitrogenase activity had the highest value in samples treated with 1/2X of 2, 4-D on fifth incubation day, but 2X of 2, 4-D had the most adverse effect. An inhibition in the growth and nitrogenase activity was recovered on the last days of incubation.

Keyword: *Stenotrophomonas maltophilia* (Sb16); Nitrogenase activity; Paraquat; Pretilachlor; 2, 4D