

Mass Production of *Pseudomonas*

Pseudomonas fluorescens as non-pathogenic saprophytes that colonize soil, water and plant surface environments. *Pseudomonas fluorescens* suppress plant diseases by production of number of secondary metabolites including antibiotics, siderophores and hydrogen cyanide. This microbe has the unique ability to enter the plant vascular system, reach the various parts of the plant system and act as a systemic bio-control agent against various fungal and bacterial diseases. Competitive exclusion of pathogens as the result of rapid colonization of the rhizosphere by *pseudomonas fluorescens* may also be an important factor in disease control



PREPARATION OF MOTHER CULTURE

Mother culture is prepared by using the king's B medium

Peptone	: 20.0 g
K ₂ HPO ₄	: 1.5 g
Mg SO ₄	: 1.5 g
Glycerol	: 10 ml
Distilled water	: 1000 ml



The above broth is dispersed into conical flasks and autoclaved at 15 lb pressure for 15 minutes and cooled and inoculated with a loop of *P. fluorescens* and incubated for 2 days.

MASS MULTIPLICATION

The king's B medium is prepared and poured into the fermentor and sterilized at 15 lb pressure for 15 minutes. After the broth has cooled below the mother culture of *P. fluorescens* is added to the king's B medium in the fermentor at the rate of 3 lit for 40 lit of the broth. Then it is incubated in the fermentor for 2 days with frequent mixing of the broth by operating the stirrer. Then the broth containing the bacterial growth is collected in plastic buckets and used for mixing with talc powder for commercial formulation.