

EFFECT OF CARBOHYDRATES ON PROTEASE AND LIPASE PRODUCTION IN SEED-BORNE FUNGI OF SOYBEAN

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ABSTRACT

*During the process of biodeterioration, seed mycoflora produce enzymes to degrade protein, carbohydrate and oil. These enzymes are called as hydrolytic enzymes. The enzymes which degrade proteins are called protease and enzymes, which degrade oil are lipase. Among the protease activity, most of the monosaccharides and disaccharides stimulate protease production; however, among monosaccharides are xylose-inhibited protease activity of *Alternaria alternata* and *Aspergillus flavus*. Fructose-inhibited protease activity of *Aspergillus glaucus*. Among disaccharides, only maltose-inhibited protease production of *Aspergillus flavus* and *A. niger*. It is interesting to note that CMC (Carboxymethyl Cellulose) inhibited considerably the protease production in maximum fungi. Lipase production of fungi also inhibited with different carbon sources. *Aspergillus* sps. reveals maximum inhibition in monosaccharides and disaccharides, whereas xylose-inhibited lipase production in almost all the fungi, whereas disaccharides and polysaccharides do not affect on lipase activity.*

KEYWORDS: *Carbohydrates, Protease, Lipase, Fungi*