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Exploiting Aspergillus terreus for the Production of Thermotolerant Phytase

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ABSTRACT Animal feed is primarily composed of plant parts that contain phytic acid, *Myo*-inositol hexakisphosphate. It serves as a phosphorus source for animals. However, it also chelates the divalent and trivalent essential minerals making them unavailable to the animals. To overcome this antinutritive effect it is proposed to fortify the animal feed with phytase to hydrolyze the phytic acid. The present study is aimed at the production of thermotolerant phytase so that it can withstand the higher temperature employed for the animal feed pelleting. The present study aimed to isolate thermotolerant phytase-producing microorganisms, economize, and optimize enzyme production using agro-waste as a source of phytate. The thermotolerant phytase producing *Aspergillus terreus fsp-4* employed in the present study exhibited the highest activity at 40°C which is the body temperature of poultry as well as 80°C, the temperature employed in feed pelleting.