



Figure S1. Effects of crude phytase enzymes of *Aspergillus niger* and *Aspergillus flavus* on phosphate mineralization in sterilized garden soil under room conditions.

Table S1. characteristic morphological features of fungal strains based on colony appearance and microscopic structures.

Name of fungal strains	Colony colour	Colony Edges	Colony Size mm	Stipes Color	Stipes Surface	Conidiophore Surface	Conidia Surface
<i>Aspergillus niger</i> (<i>A. niger</i>)	Black to dark brown	White to cream thick mat of floccose. Formed radial furrows.	50-70mm	Dark brown	Smooth	smooth and colorless.	Conidia biseriate dark brown in colour.
<i>Aspergillus flavus</i> (<i>A. flavus</i>)	Yellow green with white mycelia at the edges	sporulation rings	50-65mm	Pale brown roughed texture and colourless	Spherical	Rough shape and colorless.	Conidia Rough texture and colorless. 3.5 - 5 μ m; globose; smooth to finely rough
<i>Aspergillus fumigatus</i> . (<i>A. fumigatus</i>)	greenish grey	Hyline	55-60mm 30-40mm	spaulate to clavate, phialides covering half to three quarter of the vesicle;	smooth	240 - 390 \times 3.8 – 5.5 μ m smooth	Conidia 2 - 3 μ m, globose finely rough and plain green.
<i>Aspergillus ficuum</i> (<i>A.ficuum</i>)	Black	Hyline	40-50mm	Light yeellow	Smooth	100um-150umx 100 hyline	Conidia 3.0-4.0um
<i>Aspergillus oryzae</i> (<i>A. oryzae</i>)	Pale yellow or Yellowish brown	Yellowis brown	40-80mm	Colourless	Smooth surface	20-40 \times 3-6um, globose.	4-5um smooth
<i>Aspergillus nidulan</i> (<i>A. nidulans</i>)	Dark green	brown exudates	50-70mm	Brown	Smooth surface	35- 70 \times 3-6 μ m; conidiophore small in size.	3 - 4 μ m, green; spherical with smooth to slightly rough walls. biseriate

<i>Aspergillus terreus</i> (<i>A. terreus</i>)	dark green with orange to yellow	Brown to purplish exudates	30-40mm	colourless	Smooth surface	2.5–8 µm wide, septate, hyaline, acute angle branching, tree- or fan-like branching	Small, round, hyaline conidia ('accessory' conidia) attached to the vegetative hyphae
<i>Fusarium oxysporum</i> (<i>F. oxysporum</i>)	woolly to cottony with cream to white aerial mycelium	cream colour	12-25mm	-	-	Monophialides	Phialides and phialoconidia, specific to the genus, may be found in closed tissue
<i>Fusarium solani</i> (<i>F. solani</i>)	woolly to cottony with cream to white aerial mycelium	Cream colour	12-25mm			Monophialides. Conidiophore small 14-6µm x 2-4µm.	Sporodochia. Chlamydoconidia,ma croconidia curved, thick-walled three- celled, 2-4x 5-10 µm
<i>Penicillium citrinum</i> (<i>P. citrinum</i>)	Dark green Pale	Globulus, smooth,	10-18mm	colourless	Biverticill ate.		Conidia (2.0– 3.0 µm dia.) globe spherical and produced in well- defined chains.
<i>Penicillium purourogenum</i> (<i>P. purourogenum</i>)	5mm dark green with brownish reverse	Phialides	5-8mm			Phialides of conidiophor called "penicilli" conidiophore	Arial and smooth conidia 1.5-3µm round, unicellular, visualized unbranching chains at the tips
<i>Rhizopus stolonifera</i> (<i>R. stolonifera</i>)	white grey to pale whit		60-70mm			Sporangiophor, globose, ellipsoidal, and angular 20-30µm.	Sporingia(1.5µm to 3µm) Unicellular round to oven hyline to brown in colour.
<i>Mucor rouxii</i> (<i>M. rouxii</i>)	White initially and becomes grayish brown.		20-50mm			Sporangia are round, 50-300 µm in diameter.	Sporangia are round, 50-300 µm in diameter, gray to black in color, and are filled with sporangiospores.