

**Table 1** Growth inhibition of *Rhizoctonia solani* by different isolates of *Trichoderma*

Isolates of <i>Trichoderma</i>	Radial growth of <i>Trichoderma</i> after 24 hrs	Percentage inhibition of <i>R.solani</i> after 24 hrs	Radial growth of <i>Trichoderma</i> after 48 hrs	Percentage inhibition of <i>R.solani</i> after 48 hrs	Radial growth of <i>Trichoderma</i> after 72 hrs	Percentage inhibition of <i>R.solani</i> after 72 hrs
T. iso Diseased	4.2	10.90±0.70 <sup>c</sup>	5	36.86±0.53 <sup>c</sup>	5.5	60.55±0.27 <sup>c</sup>
T. iso Healthy	4.25	14.09±0.64 <sup>b</sup>	5.32	41.78±0.48 <sup>b</sup>	6.05	67.50±0.55 <sup>b</sup>
T. iso inbetween	4.825	19.86±0.52 <sup>a</sup>	5.92	51.63±0.40 <sup>a</sup>	6.55	72.78±1.11 <sup>a</sup>
T. iso Salyan	4.475	13.45±0.54 <sup>b</sup>	5.5	41.76±3.75 <sup>b</sup>	5.9	66.67±0.55 <sup>b</sup>
Control	0	0	0	0	0	0
P value		9.27e-13***		<2e-16***		<2e-16***
CV %	8.92		3		2.19	
LSD	1.27		1.51		1.77	
Grand Mean	11.66		34.41		53.5	

Means in a column having same letter(s) do not differ significantly at 5 per cent probability by DMRT.

**Table 2** Growth of *Trichoderma* on PDA containing different concentrations of carbendazim

Doses of carbendazim	Radial growth of <i>Trichoderma</i> after 48 h	Inhibition percentage
0.5ppm	388mm	13.78±2.24 <sup>c</sup>
1ppm	224mm	50.22±3.11 <sup>b</sup>
10ppm	0	100a
50ppm	0	100a
Control	450mm	0
P value		<2e-16***
LSD		4.63
CV %		6.65
Grand mean		52.8

Means in a column having same letter(s) do not differ significantly at 5 per cent probability by DMRT.

**Table 3** Growth of *Rhizoctonia solani* on PDA containing different concentrations of carbendazim

Doses of carbendazim	Radial growth of <i>Rhizoctonia</i> after 48 h	Inhibition percentage
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1ppm	206mm	54.22±0.89b
10ppm	0	100a
50ppm	0	100a
100ppm	0	100a
Control	450mm	0
P value		<2e-16***
LSD		1.17
CV %		1.25
Grand mean		70.84

Means in a column having the same letter(s) do not differ significantly at 5 per cent probability by DMRT.

**Table 4** Effect of various treatments on severity percentage of banded leaf and sheath blight (*Rhizoctonia solani*) of maize in the glasshouse at AFU, Rampur, Chitwan, Nepal, 2016

Treatments	Disease severity(%)			
	60 DAS	70 DAS	80 DAS	90 DAS
Carbendazim (C)	14.67±1.33	26.67±2.00 <sup>c</sup>	32.00±2.667 <sup>d</sup>	28.67±0.67 <sup>e</sup>
Trichoderma(T)	16.00±0.00	32.67±2.667 <sup>bc</sup>	46.00±4.67 <sup>bc</sup>	60.67±5.33 <sup>b</sup>
Pseudomonas(P)	13.33±1.33	32.67±3.33 <sup>bc</sup>	42.00±3.33 <sup>bc</sup>	48.67±4.67 <sup>cd</sup>
Untreated control	12.00±2.67	41.33±2.00 <sup>a</sup>	58.67±2.667 <sup>a</sup>	71.33±2.667 <sup>a</sup>
T+C+T*	18.67±1.33	28.67±2.00 <sup>bc</sup>	40.00±3.33 <sup>c</sup>	44.67±3.33 <sup>d</sup>
P+C+T*	16.00±2.67	35.33±4.667 <sup>ab</sup>	48.67±4.00 <sup>b</sup>	58.00±4.67 <sup>bc</sup>
P+C+P*	13.33±2.67	32.67±0.667 <sup>bc</sup>	47.33±0.667 <sup>bc</sup>	57.33±2.00 <sup>bc</sup>
P-Value	0.107	0.019*	0.0003***	0.000014***
LSD	ns	7.29	7.67	9.47
CV (%)	17.296	12.472	9.603	10.091
Grand mean	14.86	32.86	44.95	52.76

Means in a column having the same letter(s) do not differ significantly at 5 per cent probability by DMRT

DAS=Days after sowing, ns=not significant

\*Treatments applied alternately at 10 days interval

**Table 5** Effect of various treatments on disease control percentage of banded leaf and sheath blight (*Rhizoctonia solani*) of maize in a glasshouse at AFU, Rampur, Chitwan, Nepal, 2016

Treatments	Disease control (%)		
	70 DAS	80 DAS	90 DAS
Carbendazim (C)	35.44	45.58	59.73
Trichoderma(T)	21.18	21.92	15.18
Pseudomonas (P)	21.35	28.57	32.05
T+ C+T *	30.01	31.35	37.02
P+C+T*	14.28	16.84	18.78
P+ C+P *	20.54	19.13	19.25
Untreated control	-	-	-

\*Treatments applied alternately at 10 days interval

**Table 6** Effect of treatments on AUDPC of banded leaf and sheath blight (*Rhizoctonia solani*) of maize in the glasshouse at AFU, Rampur, Chitwan, Nepal 2016

Treatments	AUDPC1	AUDPC2	AUDPC3	Total AUDPC
Carbendazim (C)	206.67±13.33	293.33±16.67 <sup>c</sup>	303.33±16.67 <sup>d</sup>	803.33±33.33 <sup>c</sup>
Trichoderma(T)	243.33±13.33	393.33±36.67 <sup>b</sup>	533.33±50.00 <sup>b</sup>	1170.00±100.00 <sup>b</sup>
Pseudomonas(P)	230.00±23.33	373.33±33.33 <sup>b</sup>	453.33±40.00 <sup>bc</sup>	1056.67±96.67 <sup>b</sup>
Untreated control	266.67±20.00	500.00±23.33 <sup>a</sup>	650.00±26.67 <sup>a</sup>	1416.67±66.67 <sup>a</sup>
T+C+T*	236.67±3.33	343.33±23.33 <sup>bc</sup>	423.33±33.33 <sup>c</sup>	1003.33±56.67 <sup>b</sup>
P+C+T*	256.67±36.67	420.00±43.33 <sup>b</sup>	533.33±40.00 <sup>b</sup>	1210.00±116.67 <sup>b</sup>
P+C+P*	230.00±16.67	400.00±0.00 <sup>b</sup>	523.33±6.67 <sup>b</sup>	1153.33±23.33 <sup>b</sup>
P-Value	0.234	0.0013**	0.00000381***	0.000573***
LSD	47.99	70.79	82.85	190.78
CV (%)	11.308	10.228	9.532	9.608
Grand mean	238.57	389.05	488.57	974.97

Means in a column having the same letter(s) do not differ significantly at 5 per cent probability by DMRT.

DAS= Days after sowing

\*Treatments applied alternately at 10 days interval

**Table 7** Efficacy of different treatments with and without pathogen (*Rhizoctoniasolani*) in growth promotion of maize seedlings

Treatments	Shoot length	Root length	Dry shoot weight	Dry Root weight
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	Without pathogen	With pathogen	Without pathogen	With pathogen	Without pathogen	With pathogen	With pathogen	Without pathogen
Carbendazim	35.15±1.39 <sup>bc</sup>	35.98±1.75 <sup>b</sup>	21.72±1.15 <sup>b</sup>	21.01±1.42 <sup>b</sup>	0.12±0.01 <sup>b</sup>	0.13±0.02 <sup>b</sup>	0.14±0.01 <sup>c</sup>	0.15±0.02 <sup>bc</sup>
Control	33.13±0.52 <sup>c</sup>	30.71±0.68 <sup>c</sup>	20.88±3.26 <sup>b</sup>	20.81±2.19 <sup>b</sup>	0.10±0.01 <sup>b</sup>	0.10±0.02 <sup>b</sup>	0.13±0.01 <sup>c</sup>	0.16±0.02 <sup>c</sup>
Pseudomonas	36.58±0.76 <sup>b</sup>	37.34±1.36 <sup>ab</sup>	23.30±2.40 <sup>b</sup>	22.50±2.41 <sup>b</sup>	0.13±0.30 <sup>b</sup>	0.14±0.02 <sup>b</sup>	0.21±0.01 <sup>b</sup>	0.19±0.02 <sup>b</sup>
Trichoderma	41.64±0.98 <sup>a</sup>	39.76±0.86 <sup>a</sup>	33.31±1.71 <sup>a</sup>	30.05±0.73 <sup>a</sup>	0.23±0.02 <sup>a</sup>	0.24±0.02 <sup>a</sup>	0.36±0.02 <sup>a</sup>	0.26±0.02 <sup>a</sup>
P-Value	0.0000025***	0.000102***	0.000405**	0.0126*	0.00000102***	0.0000035***	0.0000000458***	0.000473***
LSD	2.59	3.07	5.27	5.85	0.037	0.05	0.04	0.05
CV (%)	5.27	6.38	15.87	18.49	18.94	22.73	14.58	21.41
Grand mean	36.62	35.94	24.78	23.61	0.14	0.15	0.21	0.18

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