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LIST OF ABBREVIATIONS

| | |
|--------|--|
| % | Percentage |
| SPSS | statistical package for social sciences |
| a.i. | active ingredient (mm-1) |
| ABI | Applied Biosystems |
| AFLP | amplified fragment length polymorphism |
| ANOVA | analysis of variance |
| BCA | biocontrol agent |
| bp | base pairs |
| C FU | Colony Forming Unit |
| CAMHB | Cation Adjusted Mueller Hinton Broth |
| CONC- | Concentration |
| DD- | Disc diffusion |
| DMSO | Dimethyl sulfoxide |
| DNA | deoxyribonucleic acid |
| dsRNA | double stranded RNA |
| DyEx | spin kit (QIAGEN, Germany) |
| EO- | Essential oil |
| EX- | Extract |
| g- | Gram |
| g/l | Gram per liter |
| GC-MS- | Gas chromatography combined with mass spectrometry |
| GTP | guanosine triphosphate |
| HPLC- | High performance liquid chromatography |
| hr- | Hour |
| IC50- | The half maximum efficacy |
| ISG | intraspecific groups (<i>R. solani</i>) |
| ISR | induced systemic resistance |
| ITS | internal transcribed spacer region |
| IU- | International units |
| MAMP | microbe-associated molecular pattern |
| MBC | Minimum Bactericide Concentration |
| MEGA | Molecular Evolutionary Genetics Analysis (|
| mg- | Milligram |
| mg/ml | |
| MHA | Muller-Hinton Agar |
| MIC | Minimum Inhibitory Concentration |
| MIC- | Minimum inhibitory concentration |
| Min | Minute |
| mL- | Millilitre |
| mm- | Millimetre |
| mRNA | messenger RNA |

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| NaCl- | Sodium chloride |
| NCCLS- | National Committee for Clinical Laboratory Standards |
| NCTC- | National Culture Type Collection |
| NHLS- | National Health Laboratory Services |
| NJ | neighbor joining |
| NMR- | Nuclear magnetic resonance spectroscopy |
| np-BNR | non-pathogenic binucleate <i>Rhizoctonia</i> spp. |
| NSAI | non-self anastomosing isolates |
| NV- | Non-volatile constituents |
| °C | Degree Celsius |
| OD | Optical Density |
| | |
| PCD | programmed cell death |
| PCR | polymerase chain reaction |
| PDA | potato dextrose agar |
| Ppm | parts per million |
| PR p | pathogenesis related proteins |
| PRR | pathogen recognition receptor |
| qRT-PCR | quantitative reverse transcriptase polymerase chain reaction |
| R f - | Distance travelled by spot from base line with respect to solvent front. |
| RAPD | random amplified polymorphic DNA |
| RDD R | <i>Rhizoctonia</i> disease decline |
| rDNA | ribosomal DNA |
| RFLP | restriction fragment length polymorphism |
| RNA | ribonucleic acid |
| RNase | Ribonuclease (type of nuclease that catalyzes the degradation of RNA into smaller |
| rpm | Round per minute |
| RRI- | Relative retention index |
| rRNA | ribosomal RNA |
| SA | salicylic acid |
| SAI | self anastomosing isolates |
| SD | standard deviation |
| SNP | single nucleotide polymorphism |
| <i>sp.</i> | refer to a single species |
| <i>spp.</i> | refer to all the individual species within a genus |
| SPSS | statistical package for social sciences |
| U | Unit |
| U/L | Unit per liter |
| U/mg | Unit per milil gram |
| UV- | Ultra violet |
| v\v | Volume per volume |
| WHO | World Health Organization. |
| μL- | Microlitre |