

Supplementary Information

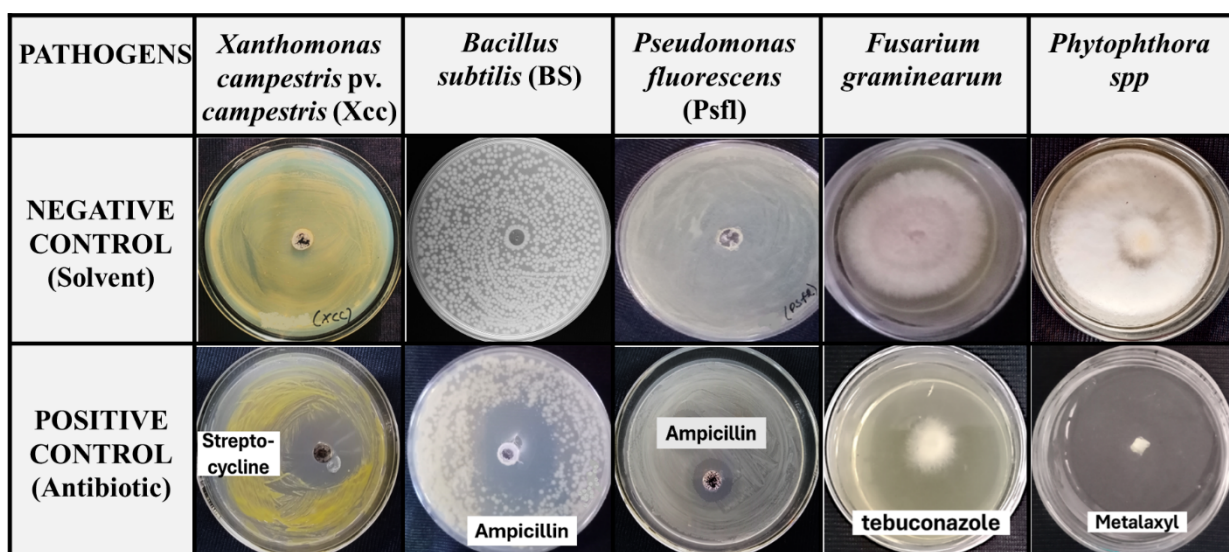


Figure: Positive and negative control of all the pathogens chosen

The above-mentioned figure demonstrates an antimicrobial assay describing the effectiveness of control treatments (standard antimicrobial agents) against chosen pathogens (three bacteria and two fungi). The treatment against bacteria (Xcc, BS, Psfl) was done by agar well diffusion method while the control treatments against fungi (*F. Graminearum*, *Phytophthora spp.*) was performed using poison food agar assay. Each pathogen was exposed to two treatments: negative control and positive control. The negative control treatment was done using DMSO (solvent) while positive control treatment used different antibiotics/fungicides against chosen pathogens. The standard antibiotic known to inhibit growth of target bacteria, i.e, streptocycline (for Xcc), and ampicillin (for BS and Psfl) were used for positive control. On the other hand, the standard antifungal agent known to inhibit growth of target fungi, i.e, tebuconazole (for *F. Graminearum*) and metalaxyl (for *Phytophthora spp*) were used for positive control. As it is clearly observed by the figure, all the pathogens in negative control plates showed uninhibited growth which indicates that the solvent DMSO alone has no antimicrobial effect. In contrast, the positive control plates exhibited clear zones of inhibition, exhibiting the effectiveness of the applied antimicrobial agents. The bacterial growth of Xcc was effectively inhibited by Streptocycline, while ampicillin suppressed both *Bacillus subtilis* and *P. fluorescens*. Similarly, tebuconazole inhibited *Fusarium graminearum*, while metalaxyl suppressed *Phytophthora spp.* completely. These assays highlight the pathogen-specific activity of the tested antibiotics and fungicides under controlled conditions.