



DETECTION OF MULTI-DRUG RESISTANT *Salmonella* IN ORGANIC SOIL AMENDMENTS DISTRIBUTED IN the PHILIPPINES

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ABSTRACT – Multidrug resistance of foodborne pathogens like *Salmonella* is a global concern to human health. Organic fertilizer and compost can harbor pathogens since these amendments are subjected to minimal physical and chemical treatments. This study aimed to detect multidrug-resistant *Salmonella* in 27 samples, representing nine brands, of organic fertilizer and compost using international standard protocols, combining phenotypic and PCR-based methods. Nine isolates from four uncertified brands were confirmed as *Salmonella* by PCR amplification of the *invA* gene, and subjected to Kirby-Bauer antibiotic susceptibility test. All isolates were resistant to ampicillin and amoxicillin, but only one was also resistant to two other classes of antibiotics, namely, nalidixic acid and ofloxacin. This shows that multidrug-resistant *Salmonella* can occur in organic fertilizer, which can potentially contaminate organically grown fresh produce.

Keywords: compost, organic fertilizer, multidrug resistance, Salmonella



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