

SOIL MICROBIOME AND FOOD SECURITY

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Agricultural intensification affects soil biodiversity and such changes may impact on current and future food security. The World Health Organization has identified antibiotic resistance as a serious threat to human health and biosecurity across the world. The soil microorganisms play an important role in the development and spread of antibiotic resistance in humans. The aim of this study was to determine soil microbial diversity and the antibiotic resistance of soil bacteria in different agroecosystems. 244 dominating bacteria were isolated, among them 53 antibiotic-resistant bacteria. All isolates were multi-drug resistant, of which greater than 62.3% were resistant to 9 antibiotics. A study of soil samples from agroecosystems of *Capsicum annuum*, *Vitis vinifera*, *Rubus idaeus*, *Petroselinum crispum* showed that the microbial community characterized by a high content of antibiotic-resistant microorganisms. From the soil were isolated antibiotic resistant anaerobic and aerobic microorganisms: *Clostridium perfringens*, *Clostridium oedematiens*, *Clostridium difficile*, *Enterobacter cloacae*, *Enterococcus faecalis*, *Hafnia alvei*, *Bacillus megaterium*, *Bacillus mycoides*, and

Pseudomonas aeruginosa. Modern agroecosystems are the source of spread of pathogenic and opportunistic microorganisms with multiple antibiotic resistances and endangering human health.