Gardening Warning: Antibiotics And Organic Horticulture

LONDON, UNITED KINGDOM, November 8, 2021 /EINPresswire.com/ -- As documented Lord Northbourne (Walter James; 1896-1982) who gifted to the world the term 'organic farming'. His 1940 book Look to the Land is a manifesto of organic horticulture and a starting point for research in to the benefits of organic horticulture for society.

Gardening is arguably one of the common ways of interacting with nature and indeed is enjoyed as a popular pastime in many countries. In the UK, there are estimated to be 27 million people, approximately 40% of the total population, who actively participate in gardening (Bisgrove and Hadley, 2002). Gardening requires, at most, a relatively small piece of land, and in many parts of the world, such gardens are today common. In the UK, it is estimated that 22.7 million households (87%) have access to a domestic garden, which comprise 432,924 hectares of land in total (Davies et al., 2009).

Organic horticulture and the biodiverse relationships created on organic farms, gardens, community gardens, and allotments benefit plants, insects, soils, and the atmosphere (The Organic Street, 2019). Organic gardening involves feeding the soil which in turn supports healthy plant growth, as opposed to directly feeding plants themselves. All possible steps should be taken to develop or improve and maintain soil fertility, except in special instances such as sites intended for the establishment of wild flowers.

Evidence suggests, that drug residue is clearly contributing to widespread antibiotic resistance, It is somewhat obvious that the abundance and the mobility of antibiotic-resistant bacteria and resistance determinants in the soil can be greatly influenced by the application of manure

(containing antibiotic residues, antibiotic-resistant bacteria, and their resistance genes on mobile elements) during non-organic fertilization of the soil. Furthermore, a study in Iran, demonstrated the presence of antibiotic-resistant verotoxigenic E. coli on vegetable samples collected randomly from retail shops (Bonyadian et al, 2017). However, the sample indicated that these vegetables absorb antibiotics contained in the manure. Therefore, the direct consumption by humans (uncooked or raw) of vegetables might lead to the transfer of antibiotic-resistant bacteria and their resistance genes, which may cause bacterial infections.

Organic horticulture has benefits. In fact, the presence of residual antibiotics in foods constitutes an important health risk because the increased microbial resistance detected in latest years. Thus, organic practices avoid the abuse of antibiotics that could have profound consequences for treatment of disease in humans, including the serious dangers of antibiotic-resistant bacteria (The Organic Street, 2021).

Jake Heath-Grey
The Organic Street
hello@theorganicstreet.com
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