

TERAPIA ANTIMICROBICA



SCIENZA E RICERCA

Resistenza agli antibiotici: pesticidi sotto accusa

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Non è trascorso molto tempo da quando l'European Centre for Disease Prevention and Control ([Ecdc](#)) e l'Organizzazione mondiale della sanità ([Oms](#)) sottolineavano l'impatto che la resistenza agli antibiotici può avere sulla salute pubblica. In termini di aumento nei costi di assistenza sanitaria di ricoveri ospedalieri

Sublethal Exposure to Commercial Formulations of the Herbicides Dicamba, 2,4-Dichlorophenoxyacetic Acid, and Glyphosate Cause Changes in Antibiotic Susceptibility in *Escherichia coli* and *Salmonella enterica* serovar Typhimurium

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UTILIZZO IN AGRICOLTURA

... routinely tested for toxicity but not for sublethal effects on microbes. Many biocides exhibit an antibiotic resistance phenotype. This can be due to either an increase in the expression of membrane porins, or both. Exposures of *Escherichia coli* and *Salmonella enterica* serovar Typhimurium to commercial formulations of three herbicides—dicamba (Kamba), 2,4-dichlorophenoxyacetic acid (2,4-D), and glyphosate (Roundup)—were found to induce a changed response to antibiotics. Killing curves in the presence and absence of sublethal herbicide concentrations showed that the directions and the magnitudes of responses varied by herbicide, an-