

ABSTRACT

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Veterinary drugs are used in large amounts in modern husbandry for treatment and prevention of diseases in animals. Anthelmintics administered to animals enter into environment primarily through its excretion in faeces or urine. Following excretion, drugs may persist in the environment and impact non-target organisms.

Plants are able to uptake xenobiotics, including drugs, and detoxify them via biotransformation. However, only drug biotransformation into non-toxic and stable metabolites and their consequent accumulation in plants represent drug detoxification. For that reasons, knowledge of biotransformation pathways of drug in plants is very important. Soybean plants, eventually seeds, are further used in agriculture as feed for cattle and absorbed anthelmintics including their metabolites can enter the food chain.

The results showed that fenbendazole entered plant and enzymatic systems of plant were able to biotransform fenbendazole via several reactions. We found differences in the metabolites between the roots, leaves, seeds and pods of soybean.