A new emphasized case of enhanced degradation: the atrazine

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In maize crops, the atrazine, the mostly used active material, presents, at present, more or less severe restrictions, in different countries. Because of its utilization in large quantities and on thousands of hectares, the concentration often exceeds the EEC admitted limits for surface and ground waters. In agricultural practice the molecule is known to be enough persistent, its halving time being of 40 to 70 days, depending on the soil, on the doses and on the weather conditions, its way of degradation being co-metabolic. Recently, in West-European countries, as well as in the USA and Israel the atrazine accelerated the degradation phenomenon that was ascertained on land for years cultivated with maize and presenting high clay content (around 20 %), a neutral and slightly alkaline pH, and large and specially repeated high atrazine doses. The responsible for this phenomenon has been proved to be a specific microflora capable of using atrazine as an exclusive source of N and C (degradation by metabolism).