

SUPPLEMENTARY DATA

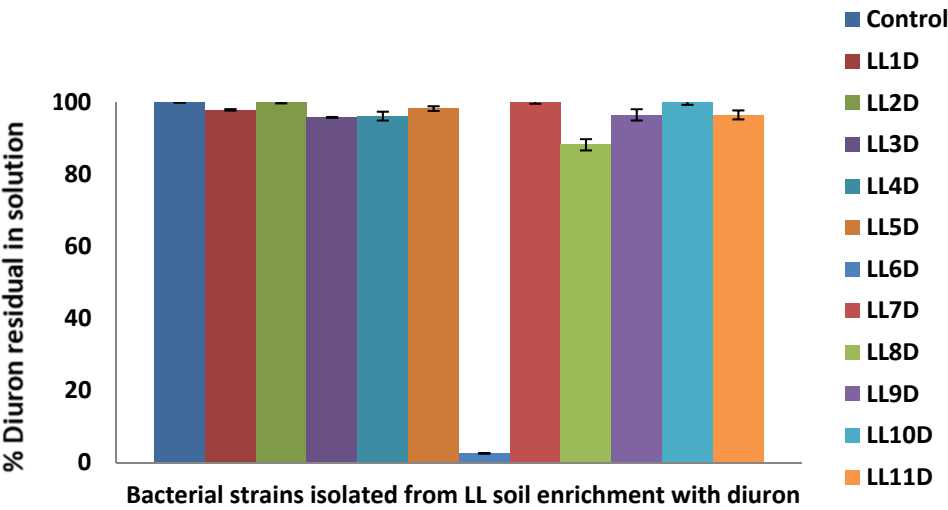


Figure S1. Quantification of the diuron degraded in aqueous solution after 20 days by the bacterial strains isolated from an agricultural soil.

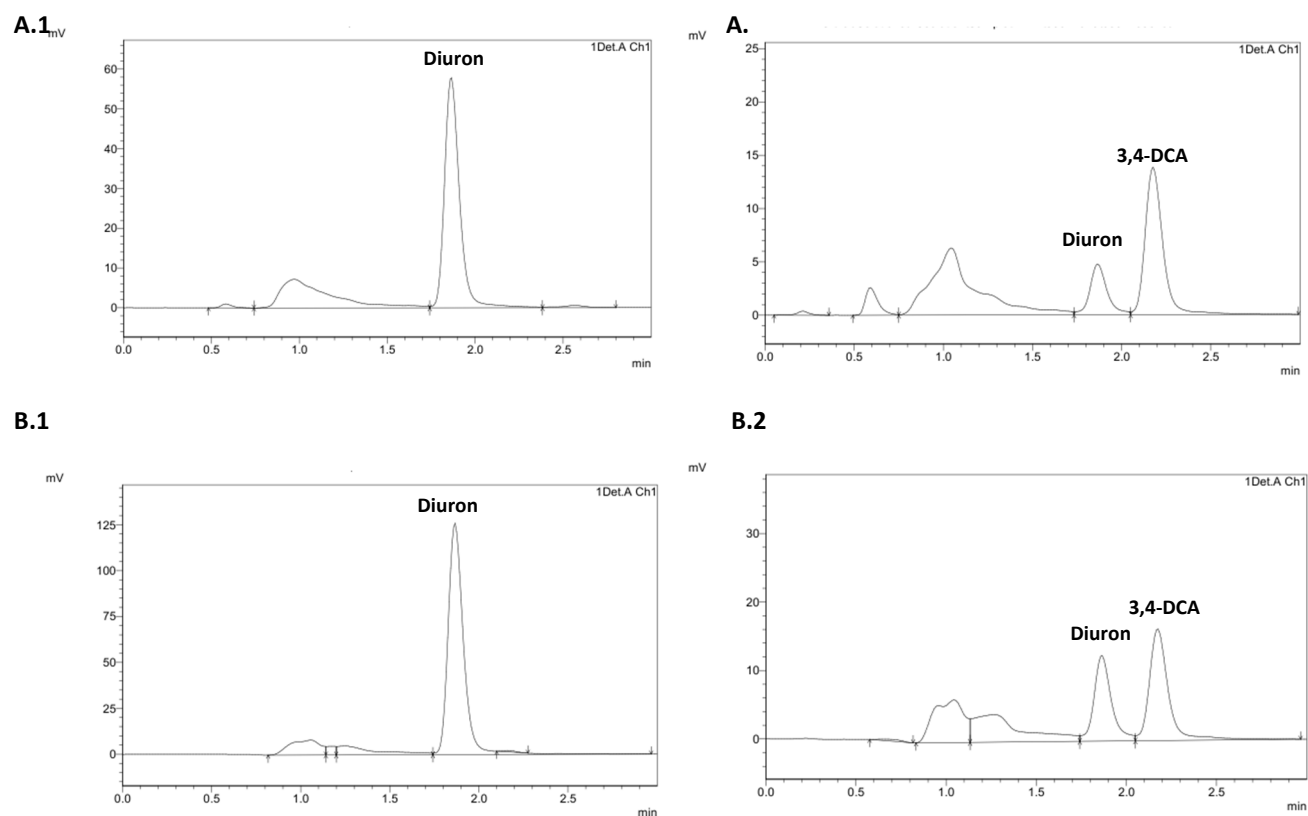
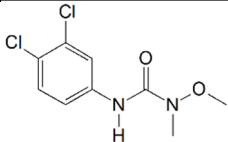
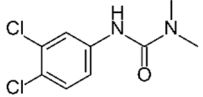
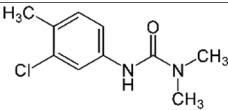
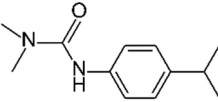
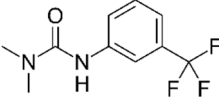


Figure S2 HPLC chromatograms obtained from the extracts of PLD soil (A.1) and R soil (B.1) after one day of incubation; and from PLD soil (A.2) and R soil (B.2) after eight days of incubation.

Table S1. Formulas, molecular structures and some properties of phenylurea herbicides studied in this work (PPDB. IUPAC Pesticides Properties DataBase).

| Name | Molecular Structure | Water solubility (mg L ⁻¹) | Log K _{ow} | K _{oc} | Soil degradation DT ₅₀ ** | Environmental fate |
|--|---|--|---------------------|-----------------|--------------------------------------|---|
| Linuron 3-(3,4-dichlorophenyl)-1-methoxy-1-methylurea |  | 63.8 | 3.0 | 843 | 48 / 57.6 | Moderately persistent/ Slightly mobile |
| Diuron 3-(3,4-dichlorophenyl)-1,1-dimethylurea |  | 35.6 | 2.87 | 680 | 146.6 / 229 | Persistent |
| Chlorotoluron 3-(3-chloro-p-tolyl)-1,1-dimethylurea |  | 74 | 2.5 | 196 | - | - |
| Isoproturon 3-(4-isopropylphenyl)-1,1-dimethylurea |  | 70.2 | 2.5 | 122* | 12 / 23 | Non persistent/ Moderately mobile |
| Fluometuron 1,1-dimethyl-3-(α,α,α-trifluoro-m-tolyl)urea |  | 111 | 2.28 | 67.4* | 63.6 / 89.8 | Moderately persistent/Mobile |

*K_{foc}; **DT₅₀: estimated average half-life in soil (lab at 20 °C / field).