

Table S4. Correlation coefficients between physico-chemical soil characteristics and acetamiprid/thiacloprid sorption parameters obtained by Pseudo First-Order (PFOM), Elowich (EM) and Weber-Morris (WMM) represented by correlation matrix (N = 1200; pooled data; 4 soils x 3 replication x 10 soil characteristics x 10 sorption parameters). Statistically significant correlations ($p < 0.05$) are presented with bold type numbers and with corresponding p values (written in parentheses in italics).

Variable	pH	HA ^(a)	CEC ^(b)	clay	TOC ^(c)	C _{oxHa} ^(d)	C _{oxFa} ^(e)	ratio 465/665	ratio C/H	ratio C/N
Acetamiprid										
q_{sor} ^(f)	-0.472	0.809	0.816	-0.511	0.950 (<i>p=0.049</i>)	0.419	0.691	0.994 (<i>p=0.006</i>)	0.856	0.780
k₁ (PFOM) ^(g)	-0.270	0.643	0.644	-0.280	0.907	0.503	0.556	0.954 (<i>p=0.046</i>)	0.840	0.601
(1/Y)Ln(XY) (EM) ^(h)	-0.397	0.803	0.789	-0.467	0.973 (<i>p=0.027</i>)	0.351	0.727	0.998 (<i>p=0.002</i>)	0.903	0.768
(1/Y) (EM) ⁽ⁱ⁾	-0.244	0.375	0.444	-0.104	0.666	0.799	0.191	0.780	0.556	0.344
C (WMM) ^(j)	-0.364	0.790	0.770	-0.439	0.975 (<i>p=0.025</i>)	0.341	0.725	0.996 (<i>p=0.004</i>)	0.913	0.752
k (WMM) ^(k)	-0.528	0.866	0.868	-0.589	0.959 (<i>p=0.041</i>)	0.354	0.748	0.994 (<i>p=0.006</i>)	0.863	0.840
Thiacloprid										
q_{sor} ^(f)	-0.275	0.752	0.716	-0.367	0.977 (<i>p=0.023</i>)	0.302	0.723	0.984 (<i>p=0.016</i>)	0.937	0.708
k₁ (PFOM) ^(g)	-0.394	0.919	0.845	-0.600	0.978 (<i>p=0.022</i>)	-0.048	0.944	0.931	0.956 (<i>p=0.044</i>)	0.886
(1/Y)Ln(XY) (EM) ^(h)	-0.348	0.835	0.791	-0.475	0.997 (<i>p=0.003</i>)	0.204	0.812	0.991 (<i>p=0.009</i>)	0.955 (<i>p=0.045</i>)	0.796
(1/Y) (EM) ⁽ⁱ⁾	0.060	-0.745	-0.613	0.330	-0.919	0.237	-0.906	-0.820	-0.982 (<i>p=0.018</i>)	-0.694
C (WMM) ^(j)	-0.360	0.839	0.797	-0.483	0.996 (<i>p=0.004</i>)	0.211	0.811	0.992 (<i>p=0.008</i>)	0.951 (<i>p=0.049</i>)	0.800
k (WMM) ^(k)	0.452	-0.948	-0.876	0.667	-0.954 (<i>p=0.046</i>)	0.097	-0.965 (<i>p=0.035</i>)	0.904	-0.926	-0.922

^(a) – hydrolitic acidity; ^(b) – cation exchange capacity; ^(c) – total organic carbon; ^(d) – carbon of humic acids; ^(e) – carbon of fulvic acids; ^(f) – sorbed amount in 96. h; ^(g), ^(h), ⁽ⁱ⁾, ^(j), ^(k). – parameters obtained by modelling with Pseudo-First Order (PFOM), Elowich (EM) and Weber-Morris (WMM) models.