

1 **Supplementary material for**

2 **Environmental behaviors of (*E*)-Pyriminobac-methyl in agricultural**  
3 **soils**

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21 **Table S1**

22 Basic physicochemical properties of the selected soils.

Soil sample	Soil type <sup>a</sup>	Latitude/ Longitude	Location	Texture	pH	OM <sup>b</sup> (%)	CEC <sup>c</sup> (cmol kg <sup>-1</sup> )	Clay (%)
S1	Phaeozem	41°36' N/ 127°53' E	Heilongjiang	Sandy loam	6.38	4.64	30.36	64.42
S2	Anthrosol	29°14' N/ 121°48' E	Zhejiang	Loam	7.85	1.66	12.90	42.10
S3	Ferralsol	28°46' N/ 115°36' E	Jiangxi	Sandy loam	5.21	0.35	11.99	15.67
S4	Alisol	35°06' N/ 118°21' E	Shandong	Sandy loam	6.78	1.20	12.19	23.47
S5	Plinthosol	19°32' N/ 110°10' E	Hainan	Silt loam	5.79	0.88	11.00	43.83

23 <sup>a</sup> Soil classification according to the World Reference Base for Soil Resources.24 <sup>b</sup> OM: Organic matter content.25 <sup>c</sup> CEC: Cation exchange capacity

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36 **Table S2**

37 Results of the linear correlation analysis conducted on the Freundlich adsorption–desorption constants for EPM and the soil physicochemical properties.

Parameter	Adsorption					Desorption				
	pH	CEC (cmol kg <sup>-1</sup> )	Clay (%)	OM (%)	OC (%)	pH	CEC (cmol kg <sup>-1</sup> )	Clay (%)	OM (%)	OC (%)
Slope	0.0007	0.6078	1.1095	0.1197	0.0694	0.0558	4.7356	9.1508	0.9421	0.5465
Intercept	6.4075	10.7430	28.8710	0.7724	0.4481	6.2782	5.1749	17.5830	-0.3455	-0.2004
<i>P</i>	0.9880	0.0006	0.1170	0.0110	0.0110	0.8830	0.0120	0.1080	0.0240	0.0240
<i>R</i> <sup>2</sup>	0.0008	0.9925	0.6144	0.9160	0.9160	0.0085	0.9107	0.6317	0.8582	0.8582

38 Notes: CEC: soil cation exchange capacity; OC: soil organic carbon content; OM: soil organic matter content.

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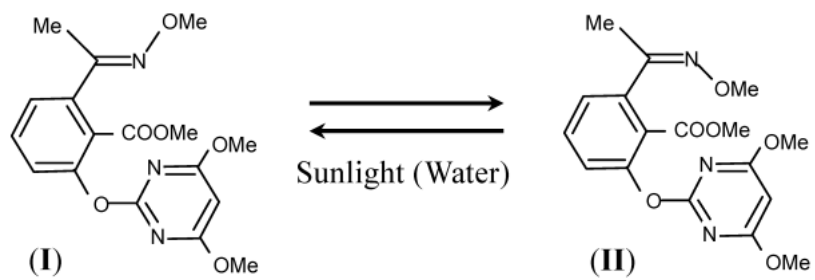
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46 **Table S3**47 Linear correlation analysis between the half-life ( $t_{1/2}$ ) of EPM and the soil physicochemical properties under different conditions.

Parameter	Aerobic				Anaerobic				Sterilized			
	pH	CEC (cmol kg <sup>-1</sup> )	Clay (%)	OM (%)	pH	CEC (cmol kg <sup>-1</sup> )	Clay (%)	OM (%)	pH	CEC (cmol kg <sup>-1</sup> )	Clay (%)	OM (%)
Slope	-0.0593	-0.9124	-2.0192	-0.2032	-0.0775	-1.0042	-2.1455	-0.2276	-0.4809	-0.7979	-4.6080	-0.3591
Intercept	9.3711	61.3570	138.9700	11.9190	10.4450	68.0520	149.7700	13.6160	36.6770	65.9150	327.9800	24.3530
<i>P</i>	0.4160	0.0400	0.0650	0.0050	0.3450	0.0640	0.1130	0.0140	0.0170	0.7590	0.4200	0.4830
<i>R</i> <sup>2</sup>	0.2276	0.8022	0.7299	0.9478	0.2939	0.7343	0.6226	0.8983	0.8850	0.0363	0.2248	0.1750



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49 **Fig. S1.** Chemical structure of EPM(I) and ZPM(II).

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