Supplementary Material

Adsorbing versus non-adsorbing tracers for assessing pesticide transport in arable soils

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Figures: 5

Tables: 1
Figure S1. Agroscope lysimeters facility used for the present experiments. Upper panel: corn growing in summer 2014. The roof covering the installation, the meteorological station and the capacitance soil moisture probes are shown. Lower panel: lysimeter weighting and leachate collection systems.
Figure S2. Accumulated values of the water balance components for gravel soil (L4)

Figure S3. Average monthly evapotranspiration and air temperature
FIGURE S4

A

- Water content gravel soil (L5)
- Drainage gravel soil (L5)
- ATR gravel soil (L4)
- Water content moraine soil (L9)
- Drainage moraine soil (L9)
- ATR moraine soil (L8)

Y-axis:
- Daily irrigation (mm)
- ΔSWS (mm)
- ATR (µg/L)

X-axis:
- Time since application (d)

Legend:
- Water content gravel soil (L5)
- Drainage gravel soil (L5)
- ATR gravel soil (L4)
- Water content moraine soil (L9)
- Drainage moraine soil (L9)
- ATR moraine soil (L8)
Figure S4. Daily irrigation, cumulative drainage, changes in soil water storage and ATR concentration during the first 375 days after application/injection. 
A) Surface application in gravel (L4 and L5) and moraine soil (L8 and L9). B) Depth injection in gravel (L3 and L6) and moraine soil (L7 and L10).
Figure S5. DEA-to-ATR molar ratio (DAR) in the drainage water after surface application (upper panel) and depth injection (lower panel). Note that the y-scale is different for the two panels.
**TABLE S1**

Table S1. Average monthly sums of the water-balance components from the two soil types during 2014, 2015 and 2016

<table>
<thead>
<tr>
<th>Month</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>gravel</td>
<td>moraine</td>
<td>gravel</td>
</tr>
<tr>
<td></td>
<td>I D ΔSWS ET</td>
<td>I D ΔSWS ET</td>
<td>I D ΔSWS ET</td>
</tr>
<tr>
<td>Jan</td>
<td>60 70 -3 0</td>
<td>61 70 -4 0</td>
<td>23 10 1 12</td>
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<tr>
<td>Feb</td>
<td>73 61 12 1</td>
<td>74 62 14 2</td>
<td>58 19 20 20</td>
</tr>
<tr>
<td>Mar</td>
<td>7 39 -61 29</td>
<td>7 38 -66 36</td>
<td>47 30 -13 30</td>
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<td>Apr</td>
<td>86 13 9 64</td>
<td>86 10 7 69</td>
<td>49 8 -1 42</td>
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<td>109 7 50 52</td>
<td>105 7 54 44</td>
<td>169 109 -11 71</td>
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<td>Jun</td>
<td>188 135 -41 95</td>
<td>196 143 -38 91</td>
<td>28 12 -103 119</td>
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<tr>
<td>Jul</td>
<td>87 12 13 62</td>
<td>88 10 17 61</td>
<td>74 4 -56 126</td>
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<td>Aug</td>
<td>91 20 -60 131</td>
<td>91 16 -52 127</td>
<td>109 1 11 97</td>
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<td>Sep</td>
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<td>125 26 54 45</td>
<td>113 0 50 63</td>
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<td>Oct</td>
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<td>32 11 -6 27</td>
<td>140 18 90 32</td>
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<tr>
<td>Nov</td>
<td>29 4 13 12</td>
<td>29 6 9 14</td>
<td>31 9 1 21</td>
</tr>
<tr>
<td>Dec</td>
<td>60 39 -2 23</td>
<td>56 43 -6 19</td>
<td>36 20 7 9</td>
</tr>
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<td>943 425 -18 544</td>
<td>951 441 -18 537</td>
<td>877 240 -5 642</td>
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