Addendum to SPIN Manual 1.1

SPIN 2.2 for use with GEM1.1.1

December 2014

1. Introduction

The manual of SPIN 1.1. [1] has been written for use with FOCUS_SWASH 4.2. Hence, no specific guidance is given for use with other host-applications. This implies that, although the main functionalities of SPIN are the same, some of the substance property tabs have not been explained in the manual. The new tabs will be explained in this addendum. SPIN 2.2. further includes a number of new functionalities as compared to SPIN 1.1. These are explained in [2].

2. Sorption tab- the 'Substrate' sub-tab

The sorption sub-tab for substrate allows to fill in the equilibrium sorption coefficient *Kom* (L kg^{-1}). This value is used to calculate the sorption to substrate (potting compost) soil in pots in the greenhouse (soilless-cultivation). The '*Koc to Kom converter*' to the right of the input field can be used to calculate the *Kom* in case only *Koc* values are available.

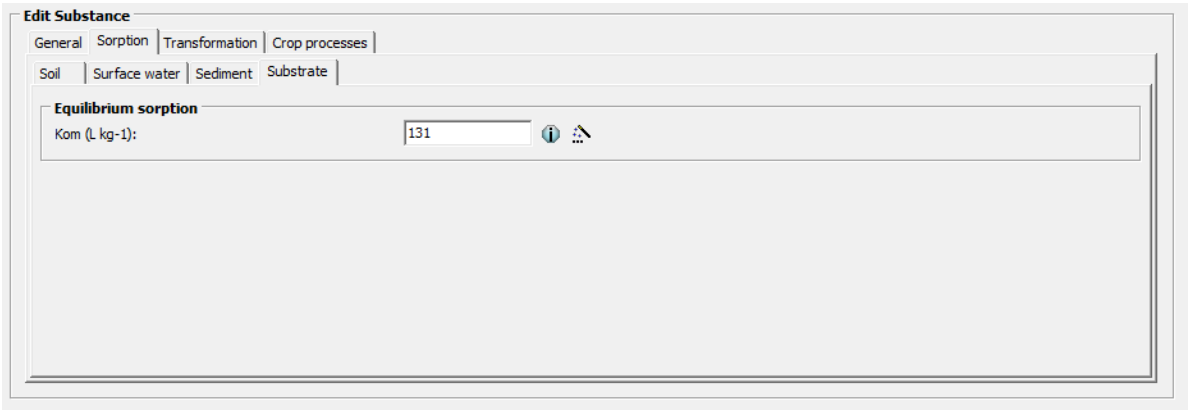

Figure 1 *Sorption tab – Substrate sub-tab*

3. Transformation tab – the 'other' sub-tab

The transformation tab- 'Other' sub-tab allows to enter greenhouse specific half-lives. Again these properties are only valid for soilless-cultivation. In the **Other** transformation tab the following substance properties can be entered:

- Half-life in recirculation water (d) and the temperature at which it was measured
- Molar activation energy (kJ mol^{-1}) for the degradation in recirculation water
- Half-life in the disinfection tank (d) and the temperature at which it was measured
- Half-life on the greenhouse floor (d)
- Half-life in substrate (d)
- Half-life in greenhouse air (d) and the temperature at which it was measured
- Molar activation energy (kJ mol^{-1}) for the degradation in greenhouse air

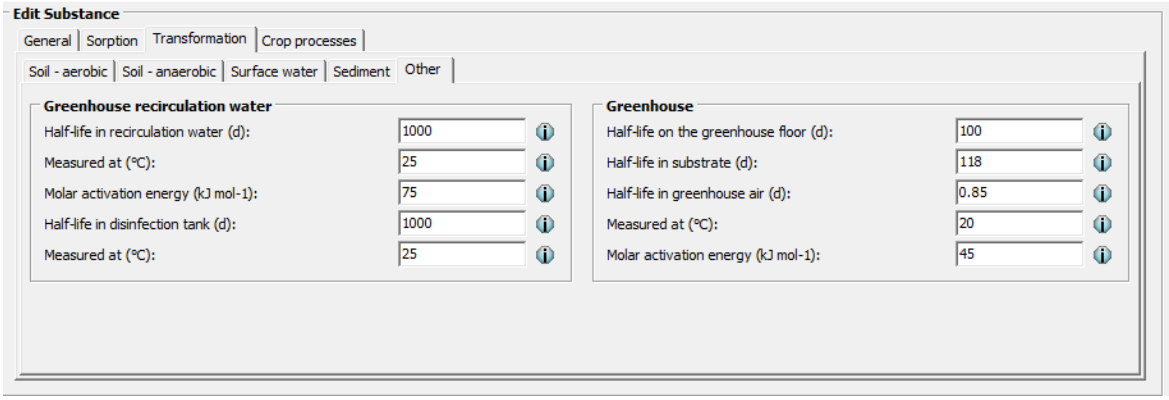

Figure 2 *Transformation tab – 'Other' sub-tab*

References

[1] Van Kraalingen, D., E.L. Wipfler, F. van den Berg, W.H.J. Beltman, M.M.S. ter Horst, G. Fait, J.A. te Roller (2013). SPIN Manual 1.1. User's Guide version 1, for use with FOCUS_SWASH 4.2. Werkdocument 354 Wettelijke Onderzoekstaken Natuur & Milieu, Wageningen, The Netherlands, November 2013. ()

[2] Addendum to SPIN Manual 1.1. SPIN 2.2. for use with FOCUS_SWASH 5.3, November 2014.