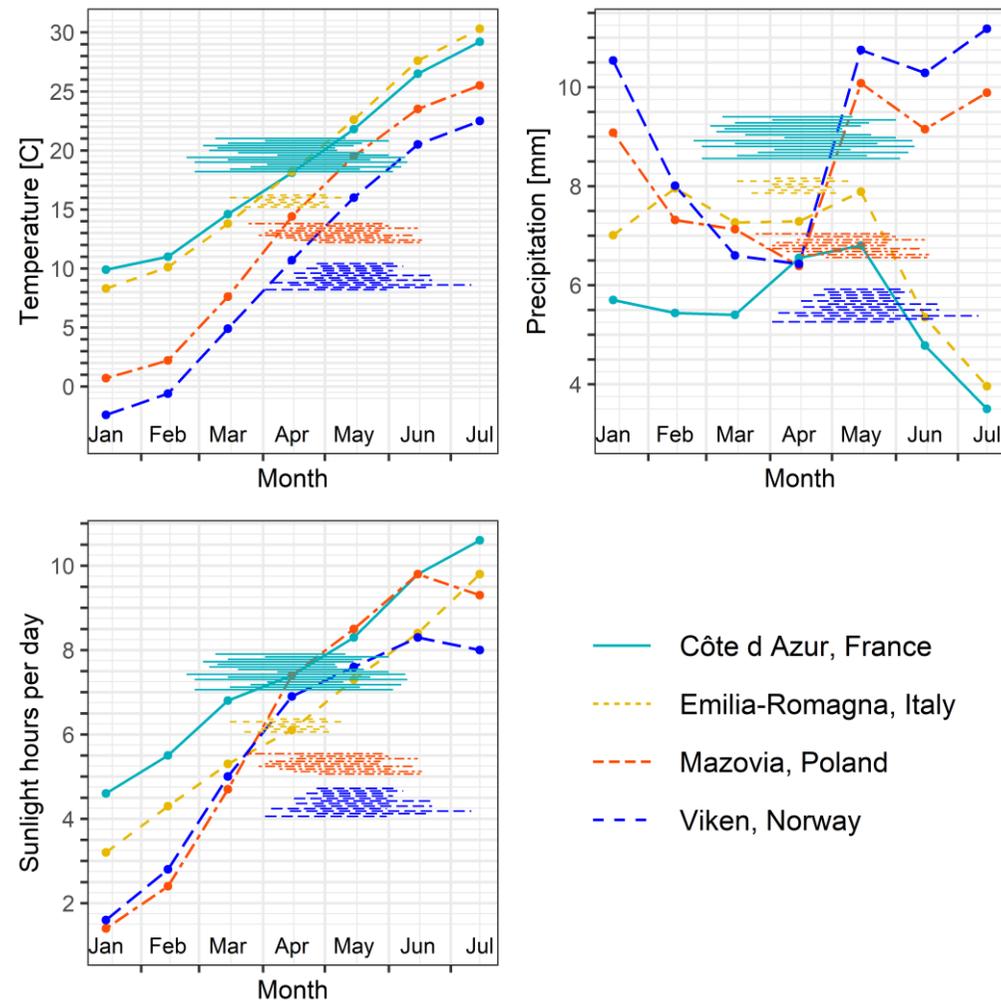


Additional file 1 related to: Masny, S., Jankowski, P., Stensvand, A. (2026). Numerical and qualitative analysis of ascospore discharge of *Venturia inaequalis* in central Poland in relation to weather conditionvcxs. Act Sci. Pol. Hortorum Cultus, 25(1), 1–12. <https://doi.org/asphc.2026.5611>

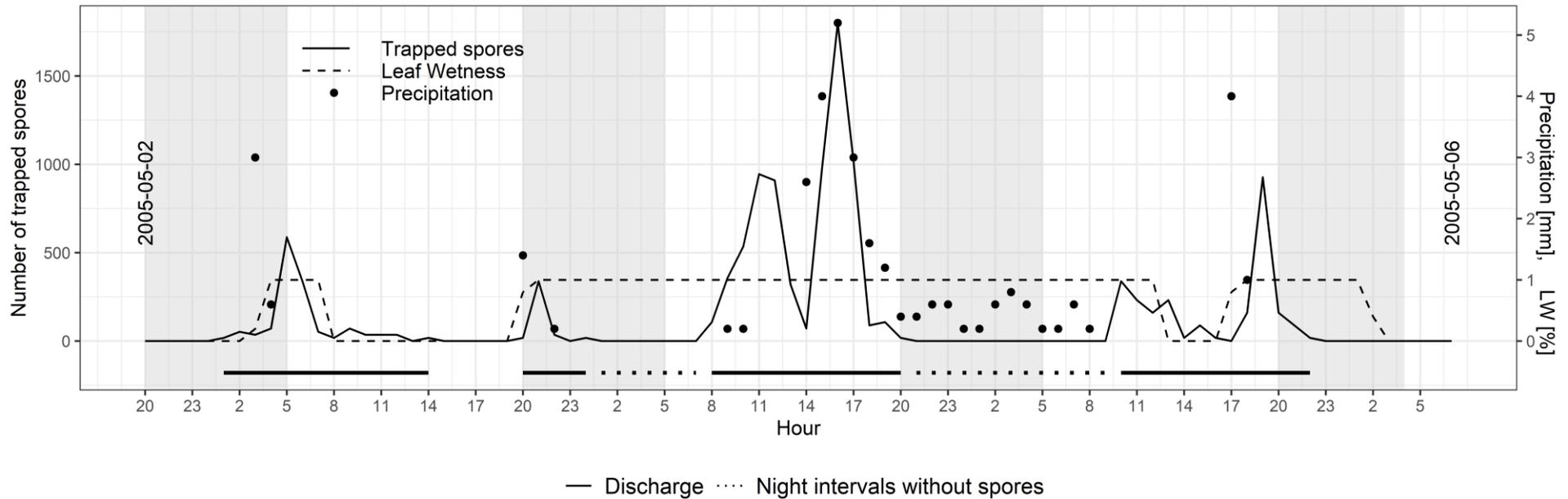


**Figure S1.** Comparison of the length and dates of the seasons in central Poland and similar data from three European areas where spore trapping of *Venturia inaequalis* have taken place: Passo Segni, in the Emilia-Romagna region, Italy (Rossi *et al.*, 1999); Avignon, in the Côte d'Azur region, France (Roubal and Nicot, 2016); and Ås, in the Viken region, Norway (Stensvand *et al.*, 2005). Seasonal data for the three locations were reported for 6, 15, and 12 years, respectively. They were related with the mean temperature, precipitation and hours of sunlight (<https://www.worlddata.info>, climate data retrieved on 24.10.2023)

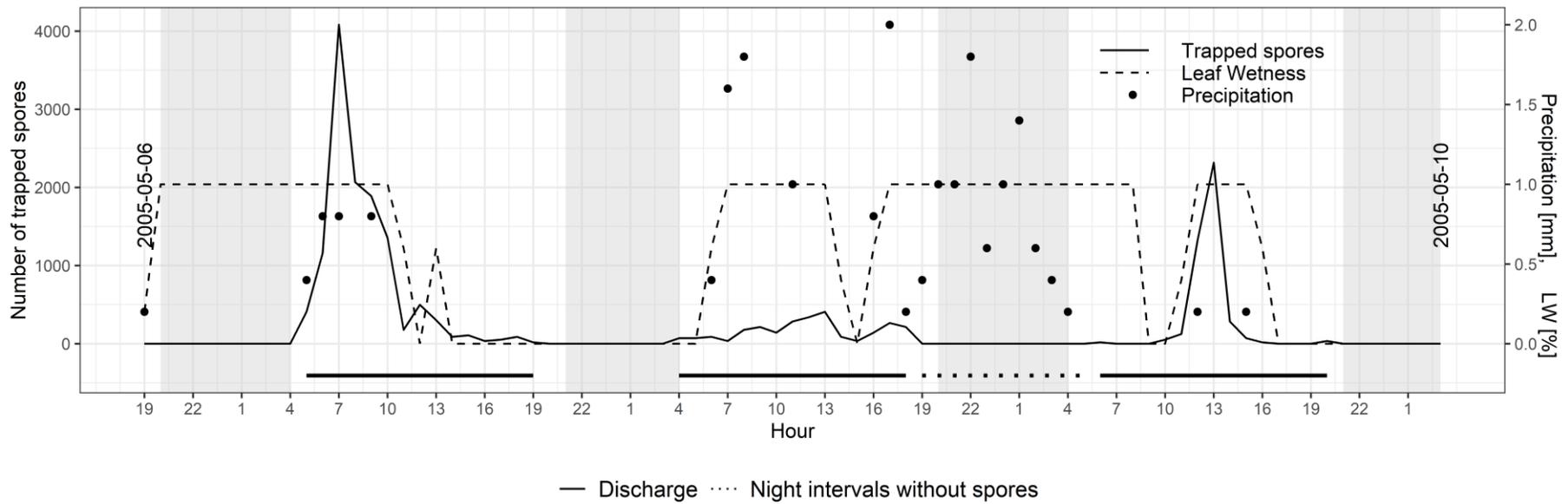
Rossi V., Ponti I., Marinelli M., Giosuè S., Bugiani R. 1999. Field evaluation of some models estimating the seasonal pattern of airborne ascospores of *Venturia inaequalis*. *Journal of Phytopathology* 147: 567–575. DOI: <https://doi.org/10.1046/j.1439-0434.1999.00436.x>

Roubal C., Nicot P.C. 2016. Apple scab: numerical optimization of a new thermal time scale and application for modelling ascospore release in southern France. *Plant Pathology* 65: 79–91. DOI: <https://doi.org/10.1111/ppa.12398>

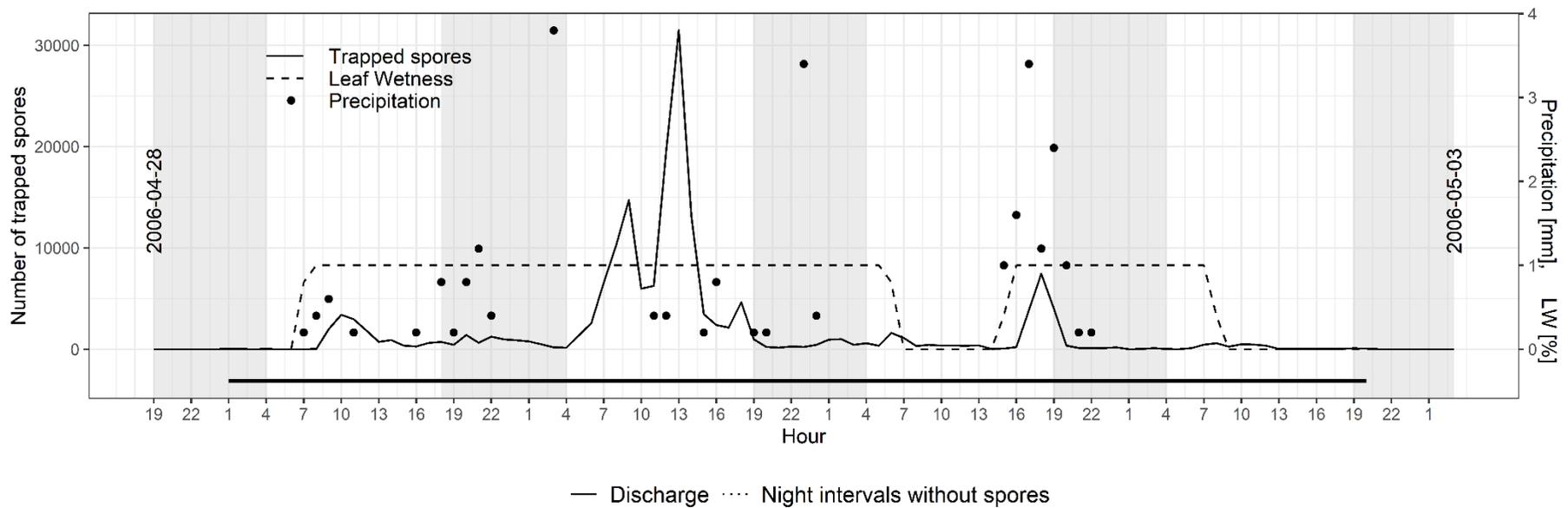
Stensvand A., Eikemo H., Gadoury D.M., Seem R.C. 2005. Use of a rainfall frequency threshold to adjust a degree-day model of ascospore maturity of *Venturia inaequalis*. *Plant Disease* 89: 198–202. DOI: <https://doi.org/10.1094/PD-89-0198>



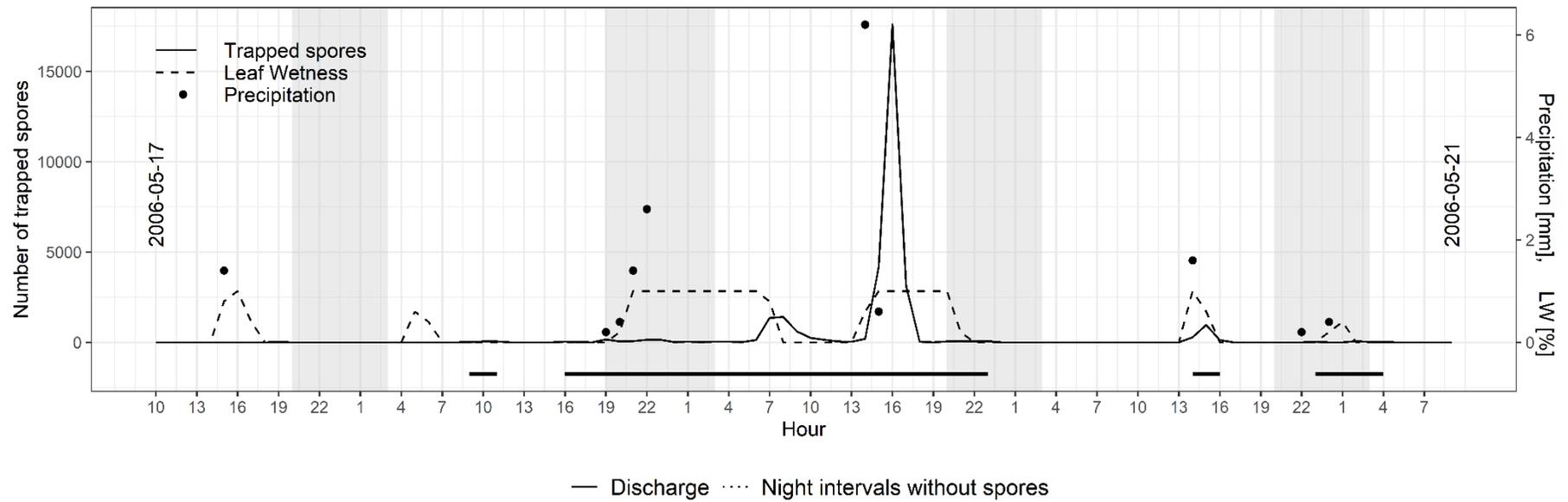
**Figure S2.** Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2005.05.02 to 2005.05.06 at the Experimental Orchard of The National Institute of Horticultural Research in Skierniewice, Poland (N 51°55'; E 20°6') located in the Grójec area. Numbers of ascospores per hour trapped by the Burkard 7-day recording volumetric spore trap (Burkard Manufacturing Co Ltd., Rickmansworth, Hertfordshire, UK). Ascospore counts converted into counts per cubic meter volume of sampled air presented with solid line. Leaf wetness presented with dashed line and precipitation with dots. Night hours indicated with grey background



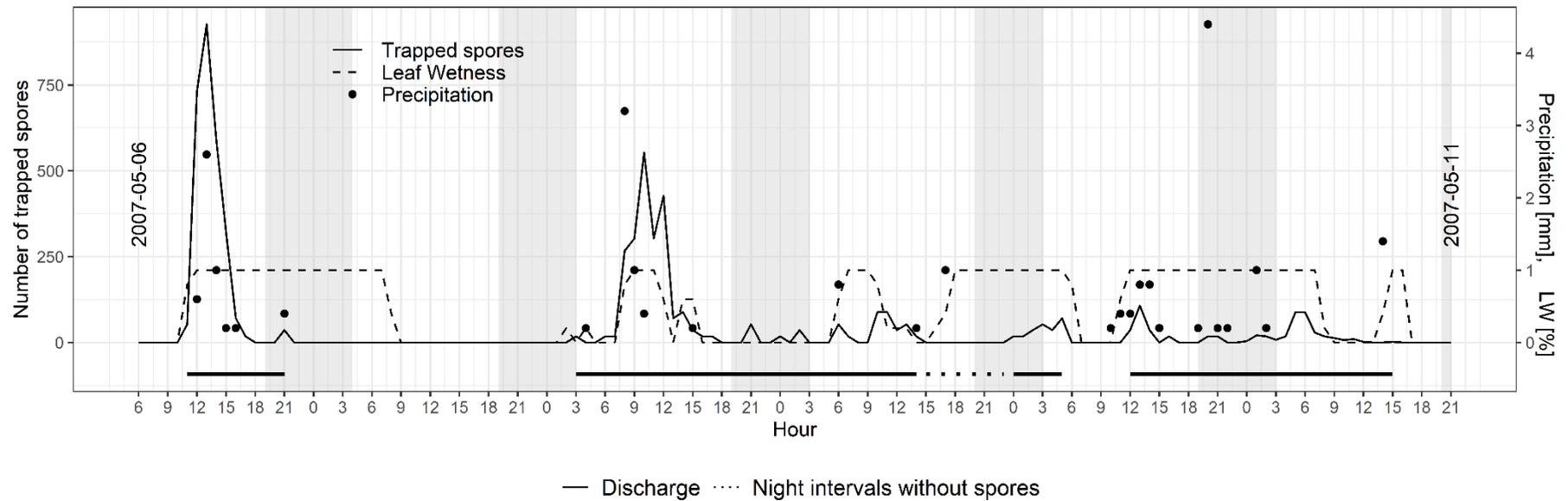
**Figure S3.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2005.05.06 to 2005.05.10



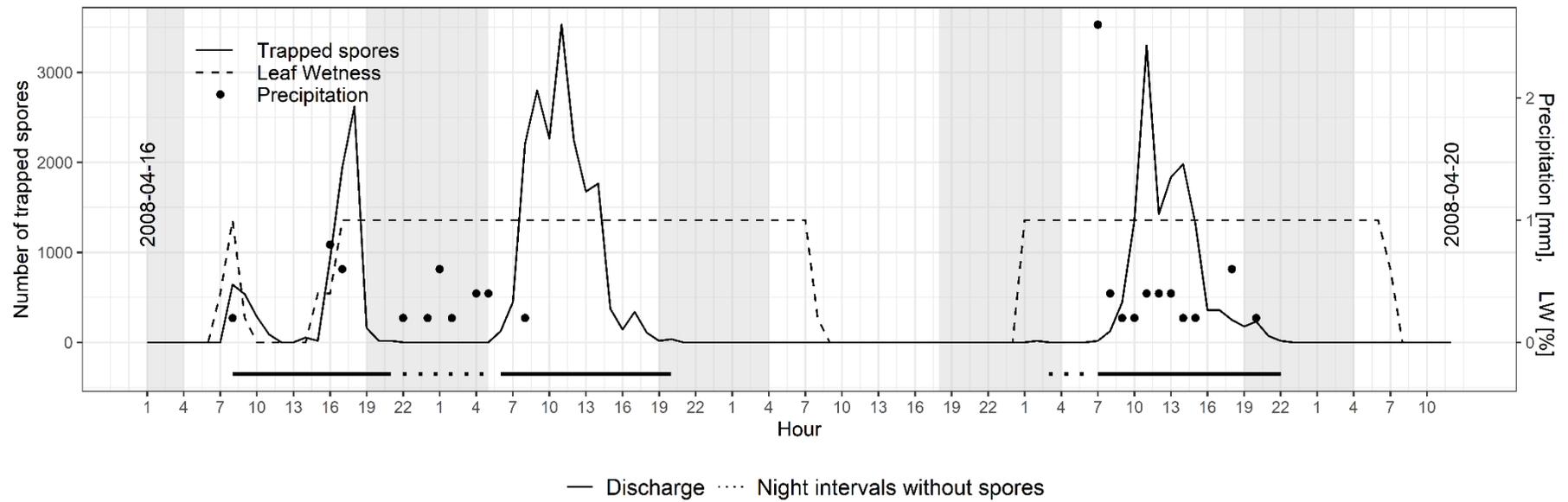
**Figure S4.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2006.04.28 to 2006.05.03



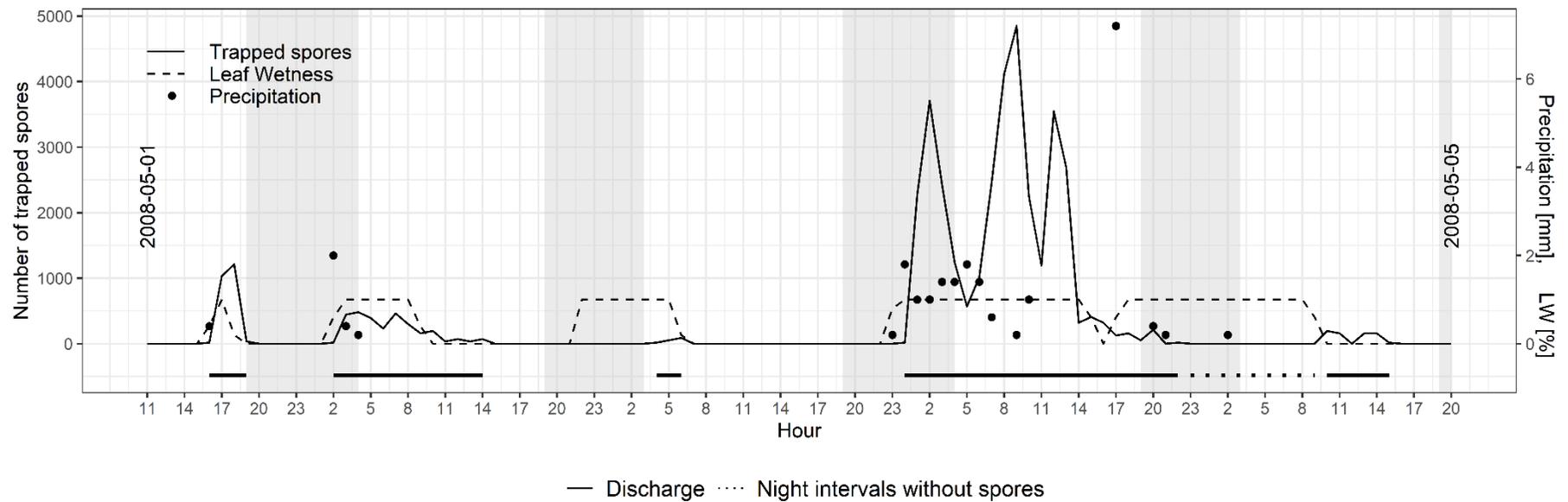
**Figure S5.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2006.05.17 to 2006.05.21



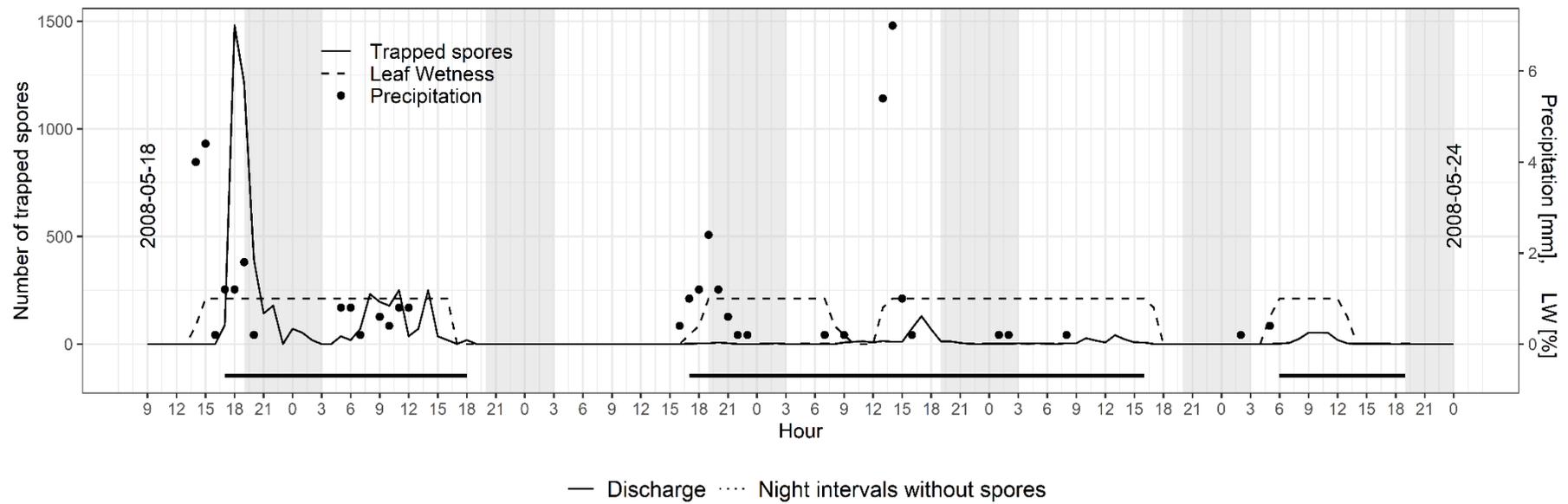
**Figure S6.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2007.05.06 to 2007.05.11



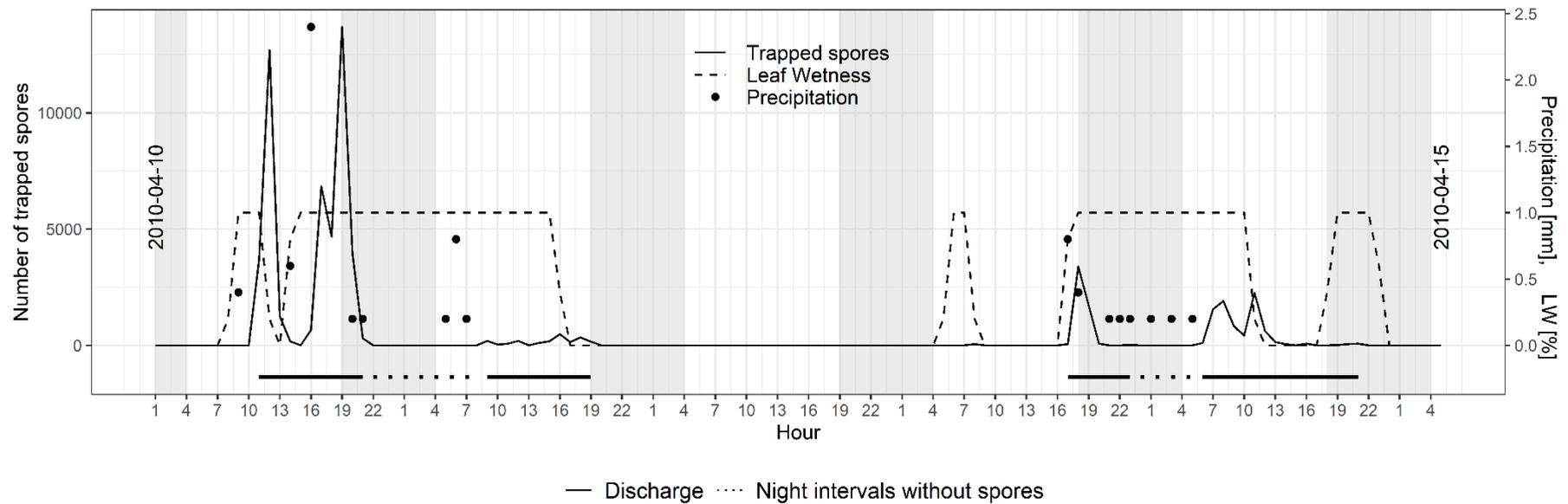
**Figure S7.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2008.04.16 to 2008.04.20



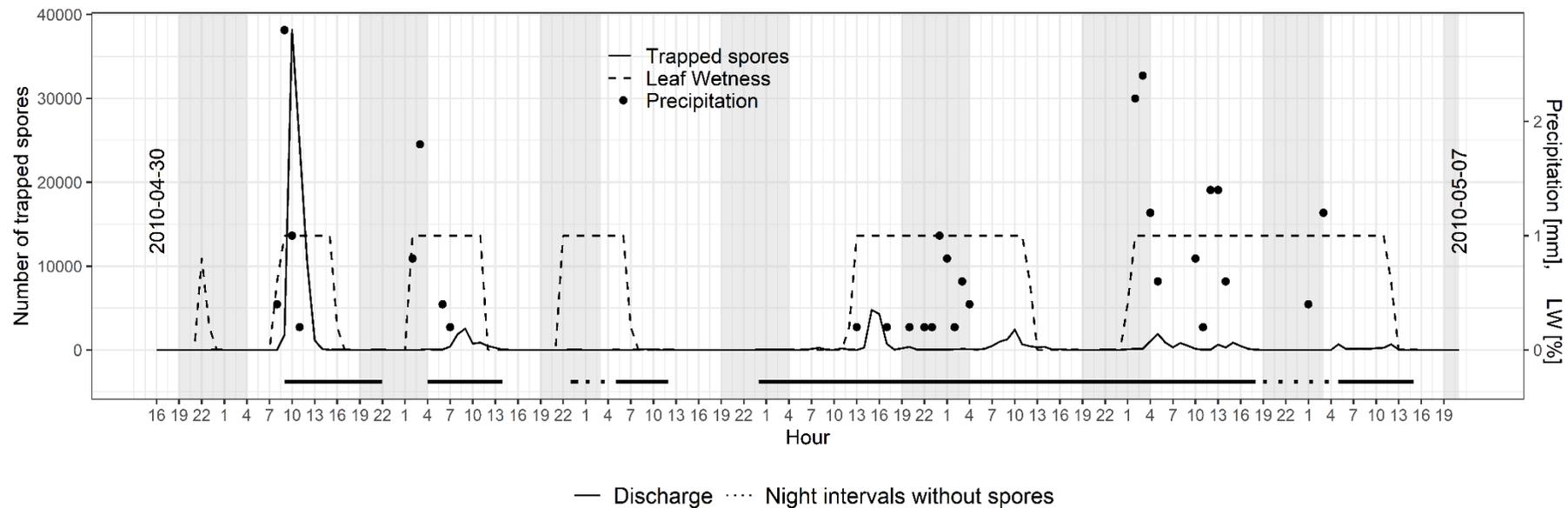
**Figure S8.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2008.05.01 to 2008.05.05



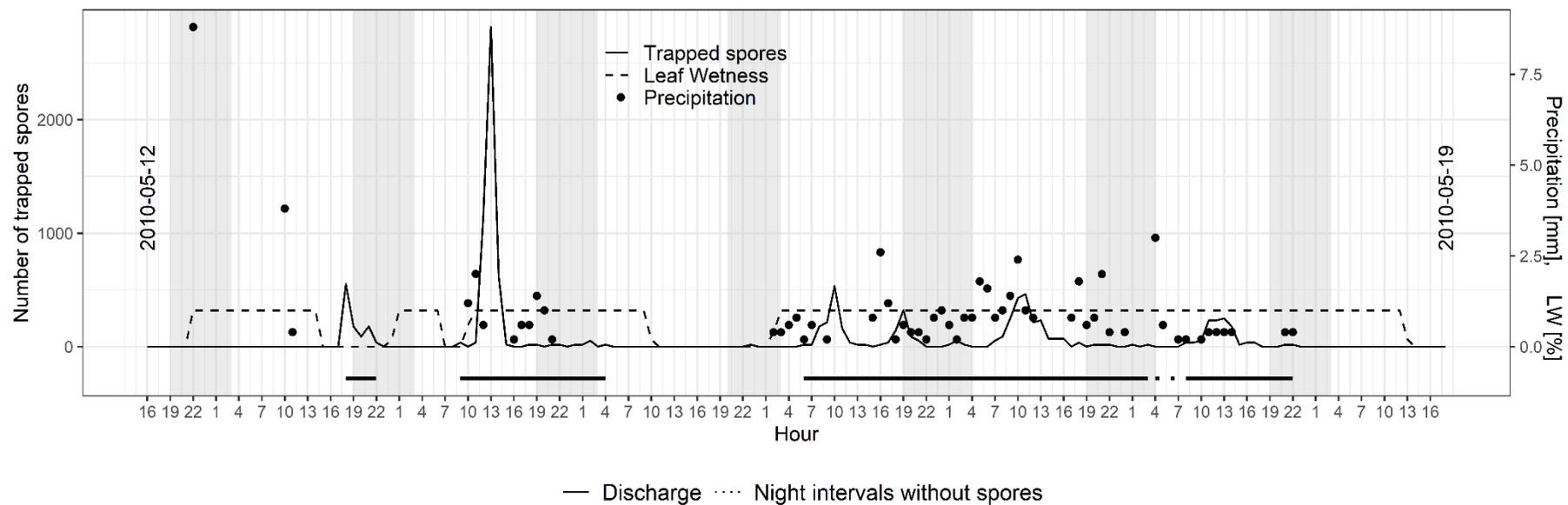
**Figure S9.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2008.05.18 to 2008.05.24



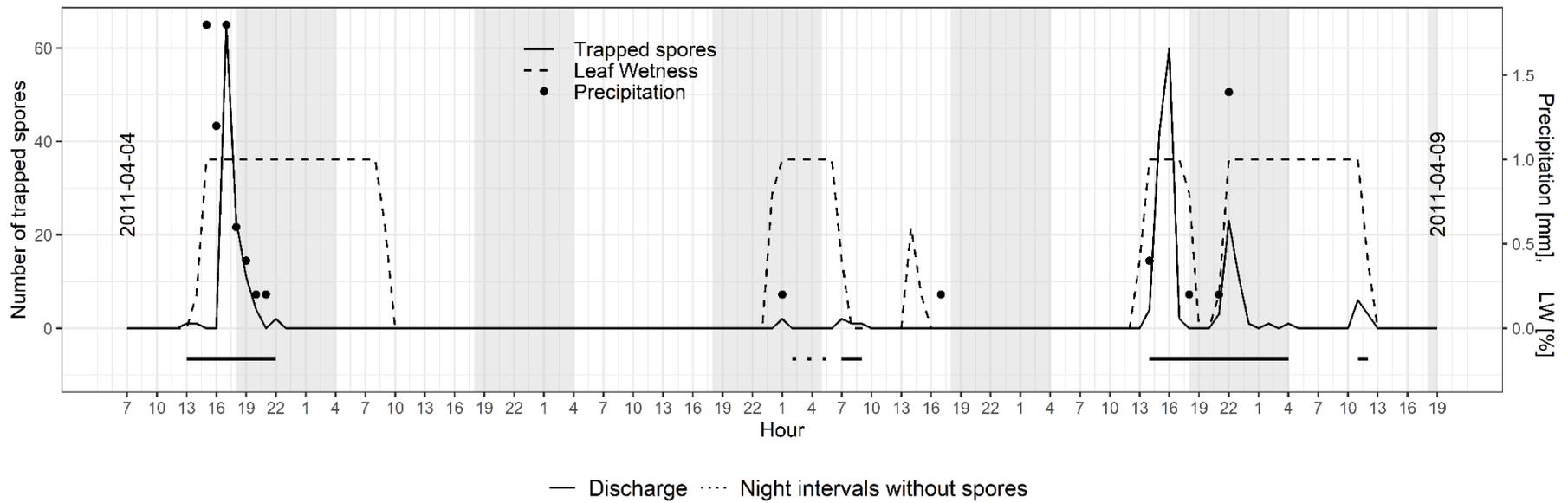
**Figure S10.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2010.04.10 to 2010.04.15



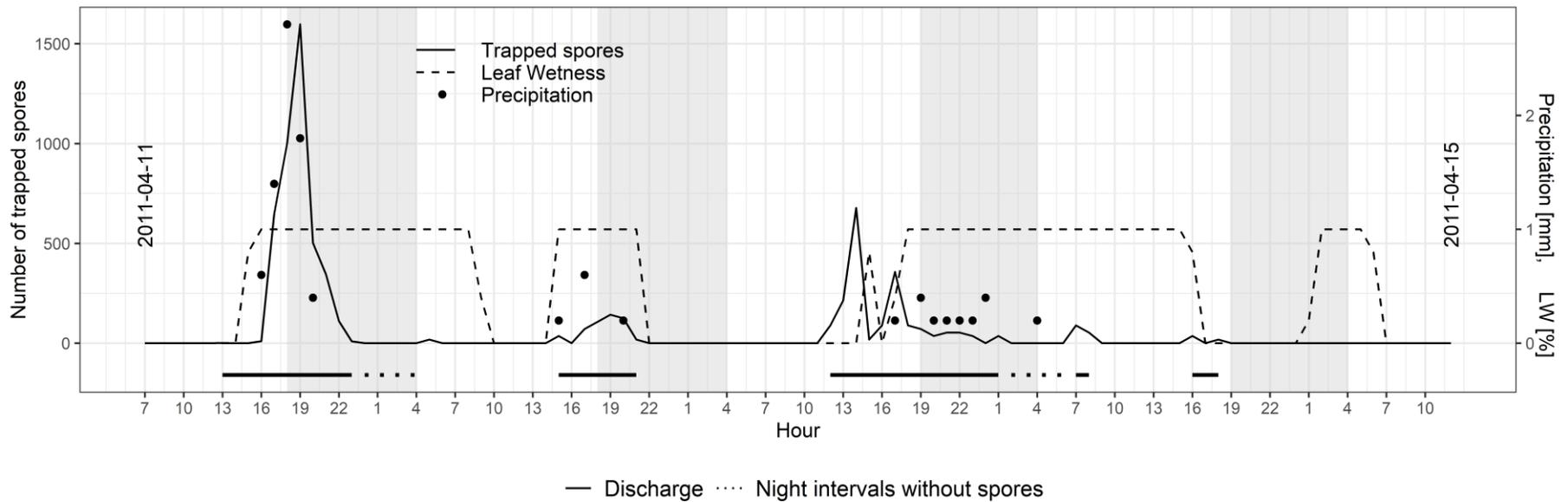
**Figure S11.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2010.04.30 to 2010.05.07



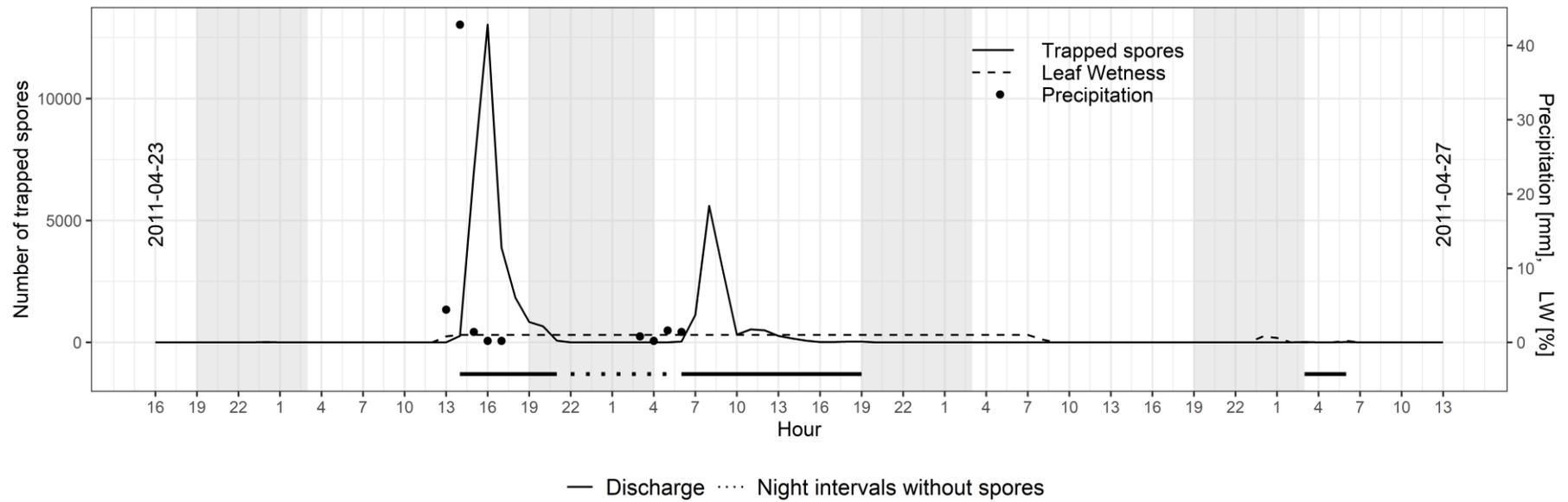
**Figure S12.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2010.05.12 to 2010.05.19



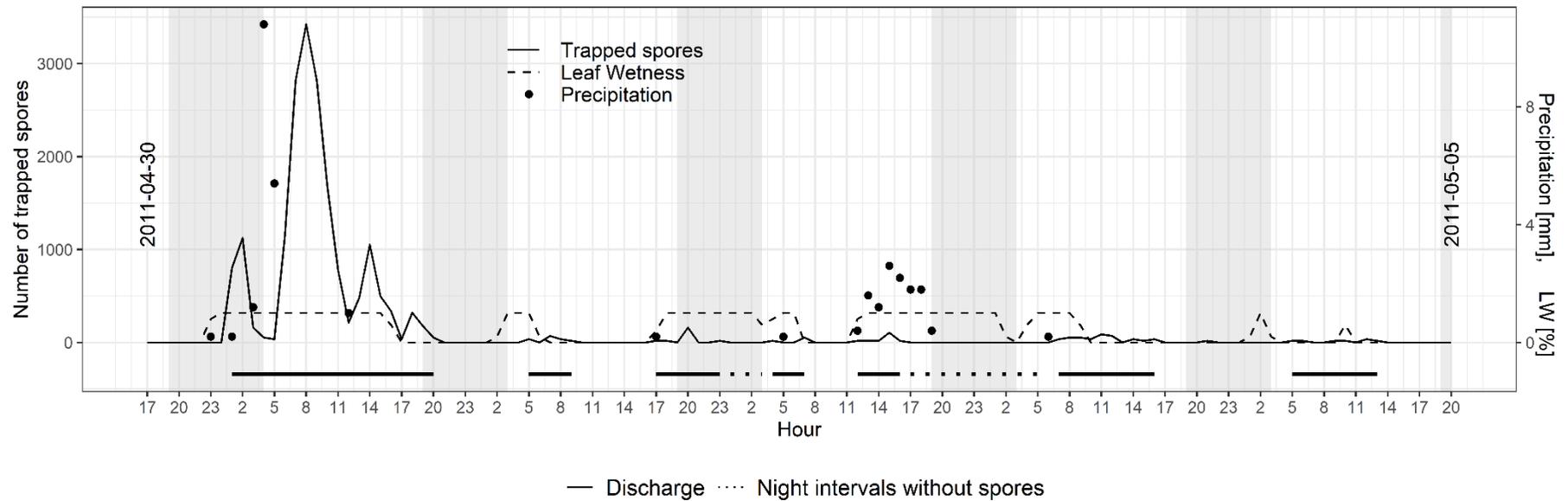
**Figure S13.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2011.04.04 to 2011.04.09



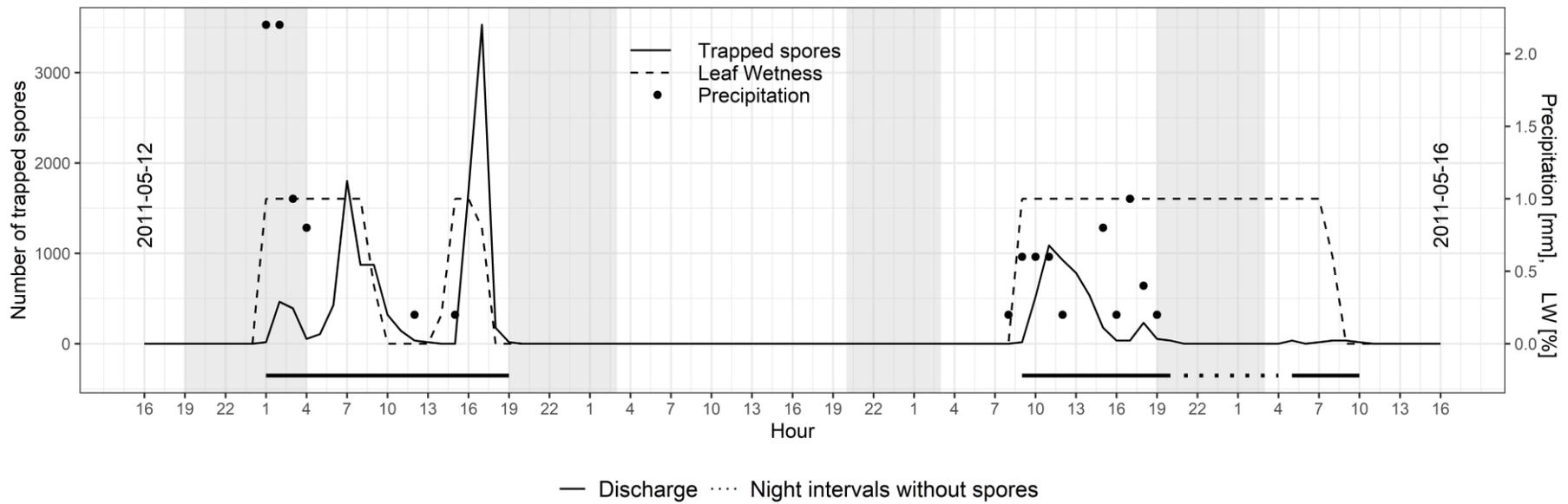
**Figure S14.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2011.04.11 to 2011.04.15



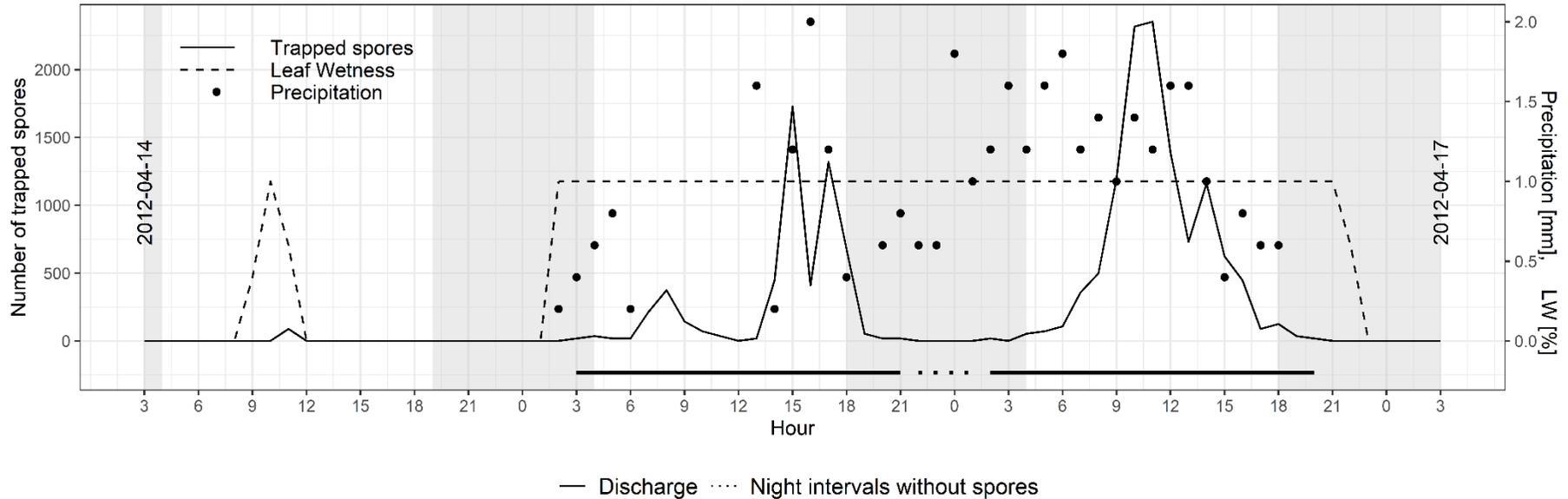
**Figure S15.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2011.04.23 to 2011.04.27



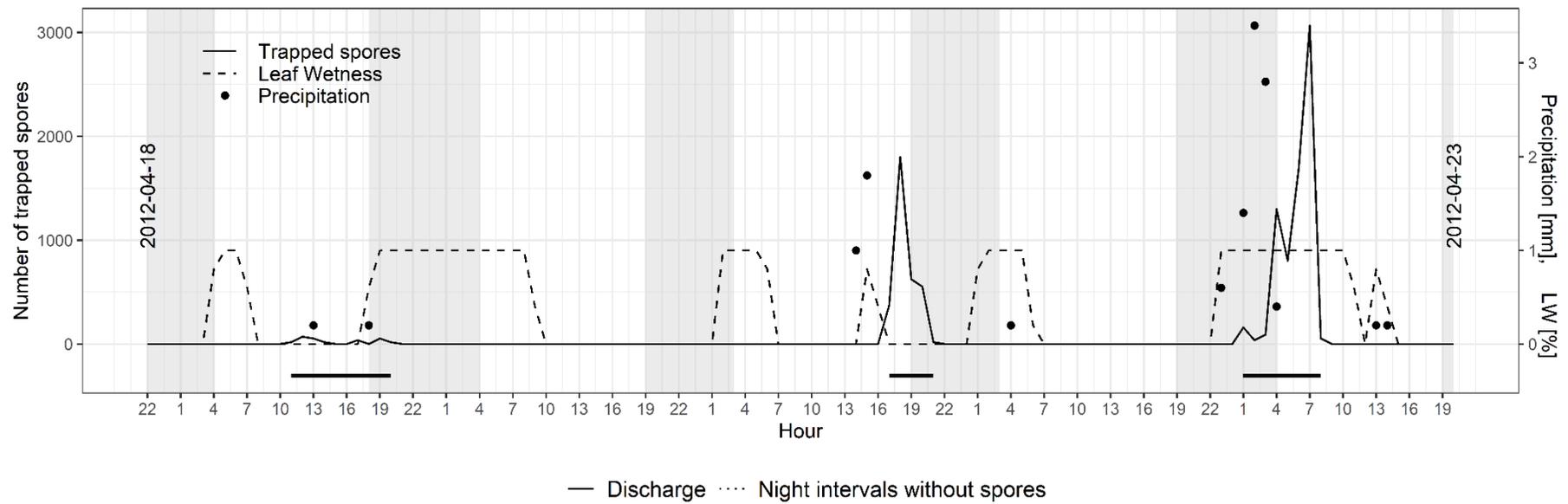
**Figure S16.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2011.04.30 to 2011.05.05



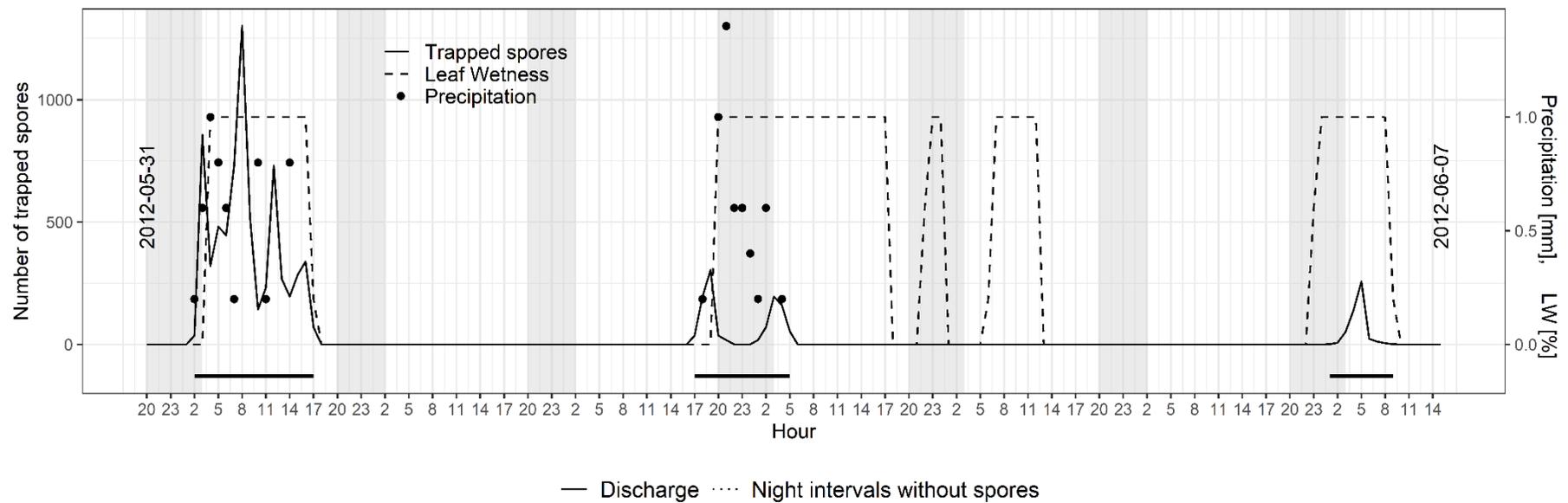
**Figure S17.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2011.05.12 to 2011.05.16



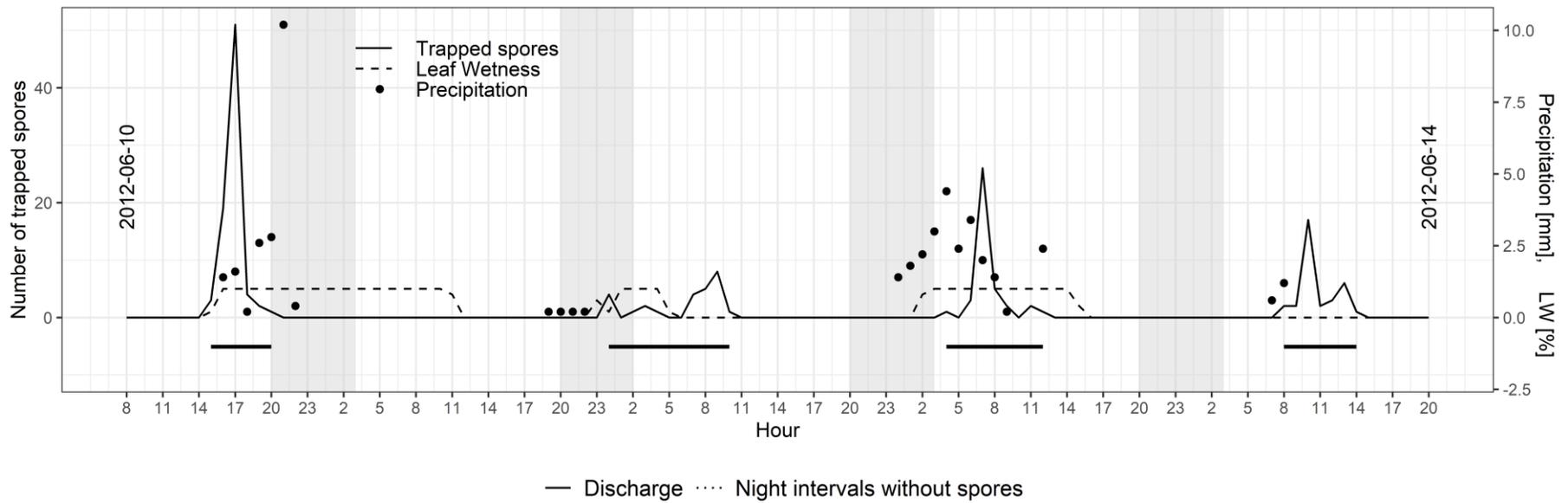
**Figure S18.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2012.04.14 to 2012.04.17



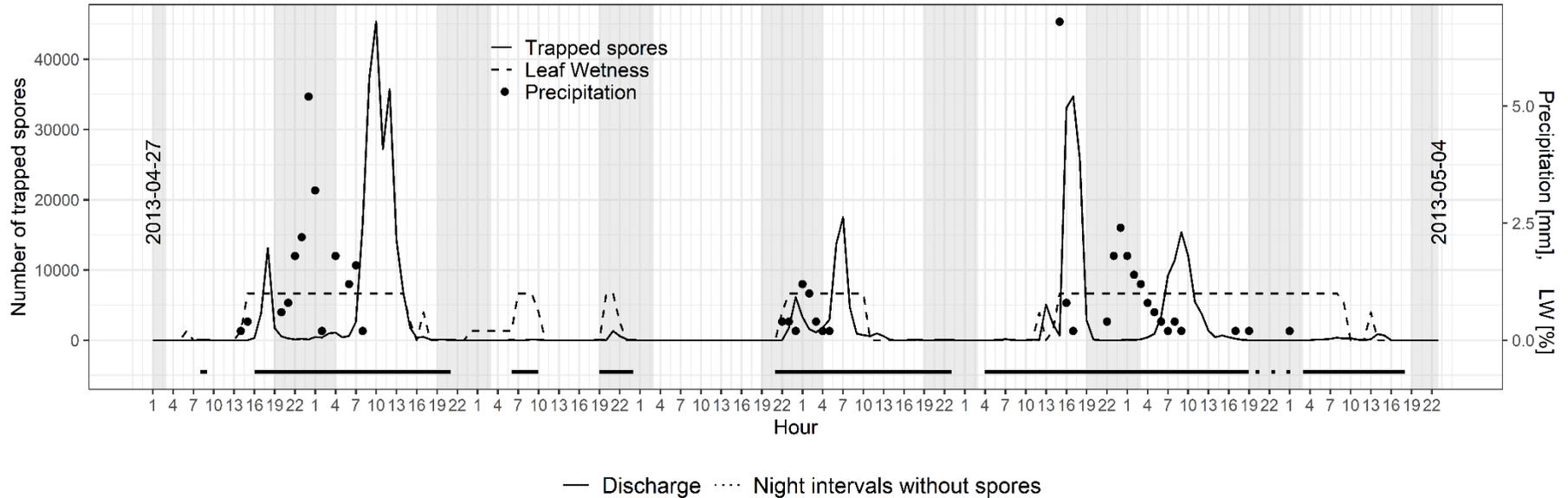
**Figure S19.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2012.04.18 to 2012.04.23



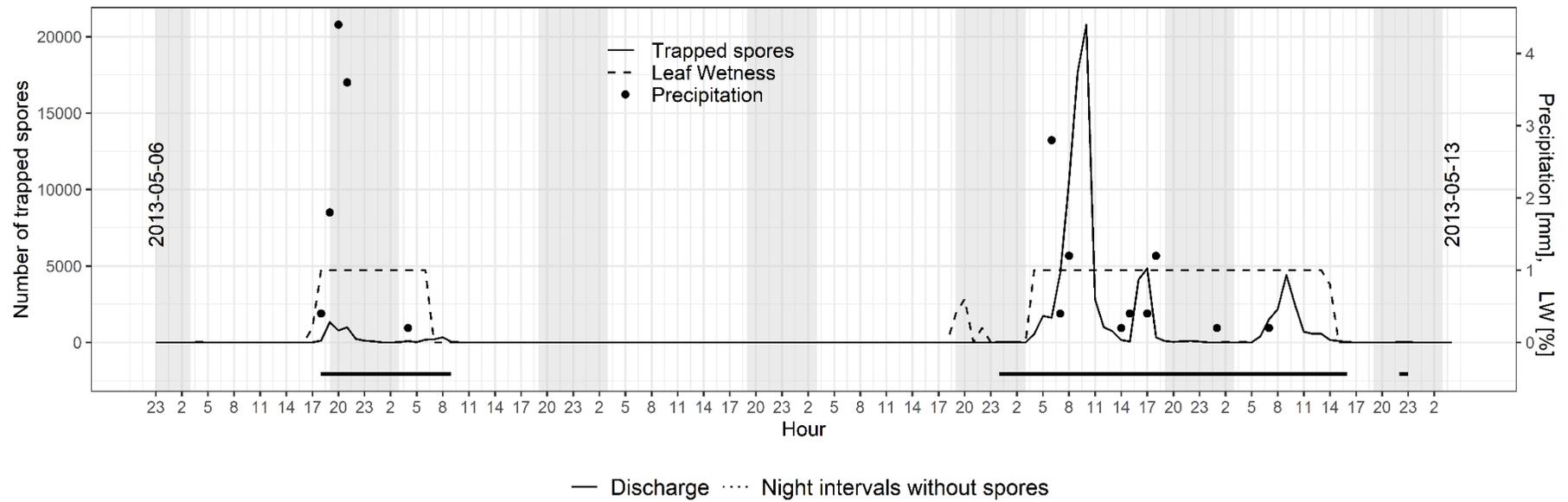
**Figure S20.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2012.05.31 to 2012.06.07



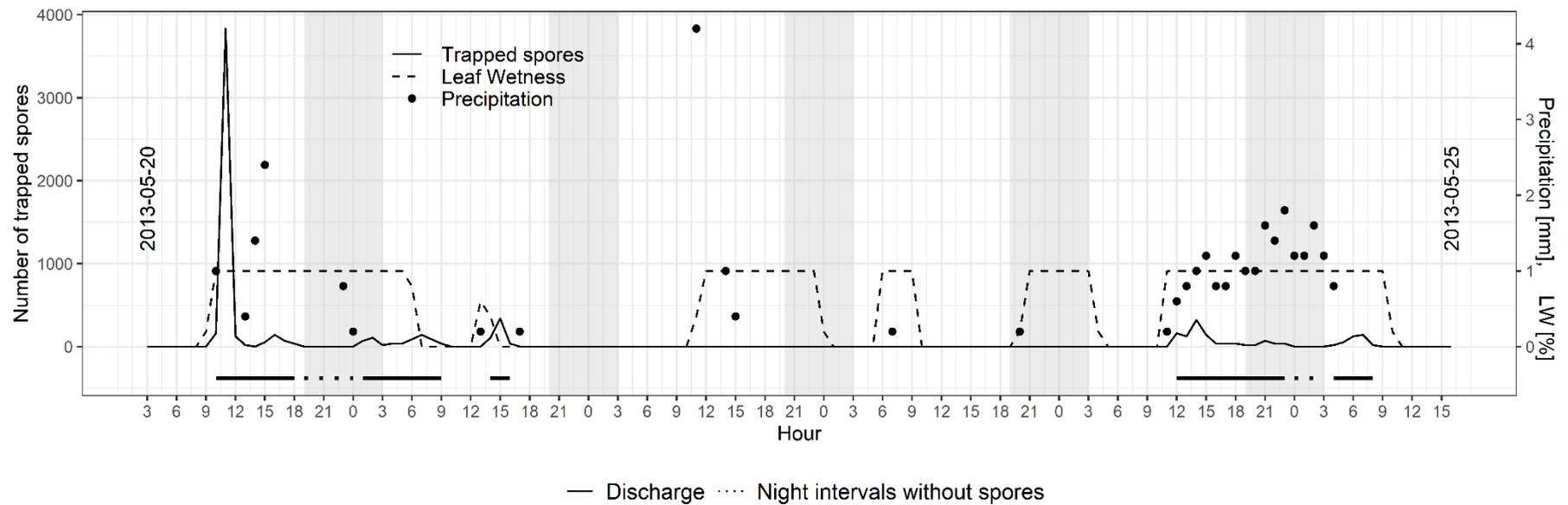
**Figure S21.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2012.06.10 to 2012.06.14



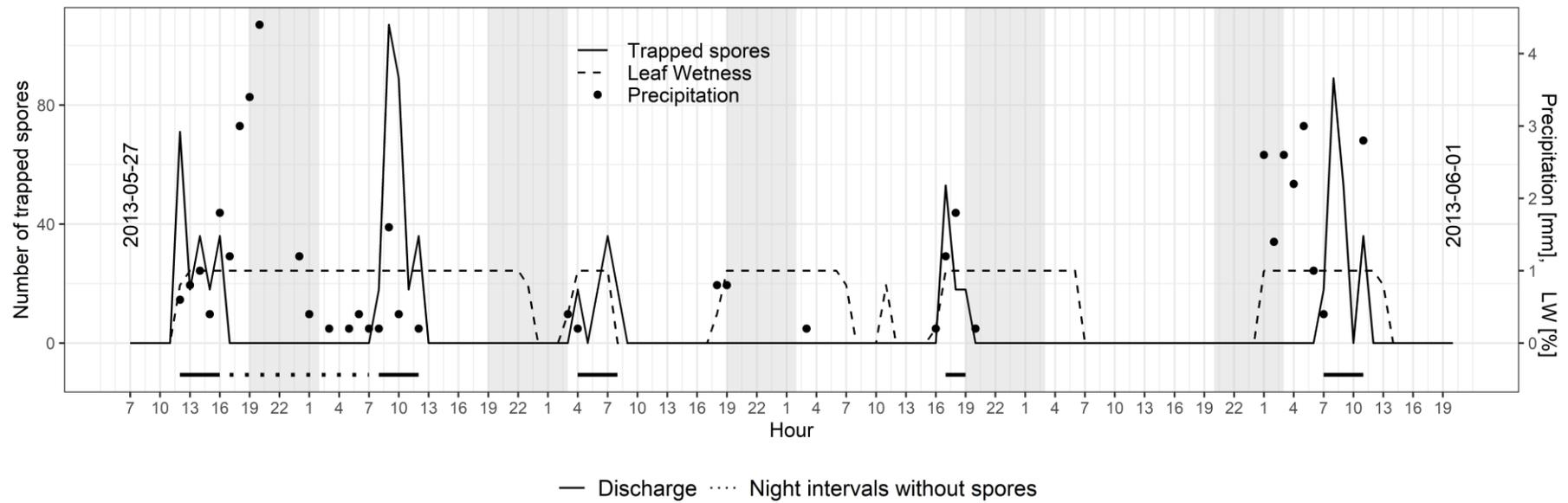
**Figure S22.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2013.04.27 to 2013.05.04



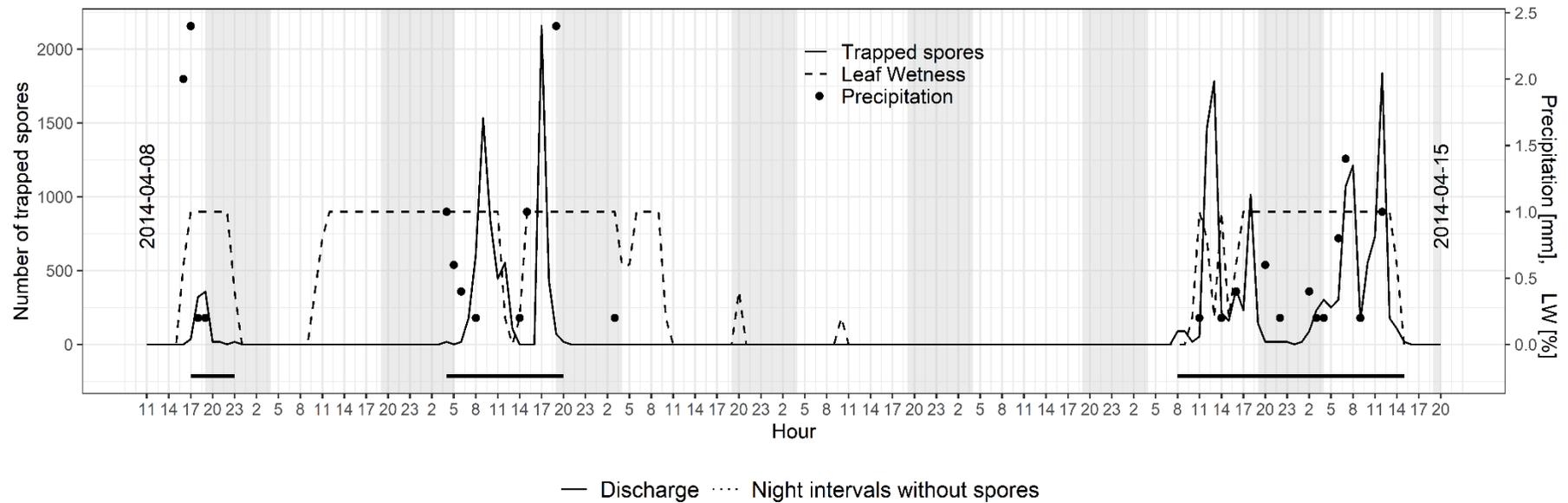
**Figure S23.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2013.05.06 to 2013.05.13



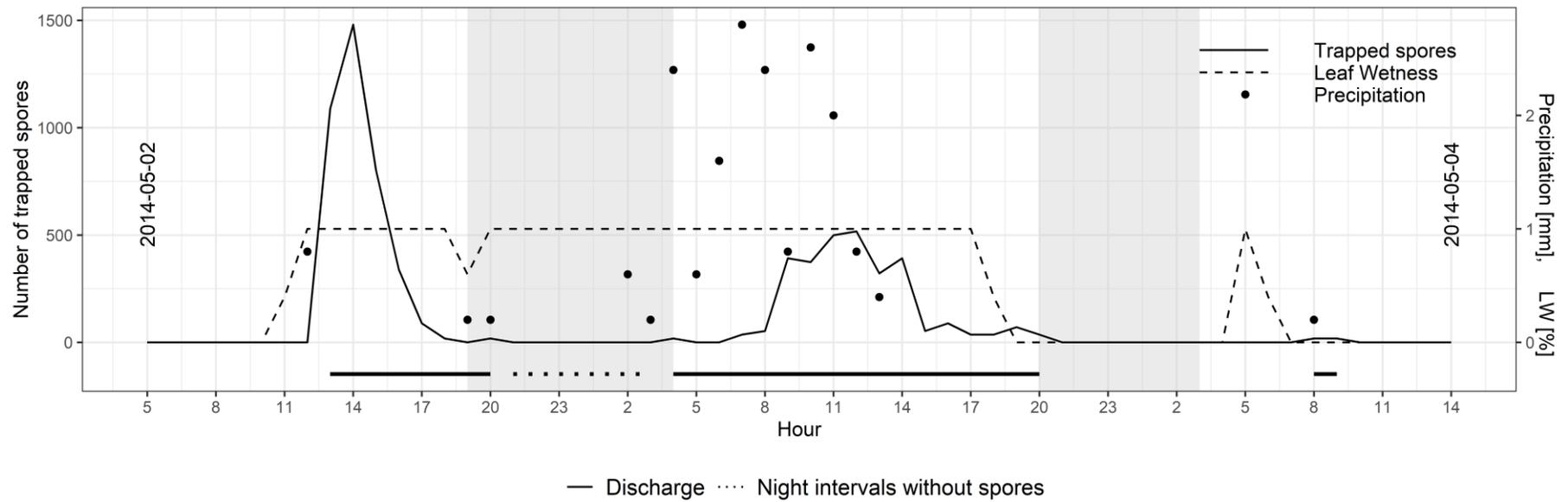
**Figure S24.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2013.05.20 to 2013.05.25



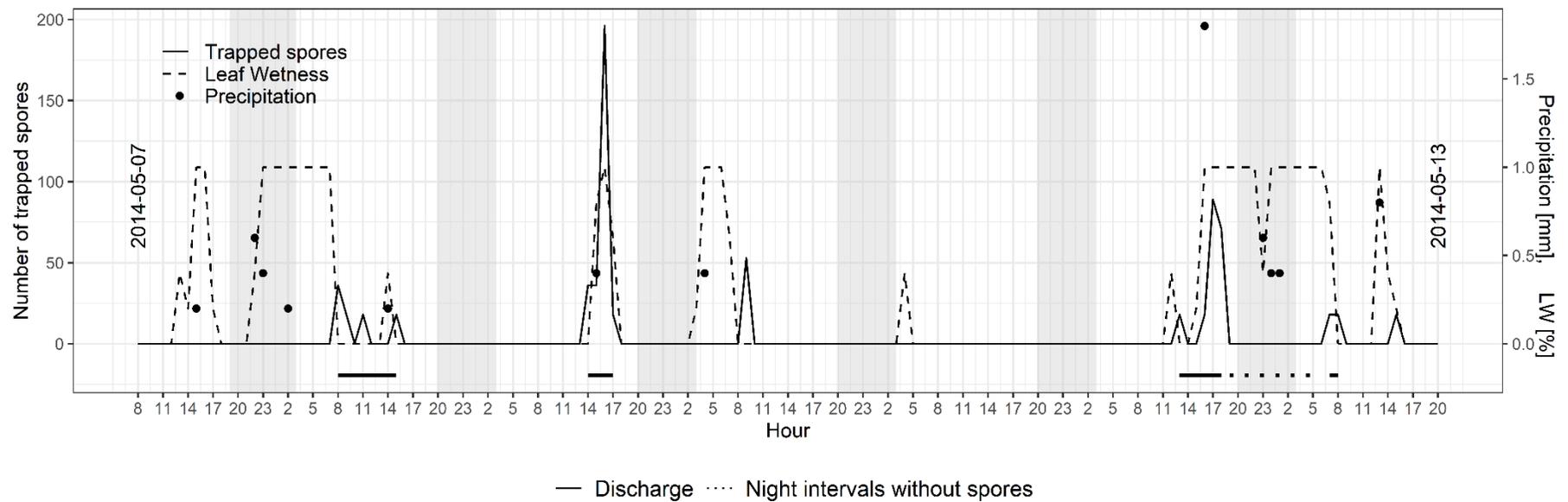
**Figure S25.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2013.05.27 to 2013.06.01



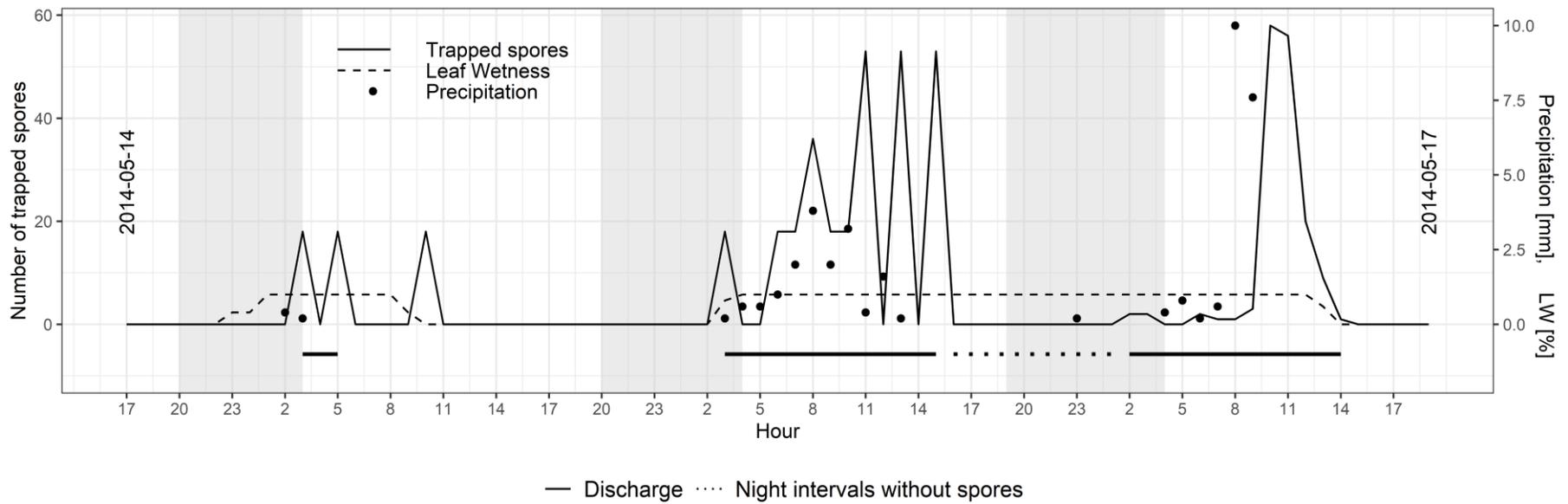
**Figure S26.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2014.04.08 to 2014.04.15



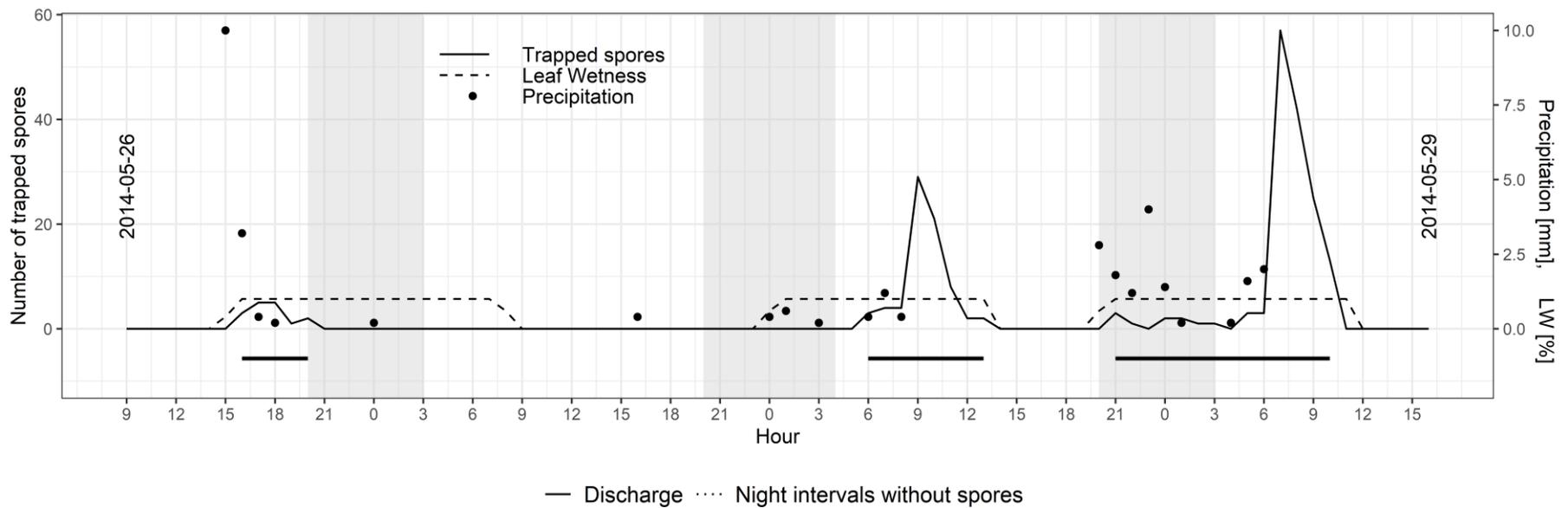
**Figure S27.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2014.05.02 to 2014.05.04



**Figure S28.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2014.05.07 to 2014.05.13



**Figure S29.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2014.05.14 to 2014.05.17



**Figure S30.** As in Figure S2. Discharge of ascospores of *Venturia inaequalis* (Cooke) Wint. from the leaves of cv. McIntosh observed from 2014.05.26 to 2014.05.29