Supplementary Material:
Downscaling climate change scenarios for apple pest and disease modeling in Switzerland

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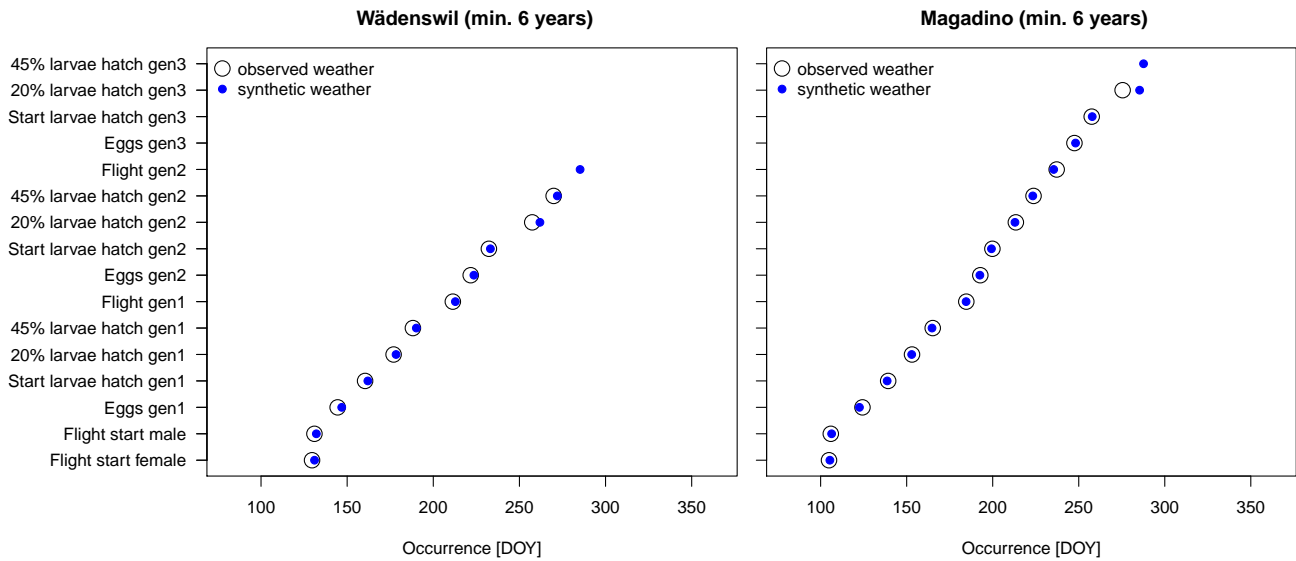
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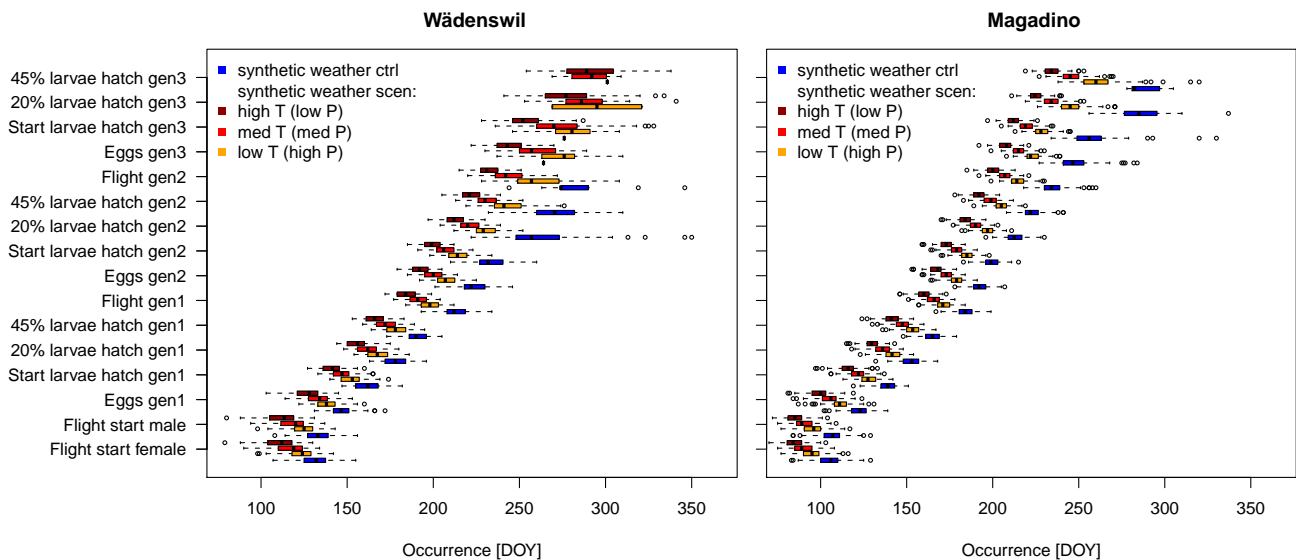[2]Agroscope Changins-Wädenswil Research Station ACW, Schloss, PO Box 185, 8820 Wädenswil, Switzerland
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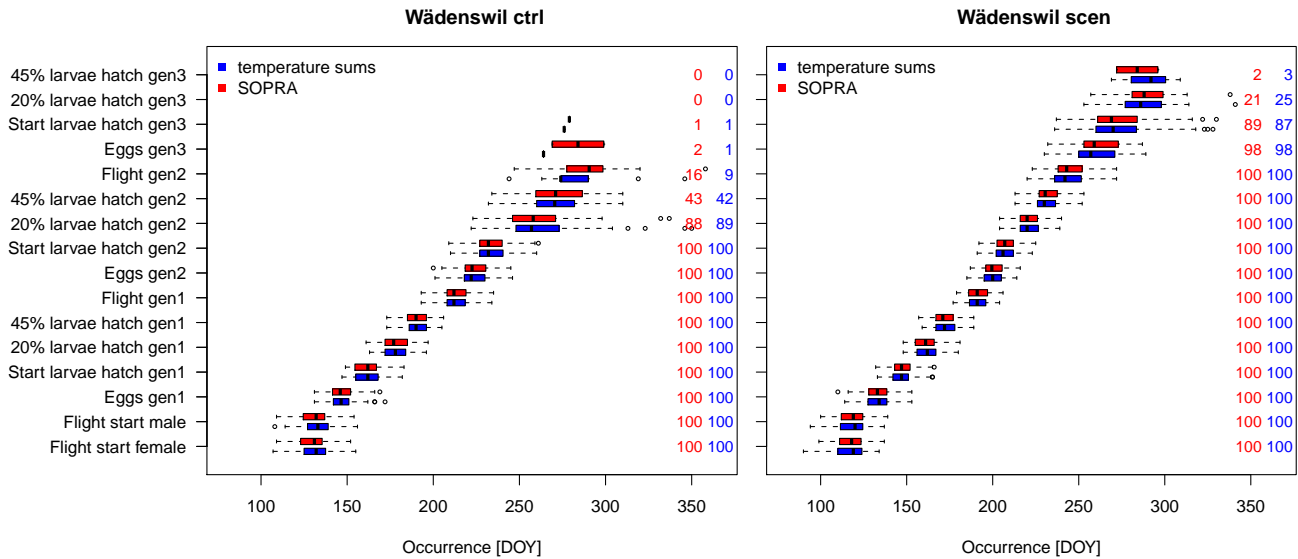[4]Agroscope Reckenholz-Tänikon Research Station ART, Reckenholzstrasse 191, 8046 Zürich, Switzerland
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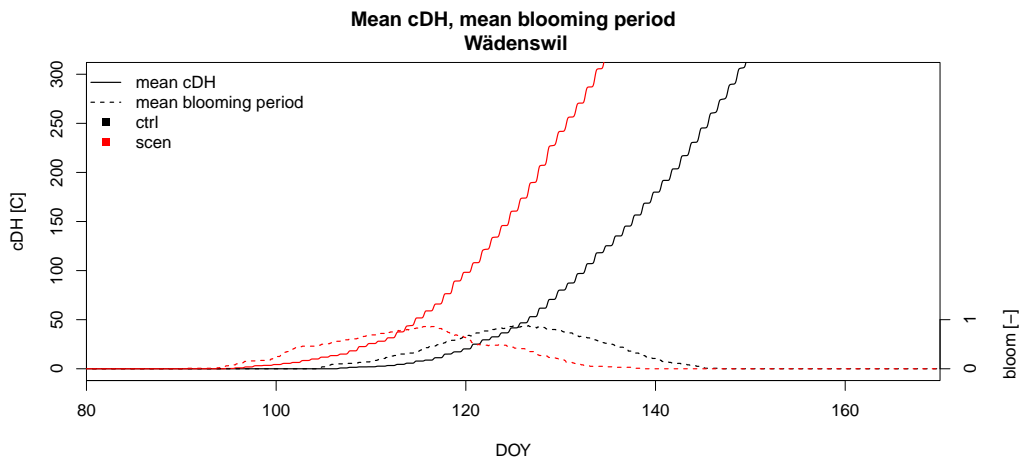
Supplementary Figure 1: Mean occurrences of important codling moth life phases derived from observed weather (black open circles) and synthetic weather (blue filled circles) at the stations Wädenswil (left) and Magadino (right). The y-axes display the life phases for three generations (denoted 'gen1–3') over one year (see Section 2.3.1), starting with the flight start in spring (corresponding to Figure 3 (top row), but separately for male and female adults). The mean occurrences are only shown when the respective phase is reached in at least six years (see also Figure 5, numbers on the right of the panels).

Supplementary Figure 2: Boxplots of the occurrences of important codling moth life phases of three generations for present ('ctrl') and future ('scen') climate at the stations Wädenswil (left) and Magadino (right). For the future climate, the three considered combinations of temperature and precipitation change signals are displayed (see Section 2.1 and Table 2). The boxplots were derived from synthetic weather data representing 100 years in each case.

Supplementary Figure 3: Comparison of dates of occurrence of important codling moth life phases from the SOPRA system (red) and from the temperature sum approach (blue, see Section 2.3.1). Boxplots from 100 years of synthetic weather under present ('ctrl', left panel) and future ('scen', right panel) climate, station Wädenswil. The numbers on the right of the panels denote the percentage of years when the respective phase was reached based on the respective simulation method and climate.

Supplementary Figure 4: Mean cumulative degree-hours (cDH) and mean blooming period (see Section 2.3.2), today ('ctrl', black) and under future ('scen', red) climate conditions.