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Varroa treatments are essential for sustainable management of honey bee colonies. Low environmental impact acaricides (e.g. thymol or formic acid based) offer several benefits like low risk of resistance development and high efficacy. The efficacy of medicines can vary depending on the temperature ranges at the apiary level.

Within the activities of the Horizon Europe BETTER-B project (Grant Number 10068544), an on-line tool for beekeepers has been developed. The tool, freely accessible through the BETTER-B Learning Platform (<https://www.better-b.eu/learning-platform/>), is an interactive map able to display areas of suitability for different temperature-dependent anti-varroa treatments. The model uses a cell-based approach, generating a raster map for every anti-varroa product, based on the temperature range indicated into the leaflets.

The primary raster dataset represents minimum and maximum average temperatures, derived through interpolation from point observations. It was acquired from major weather networks over the 30-year period spanning 1970-2000 (<https://worldclim.org/>). Temperature-dependent varroa treatments have been mapped at the cell level, with a spatial resolution of 584.6 m per cell, and the final output is a raster map that crosses the rasters/treatments with each cell containing a treatment profile on a monthly basis. An ArcGIS-powered web interface enables users to identify appropriate varroa treatments and their approved application periods for any location (e.g., apiary). This tool will be updated with registered varroa medicine data from all BETTER-B project partner countries providing a practical basis for the beekeeper, assisting him in choosing the best IPM strategy that fits its business model, the regional context (climate, available registered medicines, density of bee colonies, etc.) and the specific characteristics of the treatment agents.