# The Influence of Temperature on the Toxicity of Fenpropathrin to Fenpropathrin-susceptible and -resistant *Tetranychus urticae* (Acari: Tetranychidae)

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Undetected variables such as temperature present in the course of resistance monitoring may lead to an under- or over-estimation of the resistance level in a population. The purpose of this experiment was to compare the influence of temperature on the toxicity of a pyrethroid, fenpropathrin, to fenpropathrin-susceptible and -resistant female *Tetranychus urticae* adult using a spraying method in the laboratory. From 15 to 30℃, toxicity of fenpropathrin to the susceptible strain decreased 2.8 times. A negative temperature coefficient of toxicity (greater toxicity at lower temperature) to fenpropathrin was observed for the susceptible strain but not for the resistant strain. As a result, the resistance ratio increased with decreasing temperatures. The resistance ratio was 150, 80, 41, and 31 at 15, 20, 25, and 30℃, respectively. Our results indicate that the environmental factors such as temperature must be considered carefully in the bioassay for resistance monitoring.