Periodic orbits for periodic eco-epidemiological systems with infected prey

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Abstract. We address the existence of periodic orbits for periodic eco-epidemiological system with disease in the prey for two distinct families of models. For the first one, we use Mawhin's continuation theorem in a wide general system that includes some models discussed in the literature, and for the second family we obtain a sharp result using a recent strategy that relies on the uniqueness of periodic orbits in the disease-free space.