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Talk:

Assessment of the synchrony between incubation and latency periods of peach trees infected by *Plum pox virus*

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The relative durations of incubation (the time between inoculation and symptom expression) and latency (the time between inoculation and infectiousness of the host) are poorly documented for plant diseases. However, the extent of asynchrony between the ends of these two periods (i.e. their mismatch) is a key determinant of the epidemic dynamics of many diseases and consequently is of primary interest in the design of disease management strategies. In order to assess this mismatch, we developed an estimation approach based on experiments and we applied it on sharka, a severe disease caused by *Plum pox virus* (PPV, genus *Potyvirus*) on trees belonging to the *Prunus* genus. Leaves of infected young peach trees were used individually as viral sources in aphid-mediated transmission experiments carried out at different time points post inoculation to bracket symptom onset. By fitting a binomial generalized linear model to the obtained transmission rates, we demonstrated that the first symptoms appear on a leaf 1 day before it rapidly becomes infectious. In addition, among the symptomatic leaves, we found a positive correlation between symptom intensity and transmission rate. The latter result strengthens the conclusion that, under our experimental conditions, latency and incubation of PPV infection are almost synchronized.

Key words: infectious potential, latent period, *Myzus persicae*, *Potyviridae*, symptom severity