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Mistletoes are common aerial stem-parasites and their seeds are dispersed by fruit-eating birds. In the mutually beneficial relationships between mistletoes and bird species that disperse mistletoes seeds, the preference of birds for infected trees influences the spread of mistletoes and the spatiotemporal pattern formation of mistletoes. We formulate a deterministic model to describe the dynamics of mistletoes in an isolated patch containing arbitrary number of trees. We establish concrete criterions, expressed in terms of the model parameters, for mistletoes establishing in this area. We conduct numerical simulations based on a field study to reinforce and expand our results. (Received September 17, 2010)