As the harm caused by pesticides in recent years has come up, conscious people prefer to use medicines that do not harm the pest. Thiacloprid active agricultural warfare agent from the Neonicotinoid group, which is one of the preferred pesticides for this purpose and has an increasing market size, was examined in this study, and its effect on the length of life of Anatolian honeybee (Apis mellifera anatoliaca) and Caucasian bee (Apis mellifera causica) was examined. In the study, the label dose of the pesticide (40 ml/100-L-water) and 6 separate dose prepared by diluting 50 % of the label dose were sprayed on the bees and their life span was monitored. Only water is sprayed onto the control bees. Spray results were monitored every 12 hours and followed up to the day of death. The bees were fed with 2M sugared water and normal water during the time they lived. The change of the length of life of the control bees compared to the bees that were exposed to drugs with this method was identified. At the end of the study, all bees that received the highest dose dies within 12 hours while in the control group, the average was 16 days in Anatolian bees and 15 days in Caucasian bees. The average life span of bees sprayed with pesticide is 6 days in average Anatolia and 5 days in Caucasus. The relationship between dose and the length of life was pretty high (In Anatolian Bee R²=0.9745, In Caucasian Bee R²=0.9439). The decay rate in the length of bees that received all pesticide doses were found %62.70 in Anatolian bees and %64.10 in Caucasian bee compared to control group.