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Effects of Blower-Type Insect Trapping Treatment during the Growth Period of Second Tea Crop on Occurrences of Insect Pests, Yields and Qualities of Tea

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Abstract

An insect-trapping machine with a blowing apparatus, which uses mist air flow to blow off and trap insects on tea plants, has been developed as a physical pest control method used in tea cultivation. This technology has been shown to be effective for controlling pests and may enable pesticide-free tea cultivation. We examined the effect of treatment with this insect-trapping machine on tea pests, tea yield, and the quality of the second tea crop by using plots treated once a week, those treated twice a week, untreated plots, and chemically treated plots. During the growth period of the second tea crop, twice-weekly treatment with the insect-trapping machine was found to be effective for the reducing in the number of tea green leafhoppers. In contrast, once-weekly treatment had no effect on the number of leafhoppers. Moreover, both once-weekly and twice-weekly treatments had no effect on the incidence of yellow tea thrips. The yield was greater in the plot that was treated twice-weekly than in the plot that was treated once-weekly and was approximately equal to that in the chemically treated plot. The scores of sensory tests on tea manufactured from the plot that was treated twice-weekly were higher than those in the case of the plot treated once-weekly and approximately equal to those in the case of the chemically treated plot. On the basis of these results, we conclude that twice-weekly treatment with the insect-trapping machine is recommended for maintaining the yield and quality of tea obtained using pesticide-free cultivation.

Key words

[Physical pest control](#), [Tea field](#), [Insect-trapping machine](#), [Tea green leafhopper](#), [Yellow tea thrips](#)

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