CARBON DIOXIDE UNDER HIGH PRESSURE TO CONTROL THE TOBACCO BEETLE *LASIODERMA SERRICORNE*

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Pressurized carbon dioxide is able to control most of the important insect and mite pests within a few hours. A quick increase in pressure from a few to 20 bars and a subsequent decrease to atmospheric pressure within a few minutes reduces the lethal exposure time to less than one hour. This short treatment time renders the method attractive for pest control and especially feasible with high value products such as medicinal products of plant origin, spices, herbs, teas, tobacco, cocoa, beans, almonds and nuts.

Pressure-tight chambers of up to 30 m^3 capacity are in use for short-exposure pest control, with carbon dioxide recapture apparatus to reduce gas emission.

The lethal effect seems to consist of a combination of increased solution of CO_2 in the insect tissues leading to reduction in pH or increase in acidity, as well as rupture of cell membranes following the depressurization.

For the tobacco beetle *Lasioderma serricorne*, which causes severe losses in the tobacco processing industry, laboratory and practical results are presented describing the possibility of controling this pest at various pressures of carbon dioxide at different temperatures.