

AGRICULTURAL STORED PRODUCTS PROTECTION BY INERT DUSTS

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Inert dusts have been used to control stored product insects for thousands of years. In the last 30 years there have been several studies on inert dusts and a few products are available commercially; Insecto (North America), Dryacide (Australia), etc. However, there are several problems with these products that limit their widespread use and acceptance. These dusts are generally applied at rates that decrease the density of grain (test weight), reduce the flowability, and cause a reduction in the quality grade because the visible dust is classed as an unidentified foreign material. Such dusts have also been thought to cause excessive wear on machinery. Many of these problems could be solved if the dusts were used at reduced rates, but these rates are too low to control insects.

Some twenty years ago in Croatia, extensive research was carried out on the mode of action and the extent of efficiency of numerous inert dusts. This research work has been resumed today. The main purpose of this research is to find out the formation of inert dust which can be used at reduced application rate that would not affect test weight, flowability and visual characteristic of the grain. We found that the mixture of silica aerogels and diatomaceous earth and the mixture of diatomaceous earth and additives that affect the water balance of insects may solve these problems. The results of our investigation are partly presented in this poster.