PHOSPHINE RESISTANCE IN STORED PRODUCT INSECTS

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Resistance to phosphine has been recorded in most of the major species of stored-product pests in the U. S. Typically, resistance in the U. S. is not as severe as in other countries and, to date, no control failures among pest populations have been attributed solely to resistance. The development of phosphine resistance in stored-product insects has occurred primarily because of inadequate sealing of the commodity stores prior to fumigation. This malpractice has reduced the efficiency of fumigations and in turn has increased their frequencies. The long-term consequences of this ever-increasing cycle means control failures will occur. Because there are no current or potential replacements for phosphine as a fumigant in post-harvest technology, the threat of losing this important pest control agent through the development of resistance is genuine. Thus, every effort should be made to conduct fumigations according to established procedures that will insure effective control of the pest species.