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**STRATEGIC USE OF HIGH CONCENTRATION PHOSPHINE
FUMIGATION AS A REPLACEMENT FOR METHYL BROMIDE IN PRE-
SHIPMENT DISINFESTATION OF BULK GRAINS.**

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ABSTRACT

The target success rate for a good fumigation is generally accepted as 99.99% or essentially zero survivors. The debate on how realistic this figure maybe is unending.

The fact that many of these target pests can and do fly and subsequently reinfest product only hours after clearance indicates that perhaps aiming for such a high success rate is futile. This paper discusses the alternative approach where the fumigation success rate is determined by the time it takes population numbers to re-establish to a level where they are detectable. Adaptation of this less than perfect model encourages honest and realistic evaluation of the fumigation. When implemented, this system will reduce the cost impost of fumigation and enable utilisation of currently available technology to largely replace methyl bromide fumigations immediately.