

Stored cereal grains and pulses — Guidance on the detection of infestation by live invertebrates by trapping

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National foreword

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The UK participation in its preparation was entrusted to Technical Committee AW/4, Cereals and pulses, which has the responsibility to:

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- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
- monitor related international and European developments and promulgate them in the UK.

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Summary of pages

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Stored cereal grains and pulses — Guidance on the detection of infestation by live invertebrates by trapping

*Céréales en grains et légumineuses stockées — Lignes directrices pour
la détection de l'infestation par des invertébrés vivants par piégeage*



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Foreword

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ISO 16002 was prepared by Technical Committee ISO/TC 34, *Food products*, Subcommittee SC 4, *Cereals and pulses*.

Introduction

Within the food sector, cereal grains are the commodities which are traded in the greatest quantities. They often form nations' strategic food reserves. They can be stored for varying periods and under differing conditions, and are always susceptible to invertebrate infestation. The risk of infestation varies with the storage methods used, with time, and with the ambient temperature and humidity in the storage area. Even short storage periods in the tropics can result in the development of significantly damaging infestations.

If cereal grains become infested, the consequences can be damage, loss of quality, loss of value, and deterioration of nutritional value, and can lead to illness in animals and humans.

Infested cereal grains can act as a reservoir for the subsequent infestation of sound cereal grains. Infestation can lead to rejection of deliveries, contractual problems, loss of international trade and reputation, and problems with phytosanitary certification under the International Plant Health Convention.

Effective detection of infestation enables informed decisions to be made about if and how cereal grains require remedial treatment. Such treatments, examples of which are given in Annex D, may have implications for the subsequent use of such cereal grains in products destined for animal and human consumption.

Many methods may be used for the detection of live invertebrate infestation in stored grains, but it is considered that the most satisfactory systems for their detection in stored cereal grains and pulses are based on trapping, as described in this International Standard. Some of the other methods are listed in Annex A. These various methods have their own advantages and disadvantages. Methods based on the removal and subsequent assessment of samples are inherently less suitable for insect detection due to the sampling method.

Trapping for invertebrates in the storage of cereal grains and pulses can be used to detect the existence of pests, to collect specimens for accurate identification, to assess their numbers if action thresholds have been set, and to monitor invertebrate populations after the application of control measures to test their effectiveness.

The standard method (ISO 13690) for the sampling of cereal grains and pulses specifically does not apply to sampling for the detection of infestation. There are standard methods for the detection of hidden infestation [see ISO 6639 (all parts)] but no other International Standard exists for the detection of live invertebrates moving freely within cereal grains and pulses stored in bulk or in bags.

