DRAFT TANZANIA STANDARD

Cereals, oilseeds and pulses — Measurement of unit pressure loss in one-dimensional air flow through bulk grain.

TANZANIA BUREAU OF STANDARDS

0. National Foreword

The Tanzania Bureau of Standards is the statutory national standards body for Tanzania, formally established by the Act.No.3 of 1975, which was amended and repealed by Act.No.2 of 2009.

The Cereals and Pulses Technical Committee, under the supervision of the Agriculture and Food Standards Divisional Committee (AFDC), has prepared this Tanzania Standard.

This Tanzania standard is the identical adoption to ISO 4174:1998 Cereals, oilseeds and pulses — Measurement of unit pressure loss in one-dimensional air flow through bulk grain, published by International Organization for Standardization (ISO).

Terminology and conventions

The text of the International Standard is hereby being recommended for approval without deviation for publication as Tanzania standard.

Some terminologies and certain conventions are not identical with those used in Tanzania standards; attention is drawn to the following: -

1) The comma has been used as a decimal marker for metric dimensions. In Tanzania Standards, it is current practice to use “full point” on the baseline as the decimal marker.

2) Where the words “International Standard(s)” appear, referring to this standard they should read “Tanzania Standard(s)”.

1. Scope

This International Standard specifies a method of measuring unit pressure loss in one-dimensional air flow through bulk grain, permitting calculation of the total pressure loss of a ventilation unit. This is equal to the sum of the pressure losses

a) in the ventilation system (ducts, etc.);

b) in the grain (which is the subject of this International Standard);

c) due to the passage of the air from the duct into the grain.

The pressure losses in the ventilation system and those due to the passage of the air from the duct into the grain can be considered as negligible in relation to the pressure losses in the grain if the air flow velocity does not exceed the following limits:

— 8 m/s to 10 m/s in the main duct;

— 4 m/s to 5 m/s in the secondary duct;

— 0,25 m/s when entering the grain.

If, for economic reasons, air velocities are higher than those indicated above (up to 30 m/s in the main duct), then, following pertinent literature, the pressure loss caused by the air distributing and discharging system has to be calculated.