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**Agricultural machinery — Equipment  
for sowing — Minimization of the  
environmental effects of fan exhaust  
from pneumatic systems**

**AMENDMENT 1**

*Matériel agricole — Semoirs — Considérations pour réduire au  
minimum les effets de l'échappement du ventilateur des systèmes  
pneumatiques*

*AMENDEMENT 1*

ISO 17962:2015/Amd 1:2021

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CH-1214 Vernier, Geneva  
Phone: +41 22 749 01 11  
Email: [copyright@iso.org](mailto:copyright@iso.org)  
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This document was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 3, *Safety and comfort*, in collaboration with CEN/TC 144, *Tractors and machinery for agriculture and forestry*, in accordance with the agreement on technical cooperation between ISO and CEN (Vienna Agreement).

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# Agricultural machinery — Equipment for sowing — Minimization of the environmental effects of fan exhaust from pneumatic systems

## AMENDMENT 1

### 3.1

Modify subclause 3.1 to read:

#### 3.1 General

A means of minimizing the effects of fan exhaust from pneumatic systems shall be employed using either of the methods found in 3.2, 3.3 or 3.4.

The application of design principles is an acceptable means to minimize the effects of fan exhaust. Alternatively, testing methods can be used to verify conformance.

### 3.3

Modify the title of 3.3 to read:

#### 3.3 Field test method

##### 3.3.1.1

Add a new sentence in subclause 3.3.1.1 as follows:

The testing area shall be a field that has been prepared for sowing. The test area shall be either level tilled soil or plant material not greater than 10 cm above the soil surface.

##### 3.3.8.2

Modify the reference to renumbered subclause 3.6 as follows:

**3.3.8.2** The mean value (percentage of sediment from the emitted tracer powder) from the 90 measured values (30 for each test), shall be calculated and recorded per 3.6.3 c).

### 3.4

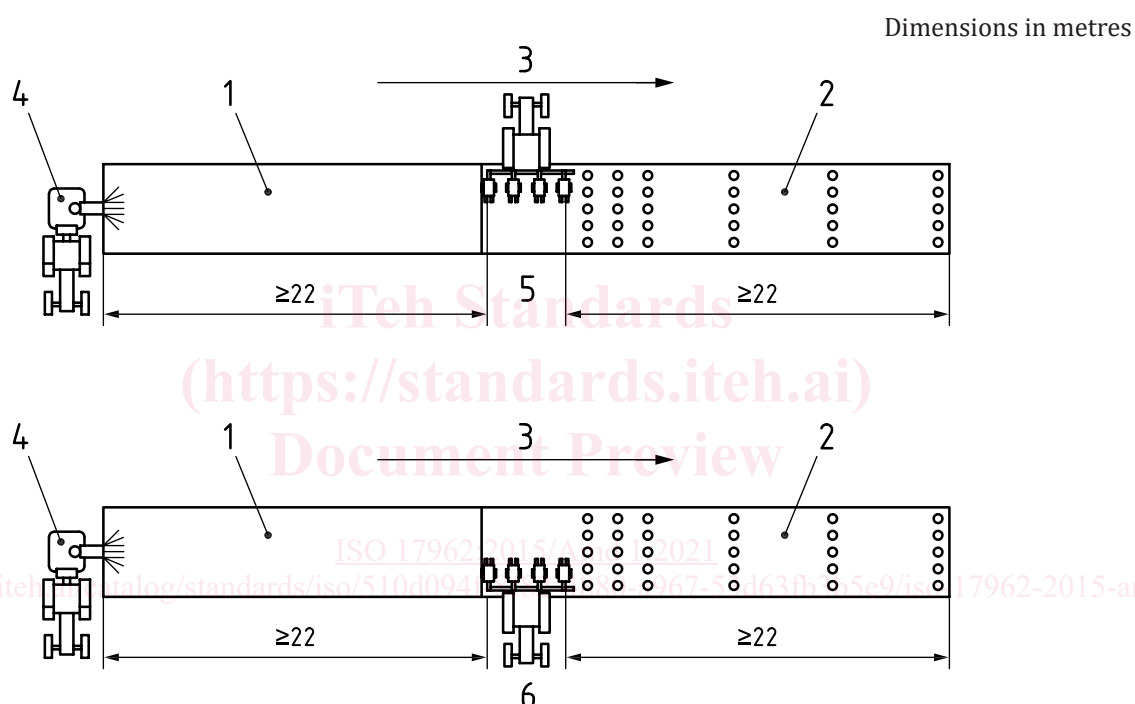
Add new subclause 3.4 as follows:

## 3.4 Wind tunnel test method

### 3.4.1 Testing area

**3.4.1.1** The testing area shall be a wind tunnel (see Figure 3). The floor surface of the wind tunnel shall be a soil prepared for sowing as specified in the operator's manual. The test conditions of the soil shall be recorded in the test report.

Following the flow of air, the tunnel will continue around the sowing equipment providing a hole as small as possible allowing to place the equipment into the tunnel.



#### Key

- 1 tunnel zone to uniform artificial air stream
- 2 area monitored with artificial collectors (petri dishes)
- 3 artificial wind direction
- 4 fan
- 5 position A (sowing equipment position)
- 6 position B (sowing equipment position)

**Figure 3 — Scheme of wind tunnel and of positions (A and B) of the sowing equipment to be tested**

**3.4.1.2** A fan shall be positioned at one side of the tunnel. The air speed delivered by the fan shall comply with 3.4.3.2.

**3.4.1.3** There shall be a uniform air stream close to sowing equipment tested. The air stream shall be measured at 4 evenly spaced heights and 4 evenly spaced widths (16 total data points), 5 metres upwind from the end of the sowing equipment being tested. The coefficient of variation (CV) of the wind speed measurements shall be less or equal to 10 %.