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## Feed machinery — Vocabulary

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## Foreword

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This document was prepared by Technical Committee ISO/TC 293, *Feed machinery*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at [www.iso.org/members.html](http://www.iso.org/members.html).

# Feed machinery — Vocabulary

## 1 Scope

This document defines terms related to feed processing technology, machines and equipment widely used in feed mills.

## 2 Normative references

There are no normative references in this document.

## 3 Terms and definitions

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>

### 3.1 Terms related to feed processing technology

#### 3.1.1 air-assisting

using the forced air to enhance working efficiency, control dust, particle size, temperature, pressure and/or moisture

#### 3.1.2

#### batching

dosing and weighing ingredients to combine them to meet the formulation requirements

#### 3.1.3

#### coating

covering the surface of an intermediate product uniformly with a predetermined amount of liquid, and/or powder

#### 3.1.4

#### destoning

removing stones from raw materials by specific gravity differences, using airflow and screening surfaces

#### 3.1.5

#### dry mixing

mixing dry, solid ingredients without the addition of liquid ingredients

#### 3.1.6

#### extruding

pressing or pushing feed through constrictions to continuously shape a feed

EXAMPLE Using a machine with one or more rotating screws and die.

#### 3.1.7

#### flushing

passing a predetermined amount of a specified material through a machine or a closed feed production system to clean it and reduce contamination of next feed production cycle

**3.1.8**

**grading**

sorting materials by different physical properties, such as size, density, colour, and often according to existing standards, either mechanically or manually

**3.1.9**

**hygienizing**

reducing micro-organisms in feedstuffs

**3.1.10**

**liquid addition**

inclusion of ingredients in a fluid state to the intermediate product

**3.1.11**

**micro dosing**

adding micro-ingredients to the major mixture

**3.1.12**

**post-cooking**

holding feed in a container after shaping operations for a specified time prior to cooling or drying

**3.1.13**

**post-grinding**

performing the particle size reduction after *batching* (3.1.2) in a feed production line

**3.1.14**

**pre-grinding**

performing the particle size reduction before *batching* (3.1.2) in a feed production line

**3.1.15**

**vacuum coating**

*coating* (3.1.3) intermediate products in a pressure environment below the atmospheric pressure to encourage absorption of the liquid through the release of pressure

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**3.2 Terms related to feed machines and equipment**

**3.2.1**

**conditioner**

machine for achieving predetermined moisture levels and/or temperature of ingredients or a mixture of ingredients prior to further processing

**3.2.2**

**cooler**

machine for reducing temperature and moisture by forced ambient or conditioned air through an intermediate product

**3.2.3**

**crumbler**

machine with rolls specially designed for breaking up pellets into smaller granular pieces

**3.2.4**

**dry flow meter**

device that detects and measures the flow rate of a dry intermediate product, usually operating on a continuous flow process

**3.2.5**

**dryer**

machine that is used to reduce the moisture content of material by use of airflow and energy transfer

**3.2.6****expander**

machine that uses a rotating screw to continuously push feedstuff through an annular gap, active disc system or crown

**3.2.7****extruder**

machine that heats up the product and propels it through the die to create the desired shape, using a system of barrels and cylinders that create increased pressure and sudden depressurization

**3.2.8****extruder die**

perforated plate installed at the discharge end of the *extruder* (3.2.7) barrel for shaping the feed product

**3.2.9****feeder**

machine that regulates flow and conveys material

**3.2.10****hammer mill**

machine that reduces particle size by impact from rotating plates (hammers) in a chamber

Note 1 to entry: A *screen* (3.2.23) is used to regulate the particle size.

**3.2.11****helical ribbon**

spiral component attached to the main shaft in a *mixer* (3.2.16) used to agitate ingredients

**3.2.12****high temperature and short time conditioner****HTST conditioner**

machine used for the pre-treatment and conditioning of animal feed that involves high temperature and high pressure for a short period of time

EXAMPLE An *expander* (3.2.6).

**3.2.13****liquid homogenizer**

machine used to reduce particle size of liquid components and mix them uniformly

**3.2.14****lump breaker**

machine that breaks up large materials or conglomerates

**3.2.15****magnetic separator**

equipment that removes ferrous materials by magnetic attraction

**3.2.16****mixer**

machine that blends ingredients to homogeneous product

**3.2.17****paddle**

tool attached to the shaft to mix and/or convey material

**3.2.18****pellet die**

part used in a *pellet mill* (3.2.19) with hole openings through which the mixed mash feed is pressed to form pellets

Note 1 to entry: It may be mounted in different orientations and be a ring or flat.

**3.2.19**

**pellet mill**

**pelletizer**

**pellet press**

machine used to agglomerate feed by compacting and forcing it through die openings to be formed into pellets

**3.2.20**

**pulverizer**

machine used to grind small particulate with air assist

Note 1 to entry: It is typically vertical in orientation and capable of grinding up to 100 µm.

**3.2.21**

**retentioner**

machine for retaining the preconditioned mash feed for a length of time at a predetermined temperature and moisture setting

**3.2.22**

**roller mill**

grinding machine mainly comprising one or more pairs of parallel corrugated rolls rotating in opposite directions

**3.2.23**

**screen**

equipment used to separate particles by size and shape

**3.2.24**

**working tank**

tank that holds pre-adding or pre-coating liquids before the mixing or *coating* (3.1.2) process

Note 1 to entry: The amount held in a working tank is predetermined by operations.

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