

# OPTO-Agrimetric

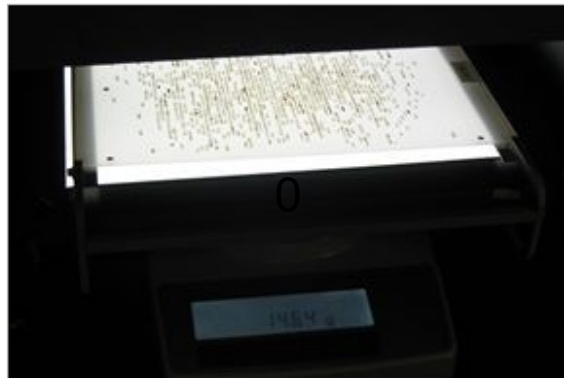
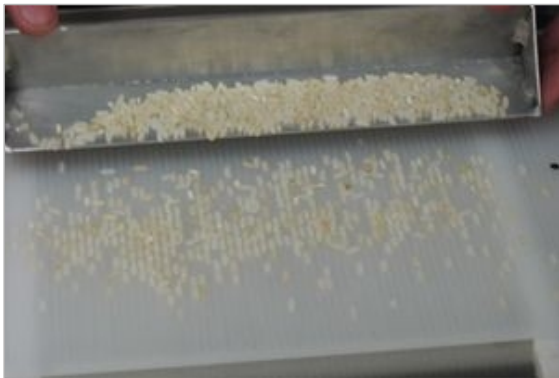


Station for Seed Characterisation by high resolution image processing



The **OPTO-Agrimetric** is dedicated to the **characterization of seeds**, including the following analysis :

- 1) **Morphometric measures** on each grain of the sample
- 2) **Classification of the grains** based on a recipe created with the classification software.
- 3) **Fast Thousand Seed Weight**



Following species are already available on the current version:

- durum wheat
- corn
- rice paddy (round & long)
- sorgho

Other species can be of course analyzed on the system, subject to adjustments.

2 configurations are available:

- **OPTO-Agrimetric Standard** for seeds  $\geq 2$  mm
- **OPTO-Agrimetric Micro** seeds  $< 2$  mm

## Principles of functioning:

The grains are placed easily on a (patented) corrugated plate. For example it is possible to lay up to 30 g of wheat. For measuring big quantities it is necessary to split the batch into smaller samples. Measurements of each sample are automatically saved and merged.

## Main functions:

### 1- Morphometric measures

Hundred morphometric descriptors are available and are applied to each grain :

- form parameters: length, width, perimeter, diameter, surface, eccentricity, circularity...etc.
- texture parameters: grey levels, Kurtosis index (of the grey levels histogram)
- colour parameters: RGB R mean, RGB R standard deviation, mean, max, etc...

### 2- Classification

After completing all steps described above, we apply a classification recipe to the morphometric results.

A classification recipe contains up to 4 classes + 1 (scrap).

The software calculates the % in number and weight of each class, as well as the TSW of each class.

### 3- Fast Thousand Seed Weight

TSW on corn, wheat, oil seed rape, barley, etc... in 3 seconds can be done with the OPTO-AGRIMETRIC, by installing an additional software, and by using a special tray.



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