

# OPTO-Agrimetric Seed Coverage Analysis



Laboratory equipment for **Seed Coverage Analysis** by image processing



The use of seed coating treatments enhances seed quality, provides protection against pests and diseases and improves seed germination rates.

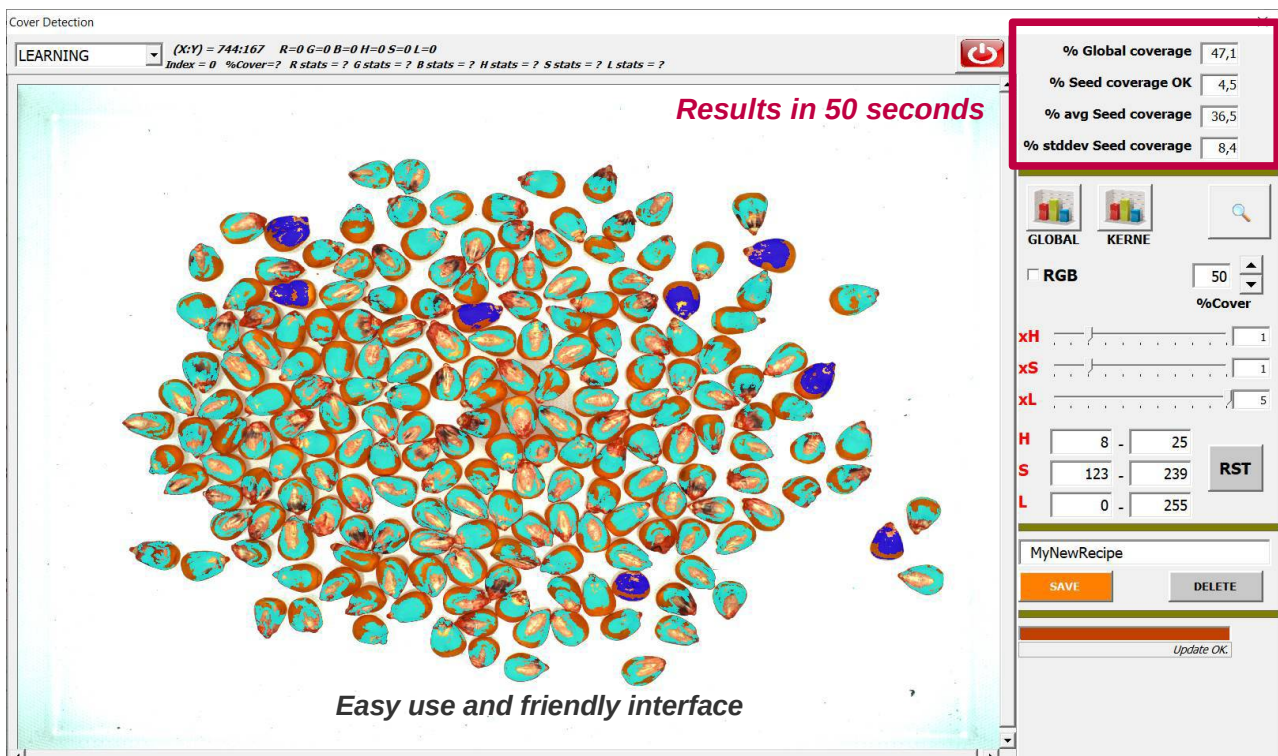
**The treatment recipes can be optimized by measuring the seed coverage.**

Our equipment **measures the seed coverage by computing color analysis and classification on seed samples.**

Two main principles are the basis of the color algorithm :

- Automatic color parameters are computed with the help of a **learning procedure** based on the analysis of a reference seeds sample,
- Automatic parameters are applied to new samples in order to measure seeds coverage with the same standard as the related reference.

The equipment is also able to **characterize the seeds in terms of morphometry and thousand seed weighth.**



## List of available measurements :

### 1- Seed Coverage :

- global percentage of coverage
- average coverage of individual seeds
- quantity of seeds with coverage higher than a limit
- standard deviation of seed coverage

### 2- Fast Thousand Seed Weight:

TSW on corn, wheat, oil seed rape, barley, etc...  
In less than 3 seconds can be done.

### 3- Morphometric parameters:

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...



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