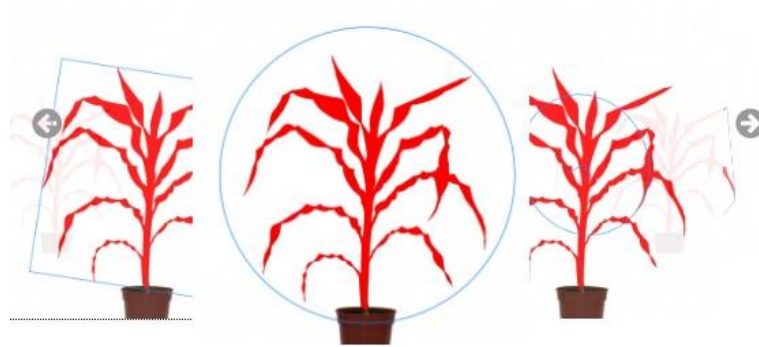
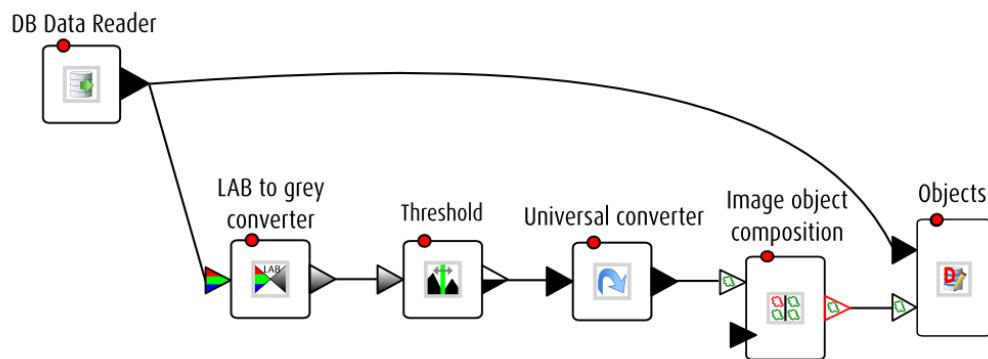


Determining morphometric parameters from plant shoots (SMP)



Morphometric image analysis of plants relies on reducing a complex shape into simple mathematical models. For example the minimal enclosing circle encapsulates the entire shape. Consider the side view image of a corn plant. The overall geometry of the plant is dictated by the angle and arching shape of leaves that grow laterally.



To determine morphometric parameters for a shape we use the Universal Converter.

The Universal Converter transforms each binary large object (blob) from the image mask (binary image) into an image object entity. The object is analysed using a set of mathematical models, thus returning a list of morphometric parameters. Below is an excerpt of frequently used parameters:

- area
- bounding box (width)
- convex hull
- compactness
- center of mass
- roundness