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## **Contribution of multispectral autofluorescence imaging to histochemistry in understanding sorghum internode hydrolysis pattern?**

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## Contribution of multispectral autofluorescence imaging to histochemistry in understanding sorghum internode hydrolysis pattern ?

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Digestibility of plant feedstock is one of the key properties and is largely dependent on the overall lignification of the plant which is monitored at the tissue scale by the relative amounts and composition of plant organ. To obtain details on anatomy and spatial distribution of main components high-throughput histochemical methods have been developed on maize and sorghum internodes [1,2]. FASGA staining procedure is based on the competition between 2 dyes and reveals regions with differentiated in terms of tissue lignification [3]. In addition to staining procedures, the specific spectral properties of phenolic compounds could also be exploited to map their distributions using spectral imaging technics. Multispectral autofluorescence imaging was successfully applied to maize stem internode to reveal differences in cell wall phenolic compounds distribution (lignin and hydroxycinnamic acids) [4]. The objective of this work was to evaluate the relevance of multispectral autofluorescence imaging to better understand contrasted hydrolysis patterns observed inside the sorghum stem internode.

### References:

1. Perrier et al. Front. Plant Sci, 2017, 1516.
2. Tolivia et Tolivia , J. Microscopy Oxford, 1987, 113-117.
3. Berger et al. Front. Plant Science, 2021, 12.