

USE OF XYLOGLUCANS AS PARTIAL SUBSTITUTES FOR AGAR IN PLANT TISSUE CULTURE MEDIA.

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Agar is the most used gelling agent in culture media. The main reasons for its wide use are the stability, high clarity, and non-toxicity. Moreover, the high cost of agar is an economic hindrance on research and commercial laboratories. Consequently, various attempts have been made to find cheaper alternative gelling agents in order to reduce the costs and improve culture characteristics. The aim of this work was to test the suitability of the xyloglucans from *Hymenaea courbaril* and *Mucuna sloanei* as partial substitutes for agar, using these blends in callus induction, *in vitro* seeds germination and seedling development of *Glycine wightii*. The xyloglucans were extracted, purified and then used in blends development. As result, the culture medium supplemented with 0.5% agar+ 0.3% xyloglucan of *H. courbaril* and 0.4% agar + 0.4% xyloglucan of *M. sloanei* showed similar or higher physical properties to those from agar, positively influencing in the calli induction, *in vitro* germination and seedling development of *G. wightii*. Results obtained show that xyloglucans of *H. courbaril* and *M. sloanei* may, with advantage, be used as partial substitutes for agar, in culture media for *G. wightii*.

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