MULTIPLE SHOOT PRODUCTION ON DIFFERENT EXPLANTS OF SUNFLOWER

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Whole seeds, half seeds, cotyledons, segments of cotyledons, hypocotyl and epicotyl segments, young leaves and apical meristems were tested on modified MS-media to produce multiple shoots in vitro. 10 to 40 % of whole seeds showed multiple shoots (up to 120 shoots per seed). The shoots were isolated and rooted on another MS-medium. This method will help breeders to get a great number of individuals out of one rare line or one single seed with special characteristics, such as high oleic acid content or any disease and pest resistance.
In this case another very important method is the in vitro culture of young embryos; sometimes a sunflower crossing, especially with wild sunflowers, does not produce normal seed. Embryo culture will help to get mature plants.
The problem inherent is the very early flower induction of in vitro cultivated sunflowers.