

WATER-STORING TISSUE IN YOUNG LEAVES OF SUNFLOWER

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Water-storing tissues are existing between epidermis and spongy tissue in the young leaves of groundnut, as introduced before. It has not yet been reported whether there are any water-storing tissues or not in the young leaves of sunflower. The author happened to discover the water-storing cell in the young leaves of sunflower when anatomic slice was made with leaves of sunflower, the variety of "Advanced worker". The slice was fixed with FAA, and stained with ferric alum, hematoxylin etc. Under microscope, from several to more than dozen of large cells, distributed vertically in the palisade tissue, are visible with thin cell walls, cellulose (stained to be green) and large vacuoles. In the cell, a few small grains can be seen, which may be deteriorated chloroplast. In accordance with the features described above it can be concluded that those are water-storing cells belonging to water-storing tissues (with pictures attached).

These cells with characteristic similar to drought structure, store much water to be transported in short distance so as to overcome the stress of water shortage, with its performance related to drought resistance of sunflower.