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The Journal of Plant Physiology is a broad-spectrum journal that welcomes high-quality submissions in all major areas of plant physiology, including plant biochemistry, functional biotechnology, computational and synthetic plant biology, growth and development, photosynthesis and respiration, transport and translocation, plant-microbe interactions, biotic and abiotic stress. Studies are welcome at all levels of integration ranging from molecules and cells to organisms and their environments and are expected to use state-of-the-art methodologies. Pure gene expression studies are not within the focus of our journal. To be considered for publication, papers must significantly contribute to the mechanistic understanding of physiological processes, and not be merely descriptive, or confirmatory of previous results. We encourage the submission of papers that explore the physiology of non-model as well as accepted model species and those that bridge basic and applied research. For instance, studies on agricultural plants that show new physiological mechanisms to improve agricultural efficiency are welcome. Studies performed under uncontrolled situations (e.g. field conditions) not providing mechanistic insight will not be considered for publication.

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