APPLICATIONS OF ABA FOR VEGETABLE TRANSPLANTS: PHYSIOLOGICAL CONDITIONING, DEVELOPMENT AND SURVIVAL
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Foliar applications of ABA have been investigated as a method to enhance drought tolerance, control plant height, and condition transplants to better withstand post-transplanting field stresses. In desiccation-recovery studies, ABA applied to mature transplants has shown to improve the maintenance of water potential and recovery of gas exchange in cantaloupe, watermelon, pepper and artichoke. Shoot relative elongation rates decreased for bell pepper and tomato transplants sprayed at 1000 mg L⁻¹ between 7 and 3 days before maturity. Growth inhibition was stronger in biomass than in plant height when a single rate of ABA was applied to young jalapeno pepper and watermelon seedlings. When ABA was applied twice on mature pepper and watermelon transplants, field survival improved under stressful field conditions. Vegetable species have differential sensitivity to exogenous ABA; thus, optimizing rate, frequency and application timing is critical to maximize its benefits.