

Signaling and Communication in Plants

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Plant-Environment Interactions

Our image of plants is changing dramatically away from passive entities merely subject to environmental forces and organisms that are designed solely for the accumulation of photosynthate. Plants are revealing themselves to be dynamic and highly sensitive organisms that actively and competitively forage for limited resources, both above and below ground, organisms that accurately gauge their circumstances, use sophisticated cost-benefit analysis, and take clear actions to mitigate and control diverse environmental threats. Moreover, plants are also capable of complex recognition of self and non-self and are territorial in behavior. They are as sophisticated in behavior as animals but their potential has been masked because it operates on time scales many orders of magnitude less than those of animals. Plants are sessile organisms. As such, the only alternative to a rapidly changing environment is rapid adaptation. This book will focus on all these new and exciting aspects of plant biology.

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