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On the Cover: The cover image illustrates the phenotype that develops when Arabidopsis plants cannot maintain acetate homeostasis because of simultaneous mutations in two genes coding for acetate-activating enzymes, one located in plastids (ACS) and the other located in peroxisomes (ACN1). These plants are sterile, grow slower and stay green for more than 150-days, and hyperaccumulate acetate at the expense of metabolites generated from acetyl-CoA. These attributes are based on ^{13}C-stable isotope labeling experiments, indicated by the "yellow hat" on the acetate molecule. The ^{13}C-labeled acetate is trafficked to either the plastids by ACS catalysis or peroxisomes by ACN1 catalysis, generating different pools of acetyl-CoA derived metabolites. Although these two enzymes can compensate for each other, the double mutant plants that lack both enzymes generate the aberrant phenotype, which establishes the importance of regulating acetate metabolism in plants. Cover image credits: Xinyu Fu, Iowa State University, Ames, Iowa.

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