Abstract

Sorghum [*Sorghum bicolor* (L.) Moench] synthesize cyanogenic glycoside known as dhurrin. Fresh vegetative sorghum will rapidly liberate hydrogen cyanide from dhurrin upon disruption of cells in which they are stored in the plant tissue. Dhurrin production has been reported in Sudan grass (*Sorghum sudanense*), Johnsongrass (*Sorghum halepense* (L.) Pers) and Columbus grass (*Sorghum almum*). It is synthesized from amino acid tyrosine by the sequential action of two cytochrome P450 enzymes (CYP79A1 and CYP71E1). Dhurrin is believed to play a role in defense against pathogens, insect pests, herbivores and in regulation of metabolic processes. The metabolic processes highlighted in this review are those associated with plant growth and development and regulation of germination. It appears that dhurrin production in sorghum could be developmentally and environmentally regulated and controlled at the transcriptional level. This review focuses on dhurrin synthesis pathway, roles in sorghum, the main signaling molecule and research gaps.