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| **Associated conference** |  |
| **Abstract / Content summary** | The work presented here is a review of cyanide in cassava. The presence of the two cyanogenic glycosides (linamarin and lotaustralin), in cassava, which on enzymatic hydrolysis leads to the production of hydrogen cyanide, is a major factor limiting cassava use as food or feed. Linamarin accounts for more than 80% of the cassava cyanogenic glucosides. It is a β-glucoside of acetone cyanohydrin and ethyl-methyl-ketone-cyanohydrin. Cassava varieties are often categorized as either sweet or bitter, signifying the absence or presence of toxic levels of cyanogenic glucosides, respectively. The so-called sweet (actually not bitter) cultivars can produce as little as 20 milligrams of Cyanide (CN) per kilogram of fresh roots, whereas bitter ones may produce more than 50 times as much (1 g/kg). Cassava grown during drought are especially high in these toxins. In addition, Cyanide is a chemical defense developed to cope with a huge diversity of unfavorable biotic conditions in the field. These glycosides and cyanogenic glycosides liberate cyanide, which, blocking cytochrome c oxidase (responsible for muscle and brain function) and NIS, is poisonous to parasites and herbivores but does not affect the plant cells. A lot of factors affect the level of cyanogenic glycosides in cassava. Many processing methods that reduce cyanide levels in cassava products have been developed.
Keywords: Cassava; Cyanogenic; Hydroxynitrite; Linamarin |
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