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Title: Effect of Soaking and Roasting Dehulling Methods of Soybean on *Bacillus* Fermentation of Soy-Daddawa

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Abstract: Soy-daddawa was prepared by fermenting soaked dehulled and roasted dehulled soybeans by a starter culture of *Bacillus subtilis* SDA3 (isolated previously from traditional fermented soy-daddawa) for 72 h. The viable cell counts of *B. subtilis*; accompanying biochemical changes as well as the products were evaluated. The viable cell count increased from an initial value of 10^4 to 10^9 cfu/g wet wt. at the end of fermentation. The pH of the fermentation of soybeans dehulled by the two methods rose from 6.7 to 8.4 with a concomitant increase in proteolytic activity, free amino acids and ammonia concentration. Alpha amylase and beta fructofuranosidase activities exhibited a rapid increase in activity in the first 24 h. Reducing sugars increased in the first 24 h and dropped in the fermentations of soaked dehulled and roasted dehulled soybeans. Soybean dehulled by the two methods showed similar biochemical and viable cell count profile during fermentation with *B. subtilis* SDA3. The two types of soy-daddawa differ significantly ($p < 0.05$) in color, texture and general acceptability while there was no significant difference in aroma, stickiness and taste. In all the organoleptic attributes scored, there was preference for soy-daddawa produced from roasted dehulled soybean.

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