

Title Properties of starches from cocoyam (*Xanthosoma sagittifolium*) tubers planted in different seasons  
Author Ting-Jang Lu, Jia-Ci Chen, Chia-Long Lin and Yung-Ho Chang  
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### **Abstract**

Starch was extracted from the tubers of two cocoyam (*Xanthosoma sagittifolium*) cultivars (KCX01 and KCX02) planted in three different seasons (summer, winter and spring). Physicochemical properties of the starch were determined in order to investigate the seasonal effect on cocoyam starch. Cocoyam tubers planted in the summer showed higher contents of total starch than tubers planted in other seasons. Starches from both cultivars of cocoyam tubers planted in the summer season had significantly ( $p < 0.05$ ) higher average granule sizes, higher contents of amylose, higher ratios of short-to-long chains of amylopectin, and lower values of the average degree of polymerization (DP) of the chain length distribution profiles. The distinct properties of the fine structure of cocoyam starch from tubers planted in summer season were associated with lower values of onset and peak temperatures and enthalpies of gelatinization.