

Compositional changes in breadnut (*Artocarpus camansi* Blanco) fruit during ripening

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Abstract

Studies were conducted to determine the physical and chemical changes of the flesh and seed of breadnut fruit between weeks 10-12 after fruit set. Fruit ripening, initiated at week 10 accelerated dramatically between weeks 11-12. Flesh firmness which was 890.5 g/force at week 11 decreased to 17.5 g/force a week later. Likewise, the bright light cream colour flesh with “L” value of 82.93 and “a/b” value of -0.29 at week 11 was altered at week 12 with “L” decreasing to 72.34 and “a/b” to -0.31. However, while flesh dry matter increased from 14.1 to 16.37% between weeks 11-12 after fruit set, changes were minor in flesh reducing sugars (12.58-12.96%) and flesh total sugars (13.86-14.09%). Notable changes in seeds were also obtained during this period. Seed mass increased from 73.2 to 85.5 g, seed dry matter progressed from 32.5 to 39.2%, seed reducing and total sugars increased from 2.0 to 3.4% and from 14.1 to 16.4% respectively. Concomitantly, the seed coat became dominantly brown and brittle as “L” values decreased from 75.4 to 43.9 while “a/b” values increased from 0.81 to 0.44.