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Introduction

- Peach palm (*Bactris gasipaes* K.) is a palm tree native to humid Neotropical forests used to obtain palm heart and fruits, both marketed as high value products.
- The palm tree is cultivated throughout Colombia in regions with a humid climate at altitudes of less than 1500 m asl. Cultivation is under small scale agro-forestry systems by the Afro-Colombian communities as well as by indigenous communities in the Amazonian and the eastern tropical savannas.
- Besides playing an essential role in food security for the communities that cultivate the palm, fruits are commercialized in cities like Cali, where it is estimated that more than 2000 women street vendors earn their livelihoods by selling peach palm fruits.
- Irregular product quality and market chain inequalities impair the economic well-being of retailers and producers.
- Results of value chain analysis and studies on the genetic variability of product characteristics are discussed below.

- The market chain analysis indicated that fruit prices increase between four to six-fold from the farm (US\$ 4-6) to the street vendor (US\$ 22-25) (Fig. 2)

- Wholesalers received the highest benefit along the chain, and it was common to find up to three intermediary traders, resulting in low benefits for those at both ends of the market chain.

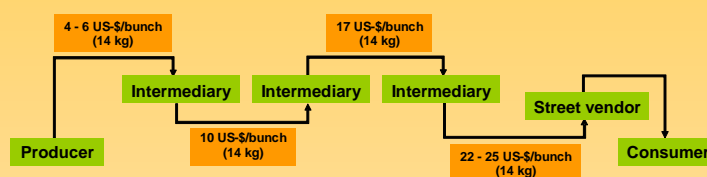


Figure 2. Typical market chain for peach palm fruits in Valle de Cauca, Colombia.

Materials and Methods

- 46 peach palm accessions originating from different regions of Colombia were analyzed for nutrient concentrations and cooking qualities.
- Farmer research teams in five villages in the municipality of Buenaventura were established to evaluate possibilities and constraints of peach palm production and marketing from a producer's point of view.
- A survey among peach palm street vendors complemented data on the market chain analysis.

- Changing fruit qualities were identified as the main obstacle for women street vendors, as wholesalers tend to mix fruits of different origins, which results in different quality characteristic and inefficient cooking due to varying cooking times.

- Consequences are long working days of > 18 hours and high energy input (electricity or firewood) requirements for cooking.

Results

- Peach palm accessions were characterized by a high morphological variability, with fruit weights varying between 17.7 – 64.9 g.
- Fruit composition was mainly starch (67 %), lipids (11.5%) and proteins (6%), making peach palm a high-value food source (Table 1).

Table 1. Chemical composition of peach palm fruits.

Parameter	n	X	σ	Min.	Max.
Dry matter (%)	39	48,7	8,5	29,5	68,5
Lipids (%)	46	11,5	5,8	3,3	23,5
Ash (%)	42	2,7	1,1	1,4	5,4
Protein (%)	43	6,2	1,3	4,0	9,5
Crude fiber (%)	43	4,7	1,3	1,3	7,9
Starch (%)	42	66,6	4,6	55,2	78,6
Total sugars (%)	42	3,3	1,1	1,0	5,3

- The firmness of peach palm fruits was reduced by about 50% after two hours of cooking time, but the variability in texture among accessions was high (Fig. 1), pointing to differences in cooking time for peach palm fruits of multiple origins.

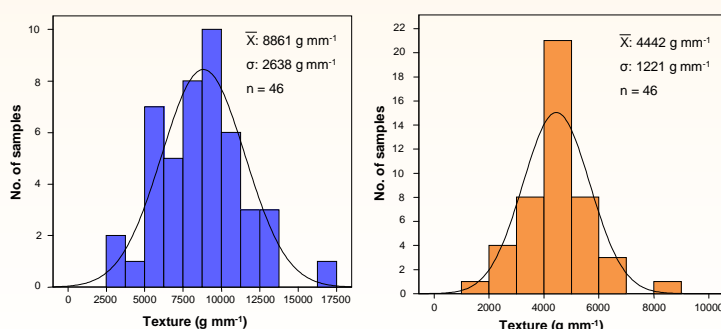


Figure 1. Texture of crude and cooked peach palm fruits.

Conclusions

- The formation of producer associations would allow farmers to gain a better access to the market, and to explore more direct marketing channels. CIAT's project is currently supporting these activities in the project area.

- Selling fruits by its origin will result in more constant cooking times, allowing women street vendors to save time and energy.

- Overall, a stable income from peach palm agroforestry systems is seen to have a strong potential to reduce poverty as well as the pressure to cultivate illicit crops in remote areas of the Pacific coast.

- Further research activities are needed to address deficits in crop management and harvest methods.

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