



## Press Release SAG/84

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### COCONUT WATER AS ENERGY DRINK FOR JOGGERS AND ATHLETES: FIRST PATENT GRANTED TO UN FOOD AGENCY

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ROME, 14 September (FAO) - Coconut water should be marketed as a natural energy drink for joggers and athletes, the United Nations Food and Agriculture Organization (FAO) said in a statement issued today. The FAO has applied for a patent on a new technology that would allow manufacturers to bottle coconut water that is biologically pure, tasty and full of the salts, sugars and vitamins demanded by athletes. Before FAO developed the new technology, coconut water's nutritional characteristics could not be preserved.

Meanwhile, the United Kingdom has granted a patent to the FAO on the new technology. It is the first patent ever given to a United Nations agency. Similar requests in Canada and Japan are pending.

"The new technology holds tremendous promise for tropical countries. Countries that process or export coconuts and small farmers who grow them will be the main beneficiaries of the newly patented technology. "FAO is making the patented process available to all interested companies", said Morton Satin, Chief of FAO's Agricultural Industries and Post-harvest Management Service. "Companies in the beverage industry have already shown interest."

Today, most coconut water is still consumed fresh in tropical coastal areas. Once exposed to air, the liquid rapidly loses most of its nutritional characteristics, and begins to ferment, according to the FAO. But the production of coconut beverages, particularly as a by-product of processing operations, such as coconut cream processing and coconut desiccation, has long interested food manufacturers.

Present processing has a drawback. Most commercial production today is carried out using high-temperature and short-time pasteurization (the same technology used in ultra high temperature long-life milk). But thermal processing eliminates not only the risk of bacteria, but also some of coconut water's nutrients and almost all of its delicate flavour. This severely limits the product's marketability.

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"Coconut water had a future only if we could invent a new cold sterilization process that retained its flavour and all its nutritional characteristics", Satin said. "The answer was microfiltration technology: you filter the water through a medium, such as porcelain or a polyacrylic gel. The filter retains all micro-organisms and spores and renders the permeate commercially sterile." Satin's previous food inventions include high-fibre white bread and wheatless bread.

"A young coconut between six and nine months old contains about 750 millilitres of water. It's a natural isotonic beverage, with the same level of electrolytic balance as we have in our blood. It's the

fluid of life, so to speak", Satin said.

The new process was conceived and tested on four coconut varieties with the help of a consulting Italian food technologist, Giuseppe Amorizzi. They also processed coconut water with added sucrose and L-ascorbic acid, to approximate the vitamin and energy content of major sports drinks. When the inventors noticed some discoloration in the water of one coconut variety -- albeit an "attractive pink" -- they added lime juice to retain its original transparency. Finally, they called in a panel of tasters, who could detect no difference between fresh coconut water and what came out at the other end of the laboratory.

Satin sees coconut water as a natural contender in the world's \$1 billion sports drink market. "What could be better than a natural beverage product with the delicate aroma, taste, drinking characteristics and nutritional value of pure, fresh, tender coconut water, plus all the functional characteristics required of a sports drink"? he said.

#### Sport drinks vs. Coconut water

	Component	Sports drink	Coconut water
----- (mg/100 ml) (mg/100 ml) -----			
-----	Potassium	11.7	294
-----	Sodium	41	25
-----	Chloride	39	118
-----	Magnesium	7	10
-----	Sugars	6	5
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