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# Exotic Juices

- Introduction of Carrière
- Terminology – Exotic vs. Tropical
  - Challenges and Opportunities
- Nutritional Benefits and Functionality
- Legal Framework and Health Claims
- How do exotic juices fit into traditional formulae?
  - Conclusions



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# Exotic Juices

## Introduction of Carrière

Based in Hamburg / Germany

Trading in citrus, tropical and exotics

Focussed on 4 growth pillars:

Conventional

Organic

Fairtrade

FTNF aromas, water phases, citrus derivates

Worldwide network of renowned suppliers



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# Exotic Juices

## Terminology - Exotic vs. Tropical

**Exotic**, derives from Greek *εξωτική* (exotiki), meaning foreign or strange, latin: *exoticus* the foreigner

→ seen from an individual perspective

e.g. Lulo / Naranjilla is exotic to an European but not to a Colombian or Ecuadorian



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## Terminology - Exotic vs. Tropical

**Tropical**, derives from Greek *τρόπος* (tropos), meaning turn

→ the tropics of Cancer and Capricorn mark the North and South latitudes, where the sun to turn in its seasonal motion; tropical

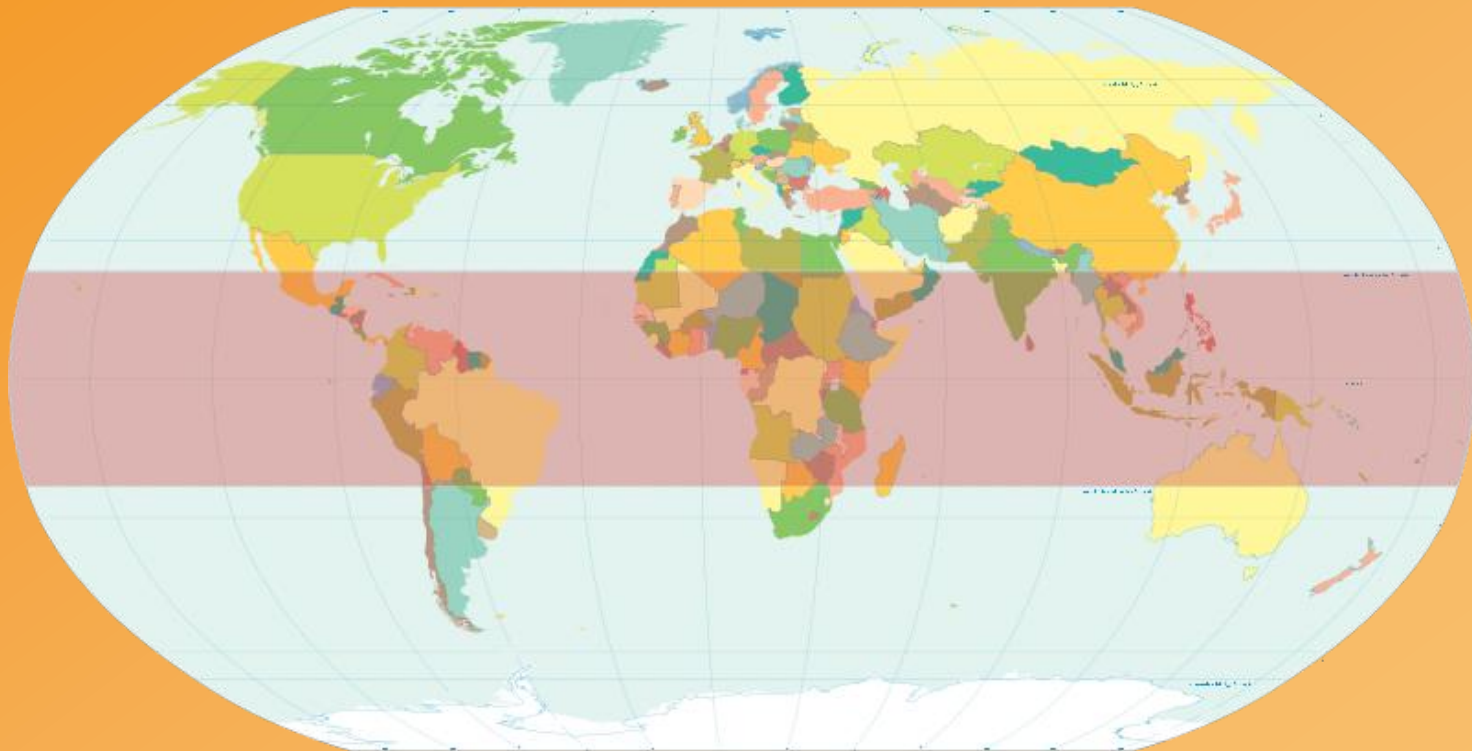
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# Exotic Juices

## Terminology - Exotic vs. Tropical





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# Exotic Juices

## Terminology - Exotic vs. Tropical

Seen from an European perspective, many tropical and sub-tropical fruit can be regarded as exotic

- some of them mainly known as fresh fruit like physalis / cape gooseberry, starfruit
- some of them used in fruit preparations, like acerola, açai, goji, noni
- and locally used as processed fruit, like lúcuma, lulo / naranjilla
- or mainly used as fresh fruit, like pitaya



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# Exotic Juices

## Challenges and Opportunities

*„Those who rise to the challenge today, will ultimately have the best opportunities tomorrow“  
( Unknown but true 😊 )*



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## Challenges and Opportunities

### **Risks at supply side**

Limited availability of fresh fruit

Logistical problems – distances between orchards and factory and/or factory and port;

Lack of human resources, qualified personnel

Quality risks, starting from the selection of fruit to processing [pasteurization, holding time and temperature]

Crop imponderables [weather conditions]





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# Exotic Juices

## Challenges and Opportunities

### **Risks at demand side**

Global falling sales → switch from juice to nectar or drinks, consumers trading down to cheaper products

Tight competition

Mistrust among companies, banks, insurers

Tighter credit conditions, delayed payments



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## Challenges and Opportunities

### Opportunities and key trends

Reduction and in many cases removal of all tariff and non-tariff barriers → *creates trade opportunities*

Health, convenience, sustainability → *continue to be the key trends in the fruit juice industry*

Health trend also creates opportunities for new fruit juices containing new fruit varieties or concepts

→ *health benefits via functional fruit*

*(see my article: “Functional fruits – a neglected potential?”)*



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## Nutritional benefits and functionality

### Functional fruit

show special analytical and nutritional characteristics  
offer additional health benefit beyond a basic nutritional  
function of supplying nutrients  
are natural ingredients of functional juices/drinks in  
special and functional food in general

*(see my article in Foodnews based upon my lecture IFW Cologne  
16-17th March 2005)*



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## Legal Framework and Health Claims

Legal framework set by European authorities, has to be respected fully. Conformity, e.g. with the AIJN code of practice, is a clear must.

However, “*Novel Food Legislation*” and the so-called “*health claims*” are not translated in praxi in every European country.



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## Legal Framework and Health Claims

### Consequences:

Inequality and imbalance among countries, more precisely between competing suppliers and customers

Companies in some countries are concerned about these legal matters and others just “*navigate*” around what they consider innovation-inhibiting legislation



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## Legal Framework and Health Claims

Not possible in EU →





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# Exotic Juices

How do they fit into traditional formulae?

## Why using exotic juices?

Fruit juices seem to look the same and taste the same  
→ “*multivitamin effect*”

Too many copycats and “*me-too products*”

- The consumer expects real innovations with products
- having an own identity, i.e. unique taste and flavour
  - offering an additional [functional] benefit



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# Exotic Juices

How do they fit into traditional formulae?







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# Exotic Juices

How do they fit into traditional formulae?

## Decision factors / selection process:

Huge diversity, which is almost impossible to overlook

Is the fresh fruit available for industrial processing?

Is the fruit known as fresh fruit?

If yes, is it appealing to our senses and can we transmit this idea to a juice or nectar? → *evolution of a marketing concept*

Do colour, taste and flavour harmonize with traditional juices, like orange or apple? → *sensorical properties*



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# Exotic Juices

How do they fit into traditional formulae?

## Problem:

When consumed as a plain purée/juice, especially some highly “*functional*” exotics have a

- dark colour, like borojó which does not fit in very well with traditional juices
- peculiar taste and flavour, like açai, borojó, goji, noni

Taste and flavour can be masked by using other ingredients like sugar and honey

Some functional ingredients could be extracted from exotic fruit and inserted in traditional blends

→ But is this the “real thing”?



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# Exotic Juices

How do they fit into traditional formulae?

## Suggestion:

Instead of trying to find a “*super superfruit*” with as much functionality as possible, we should go for an organoleptically, well-balanced formula with fruit juices / purées, like for instance:

- physalis, lat.: *Physalis peruviana*, also known internationally as cape gooseberry and uchuva in Colombia and uvilla in Ecuador
- naranjilla, lat.: *Solanum quitoense*, also known under the name of lulo in Colombia



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# Exotic Juices

How do they fit into traditional formulae?

**Selection of fruit – Physalis / Cape Gooseberry:**



**CAPE GOOSEBERRY RECEPTION: UCHUVA VARIETY**

<b>MATURATION GRADE</b>	<b>BRIX MÍNIMO: 12,0</b> Full maturation, uniform and without indication of fermentation. It must not be soft or watery, and its skin must be firm and consistent. It must be between levels 5 to 6 according to the color chart.
<b>SENSORIAL ASPECT</b>	<b>COLOR:</b> The cup must be yellow and the fruit must be yellow - orange <b>FLAVOR AND AROMA:</b> Typical of ripe cape gooseberry, without indications of fermentation or ripening.
<b>PACKAGING</b>	Perforated plastic baskets of smooth interior, with a maximum capacity of 10 kilos. The packing must be completely clean (outside and inside) and free of any strange smells.
<b>TRANSPORTATION</b>	The vehicle in which the fruit is transported must be in good sanitary conditions, free of excrements; properly covered to protect the fruit of the dust, the sun or the water and allow ventilation. The fruit must not be transported simultaneously with other materials such as: chemicals or agricultural inputs, oil/fuels that may contaminate or impregnate smells to the fruit, wastes (rubbish), animals (any kind), foods of nature different from the fruit, different fruits that transfer smells or chemical residue to the fruit that has been agreed to deliver and others from non nutritional nature.
<b>GENERAL ASPECTS</b>	The fruit should look healthy, pleasant, fresh and uniform, without excessive mechanical damage, so it is recommended that the vehicle is laden with fruit harvested the same day if possible. The fruit must be free of mold or signs of decomposition or fermentation, without any mixture of green and ripe fruit. It must be free of impurities such as: leaves, wastes, woods, nails or other foreign materials. The fruit must be free of damage by insects or rodents and signs of contamination with foreign substances.
<b>PESTICIDES</b>	In the case of the use of pesticides, they must have the ICA registration. The fruit must meet the requirements for maximum allowable pesticide residues described in national legislation and international law.

**COLOR CHART**



Approved by Manager

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# Exotic Juices

How do they fit into traditional formulae?

## Selection of fruit - Naranjilla:



**NARANJILLA RECEPTION: LA SELVA VARIETY**

Date: 2009-10-30

<b>MATURATION GRADE</b>	<b>MINIMUM BRIX: 7,50.</b> Full maturation, uniform and without indication of fermentation. It must not be soft or watery, to firm and consistent peel. It must be between levels 3 to 4 according to the color chart
<b>SENSORIAL ASPECT</b>	<b>COLOR:</b> The skin must be yellow-orange at least 75% and the flesh must be green <b>SABOR Y AROMA:</b> Typical of ripe naranjilla, without indications of fermentation or ripening.
<b>PACKAGING</b>	Perforated plastic baskets of smooth interior, with a maximum capacity of 25 kilos. Wooden box, open at the top, maximum capacity of 12 Kilos. The packing must be completely clean (outside and inside) and free of any strange smells.
<b>TRANSPORTATION</b>	The vehicle in which the fruit is transported must be in good sanitary conditions, free of excrements; properly covered to protect the fruit of the dust, the sun or the water and allow ventilation. The fruit must not be transported simultaneously with other materials such as: chemicals or agricultural inputs, oil/fuels that may contaminate or impregnate smells to the fruit, wastes (rubbish), animals (any kind), foods of nature different from the fruit, different fruits that transfer smells or chemical residue to the fruit that has been agreed to deliver and others from non nutritional nature.
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**COLOR CHART**



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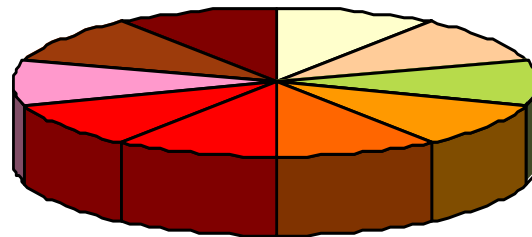


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# Exotic Juices

How do they fit into traditional formulae?

**Colour Range  
Exotic Fruit**



- Guanábana
- Lychee
- Lulo
- Physalis
- Lúcuma
- Acerola
- Tree Tomato
- Dragonfruit
- Borojó
- Tamarindo





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## Exotic Juices

### Conclusions

Term “*exotic*” has a broader sense than “*tropical*”

Multiple challenges and opportunities

Exotics offer many nutritional and health benefits

In some cases, companies evade the “*Novel Food Legislation*” and whet their competitive edge

Selected, palatable fruit with an unique taste and flavour harmonize with traditional fruit. The concept of using specific fruit rather than going in quest of a “*superfruit*” seems to be appropriate



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THANK YOU !  
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GRACIAS !  
MERCI !  
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