

Improved Value Chains through Food safety: Traceability, working condition, Sustainable Production

Case Study: Improved Product Safety and Quality for the Thai Fruit Juice Industry
By
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Partnerships :

SGF & GIZ

Time Line :

2012-2015

Pilot Plants :

6 fruit juice factories





Value Chain of Fruit Juice, THAILAND

FARMER

PROCESSOR

MARKET



International market

ASEAN & Local market

Broker & Middle man

Quality Control Unit



Important Findings on Fruit Juice Market in Thailand

- Thai fruit juice market enjoys continuous growth rate recently
- Total Value approx. 400 mil US
- Avg. growth rate is at 5% per year. (Tetrapack, 2016)
- Thai consumer 4 liters/person/year.

Local Market Share*

100% Fruit content → 40%

40% Fruit content → 10%

≤25% Fruit content → 50%

Thai fruit juice Export value

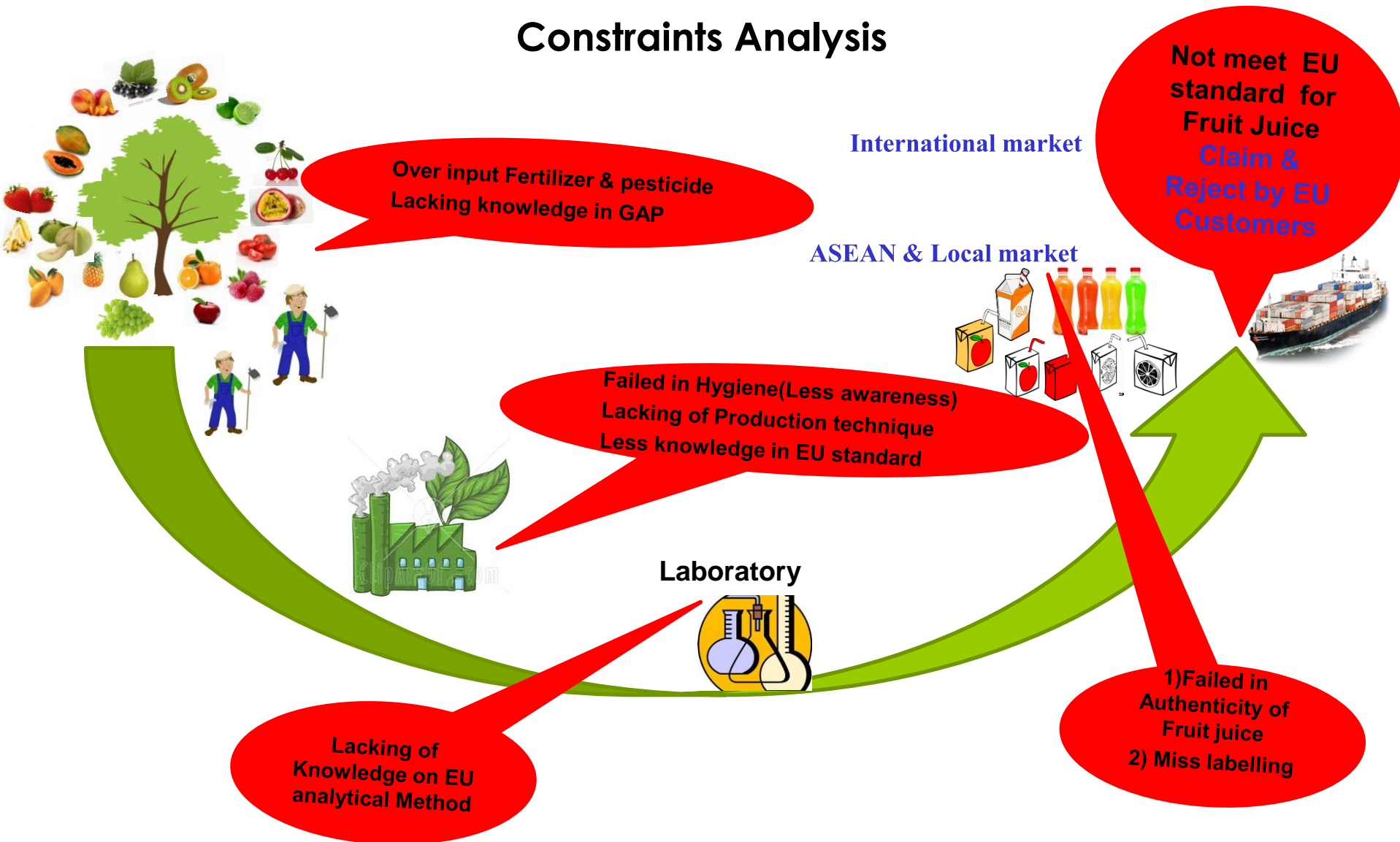
Fruit Juice Category	Sale Volume in (Million Baht)					
	2011	2012	2013	2014	2015	2016
Pineapple*	6,824	5,573	4,550	4,264	5,373	6,450
Orange	390	641	691	939	919	1,358
Apple	20	217	290	576	1,043	1,264
Grape	37	95	79	79	126	154

Export value for Pineapple products

Country	% Market share
USA	58
Netherland	15
German	9
Japan	8
England	8
Others	2



Constraints Analysis





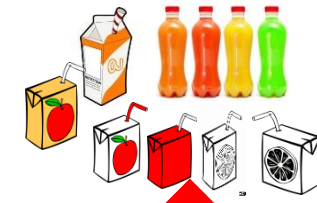
Value Chain and upgrading vision



GAP knowledge
Income

Product Safety & Quality
Good health for consumer

Export Volume



1

2

3

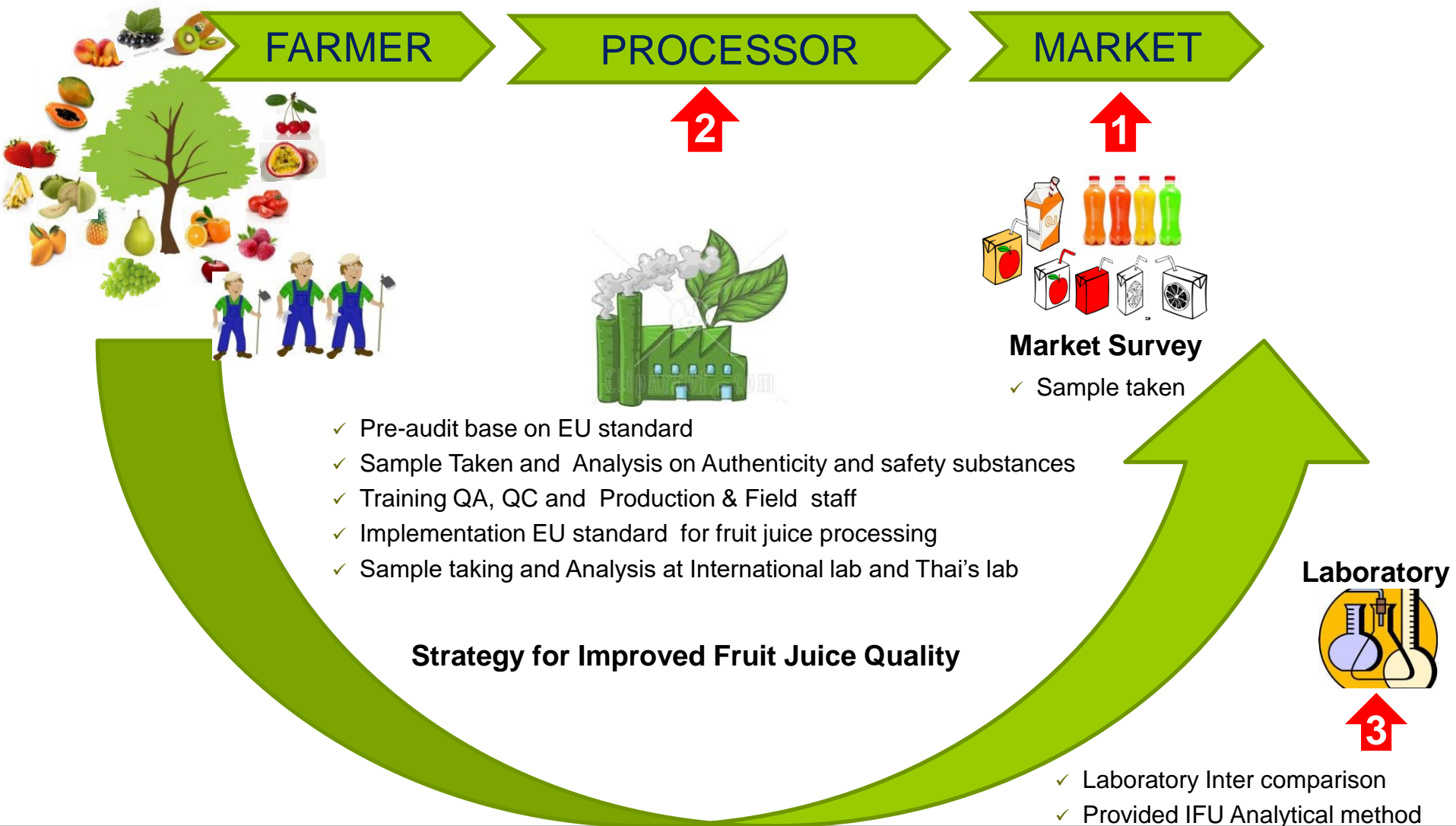
- product safety & quality
- Increase market opportunity
- Re-process product decreasing
- Cost reduction

Knowledge
Laboratory





Intervention and upgrading strategy



Activities and Results



Training on the job for Factory staff on Hygiene and production technique



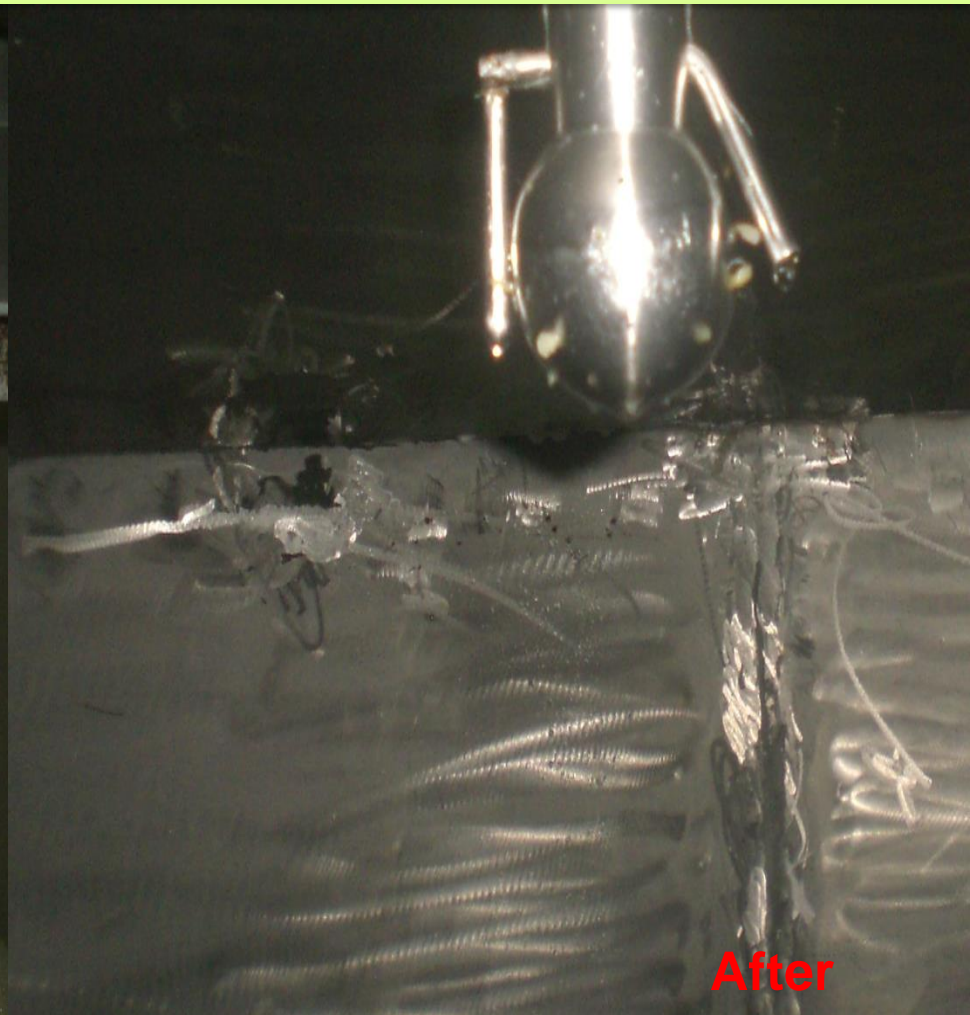
Raised Awareness on Hygiene



Raised Awareness on Hygiene



Improved Plant Hygiene (CIP effectiveness)



Improved Plant Hygiene (CIP effectiveness)





Training QA staff on RM quality

DESCRIPTION
and ripened good quality of orange. It is made from blending of concentrated
and sound fruit, with special added ingredients and flavoring as indicated in the
Orange juice concentrate (with orange cell), Sugar syrup, Beta-carotene,
(C), Natural aroma.

REQUIREMENTS

Classification

Food grade, Free from any toxic or noxious substances, Free for any foreign materials
Must conform to the food legislation of the country of destination. Shall not exceed any and all tolerances for pesticides and heavy metals relevant governing bodies for the country in which the material is used. In addition to any specific microbiological limitation listed in the material shall be free of pathogenic or toxigenic microorganisms and render the material adulterated or present a risk of growth to level of food borne illness in humans.
Documentation providing proof of this origin and absence of contamination material must be provided on request ("identity preservation") Must not contain genetically modified (GM) material, nor be derived from modified organisms

Requirements

Status	Certificate
Required	Certificate required before supply commences
Required	Major allergen declaration

REQUIREMENTS



Controlled Document
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08 MAY 2013

Application G

Control Fresh Fruit Quality: Visual check and



Reduced Chlorate contamination



Improved maintenance program

Before



After



Re-design in proper condition and easy to cleaning





Sample Taking and Analysis According with EU Fruit Juice standard



Provided EU Analytical Method and Inter-comparison Test

- Central Lab Thai
- National Food Institute
- Thailand Institute of Scientific and Technological Research
- SGS Thailand Co., Ltd.





The Impact of Value Chain



Experiences and Lesson Learnt

- There's no Thai's local Fruit Juice factory participated in this project. All fruit juices which declared 100% pure juice still be the question on authenticity (Result from market survey by EU laboratory found sugar/citric acid added and % of Fruit content not according with labelling)
- Increasing frequency of El Nino events due to climate change has caused drought stress in agriculture sector. This has negative effects on the supply of Pineapple fruits (Low fruit quality and quantity)
- Need more stakeholder to involve such as THAI FDA to monitoring fruit's quality In the Thai market and need to support their Laboratory analysis method according with EU standard.



Recommendation



FARMER



PROCESSOR




MARKET

Government: Raise awareness on Food safety
Consumers: Willing to pay for quality

Factory: Should do the contract farming with farmers
 Easy to control quality and quantity

Farmers: Thailand should have agricultural crop zoning system for pineapple farming.

This can make the farmers have stable price and stable fruit supply to factory. These will be effected on fruit quality. (decrease nitrate in fruit and reduce scramble for Pineapple fruit among factory.)



THANK YOU