



Sardine & Arenque



Qualitative Marketing Research

Focus Groups, Brazil, spring 2010



Commisioned by Nofima Marked, Tromsø,
Norway



Main findings;

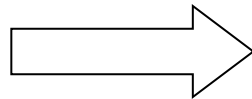
- ❖ Usage of sardines are divided into canned sardines and fresh sardines, some buy both types Some only buy it fresh because they prefer it to be natural. Others prefer canned sardines due to the convenience (they are more or less ready to be eaten).
- ❖ Dishes/recipes are the first associations people have in mind when asked about sardines. Examples were sardines with pasta (referring to canned sardines), fried sardines (referring to fresh sardines) and sardines as an appetizer. Sardines was also associated with healthiness containing Omega 3.
- ❖ Sardines are consumed much more often than bacalhau. This is due to the fact they are cheaper, and that the image of sardines is related to basic, simplistic and day-by-day food. Bacalhau represents the opposite.
- ❖ Sardines are not for special occasions but they are associated with food/snack to accompany beers with friends. Sardines can be used as an appetizer, and they can also be used in moments of improvisations.
- ❖ There are many ways Brazilian prepare sardines, but fresh type is mainly made using the pressure cooker, since some believe sardines become similar to the canned ones (spines soften), and fried sardines (either breaded or not). Sardines with pasta seems to be the dish mostly with canned alternatives. Both types are used in pizza, pies, *a la escabeche*, among many others;
- ❖ Sardines have no comparison with bacalhau, neither on taste, price, dishes to be made, moments to be eaten or feelings people have while eating them. They are two different food items according to participants' opinions: while sardines are basic and popular, bacalhau is associated to be chic and sophisticated;
- ❖ The name Arenque was unknown to the vast majority of the participants. Even the few who had heard the name could give a correct description.

I – Study's Objective

Norwegian herring is in some cases labeled “Sardinha Noruega” in the Brazilian market. However, the knowledge about how Brazilian prepare sardines is limited. The objective of this study is to obtain a deeper understanding about the consumption of sardines. Several focus groups were completed to gain some more basic information about sardines and the consumption of sardines.

II – Methodology & Samples

16 focus groups completed in the following cities:



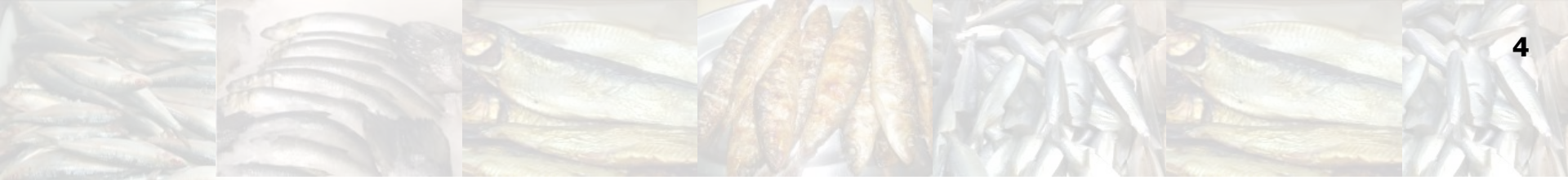
Cities	Number of Groups	
	C Class	A/B Class
São Paulo	2	2
Rio de Janeiro	2	2
Belo Horizonte	1	1
Brasília	1	1
Salvador	1	1
Recife	1	1
Total	8	8

III – Participants' Screening Criteria

- ❖ Woman and men (the majority were women)
- ❖ From 25 years-old to 70 years-old
- ❖ The purchaser and the person who prepared or guided preparing (great majority of recruited people were the ones preparing themselves)
- ❖ C, B and A social economic classes (groups were divided in C groups and B/A groups)

IV – Participants' Profile

Belo Horizonte	Rio de Janeiro		Recife
<p><u>Group 1 – C Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 28 to 55 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 2 – A/B Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 26 to 59 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>	<p><u>Group 1 – A/B Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 48 to 58 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 2 – A/B Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 26 to 42 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>	<p><u>Group 3 – C Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 47 to 69 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 4 – C Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 28 to 45 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>	<p><u>Group 1 – C Class</u> <input type="checkbox"/> 10 people <input type="checkbox"/> From 33 to 66 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 2 – A/B Class</u> <input type="checkbox"/> 10 people <input type="checkbox"/> From 28 to 57 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>
Brasília	São Paulo		Salvador
<p><u>Group 1 – C Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 27 to 64 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 2 – A/B Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 27 to 47 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>	<p><u>Group 1 – A/B Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 49 to 59 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 2 – A/B Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 26 to 45 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>	<p><u>Group 3 – C Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 46 to 68 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p> <p><u>Group 4 – C Class</u> <input type="checkbox"/> 8 people <input type="checkbox"/> From 26 to 43 years-old <input type="checkbox"/> All women <input type="checkbox"/> All are decision makers</p>	<p><u>Group 1 – C Class</u> <input type="checkbox"/> 9 people <input type="checkbox"/> From 25 to 51 years-old <input type="checkbox"/> 8 women and 1 man <input type="checkbox"/> All are decision makers</p> <p><u>Group 2 – A/B Class</u> <input type="checkbox"/> 10 people <input type="checkbox"/> From 25 to 56 years-old <input type="checkbox"/> 8 women and 2 men <input type="checkbox"/> All are decision makers</p>



V – FINDINGS

V.1 – Usage & types of sardine



Fresh / natural Sardines

X



Canned Sardines

- ❖ Interviewed consumers belong to one of three groups: Those who only eat fresh sardines, the ones only eating canned sardines and the ones eating both types. Some did not know sardines were sold fresh. Very few said they disliked sardines and there was no distinction related to age or social class among those consuming sardines.
- ❖ The ones only buying and consuming fresh sardines do it because of freshness and possibilities of making different dishes than you can do with canned. The ones not choosing the fresh sardines, rejected it due to unpleasant smell. Some claimed they only bought fresh sardines without head, tail and intestines (cleaned).
- ❖ Most of people think sardines come from Brazil, but some mentioned “Norueguesa” and “Portuguesa”. The “common” sardines are from Brazil – some mentioned Lage in Santa Catarina.
- ❖ The ones only buying canned chose it because of convenience.

Citations:

"I like fresh sardines, my husband knows how to buy it, he watches and tells 'this one you can buy because it's really fresh' " (woman, Belo Horizonte, C class, 28 years-old)

"I only eat canned sardines" (woman, Belo Horizonte, C class, 35 years-old)

"I buy either canned sardines and fresh sardines" (woman, Belo Horizonte, A/B class, 26 years-old)

"I prefer buying natural sardines" (woman, Belo Horizonte, A/B class, 43 years-old)

"I like canned sardines because it's more practical" (woman, Brasília, C class, 28 years-old)

"At home, we only eat canned sardines" (woman, Brasília, C class, 33 years-old)

"I don't like it fresh because I don't like the smell" (woman, Brasília, C class, 27 years-old)

"My husband buys it once in a while, but I don't like sardines" (woman, Brasília, A/B class, 47 years-old)

"I only buy it fresh" (woman, Brasília, A/B class, 35 years-old)

"I like to buy fresh sardine, but only if it's cleaned, with no head and already treated" (woman, Recife, A/B class, 27 years-old)

"I prefer it canned because it's more practical" (woman, Salvador, A/B class, 38 years-old)

"I buy fresh sardines sometimes" (woman, Rio de Janeiro, A/B class, 50 years-old)

"There are Lage sardines and sardines from Norway" (woman, Rio de Janeiro, A/B class, 42 years-old)

"Smaller sardines are better because they have less spines" (woman, Rio de Janeiro, A/B class, 29 years-old)

"I thought sardines were all the same, I thought some are smaller because they just didn't grow" (woman, Rio de Janeiro, C class, 27 years-old)

"It needs to be fresh" (woman, São Paulo, A/B class, 53 years-old)

"Sardines are too fatty, I think it's not good, specially for the kids" (woman, São Paulo, A/B class, 28 years-old)

"I don't know about sardines, only canned ones" (woman, São Paulo, A/B class, 38 years-old)

"I rarely buy the fresh one" (woman, São Paulo, C class, 40 years-old)

"I just like canned, because the fresh stinks" (woman, São Paulo, C class, 32 years-old)

V.2 – Words associated with sardine

- ❖ First associations to sardines are related to dishes/recipes and what sardines can tie up with. Other associations refer to the preparation of sardines, their smell, types of presentation (fresh versus canned), fish for the poor, benefits for health, spines, canned sardine brand, among others;
- ❖ Except for the groups in Salvador and C class group 1 (older people) in São Paulo, all others mentioned a dish or an accompaniment as the first thing they thought when thinking of sardines. “**Sardines with pasta**” and “**Sardine as an appetizer**” were the ones mentioned most often
- ❖ 9 of the groups cited **fried sardines** as the first thing they thought about sardines;
- ❖ At least 7 groups meant “**canned sardines**” as their first association to sardines.
- ❖ 6 groups mentioned “**Omega 3**” as the first association to sardines.
- ❖ One person mentioned “**Coqueiro**”, a brand of canned sardine.
- ❖ 3 groups cited that sardines have “**a lot of spines**” while one person from one group just mentioned the opposite: “**few spines**”. Spines, either a lot or few, were the first associations to sardines for some people ;
- ❖ In the tables on the next pages, we have summarized the findings

1st Mind Associations to Sardines

RELATED TO:	1st MIND ASSOCIATIONS	BH C	BH A/B	BSB C	BSB A/B	REC C	REC A/B	SAL C	SAL A/B	RJ A/B 1	RJ A/B 2	RJ C 1	RJ C 2	SP A/B 1	SP A/B 2	SP C 1	SP C 2
Dishes / Accompaniments	Sardines with lemon	█															
	Potatoes Salad	█															
	Olive Oil	█															
	Sandwich of sardine	█															
	Appetizer	█										█	█	█			
	With Beer		█	█									█	█			
	With Pasta		█	█	█								█				
	Pizza of sardine									█							
	With lettuce											█					
	Breaded							█									
	With a salad												█				
	A la Escabeche										█		█	█			
	Sardine pie				█												
Pate of Sardines														█		█	
Preparation	In the pressure cooker	█												█			
	Fried sardines			█		█	█	█	█	█			█	█	█	█	█
	Easy to prepare							█				█		█			
	Don't like to clean it						█										█
Smell	Strong smell			█	█	█											█
	Stinks / bad smell														█		█
Fresh x Canned	Fresh in a sack			█													
	Fresh										█						
	Squeezed in a can /inside a can / canned			█	█	█	█	█			█						█
	Canned ones has become more expensive than before			█													
	Big red can						█										
Poorness	Fish for the poor / Poorness					█						█					
Health Benefit	has Omega 3					█		█	█	█		█		█			
	It has vitamins					█		█	█	█		█		█			
	Good for health					█				█							



1st Mind Associations with Sardines (cont)

RELATED TO:	1st MIND ASSOCIATIONS	BH C	BH A/B	BSB C	BSB A/B	REC C	REC A/B	SAL C	SAL A/B	RJ A/B 1	RJ A/B 2	RJ C 1	RJ C 2	SP A/B 1	SP A/B 2	SP C 1	SP C 2
Price	Cheap Fish																
	Wonderful price																
Adjectives	Delicious / Very tasteful																
	Don't like it																
	Practical																
	I love it																
Spines	There are no spines																
	A lot of spines																
Brand	Coqueiro (brand of canned)																
Others	Fishermen's nets																
	Quantity																

Citations:

"I love it canned!" (woman, São Paulo, C class, 55 years-old)

"Fresh sardines stink!" (woman, São Paulo, C class, 26 years-old)

"I think of sardinepate" (woman, São Paulo, C class, 43 years-old)

"I like pie made with canned sardines" (woman, Brasília, C class, 48 years-old)

"It reminds of a big red can" (woman, Recife, A/B class, 39 years-old)

"Canned sardines with pasta is delicious" (woman, Rio de Janeiro, C class, 34 years-old)

"Many spines" (woman, São Paulo, A/B class, 25 years-old)

"Very practical" (woman, São Paulo, A/B class, 45 years-old)

"Cheap fish" (woman, São Paulo, C class, 46 years-old)

"I love it!" (woman, São Paulo, C class, 68 years-old)

"I just don't like to clean it" (woman, São Paulo, C class, 34 years-old)

"Only canned!" (woman, São Paulo, A/B class, 32 years-old)

"Sandwich of sardines I make is very good" (woman, Belo Horizonte, C class, 54 years-old)

Citations:

"Fried sardine with lemon" (woman, Belo Horizonte, C class, 55 years-old)

"I only eat sardine as an appetizer" (woman, Belo Horizonte, C class, 43 years-old)

"I think of sandwich with canned sardine, very tasty" (woman, Belo Horizonte, C class, 48 years-old)

"Beer and pasta" (woman, Belo Horizonte, A/B class, 28 years-old)

"I like fresh sardine fried" (woman, Brasília, C class, 33 years-old)

"I think of those fishermen using those nets..." (woman, Brasília, C class, 33 years-old)

"I think of beer" (woman, Brasília, C class, 38 years-old)

"When I think of sardines, I think of the strong smell" (woman, Brasília, C class, 64 years-old)

"When I think of sardines, I think of quantity" (woman, Brasília, C class, 45 years-old)

"I think of pasta with sardines" (woman, Brasília, C class, 37 years-old)

"I think of fresh sardines in a sack" (woman, Brasília, C class, 27 years-old)

"I think of them all squeezed in the can" (woman, Brasília, C class, 38 years-old)

"Sardine is a fish for the poor" (woman, Recife, C class, 35 years-old)

"Sardine is a small fish containing Omega 3" (woman, Recife, C class, 42 years-old)

"Sardine has a lot of spines, but it's delicious and good for health" (woman, Recife, C class, 56 years-old)

"I don't like its smell, it's too strong" (woman, Recife, C class, 66 years-old)

"Sardine is a fish coming in a can" (woman, Recife, A/B class, 48 years-old)

"Sardine has Omega 3, it's a healthy fish" (woman, Recife, A/B class, 27 years-old)

"Sardine has a very strong smell, it even sticks to your breath. You can't be in a party with that breath" (Recife, A/B Class, woman 27 years-old)

Citations:

"A fish with many spines" (woman, Salvador, C class, 43 years-old)

"A cheap fish" (woman, Salvador, C class, 32 years-old)

"It's a fish rich in Omega 3" (woman, Salvador, C class, 25 years-old)

"Canned sardines" (woman, Salvador, C class, 51 years-old)

"Wonderful price" (woman, Salvador, A/B class, 56 years-old)

"Easy to prepare" (woman, Salvador, A/B class, 25 years-old)

"Rich in Omega 3" (woman, Salvador, A/B class, 38 years-old)

"Pizza with sardines" (woman, Rio de Janeiro, A/B class, 50 years-old)

"Cheap and delicious" (woman, Rio de Janeiro, A/B class, 58 years-old)

"Good for health" (woman, Rio de Janeiro, A/B class, 48 years-old)

"Very tasteful" (woman, Rio de Janeiro, C class, 56 years-old)

"Omega 3" (woman, Rio de Janeiro, C class, 60 years-old)

"Easy to prepare" (woman, Rio de Janeiro, C class, 49 years-old)

"Appetizer" (woman, Rio de Janeiro, C class, 28 years-old)

"Fried is delicious!" (woman, Rio de Janeiro, C class, 34 years-old)

"With lettuce" (woman, Rio de Janeiro, C class, 45 years-old)

"Sardines remind me of poverty" (woman, Rio de Janeiro, C Class, 26 years-old)

"Sardines a la escabeche" (woman, São Paulo, A/B class, 55 years-old)

"Fried as an appetizer" (woman, São Paulo, A/B class, 59 years-old)

"I don't like it, don't buy it and don't prepare it" (woman, São Paulo, A/B class, 49 years-old)

"It has Omega 3, it's good for our head and health" (woman, São Paulo, A/B class, 56 years-old)

"It's a practical fish, easy to remove the spines" (woman, São Paulo, A/B class, 51 years-old)

V.3 – Frequency of sardine consumption

- ❖ Except for the few who did not eat sardines, the consumption is much more frequent than bacalhau. Participants reported eating it from a few times a year to weekly.
- ❖ Frequency of consumption seems to be independent of social class and city;
- ❖ Higher frequency on purchasing and eating sardines is mainly driven by price.

Citations:

"I eat it every 15 days" (woman, Recife, C class, 45 years-old)

"Once a week" (woman, Recife, A/B class, 57 years-old)

"I buy around 5 cans of sardine per month" (woman, Belo Horizonte, A/B class, 38 years-old)

"I almost never eat sardine, I don't like it" (woman, Belo Horizonte, A/B class, 43 years-old)

"I buy it every month" (woman, Brasília, C class, 48 years-old)

"I buy fresh sardines at least once a month, I think sardines are very healthy, when I was a child, my father used to tell me a lot about sardines' nutritive value" (woman, Brasília, C class, 64 years-old)

"I buy it around 3 or 4 times a year" (woman, Brasília, A/B class, 48 years-old)

"I buy canned sardine every month" (woman, Recife, A/B class, 45 years-old)

"From 15 to 20 times a year" (woman, Salvador, C class, 49 years-old)

"Around 10 times a year" (woman, Salvador, C class, 51 years-old)

"It has Omega 3, so I prepare it once or twice a week" (woman, Salvador, A/B class, 56 years-old)

"Around 4 times a year" (woman, Salvador, A/B class, 25 years-old)

"Every time I want" (woman, Rio de Janeiro, C class, 56 years-old)

"In my home, we eat it around twice a year, because when there is no sardine period, they are too small" (woman, São Paulo, A/B class, 53 years-old)

"I buy whenever I want it, around every 2 months" (woman, São Paulo, A/B class, 51 years-old)

"Around once a month" (woman, São Paulo, C class, 48 years-old)

"Around every 15 days" (woman, São Paulo, C class, 62 years-old)

"Twice a month" (woman, São Paulo, C class, 26 years-old)

"I eat it every Tuesday because it's open market day" (woman, Rio de Janeiro, C class, 29 years-old)

V.4 – Places to purchase sardines

Citations:

Supermarkets seems to be the main place people go, but some other places were also mentioned, see the list below. Among supermarkets, Carrefour was most often cited from participants followed by Extra. Some people prefer open markets because they think this place offers fresher fish. Others prefer supermarkets because they think the products have a higher turn-around, meaning they could find newer/fresher products.

- ❖ At Mercado Central (Belo Horizonte, A/B Class)
- ❖ At Carrefour (Belo Horizonte, A/B Class; Brasília A/B; São Paulo, A/B Class; São Paulo, C Class)
- ❖ In supermarkets (Belo Horizonte, A/B Class; Brasília, C Class; Recife, C Class; Salvador, C Class; Salvador, A/B Class; Rio de Janeiro, C Class; Rio de Janeiro, A/B class; São Paulo, A/B Class; São Paulo, C Class)
- ❖ At the fishmonger (Brasília, C Class; Recife, C class)
- ❖ At Extra (Brasília, A/B Class)
- ❖ At open markets (Recife, A/B Class; Rio de Janeiro, C Class; São Paulo, A/B Class; São Paulo, C Class)
- ❖ Mobile outlet passing by my house (Salvador, C class)
- ❖ Everywhere (Salvador, C class)
- ❖ Bakery (Salvador, C Class)
- ❖ Fishery (Salvador, C Class; Rio de Janeiro, C Class; São Paulo, A/B Class)
- ❖ Butchery (Salvador, C Class)
- ❖ Beach kiosk (Salvador, A/B Class)

“ Nowadays, it's not that usual to buy at the fishmongers anymore, I buy in the supermarkets, it seems there is more turn around of products, they are always fresh” (woman, Brasília, C Class, 56 years-old)

“ In the supermarkets, it's hard to find it fresh” (woman, Rio de Janeiro, C Class, 40 years-old)

“ I prefer buying it in the open market, because it rotates more, it's more fresh. In the supermarket it starts to be come black in color because people don't buy it frequently” (woman, São Paulo, C Class, 37 years-old)



V.5 – Common Average Size of sardine

Most of the participants agreed upon sardines measuring approx 15 cm on average, but they could vary from 10 cm to 20 cm. Some mentioned that size could differ depending on types, they mentioned the Portuguese sardines type (some think they are smaller and others they are bigger than the others), Lage type and Norwegian type. One person in São Paulo compared it to the size of a fish called “Cavalinha”. Please see the answers below:

- ❖ Around 15 cm (Belo Horizonte, C Class; Recife, C Class; São Paulo, A/B Class; São Paulo, A/B Class; São Paulo, C Class)
- ❖ From 10cm to 15 cm (Belo Horizonte, A/B Class; Rio de Janeiro, A/B Class)
- ❖ From 15 cm to 20 cm (Brasília, C Class; Recife, A/B Class; Rio de Janeiro, C)
- ❖ The size of a hand (Brasília, A/B Class; Salvador, C Class; Salvador, A/B Class)
- ❖ The Portuguese is smaller than the others (Rio de Janeiro, A/B Class)
- ❖ The Norwegian is longer, the common size is Lage (Rio de Janeiro, A/B Class)
- ❖ The Portuguese is bigger than the others (Rio de Janeiro, C Class)
- ❖ Lage is the biggest (Rio de Janeiro, C Class)
- ❖ Cavalinha's size when it's adult (São Paulo, A/B Class)

V.6 – When to consume sardines

❖ According to participants, sardine is practically an everyday food, independently of social class and city. Sardines are **not, like bacalhau, a special food for Brazilians**, thus not being prepared for special occasions/moments;

❖ It is also felt that sardines are not a type of food people can offer in a lunch or dinner for guests, that means, it's not a fish for inviting special people, since it's considered to be popular. The exception could be (for a person in Recife and another in Salvador) if someone arrives unexpectedly. Then canned sardines could work

❖ Sardines can be used in some festive moments as an appetizer, never as the main dish;

❖ Sardines are also nice when you are relaxing and drinking beer with friends in a bar or watching a soccer game, usually in weekends;

Citations:

"Sardine is prepared everyday due to practicability" (woman, Belo Horizonte, A/B Class, 39 years-old)

"I eat grilled sardine when I'm on diet" (woman, Belo Horizonte, A/B Class, 54 years-old)

"At home, we almost never eat sardines, I even forget about them" (woman, Brasília, C Class, 38 years-old)

"I eat it every time I want it, it's good with beer" (woman, Recife, A/B Class, 27 years-old)

"Since sardines are cheap, we always buy, we eat them every week" (woman, Brasília, C Class, 64 years-old)

"Fresh sardine is not when you are receiving guests at home, it's not practical" (woman, Recife, A/B Class, 37 years-old)

"I'm a daughter of a fisherman, so I love fish, I eat it always, because sardine is cheap" (woman, Brasília, A/B Class, 47 years-old)

"Canned sardines is easy to prepare quickly when you need to receive an unexpected guest" (woman, Recife, A/B Class, 43 years-old)

"I'm used to prepare it in an improvisation situation, usually canned sardines" (woman, Salvador, C Class, 44 years-old)

"I prefer making it in weekdays, in no special moments" (woman, Salvador, C Class, 25 years-old)

Citations:

"I eat it almost everyday" (woman, Salvador, A/B Class, 56 years-old)

"I'm not used to see fresh sardines in the supermarket, so whenever I find it, I buy and prepare it" (woman, Salvador, A/B Class, 51 years-old)

"It can be eaten as an appetizer, in lunch time or in dinner time" (woman, Salvador, A/B Class, 56 years-old)

"Sometimes I prepare sardines on Easter, they are the appetizers, before serving bacalhau" (woman, São Paulo, A/B Class, 56 years-old)

"I eat sardines when I get sick of meat and chicken" (woman, Rio de Janeiro, C Class, 31 years-old)

"There is no special day for eating sardines, I eat it whenever I want it" (woman, São Paulo, A/B Class, 58 years-old)

"In moments a person cannot afford to buy bacalhau, she buys sardines" (woman, São Paulo, A/B Class, 55 years-old)

"You can serve it on Christmas or New Years, but not everyone will eat it. It is hard to please everybody with sardines" (woman, São Paulo, A/B Class, 49 years-old)

"It's a day-by-day food, if you don't have meat that day, you can just put canned sardine on the plate, it will be perfect" (woman, São Paulo, A/B Class, 31 years-old)

"It's not a special dish" (woman, São Paulo, A/B Class, 33 years-old)

"I like to eat it at lunch time" (woman, São Paulo, A/B Class, 59 years-old)

"You offer sardines in festive days only if you don't have money to buy bacalhau" (woman, São Paulo, C Class, 57 years-old)

"It's a day-by-day food and it's the type of dish you can't keep. It needs to be eaten right after you've prepared it" (woman, São Paulo, C Class, 39 years-old)

"It's good for eating in the weekends with beer" (woman, São Paulo, A/B Class, 28 years-old)

"I like to eat sardines when there is a soccer game" (woman, São Paulo, A/B Class, 49 years-old)

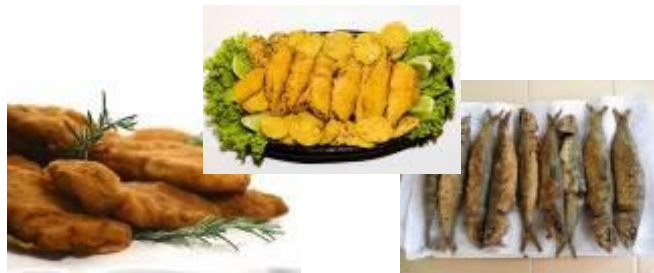
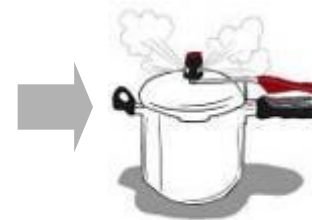


V.7 – Ways of Preparing and Eating Sardine

❖ It seems there are many ways of preparing and eating sardines. No real differences among cities were observed. It seems sardines is not a regionalized food (except for one unique person in Recife who mentioned she likes to eat sardine with “*cuscuz*”) and no special type of dish is mainly prepared in one region that is not prepared in another.

❖ Below, see the list of ways sardine is prepared or with what sardines can be accompanied:

➤ Fresh sardines are prepared in the **pressure cooker** by many participants, this way was one of the most mentioned. According to the participants, this makes fresh sardines being similar to the canned sardines and its spines soften. Some use only water and others temper with tomatoes.



➤ **Fried sardines** were also another way mentioned by many participants. Sometimes breaded and fried (breadcrumbs). Fried sardines go with garlic, lemon, etc...



➤ **Sardines with pasta** were cited by many, but this recipe is always based on canned sardines:

❖ Other combinations & dishes mentioned:

➤ Sardines with Manioc:



➤ Sardines with Rice:



➤ Sandwich of sardines:



➤ Sandwich with beers:



➤ Sardines as an appetizer:



➤ Sardines with Salad:



➤ Pate of Sardines:



➤ Sardines with Smashed Potatoes:



➤ Sandwich with lemon:



➤ Sardines with Coke



➤ Pie of Sardines



➤ Sardines with Onion & Pepper



➤ Sardines roasted in the oven



➤ Sardines roasted like barbecue



➤ Omelet of Sardines



➤ Sardines *a la escabeche*



➤ Pizza of Sardines



➤ Mayonnaise salad with Sardines



➤ Sardines with *Cuscuz*



➤ Sardines filled



Citations:

"I like to prepare it in the pressure cooker, it becomes like canned sardine" (Belo Horizonte, C Class, woman, 41 years-old)

"There is nothing better than eating sardine with salt and olive oil" (Belo Horizonte, C Class, woman, 32 years-old)

"I cook fresh sardine in the pressure cooker with tomatoes, I buy it already cleaned on trays, I like to eat it with pasta" (Belo Horizonte, A/B class, woman, 59 years-old)

"I prefer buying it fresh because I like to prepare fried sardine" (Belo Horizonte, A/B Class, woman, 33 years-old)

"I buy canned sardine, it already comes with lemon or tomatoes, it's very practical. It has Omega 3 that we have to consume and it's cheap and healthy" (Belo Horizonte, A/B class, woman, 42 years-old)

"I like to prepare fried sardine with manioc and fresh sardine with rice" (Belo Horizonte, A/B Class, woman, 36 years-old)

"Sardine can be done fried, in the pressure cooker, as a pie, in the pasta, as a pate, they are all good" (Belo Horizonte, A/B Class, woman, 55 years-old)

"I like it as an appetizer" (Brasília, C Class, woman, 55 years-old)

"I like canned sardine pie" (Brasília, C Class, woman, 27 years-old)

"I fry it with garlic" (Brasília, C Class, woman, 56 years-old)

"I like fried fish, sardine gets really crunchy, we fry it more to soften the spines, it's very delicious" (Brasília, C Class, woman, 32 years-old)

"I make it in the pressure cooker, I include a glass of oil and a glass of vinegar, it seems like the canned ones, even the spines seem to melt" (Woman, Brasília, C Class, woman, 27 years-old)

"I like to eat it with pasta and wine" (Woman, Brasília, C Class, woman, 32 years-old)

"I like it as a pate" (Woman, Brasília, C Class, woman, 56 years-old)

"I like it with white rice and mashed potatoes" (Woman, Brasília, C Class, woman, 64 years-old)

Citations:

"I like to fry them and soak it with lemon"
(Brasília, A/B Class, woman, 41 years-old)

"I like to eat it with beer" (Brasília, A/B Class, woman, 27 years-old)

"I always hear people mention sardines with beer. I think it is a good combination"
(Brasília, A/B Class, woman, 34 years-old)

"I cook it in the pressure cooker with tomatoes" (Recife, C Class, woman, 38 years-old)

"I temper it, include salt and lemon and bake it in the oven" (Recife, C Class, woman, 45 years-old)

"I prefer it fried" (Recife, A/B Class, woman, 57 years-old)

"When we cook it in the pressure cooker, it's identical to canned sardine, all spines get out" (Recife, A/B Class, woman, 45 years-old)

"I always prepare it with tomatoes, onions, pepper, garlic, a pinch of colorale and salt in the amount you want. You put all in the blender, with no tail neither head, then you put it in the pressure cooker and it becomes a cream"
(Recife, A/B Class, woman, 57 years-old)

"I clean it, take the head out, cut it in the middle, roll it in the egg, pass on the breadcrumbs and fry it"
(Recife, A/B Class, woman, 43 years-old)

"I make it breaded" (Salvador, C Class, woman, 51 years-old)

"I make pie, filled with sardines and olives"
(Salvador, C Class, woman, 28 years-old)

"I like sardines with beer" (woman, São Paulo, C Class, 51 years-old)

"I like it as an appetizer with beer" (woman, São Paulo, C Class, 27 years-old)

"I fry it with breadcrumbs" (Salvador, C Class, woman, 32 years-old)

"I cook it in the pressure cooker only with little water" (Salvador, C Class, woman, 25 years-old)

"With tomatoes and onions, you make a paste with them and fill it inside the sardine"
(Rio de Janeiro, A/B Class, woman, 52 years-old)

"It's delicious with vinaigrette, you sauce it normally, then fry the sardines, make a vinaigrette sauce, put sardine together and cook it" (Rio de Janeiro, A/B Class, woman, 48 years-old)

Citations:

"I like it a la escabeche" (Rio de Janeiro, A/B Class, woman, 38 years-old)

"I like to cook it in the pressure cooker, it's delicious, like canned sardines, when pressure comes, you turn off and leave it that way" (Rio de Janeiro, A/B Class, woman, 28 years-old)

"I roll it in the corn flour and fry it" (Rio de Janeiro, A/B Class, woman, 26 years-old)

"I don't like to prepare sardines, they have a strong smell" (woman, Rio de Janeiro, A/B class, 28 years-old)

"I like sandwich of sardines (woman, Rio de Janeiro, A/B class, 35 years-old)

"I like fried sardines with salad and white rice, simple like that" (woman, Rio de Janeiro, A/B class, 42 years-old)

"I like to cook it in the pressure cooker with tomatoes, onions and pepper" (Rio de Janeiro, C Class, woman, 69 years-old)

"I like to cook it in the pressure cooker putting one layer of sardine and one layer of sauce" (Rio de Janeiro, C Class, woman, 55 years-old)

"Sardines are terrible with beans" (Rio de Janeiro, C Class, woman, 69 years-old)

"Sardines do not match with wines, but are good with Coke" (Rio de Janeiro, C Class, woman, 58 years-old)

"Canned sardines with pasta is great!" (Rio de Janeiro, C Class, woman, 28 years-old)

"You can make omelet, pizza and pies with canned sardines!" (Rio de Janeiro, C Class, woman, 31 years-old)

"I like it a la escabeche" (São Paulo, A/B Class, woman, 56 years-old)

"I like it fried" (São Paulo, A/B Class, woman, 55 years-old)

"I like it breaded" (São Paulo, A/B Class, woman, 53 years-old)

"I prepare it in the pressure cooker and also inside the bread" (São Paulo, A/B Class, woman, 59 years-old)

"Sardines are offered a la escabeche in social events to be eaten with bread" (São Paulo, A/B Class, woman, 56 years-old)

Citations:

"Sardines with lemon are delicious!" (São Paulo, A/B Class, woman, 54 years-old)

"If you include pepper and olive oil, you can even think it's Anchova!" (São Paulo, A/B Class, woman, 52 years-old)

"I like pate of sardine!" (São Paulo, A/B Class, woman, 45 years-old)

"I've already eaten it roasted, like barbecue" (São Paulo, A/B Class, woman, 38 years-old)

"I was willing to eat sardine these days, then I ate canned sardines with salad" (São Paulo, A/B Class, woman, 40 years-old)

"I prepare it in the pressure cooker" (São Paulo, A/B Class, woman, 45 years-old)

"I roast it like barbecue" (São Paulo, A/B Class, woman, 31 years-old)

"I bake it, it breaks in the oven" (São Paulo, A/B Class, woman, 36 years-old)

"Sardines match with lemon, coriander, rosemary and white pepper" (São Paulo, A/B Class, woman, 27 years-old)

"I like to eat it with salad of tomato and lettuce" (woman, São Paulo, C Class, 68 years-old)

"I like it with pepper, coriander, parsley, I take off the spines and braise it" (woman, São Paulo, A/B Class, C years-old)

"I prepare it with spines, because it breaks in the oven" (woman, São Paulo, C Class, 55 years-old)

"I take out its spines, pass it in the breadcrumbs, fry it and eat it with cheese, ham and fried banana, it's wonderful!" (Salvador, A/B Class, woman 49 years-old)

V.8 – Comparison with Bacalhau

- ❖ It's a common sense among all cities, ages and social classes that bacalhau is a refined dish while sardine is the opposite;
- ❖ According to the participants, the only similarity between them is the fact both are fish and both have strong smell;
- ❖ While sardines are popular or a food for the “poor”, bacalhau is a sophisticated dish;
- ❖ While bacalhau is considered to be expensive, sardines are considered to be very cheap;
- ❖ Bacalhau is the type of food people offer in a special dinner/lunch, but sardines are not considered the type of food for receiving guests, it's uninvited;
- ❖ Dishes to be done with bacalhau can never be done with sardines, the way of preparing and serving them are completely different;
- ❖ Bacalhau is considered to be a “1st line product” while sardine is a “2nd line product”;
- ❖ Bacalhau is an elaborated dish while sardine is a simple dish;
- ❖ While sardines are a day-by-day food, bacalhau is for special moments;
- ❖ Sardines can be served as an appetizer while bacalhau is the main meal;
- ❖ Sardines have more spines than bacalhau;
- ❖ Practically “everyone” likes bacalhau while sardines, not all;
- ❖ You eat sardines in a bar while bacalhau is eaten in a restaurant;
- ❖ Sardines are basic while bacalhau is “chic”.

Citations:

"There is a huge difference: in price, taste, smell, way of preparing" (Belo Horizonte, C Class, woman 55 years-old)

"Sardine is easier than bacalhau to prepare" (Belo Horizonte, C Class, woman 28 years-old)

"If you invite people to eat sardine it will be looked upon as very strange Bacalhau is better because is more sophisticated" (Belo Horizonte, C Class, woman 36 years-old)

"Sardine is good with beer while bacalhau is good with wine" (Belo Horizonte, C Class, woman 41 years-old)

"Bacalhau has nothing in common with sardine" (Belo Horizonte, A/B Class, woman 39 years-old)

"Bacalhau is very different from sardine, it has another taste" (Belo Horizonte, A/B Class, woman 59 years-old)

"Bacalhau has more status, it's associated with a refined taste, not for everyday, it's special, for gathering family, it reminds of many good things, sardine is popular, an everyday-food" (Belo Horizonte, A/B Class, woman 59 years-old)

"I like sardine, but it has no comparison with bacalhau" (Belo Horizonte, A/B Class, woman 26 years-old)

"Bacalhau is great, but sardine you can eat at least once a week because it's more practical and very healthy" (Belo Horizonte, A/B Class, woman 36 years-old)

"I think we can compare bacalhau with sardine in my opinion, but bacalhau has much more salt" (Brasília, C Class, woman 45 years-old)

"The only similarity between them is the fact they are fish, but by the taste, we can never compare them" (Brasília, C Class, woman 64 years-old)

"Ways of preparing them are completely different, you can never get a bacalhau and fry it, for example" (Brasília, C Class, woman 45 years-old)

"Bacalhau you eat 2 to 3 times a year, but sardine is more practical, you can eat it everyday" (Brasília, C Class, woman 64 years-old)

"Bacalhau can be eaten with beans and salad, sardine you eat with smash potatoes, for example" (Brasília, C Class, woman 28 years-old)

"Both are fish, but it's like bacalhau is like a 1st line product while sardine is a 2nd line product, this is how I compare them" (Brasília, A/B Class, woman 47 years-old)

Citations:

"Bacalhau tray costs R\$ 39,90 and sardine trays costs R\$ 3" (Brasília, A/B Class, woman 43 years-old)

"Sardine is faster to prepare while bacalhau takes longer, it's a more elaborated dish" (Brasília, A/B Class, woman 29 years-old)

"Bacalhau is more sophisticated, so every one likes it, different from sardine" (Recife, C Class, woman 33 years-old)

"Sardine is more popular than bacalhau" (Recife, C Class, woman 66 years-old)

"Sardine is a daily food while bacalhau is for special moments" (Recife, C Class, woman 56 years-old)

"Sardine is good for health, but it's not a refined dish" (Recife, C Class, woman 48 years-old)

"Among the main differences between them, there is the salt (bacalhau has more), timing for preparing (bacalhau needs more)" (Recife, A/B Class, woman 57 years-old)

"Sardine is easier to prepare, because bacalhau has the process of desalting, having it previously soaked on water" (Recife, A/B Class, woman 48 years-old)

"Everyone can afford to buy sardine, bacalhau not" (Recife, A/B Class, woman 27 years-old)

"You can't offer guests a sardine, it's not good. Bacalhau is the opposite" (Recife, A/B Class, woman 37 years-old)

"We can prepare much more dishes with bacalhau than with sardines" (Salvador, C Class, woman 38 years-old)

"Bacalhau is chic, sardines not" (Salvador, C Class, woman 25 years-old)

"Sardines are more like appetizers, you can't really offer it as the main meal like bacalhau" (Salvador, C Class, woman 49 years-old)

"I cook it in the pressure cooker, it preserves the entire sardine" (Salvador, A/B Class, woman 56 years-old)

"Bacalhau has different types, Porto, Saithe, etc., sardines do not have that" (woman, Salvador, A/B class, 49 years-old)

"Price, taste and size, all is different from each other" (woman, Salvador, A/B class, 25 years-old)

"Nobody will invite anybody to a sardine dinner" (Salvador, C Class, woman 51 years-old)

Citations:

"Bacalhau is much more sophisticated than sardine" (Salvador, A/B Class, woman 43 years-old)

"We prepare sardines almost daily, bacalhau is for special moments" (Salvador, A/B Class, woman 38 years-old)

"Bacalhau is a matter of tradition, sardines not" (Salvador, A/B Class, woman 56 years-old)

"You can invite anyone to eat bacalhau, but not sardine, not everyone will like sardines" (Rio de Janeiro, A/B Class, woman 54 years-old)

"Sardines are good to eat watching a soccer game, with beer, it's a popular food, bacalhau not" (Rio de Janeiro, A/B Class, woman 49 years-old)

"Sardines are cheap, bacalhau is expensive" (Rio de Janeiro, A/B Class, woman 28 years-old)

"Sardines are for eating with friends, and in parties. Bacalhau is for eating with family" (woman, Rio de Janeiro, A/B Class, 28 years-old)

"Bacalhau is good with wine and sardines with beer" (woman, Rio de Janeiro, A/B Class, 32 years-old)

"If I'll serve sardines, I prefer not to invite anyone. With bacalhau, I can" (woman, Rio de Janeiro, C Class, 60 years-old)

"You eat sardines in a bar and bacalhau in a restaurant" (woman, Rio de Janeiro, C Class, 56 years-old)

"Bacalhau is less sickening than sardines" (woman, Rio de Janeiro, C Class, 58 years-old)

"Bacalhau is for festive moments and sardines for every sunday" (woman, Rio de Janeiro, C Class, 34 years-old)

"Sardine is a poor dish while bacalhau is a rich dish" (woman, Rio de Janeiro, C Class, 27 years-old)

"I only know how to prepare 2 dishes with sardines, bacalhau, I prepare many more" (woman, Rio de Janeiro, C Class, 41 years-old)

"Sardines have more spines while bacalhau have more meat" (woman, Rio de Janeiro, C Class, 33 years-old)

Citations:

"There is just no comparison between them, taste is completely different" (São Paulo, A/B Class, woman 49 years-old)

"Dishes we prepare with them are totally different, what you make with bacalhau you just don't make with sardines" (São Paulo, A/B Class, woman 59 years-old)

"If one has bacalhau, one doesn't even want to think about sardines" (São Paulo, A/B Class, woman 55 years-old)

"Both smell badly" (São Paulo, A/B Class, woman 58 years-old)

"Sardine is a day-by-day dish, it's not considered a refined dish" (São Paulo, A/B Class, woman 59 years-old)

"Sardine is good with potato, rice, lettuce and mashed potatoes" (São Paulo, A/B Class, woman 53 years-old)

"If it's a celebration day, I don't prepare sardines, because it's a basic dish, bacalhau is more chick" (São Paulo, A/B Class, woman 51 years-old)

"There is a prejudice that sardines are for the poor and bacalhau for the rich" (São Paulo, A/B Class, woman 56 years-old)

"You can't compare a R\$ 3-food with a R\$ 40-food" (São Paulo, A/B Class, woman 45 years-old)

"For the ones who like bacalhau, there are more options of dishes. With sardines' options are limited" (São Paulo, A/B Class, woman 36 years-old)

"Sardines could never be bacalhau, the latter is much more sophisticated" (São Paulo, A/B Class, woman 41 years-old)

"Sardines can never replace bacalhau, even the dishes are different" (São Paulo, C Class, woman 54 years-old)

"Thickness between them are also very different" (São Paulo, C Class, woman 62 years-old)

"They are very different products, I eat bacalhau, but don't eat sardines because of they have too many spines" (São Paulo, C Class, woman 41 years-old)

"They have different meat, different taste..." (São Paulo, C Class, woman 28 years-old)

"You eat sardines in your day-by-day, but bacalhau only in special moments" (São Paulo, C Class, woman 37 years-old)

"You can't make a special lunch with sardines, only with bacalhau" (São Paulo, C Class, woman 34 years-old)

"If I'll get to a place and see dishes with sardines, I would think: How sad', different from bacalhau" (São Paulo, C Class, woman 31 years-old)

V.9 – Knowledge of Arenque

❖ **Arenque** is a name completely unknown by all participants independently of cities, ages and social classes;

❖ Words associated with arenque were mentioned spontaneously but not by as a conscious association to the fish. That means that all associations were only related to what what arenque could resemble. Few of this related to sardines.

❖ The following associations came up:

- It seems to be an Arabic name;
- It seems to be from the North of Brazil;
- It seems to be Japanese food name;
- It seems to be a “chic” fish;
- It’s similar to sardine;
- It’s similar to “robalo” fish;
- It must be a bacalhau brand;
- It’s a yellow small fish;
- It’s a small fish;
- It reminds me of Carnival;

Citations:

“It seems I have once seen a poster written ‘Arenque’ in a fair, but never really saw it” (Belo Horizonte, C Class, woman 55 years-old)

“I have never heard of it, but Arenque reminds me of an Arabic name, I guess it comes from Morocco” (Recife, C Class, woman 35 years-old)

“I have heard of it, but really don’t know what it is” (Belo Horizonte, A/B Class, woman 39 years-old)

“I have never heard of Arenque , but it seems an indigenous name” (Recife, A/B Class, woman 57 years-old)

“I have the impression this fish is from the North of Brazil” (Belo Horizonte, A/B Class, woman 43 years-old)

“I have never heard of Arenque , but it doesn’t seem to be a name of a fish, but of a spider” (Recife, A/B Class, woman 37 years-old)

“I don’t know it, but maybe so because some fishes have different names in different places, depending on the region. I have seen that on TV. They showed how a fish can be named very differently in many regions. Maybe here we know it as another name” (Brasília, C Class, woman 56 years-old)

“I have never heard of Arenque , but it seems like a Japanese food name” (Recife, A/B Class, woman 43 years-old)

“I have never heard of Arenque , but it seems to be a chic fish” (Salvador, C Class, woman 49 years-old)

Citations:

"This Arenque name reminds of Carniva" (Salvador, A/B Class, woman 29 years-old)

"I think I've heard some friends talking about it, but don't know much" (Salvador, C Class, woman 38 years-old)

"I think this fish is similar to sardine, but I really don't remember more about it" (Salvador, A/B Class, woman 56 years-old)

"Never heard of it, but it seems to be a tasteless fish" (Salvador, C Class, woman 25 years-old)

"I seems to be an Arabic food" (Salvador, C Class, woman 48 years-old)

"Is that a type of bacalhau?" (Rio de Janeiro, C Class, woman 51 years-old)

"Maybe I heard of it in a Discovery Channel program, but am not really sure about it" (Rio de Janeiro, A/B Class, woman 48 years-old)

"I think I've seen it in a open market, 'Mercadão', in Niterói, but maybe I mixed it up with something else" (Rio A/B Class, woman 58 years-old)

"I think it's similar to 'robalo', but robalo is bigger" (Rio de Janeiro, A/B Class, woman 52 years-old)

"I have heard the name, but can't remember what it is" (Rio de Janeiro, A/B Class, woman 37 years-old)

"I've read it in receipts for losing weights. Then you can eat salmon or arenque" (Rio de Janeiro, C Class, woman 55 years-old)

"I have never heard of it, unless we know it by another name..." (São Paulo, A/B Class, woman 49 years-old)

"The only information I remember about it it's it is a small fish, it has 2 other names that I don't remember and has many vitamins" (São Paulo, A/B Class, woman 52 years-old)

"It must be a bacalhau brand" (São Paulo, A/B Class, woman 27 years-old)

"It's a beautiful name" (São Paulo, A/B Class, woman 40 years-old)

"I think it's a yellow small fish" (São Paulo, C Class, woman 48 years-old)

"I have never heard of it, it seems an Arabic name" (São Paulo, C Class, woman 43 years-old)

VI – SUMMARY OF FINDINGS & RECOMMENDATIONS

- ❖ Usage of sardines are divided into canned sardines and fresh sardines, some buy both types Some only buy it fresh because they prefer it to be natural. Others prefer canned sardines due to the convenience (they are more or less ready to be eaten).
- ❖ Dishes/recipes are the first associations people have in mind when asked about sardines. Examples were sardines with pasta (referring to canned sardines), fried sardines (referring to fresh sardines) and sardines as an appetizer. Sardines was also associated with healthiness containing Omega 3.
- ❖ Sardines are consumed much more often than bacalhau. This is due to the fact they are cheaper, and that the image of sardines is related to basic, simplistic and day-by-day food. Bacalhau represents the opposite.
- ❖ Sardines are not for special occasions but they are associated with food/snack to accompany beers with friends. Sardines can be used as an appetizer, and they can also be used in moments of improvisations.
- ❖ There are many ways Brazilian prepare sardines, but fresh type is mainly made using the pressure cooker, since some believe sardines become similar to the canned ones (spines soften), and fried sardines (either breaded or not). Sardines with pasta seems to be the dish mostly with canned alternatives. Both types are used in pizza, pies, *a la escabeche*, among many others;
- ❖ Sardines have no comparison with bacalhau, neither on taste, price, dishes to be made, moments to be eaten or feelings people have while eating them. They are two different food items according to participants' opinions: while sardines are basic and popular, bacalhau is associated to be chic and sophisticated;
- ❖ The name Arenque was unknown to the vast majority of the participants. Even the few who had heard the name could give a correct description.