

## **COMPLETE USE OF FOOD BY THE FINAL CONSUMER**

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**Abstract:** In view of the scenario of food insecurity that has been going on for many years and aggravated by the current economic situation in Brazil, the number of people affected by insecurity has increased considerably. The present work was carried out based on 1067 interviewees, which corresponds to approximately 0.0023% of the estimated population for the State of São Paulo, according to data from the Brazilian Institute of Geography and Statistics - IBGE, and shows that the number of people who are concerned with verifying labeling data, as well as with correctly arranging food in the refrigerator. It also shows that most people believe that it is expensive to have a healthy diet and that few make full use of food, even though the number of respondents who claim to have an aversion to the consumption of parts such as stalks, leaves, seeds and bark is small. The research makes clear the public's lack of knowledge about the possibilities of using all parts of food, showing how much it lacks information and even public policies that lead to the best use of all foods from the producer to the final consumer, being the latter our target audience.

**Keywords:** Food insecurity; full use; final costumer; hunger.

## INTRODUCTION

The current economic scenario in Brazil, combined with cuts and discontinuities in public policies, leads a portion of the population to a very delicate situation with regard to food security, worsening a situation that was already serious and which for many years has been fought not only in the country, but worldwide, which is the issue of food waste.

It is important to have a definition of the terms loss, disposal and waste of food.

According to Peixoto and Pinto:

“Food loss is the involuntary reduction

in the availability of food for human consumption, resulting from inefficiencies in production chains”; “food disposal refers to the intentional rejection of items, mainly by retailers and consumers, and is due to the behavior of companies or people, meaning that they are discarded even if they are still suitable for human consumption”; “the term food waste can therefore be used to refer to the combination of the terms loss and disposal” (PEIXOTO; PINTO, 2016, p. 2-3).

It is known that losses can occur from the food producer to the final consumer, which not only worsens the condition of food insecurity but also “has environmental, economic and social implications and impacts the sustainability of food systems” (EMBRAPA, 2017).

According to the United Nations, through the United Nations Environment Program (UNEP),

“Reducing food waste would cut greenhouse gas emissions, slow the destruction of nature for land conversion and pollution, increase food availability and thereby reduce hunger and save money in a time of global recession”.(United Nations Environment Programme, 2021).

According to FAO (2021), in 2014 Brazil left the world map of hunger for the first time and this occurred due to the application of public policies allied to the supply of food in the domestic market, allowing the reduction of the values practiced in the commercialization of the products themselves.

For Brazil there is no data on the proportion of edible and inedible parts wasted in households, the study carried out through UNEP only contains information for some high-income countries, which show a 50/50 proportion. (FAO, IFAD, UNICEF, WFP and WHO. 2021).

However, Peixoto (2018) warns that the lack of knowledge on the part of the consumer regarding planning for consumption, as well as the failure to verify expiration dates and

careless attitudes regarding the preparation and conservation of food result in disposal, generating economic costs.

Embrapa (2017) more objectively points out what can be done by the consumer so that waste can be minimized from their own residence and consequently reducing the environmental, financial and social impacts.

The population’s lack of knowledge on how to fully use food remains clear, as well as the contribution of nutrients existing in commonly discarded parts, the importance of verifying labeling data and also the organization of food both in the refrigerator and in cupboards and pantries.

## **OBJECTIVES**

### **A. GENERAL OBJECTIVE**

The objective of this research was to identify, in a portion of inhabitants of the State of São Paulo, the percentage of people who had knowledge about the integral use of food.

### **B. SPECIFIC OBJECTIVES**

It rose: the percentage of people who used the parts of food - leaves, stalks, seeds and bark; the way the public viewed the use of all parts of food; If you were food insecure, at what level would you be?

## **METHODOLOGY**

### **A. POPULATION AND TYPE OF STUDY**

People of all genders, aged between twenty and seventy, living in the State of São Paulo, identified by region, were approached, namely: North Region - SP, South Region - SP, East Region - SP, Center - SP, West - SP, Coast of SP, Interior of SP, Metropolitan Region of SP.

The choice of this population was due to the age groups that are commonly more active with regard to the purchase and production

of food in their homes and the guarantee of expressions of knowledge used by the majority of the population reached, opting for field research of the descriptive and quantitative type.

## B. MATERIALS AND INSTRUMENTS

We provide electronic equipment (computers, *smartphones* and *tablets*) connected to the internet and using social networks.

## C. DATA COLLECT

Fifteen questions were prepared and made available to the target audience through Google Forms.

The form was disseminated through the research authors' social networks, as well as profiles on social networks created to meet the work on screen, remaining available from 09/27 to 10/28/2021, the date on which it was closed for tabulation of the data.

## D. DATA ANALYSIS

The questionnaire was answered by a total of 1067 people, a number that is equivalent to approximately 0.0023% of the estimated population of the State of São Paulo in 2021, according to data from the Brazilian Institute of Geography and Statistics - IBGE (total of

46,649,132 people), which had graphics and tabulation by Excel, automatically generated by Google Forms.

## E. PROBLEM DETERMINATION

The disposal of food parts generates great waste, while these could be used for food production, including taking advantage of nutrients that are often present only in the discarded parts and, thus, reducing both waste and the risk of food insecurity faced by part of the population.

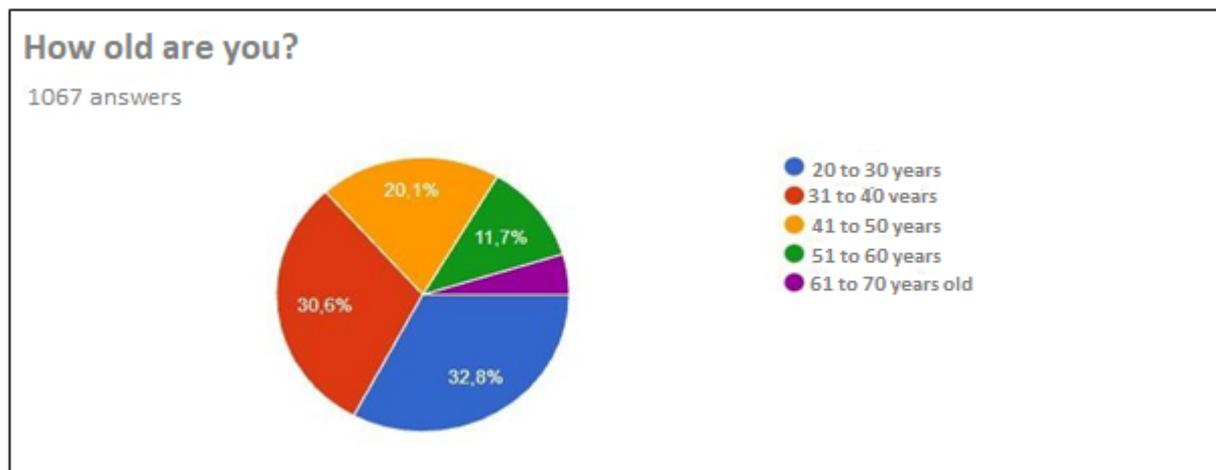
In order to guide the population on the different ways to fully enjoy food, it is necessary to identify the forms of waste and also the reasons that lead to this.

## RESULTS AND DISCUSSION

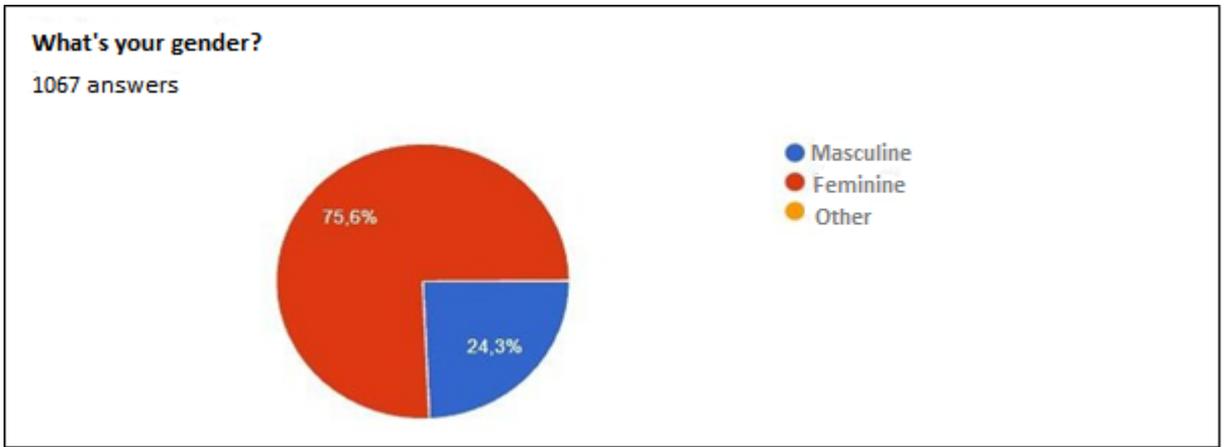
Of the answers obtained through Google Forms, 350 are in the range of 20 to 30 years old; 327 from 31 to 40 years old; 214 from 41 to 50 years old; 125 from 51 to 60 years old and 51 from 61 to 70 years old.

Of this total, 807 are women; 259 men and only 1 person of unspecified gender.

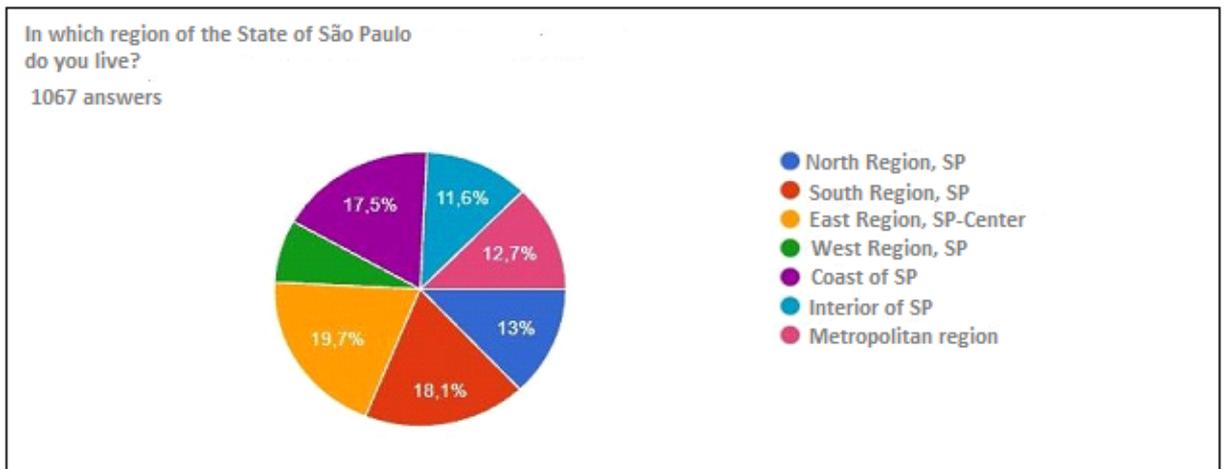
As for the distribution by regions, we have 210 people in the East region of São Paulo; 193 in the South region; 187 on the coast; 139 in the North region; 135 in the Metropolitan region; 124 in the interior of São Paulo and 79 in the West region.



Graphic 1



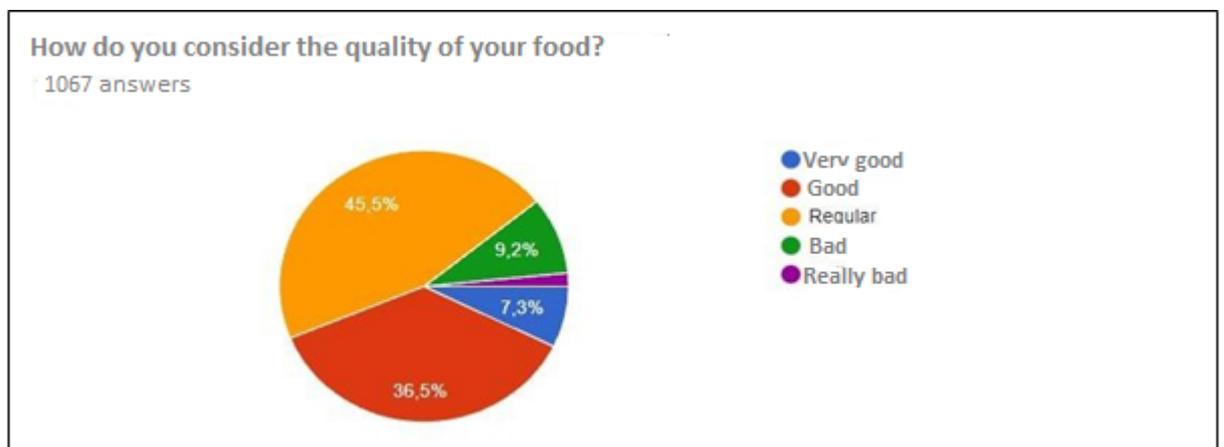
Graph 2



Graph 3

Of the total population, only 78 people consider their food of very good quality and 389 as good; 48 people consider it regular; 98

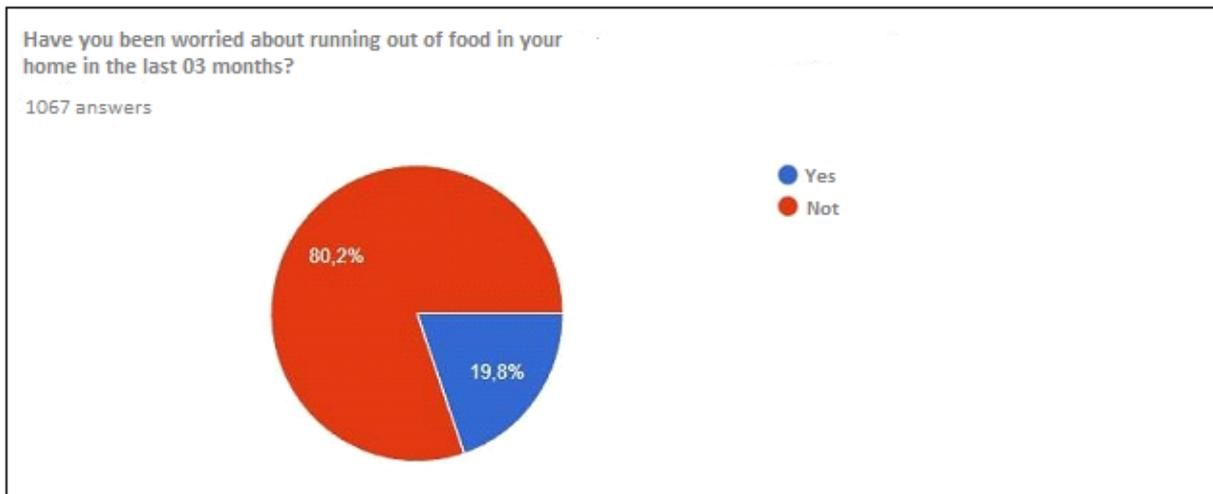
people bad and 17 people consider the quality very bad.



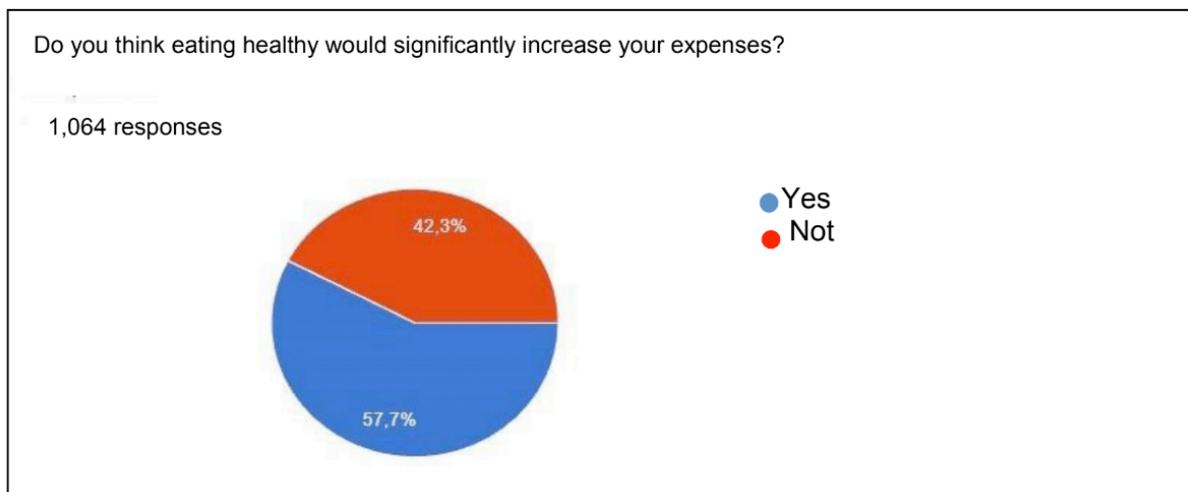
Graph 4

As for the food scenario, 856 people answered that there was no concern about running out of food in their homes in the last three months, while 211 reported such concern. However, 57.7% responded that

they believed that eating healthily would significantly increase their expenses, while 42.3% believed that there would be no significant increase.



Graph 5



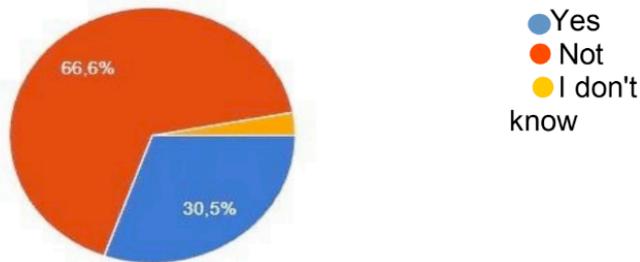
Graph 6

Of the interviewees, 66.6% answered that they had not eaten inadequately in the last three months due to financial savings; 2.9% said they did not know and 30.5% said yes, they ate inadequately for economic reasons.

Of the total number of respondents who responded that they ate inadequately, 19.7% did so on a few days, while 8.1% reported that they ate only 1 or 2 days and 5.8% almost every day.

In the last 03 months, have you ever eaten inadequately due to financial savings?

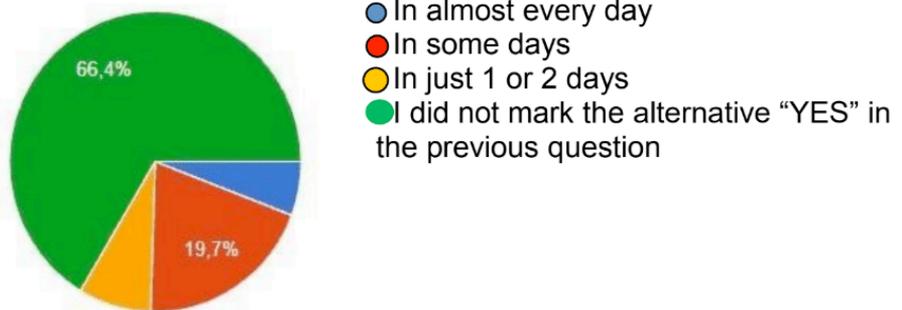
1067 answers



Graph 7

IF YES, HOW OFTEN?

1067 answers



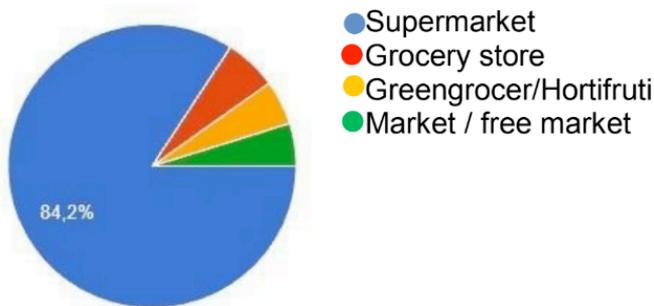
Graph 8

The most frequent place to buy food, mentioned by 898 people, is the supermarket. Following, although in smaller numbers, 63 people appear answering that the grocery store is the most frequent place and 54 for greengrocers; 52 people answered that they

buy more frequently at fairs/free markets.

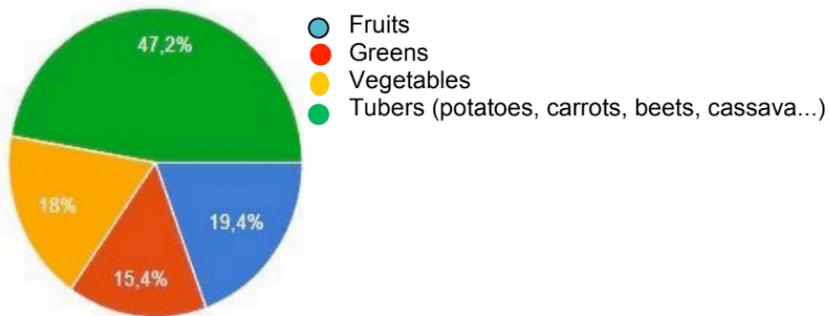
The most consumed food groups were in the following order: 504 people answered tubers; 207 people, fruit; 192 people, vegetables; and 164, vegetables.

Where do you buy your food most often?  
1067 answers



Graph 9

What do you consume most in your food?  
1067 answers



Graph 10

When questioned about feeling aversion to using food parts (peels, stems, leaves and seeds) for consumption, 794 people answered no and 273 yes.

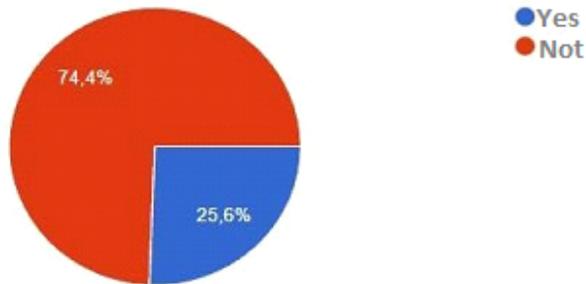
As for the weekly frequency of consumption of food parts (peels, stems, leaves and seeds) at meals, 390 people answered none; 513 people,

1 to 3 times; 129 people, 4 to 6 times; and 35 people, 7 to 10 times.

When asked about which of the parts of food they despise the most in their diet, 555 answered that it was the peels; 323, the seeds; 151, the stalks; and 38 people answered that it was the leaves.

Do you have an aversion to using preparations that use part of the food (peels, stalks, leaves and seeds) in your consumption?

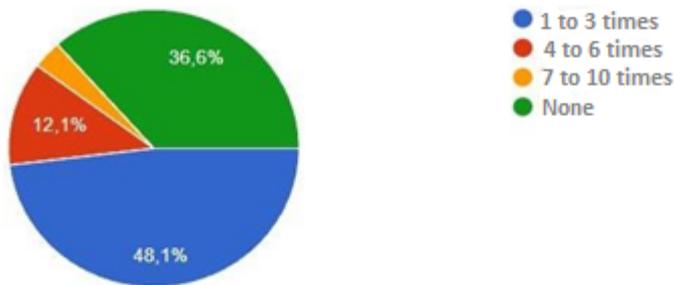
1067 answers



Graph 11

How often a week do you eat part of your meals (peels, stalks, leaves and seeds)?

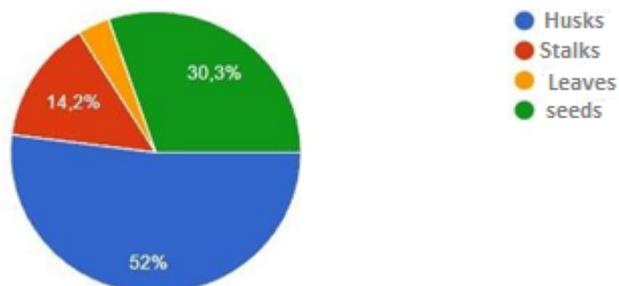
1067 responses



Graph 12

Which of the parts of the food shown below do you despise the most in your diet?

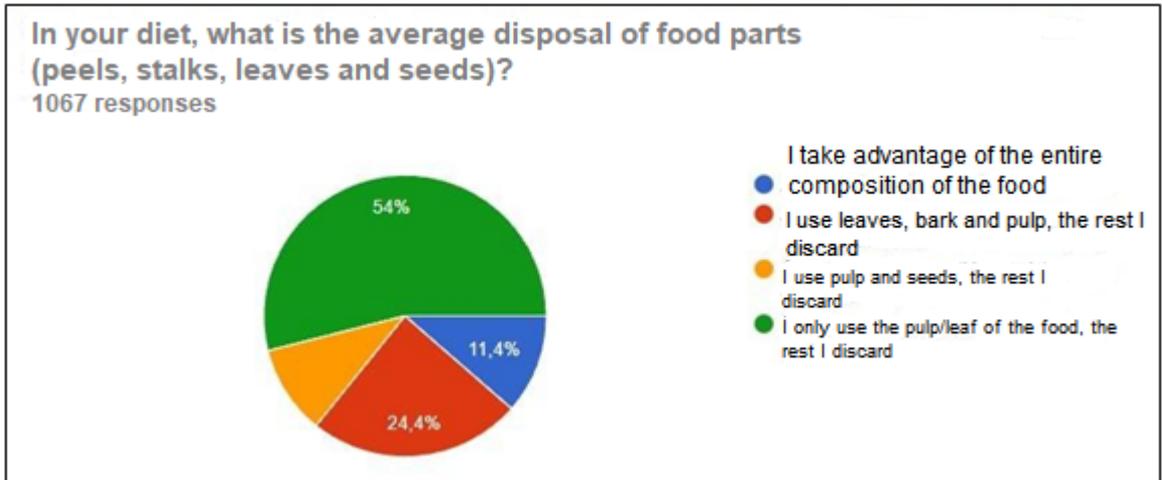
1067 answers



Graph 13

Regarding the average disposal of food parts (peels, stalks, leaves and seeds), 576 people answered that they use only the pulp/leaf of the food, discarding the rest. Another 260 people answered that they use leaves, bark

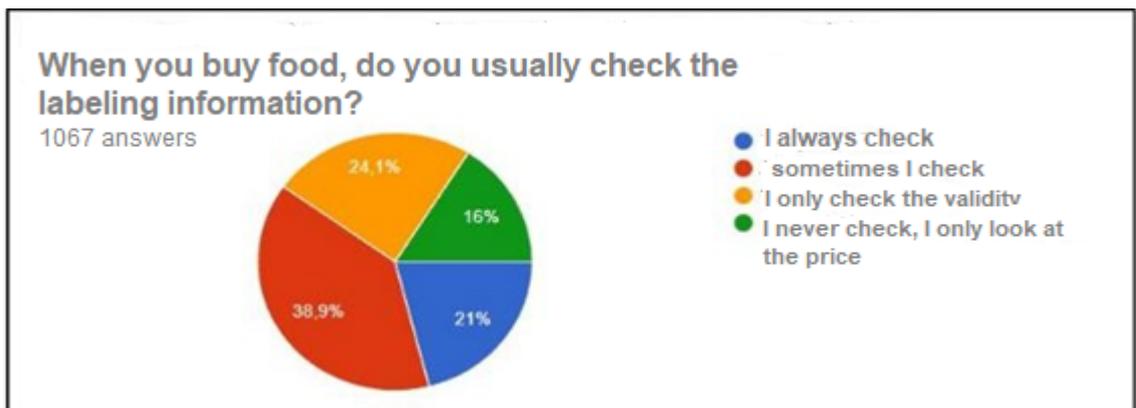
and pulp, discarding stalks and seeds. Already 109 people answered using only the pulp and seeds, disregarding the rest. Only 122 people responded using the entire composition of the food.



Graph 14

Regarding checking the labeling information when buying food, 415 people answered checking it only a few times; 257 people, who check only the validity; 171

people answered that they don't check, they just observe the price; 224 people always check the labeling information.



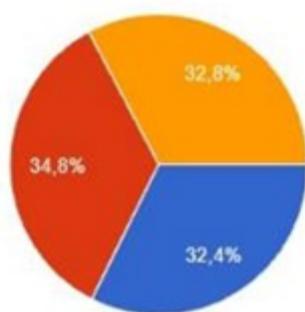
Graph 15

When questioned about the organization of the refrigerator, 371 people answered that they put the most common foods in their correct regions and the rest where it fits; 350

who place their food in a disorganized way, based on where it fits; and 346 order food based on the correct fridge regions.

By storing your products in the refrigerator, you:

1067 answers



- Sorts food based on the correct fridge regions
- It places the most common foods in their correct regions and the rest only where it fits.
- Place your food in a disorganized way, based on where it fits

Graph 16

The Food and Agriculture Organization (FAO) leads global efforts to eradicate hunger in the world and in Brazil, specifically, has been developing programs that prioritize food security, having as a guideline the right to adequate and healthy food in a permanent and sustainable way and articulates itself to achieve the objectives, as it did with the construction of the Food and Nutritional Security Policy (SAN) in Brazil. (FAO, 2021).<sup>7</sup>

However, the data collected from the survey show that 56.2% of respondents recognize that the quality of their food is classified between regular and very poor, even though only 19.8% of these respondents stated that there was concern about running out of food in their homes in the last three months.

Such a position may indicate both food insecurity and lack of knowledge about what healthy eating actually is, as 57.7% of respondents believe that eating properly would significantly increase their expenses.

The survey also presents us with significant data regarding inadequate food for economic reasons, which reaffirms the food insecurity situation faced by 33.4% of respondents.

As for the consumption of parts of food such as peels, stalks, leaves and seeds, although

the number of respondents who do not have an aversion to consuming these is 74.4%, only 63.4% consume them and only 11.4% do full use of food.

It is noteworthy the fact that 84.2% of respondents buy their food in supermarkets, where packaging already eliminates some of the parts that could be used. That is, waste begins even before the food reaches the consumer.

And of the most consumed foods, we have 47.2% in tubers, which points to the consumption of fruits, vegetables and legumes below the daily consumption requirements according to the Food Guide for the Brazilian Population, especially when taking into account eating habits of the population of the State of São Paulo in its most diverse regions.

Two other important factors are related to labeling and organization of the refrigerator: only 21% of respondents check the labeling information of purchased foods and 32.4% order foods based on the correct regions of the refrigerator. The absence of such procedures can lead to food loss, as well as jeopardize the health of those who consume them without observing the validity, conservation status or even the list of ingredients in case of any

dietary restrictions.

## CONCLUSIONS

More than half of the people interviewed eat inadequately because they do not know the correct information about healthy eating and what they can consume to have it without a significant increase in their expenses, which leads to the discarding of important parts of food, which could be used for the production of tasty and nutrient-rich foods, which would help even the portion of the population that is at risk of food insecurity or even that are

already at its various levels (mild, moderate or severe) to remain adequately nourished in the scenario of difficulties aggravated nowadays due to the economic and social instability crossed by the country.

It is necessary that public policies are actually implemented and publicized, as well as that families in general are guided on the importance of how to avoid waste from the purchase of food, including all parts of it, as well as reading and understanding the labeling and also from storage in refrigerators, cupboards and pantries.

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