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Assessment of different varieties of date palms in Morocco and drives

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ABSTRACT

The sector of dates is a key vector in regional development in Morocco, The objective of this work is to identify dattières varieties during the 4th edition of the international exhibition dates in Morocco (SID 2013) and focus on the development of derivatives of dates (coffee, jam, syrup, flour, etc....) in the Moroccan market. The fieldwork was carried out through the combination of two complementary methodological approaches; a questionnaire survey conducted among 100 exhibitors from the region and a series of interviews with 150 consumers. The results reveal the presence of a hundred varieties of dates set during the SID, the group "Boufeggous, Khalt and Bouskri" is considered the group of varieties of dates the best known and most widely consumed about 60% 95% consume dates during the festivities and religious holidays and 60% consume jam and coffee made from dates, while less than 50% use the date syrup.

KEYWORDS

Die dates; Morocco; SID; Investigation; Derivatives dates.



INTRODUCTION

The fourth edition of the International Exhibition Dates of Morocco (SID) 2013 placed this year under the theme "The renewal of our palm, a new breath to our oasis" aims to development issues and challenges phoenicicole sector, the exchange of technical and technological advances in production and recovery dates,

product exposure of regional agriculture and strengthening the traditional Moussem dates.

Moreover, in addition to Moroccan producers, this year was marked by the participation of 186 exhibitors from 12 different countries (Tunisia, Algeria, Egypt, Iraq, Jordan, Saudi Arabia, UAE, Oman, Kuwait, Libya, Mauritania and Sudan) and expects to welcome more than 60,000 visitors.

Already, it should be noted that "this year the rehabilitation program was crowned by palm planting palm millionth by King MohammedVI El Khorbat (Morocco), renewal model site of a palm," says Aziz Akhannouch, Minister agriculture and Marine Fisheries.

Sidelines of the exhibition, forums have been programmed to promote innovation and scientific research.

A field survey was conducted and has the following objectives:

Prepare a report on the different varieties of dates of Morocco prevalent in the domestic market: Figuig Aoufous, Tinjedad, Mellab, Zagora, M'hamid El Ghizlane, Tata, Boudnib, Tinerhir, Rissani, Erfoud Ksar Elbouya, etc.;

Focus on developing derivatives date (paste, jam, syrup, flour, etc....) on the Moroccan market

Methodology adopted and conduct of the study

The methodology is based on three essential elements are:

The choice of the survey area (zoning)

The sample size

The tool of information gathering (questionnaire) zoning

Regarding the first element, it was decided from the outset to be the heart of the event "at the international exhibition dates in Erfoud 2014," the crossroads of meetings between the forces of the sector and the agricultural sector and that for maximum of exhibitors, visitors and consumers across the country information.

(a) sample

The sample size was determined to have a maximum of exhibitors and consumers during the past three days at the show. It was therefore decided to interview 150 consumers and 100 exhibitors, divided according to the demographics of different Moroccan oasis namely Figuig Aoufous, Tinjedad, Mellab, Zagora, Mr. Hamid El Ghizlane, Tata, Boudnib, Tinerhir, Rissani Ksar Elbouya Erfoud. This panoramic choice therefore allowed to sweep the main oasis in the country.

SURVEY DESIGN

Our methodological approach combines a questionnaire survey conducted among a large sample of exhibitors dates different Moroccan oasis and a series of interviews with traders and industrial products different dates. The combination of these two tools has, among other things, expand the identification of different varieties of dates prevalent in the Moroccan market, and collect the testimonials of the main products of dates by consumers.

Collection of information

As questionnaires used, they included 20 questions for 15 questions for consumers and exhibitors. The third question was "multiple choice", the rest was composed mainly of open questions. There were only very few closed questions; this is explained by the fact that the investigation was essentially qualitative.

RESULTS AND DISCUSSION

The use of questionnaires was first allowed us to identify all varieties of dates, more than 100 varieties were exhibited at the International Exhibition dates in Morocco, as well as evaluate the known varieties and consumed by consumers and there has a clear dominance of about 60% of the group "Boufeggous, Khalt and Bouskri", further analysis of the survey results in terms of frequency of consumption of dates showed that 95% of consumers surveyed said they ate dates but this consumption was casual.

Concerning derivatives dates, the proportion of consumers who reported consuming these products (jam, coffee-based cores dates and syrup), the greater than 60% have secured their consumption jam and coffee dates by against less than 40% of consumers reported using the date syrup.

Varieties of dates

On varietal profile shown at the Moroccan palm, it boasts more than 400 varieties of dates inventoried and thousands of khalts (hybrid unselected from semi natural that sometimes no name given)^[4,15], Morocco remains one of the richest countries in terms of varieties^[14].

Ouarzazate Morocco remains the region with the largest 41% of national production, followed Tafilalet (28%) and Tata (20%)^[1,2]. But despite our productive potential, consumption of dates is still low at the national level: 3 kilos per capita per year, except in the production areas where consumption can reach 20 kilos per capita^[1,2,3]. Morocco also important dates to meet strong domestic demand, especially during the holy month of Ramadan^[13]. The Minister of Agriculture estimates the quantities imported 30,000 tons per year, or about a quarter of national production. They come mainly from Iraq for 40%, Tunisia (35%), UAE (7.5%) and Egypt (5%)^[1,2].

Nevertheless, two major constraints weaken the Moroccan date palm potential: bayoud disease and drought^[15]. These two factors have a dramatic impact on domestic production.

Varieties known by consumers (recognition rate)

Knowledge of varieties is better at merchants than consumers. Indeed, no consumer "interviewed" could include the main varieties produced in Morocco. However, some varieties are better known than others (60% for Boufeggous variety). Frequencies citation varieties in descending order are shown in Figure 1. Percentages are calculated on the total sample of consumers surveyed. Knowing that a consumer may provide more than one answer (include more than one variety), the sum of percentages is obviously greater than 100%.

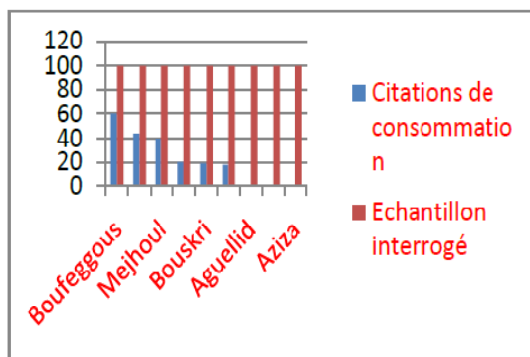


Figure 1: Levels of awareness of dates (in%) according to the survey conducted

In this survey, we found a positive correlation between awareness and consumption rate of dates and this is verified since the Boufeggous group Bouskri, Khalt, Jihel Mejhoul and is at the top of the scale "reputation" and scale the rate of consumption.

TABLE 1: Different varieties of dates enumerated in the International Exhibition Dates in Morocco in 2013

CITIES	VARIETIES
Figuig	-Aziza Bouzid
	-Assiane
	-Boufeggous gharas
	-Mejhoul
	-Taâbdount
Aoufous	-Mejhoul
	-El Khalt
	-Tarzawa
	-Boufeggous
	-Bouslikhène
Tinjdad	-Initfit
	-Adamou
	-Mejhoul
Mellab	-Boufeggous
	-Azegza
	-Mejhoul
	-Boufeggous
	-Mejhoul
Zagora	-El feggous
	-Ras el asmar
	-El jihl
	-Bousthammi
	-Ihardane
	-Aguelit
	-Iklene
	-Akenbouh
	-Aklal
	-Matnhel
	-Bourhar
-El Khalt	
M'hamid El Ghizlane	-El jihl
	-Feggous
	-Bousthammi
Tata	-Rteb
	-Boufeggous
	-El jihl
Boudnib	-Bouittob
	-Mejhoul
	-El feggous
	-Barijo
Tinghir	-Ahabsa
	-El feggous
	-Oultoukdim
	-Moussebso
	-El Khalt
Rissani	-Mejhoul
	-El feggous
	-Bouslikhène
	-Bousserdoune
Ksar Elbouya Erfoud	-Bouzekri
	-Mejhoul
	-Bouzekri

Varieties typically consumed

Ranking Moroccan varieties consumed by descending order of citation is presented in Figure 2 (percentages are calculated on the number of consumers who responded to the question).

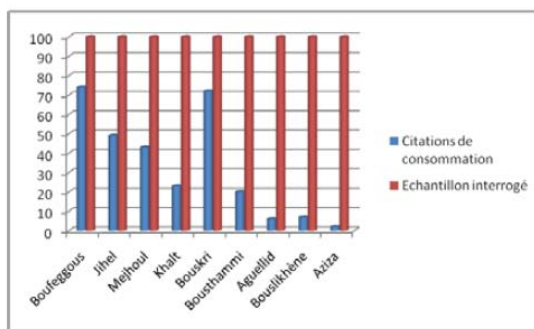


Figure 2: Consumption Rates date varieties

These data emerges a clear dominance of the group "Boufeggous, Khalt and Bouskri" followed by a second group "Jihel, Mejhoul, Bousthammi" and finally the rest of the frequency of citation is marginal.

Statements to consumers dattières varieties they consume and most familiar, are mainly due to their reasonable price which varies from 13 to 20 Dh / kg for Boufeggous range, 13 to 27 Dh / kg for Bouskri variety and the conservation status of the group "Boufeggous, Mejhoul and Bouskri" these varieties come in better condition.

Frequency of consumption of dates

Figure 3 shows, in descending order, the importance of drinking occasions dates. Although traders confirm the consumer reporting on the existence of peak sales on certain occasions (Ramadan, Ashura Religious Holidays, Ceremonies,...), they stress they sell dates in a quasi-permanent. It is of course traders in dried fruits, condiments and herbalism. This assumes that dates are kept relatively long, hence the importance of thinking about storage conditions, since the quality degradation during the retention period is the major criticism cited by consumers.

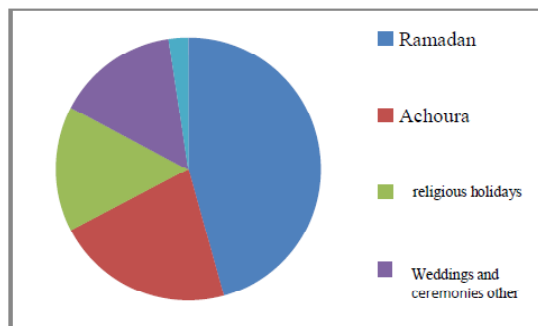


Figure 3: Opportunities consumption dates (%)

It should be noted here that the percentages of sales opportunities dates exceeds 100%. This is because the trader had the opportunity to call more than one occasion consumer dates.

In over 68% of cases, the consumption of dates is occasionally (Figure 3). This is probably due to two factors:

The product "date" is associated in the minds of Moroccans, festivities, religious holidays and Ramadan.

The consumption occasions are related to the period during which the "good date is available," that is to say, at the time of harvest and during the period when the date has not kept undergone

alteration. However, the duration of this period is related to the quality of conservation in marketing channels where storage conditions experiencing high variability.

The development of derivatives dates

Date technology is the appropriate means to maintain and improve the quality of date^[4,5]. It covers all operations of the crop marketing, designed to keep fruit all their qualities and transform those who are not consumed, or supplies in the state, various products, raw or processed, intended for human or animal consumption and industry^[4,12]. The most used technologies and date known internationally are summarized in Figure 3.

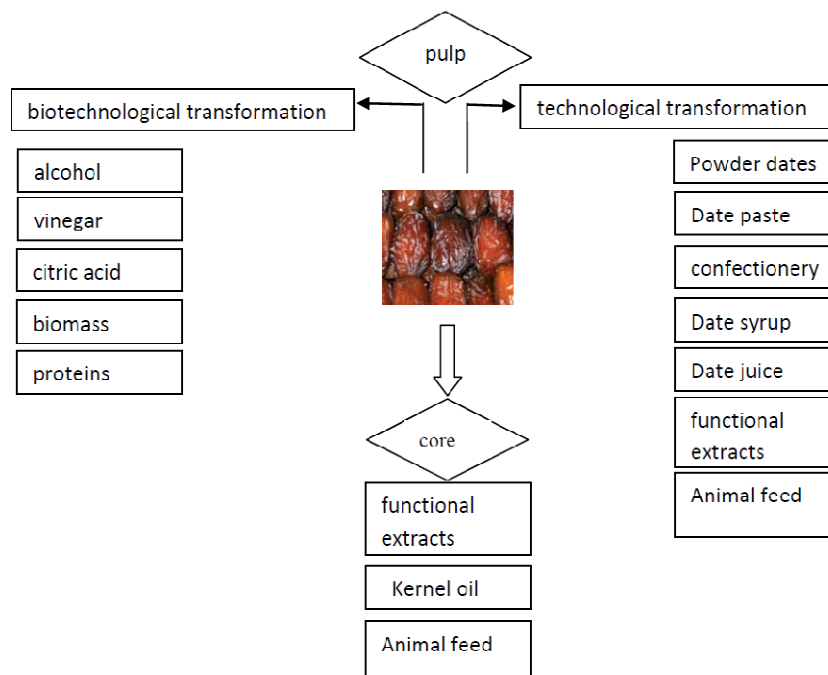


Figure 3: Transformations technology and biotechnology to date (Source: Ouhajjou, 2010)

Consumer preferences over jam dates

The proportion of consumers who reported consuming jam dates is high (80% of the sample) and the breakfast is the main opportunity to use jam dates. Most consumers surveyed said their preference in terms of natural products, thus presenting opportunities and challenges for the market valuation of date.

This high consumption is due to the different qualities of the date and its wealth in minerals and trace element such as calcium, phosphorus, magnesium, potassium, iron, manganese, copper, zinc,... etc..^[6,7].

The high fructose ensures this jam and dietary character can join the fun palace medicinal virtues of this sacred fruit is the date^[17,9].

Consumer preferences over coffee from date pits

Over 50% of consumers surveyed during the International Exhibition dates have secured their coffee consumption, they said that the coffee base date stones Bio is an excellent successor of coffee.

Indeed, "This therapeutic product is very rich in minerals^[8], can reduce cholesterol in the blood and can be an ally of health for people with insomnia^[16,18].

Consumer preferences with respect to date syrup

Unlike jam or coffee, date syrup is not too consumed only 40% of consumers surveyed reported using the date syrup, as the traditional production conditions are generally very poorly controlled.

Obtaining it in rural areas by traditional methods often leads to a poor quality product, black, blurred, the burnt taste.

For syrups of better quality than those currently produced by most installed at Moroccan oasis units, proceed to the concentration of the syrup under vacuum at low temperature (40 to 50 ° C)^[10,11].

CONCLUSION

The questionnaire survey conducted among 100 exhibitors from the region and a series of interviews conducted among 150 consumers has enabled us to establish a balance on the different varieties dattières exposed during the 4th edition of the International Exhibition Dates in Morocco 2013 to assess known and consumed by the Moroccan consumer varieties and determine the frequency of consumption of dates and its derivatives which proved important in view of the nutritional value of the date. Indeed, the date has very interesting nutritional properties, functional, pharmacological and cosmetic, it opens other promising avenues of recovery by the food, pharmaceutical and cosmetic industries. This reflection on the dates fits into the strategy of our study is to develop different varieties of dates Moroccan and consumer preferences in terms of dates and its derivatives.

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