

The green food in Algerian context: potentialities and constraints And which attitude has consumer toward it

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Abstract:

For centuries Algeria has always had a healthy food production so that the Algerian society was peasant in its majority, Until there have been new modes of consumption as a result of the industrialization and globalization, the mode of food consumption has changed in recent decades, nevertheless health and environmental problems have made it absolutely necessary to return to the traditional mode of production.

The green food product is the clean healthy product containing less chemical intruders harmful to health. The “terroir product” is a green food product given its specific quality, its healthy traditional production conditions, the know-how that was there before that industrialization arrived, The objective of this article is to shed light on the potential that Algeria possesses in this respect, as well as the institutional and legislative initiatives taken to valorize this kind of production, and the constraints faced, in first part. In the second one we used to establish a quantitative study to show the attitude of consumer’s green food trough the influencing factors.

We used 5 scale point of Likert (from strongly agree to strongly disagree) to collect data whose reliability was confirmed by Cronbach’s α . The measurement method that was used for data analysis is the frequency distribution table; frequency percentage and graph were used for writing, the descriptive statistics section.

We have proceeded a principal component analysis. Then pearson’s coefficient correlation was statistical test used in deductive statistic section, SPSS version 22 was used to analyze data. The results found by this study indicate that the Algerian consumer has a positive attitude towards the green food product, and that the specific quality of the green food product is the factor most influencing the attitude of the consumer among the factors: psychological, cultural, and social in our context of study.

Keyword: Green food; “terroir” product; specific quality; the know-how.

ملخص:

كانت الجزائر تتمتع دائما بإنتاج غذائي صحي على مدى قرون مضت، باعتبار أن المجتمع الجزائري كان مجتمعا ريفيا بأغلبه، و قد ظهرت أساليب جديدة للتصنيع و للاستهلاك كنتيجة للتطور الصناعي و التكنولوجي الذي يشهده العالم و قد انتشرت هذه الأساليب الاستهلاكية الغذائية عبر مختلف البلدان بفاعل العولمة خلال العقود الأخيرة، ، مما أدى إلى ظهور مشاكل الصحية والبيئية جعلت من الضروري تماما العودة إلى النمط التقليدي للإنتاج.

المنتج الغذائي الأخضر هو المنتج الصحي النظيف الذي يحتوي على أقل مدخلات كيميائية ضارة بالصحة. إن منتج الأرض المحلي الغذائي هو منتج غذائي أخضر نظرا لجودته النوعية وظروف إنتاجه التقليدية الصحية والدراية التقنية التي كانت موجودة قبل أن يصل التصنيع، الهدف من هذه المقالة هو تسليط الضوء على الإمكانيات التي تمتلكها الجزائر في هذا السياق فضلا عن المبادرات المؤسسية والتشريعية المتخذة لتنميين هذا النوع من الإنتاج، والتحديات التي تواجهها، في

الجزء الأول. و قد قمنا بدراسة كمية لإظهار موقف المستهلك من الغذاء الأخضر و كذا العوامل المؤثرة في موقف هذا الأخير.

استخدمنا مقياس ليكرت ذا الخمس نقاط (موافق بشدة-غير موافق بتاتا) لجمع البيانات التي تم تأكيد مصداقيتها عن طريق حساب المعامل α كرونباخ. طريقة القياس التي استخدمت لتحليل البيانات هي جدول توزيع التكرارات. تم استخدام النسبة المئوية للتكرار والرسم البياني في قسم الإحصاء الوصفي.

وقد أجرينا تحليلا للمكون الرئيسي. ثم استعملنا معامل الارتباط بيرسون من أجل اختبار العلاقة الإحصائية بين المتغيرات في قسم الإحصاء الاستنتاجي، وقد استخدمنا الحزمة الإحصائية SPSS الإصدار 22 لتحليل البيانات. وتشير النتائج التي توصلت إليها الدراسة إلى أن المستهلك الجزائري يتخذ موقفا إيجابيا تجاه المنتج الغذائي الأخضر، وأن النوعية الخاصة بالمنتج الغذائي الأخضر هي العامل الأكثر تأثيرا على موقف المستهلك من بين كل من العوامل النفسية، الثقافية و الاجتماعية في سياق دراستنا.

الكلمات المفتاحية: المنتج الغذائي الأخضر، منتج الأرض المحلي، النوعية الخاص، المعرفة بكيفية الفعل.

Introduction:

In Algeria there is a variety of agricultural production systems of very good quality, at the level of rural geographical locations, including mountains and foothills, Generating green products that ensure the consumer's food safety on the one hand and which represents a know-how and a cultural heritage on the other.

The Algerian “terroir” product is the agricultural product of specific quality, like olive oil, the table grapes and the Wine grape variety. However this product is not yet in a position of strong development. There are constraints that are not in favor of developing a good strategy to promote these products, Despite the existence of a request of consumer rather demanding on the quality of the food product which encouraged valuing this production in order to draw benefits in case of food safety on the one hand, and create the value and develop this sector of another part.

The European market has a supply of specific quality products which is not recent, Nevertheless, this dynamic is Fairly slow in the case of the countries of the southern Mediterranean region, Other opportunities may be the object of profits like the importation of olive oil, and the wine of varietal. Our main question is: **where is the Algerian context from green production food? And what attitude has consumer on it?**

In this article we will discuss the theoretical concepts of Green Products especially green Food, legislative devices, and institutional initiatives taken in order to enhance the potential that Algeria has in the framework of terroir product , and the constraints of it valorization, we have chose to use the qualitative method of information and the Harvard reference method in first part.

In second one we will study the attitude of consumer's green food trough the influencing factors on a sample of, 94 “dar djeddy's” company consumers .we use the quantitative method to establish this study, the results of this study shows that the attitude in this case is explained mostly by the factor of specific quality's green food.

Theoretical notions:

Green product:

Green product is known as eco product, ecological product, or environmentally friendly product, this product is not supposed to pollute the earth, deplores natural resources, and can be recycled, or preserved. . (Tan Booi, Chan Lau Teck Chai, 2010).

Green food:

Nowadays, green marketing has become popular, the green food production is also a part of the Green Marketing, (Md SaifulIslam, IffarZabin, 2013), green food is supposed to make reference to the safety, quality and nutrition, it's produced by a specific model under sustainable development principales, and it is certified by a particular organization, adopting standards that allow to sell with the logo of the Green Product (Hanqing lin 2006).

Organic food:

Organic food Refers to food products developed, stored, or processed without using chemical products, fertilizers, herbicides, pesticides, fungicides, growth hormones, and genetic modifications (salimee Santiteerakul 2016).

The food product green is not necessarily organic, however the production of organic food should be more strict, therefore the concept of "green food" is broader than "organic" since this includes food security, health issues, the problems of the environment, as well as to the well being of the animals (Pittawat Ueasangousate from Rezai et al).

Table N1: Comparison between 3 types of food products.

	food	Green food	Organic food
Objectives.	High output and economic efficiency.	Good environment, Food safety, high economic and social efficiency.	Best environment and food safety.
Characteristics.	High use of chemicals.	Less use chemicals.	No chemicals.
Area of cultivated land.	many	Limited but could be enlarged.	Quite limited.

Source : (Hanquin lin 2006) p-9.

Types of agriculture product:

Today there is a demand of healthy product with nutritional characteristics proved, from many demanding consumers on production's conditions of food. Therefore the quality of the food product has become an important issue,

There are two kinds of agricultural product quality:

- 1- Generic quality: based on nutritional level of the agricultural products supplied to consumers. As well as on health safety, therefore the quality is guaranteed when The nutritional and health qualities are combined in the products¹
- 2- Specific quality: products identified by specific or specific characteristics such as the geographical indication (AOC, PGI, BIO) are thus elaborated by an interaction

¹ Translated from : www.servagri.eu/attachments/article/70/agriculture%20qualité.pdf, consulted : 23/08/2010 , 14h :13.

between the particular natural resources and the local know-how; these products are well considered by consumers (Salhi 2004).

The product of terroir:

- **The concept of terroir:**

With the development of soil science, the terroir concept has taken other dimensions than geography through The work of professionals, and French agricultural researchers.

A social and cultural dimension has been integrated into the terroir concept according to (Ferroudja Adane 2013) « The terroir is understood as an expression reflecting human society and its social organization, its practices, its activities, and its history have led this notion to take 3 dimensions : geographical, cultural and social, the term was defined by UNISCO as "A terroir is a delimited geographical space defined from a human community that constructs through its history a set of distinctive cultural features ,knowledge and practices, based on the system of interactions between the natural environment, and human factors, The know-how involved reveals an originality, confer a typicity and allow recognition for original products and services and this space and for the men who live there also, The terroir is a living and innovative space that can not be assimilated to only tradition from the definition given by UNISCO we can deduce that the terroir is a limited geographical space which was developed by a human community. Methods of production, know-how and traditions, highlighting the product of “terroir”.

- **The product of terroir: an organic product:**

The “terroir” product can be defined by several pillars, which are: culture and heritage; Originality; The terroir image; the organic.

- ✓ originality:

according to (Ferroudja Adana 2013 par Recard 1994) "The terroir product is characterized by an originality linked to local environment including all terroir's physical characteristics of as well as manufacturing constraints. Terroir product is specific in relation to the geographical area from which it originates.

- ✓ The image of “terroir”:

The “terroir” product includes all food products, transformed or not, bearing a sign of quality or not, having a geographical identity or not, having a tangible or not tangible “terroir”, recent or old, benefiting consumers a terroir image according to (Ferroudja 2013 by Lagrange et Trognon 1995).

- ✓ Culture and heritage:

The terroir product crosses space, time and rests on practices and shared knowledge, it is inscribed in the culture also, (Ferroudja 2013).

Organic:

The product of organic farming respects a number of rules, such as not using chemicals for a better environment and food security (Hanqin Lin 2006).

Table N 2: definitions

object	definition	Reference
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Controlled origin Appellation (AOC)	The designation of a country or region or a locality which serves to designate a product originating in it and whose quality or characteristics are due to the geographical environment including natural and human factors .	INAO, of 6 mai 1979.
	All the products marketed, whatever their mode of marketing, products which the traditional production is linked to the transfer of know-how of generations, who are attached to a geographical zone whatever the scale or type of zone (urban or rural) Having a certain notoriety, stable in their designations and manufacturing techniques and which are characterized by a particular know-how on at least one of phases in production process	

Translated from: Hélène Ilbert, produits du terroir méditerranéen, conditions d'émergence, d'efficacité et de mode de gouvernance (PTM, CEE et MG), 2005, p.41.

The "terroir" product: a green food product that contributes to sustainable development:

The "terroir" product can be a strong lever that contributes to the sustainable² and rural development.

There are links between local actors and their territories that generate a specific quality associated with the geographical indication (GI).

These specific products have characteristics that cover the three dimensions of sustainable development.

➤ The economic dimension of terroir product:

The product could represent a source of added value because of confidence of consumer with regard to guarantees provided: : The origin, the specific quality of the product, and even generic quality products, which allows these products to access new niche markets, according to the theory of monopoly competition, The company makes efforts to differentiate their products and to convince consumers that theirs are the best in relation to quality, in which case the demand is not perfectly elastic, however, a price decrease of a competing product could occur, and this does not necessarily cause the cancellation of purchases of the product under consideration.

So the "terroir" product allows the company to maximize its profit.

➤ The environmental dimension of "terroir" product:

The promotion of "terroir" product generates sustainable use of natural resources and biodiversity through

- Sustainable use of resources: traditional production systems that are linked to production of "terroir" products have a much less negative impact on the natural environment than modern ones.

Sustainable use of resources avoids the use of chemicals, pesticides; natural systems are used for production.

- Preservation of biodiversity: as long as the "terroir" product is generally linked to traditional microorganisms or breeds adapted to the local or endemic environment that can contribute to limit the negative impact of specialization and economic rationalization, and can also prevent the loss of habitats and unique genetic resources.

➤ The social dimension:

² www.Fao.org/fileadmin/user_upload/foodquality/fichefiles/fr/c2.2_pdf consulté le 25/08/2016, à 16:47h.

The “terroir” product has been developed for several generations in the same cultural and social environment therefore it integrates a component linked to the local knowledge, To the experiences of producers to achieve a specific quality, IG can present a cultural emblem also.

I. The “terroir” product in Algerian context:

a. the regulatory devices in case of standardization, the designations of origin and Certifications:

Since the 1980s, Algeria has a price device in charge of quality, the latter covers two important aspects of regulations, The protection of the consumer as well as the quality of the product and the service (certification, Auto control, standardization, phytosanitary protection, accreditation of laboratories) and also the establishment of new bodies, new legal texts, news mission which have the goal to promote the quality of the product, food security as well as the loyalty of Trade. have all been launched as a ample institutional gait

➤ The first fundamental law:

The law of 89/02 of 07/02/1989, which concerns the general rules of consumer protection.

This law placed the product on the quality control of the products, the guarantee of the services and the products, the repression of frauds, the conditions of hygiene of product, the auto control, additives, legal metrology, analytical laboratories, etc. ect.

The public authorities are considering to put in function a quality policy for preserving food safety, the health of the consumer, and also to promote the local production through the quality.

➤ The laws specific to the agri-food, agricultural and standardization domain.:

➤ the second fundamental law, Law 88-08 of 26/01/1998 on veterinary medicine and the protection of animal health and (Decree 91-452 of 16/11/1991 concerning veterinary inspections at borders).

➤ The third fundamental law: Law 87-77 of 01/08/1989 on Phytosanitary products.

➤ The fourth fundamental law: the law of seeds and seedlings, allows The establishment of national scheme for certification of seed and seedlings by group of culture Following this law, a project on production systems for plant material was initiated.

➤ The framework legislation, the Law 89-93 on the standardization and industrial property and the Decree 90-32 of 15/05/1990 on the organization and functioning of the Standardization, As well as the 11 decrees of 03/11/1990 That secure the modalities of design standards and the organization of committees of technical aspect of standardization. The objectives of these laws are control, promotion, and the enhancement of the "genetic" products quality (Hélène Ilbert 2005).

➤ Regulatory and legal framework for valorization of quality and quality products.

➤ Ordinance 76-65 of 16/07/1976 on the appellations of origin: it concerns the wines of origin: 7 VAOG.

- ✓ The Dahra hillsides
- ✓ the mascara hillsides.
- ✓ the Tlemcen hillsides.
- ✓ the Zaccar hillsides.

- ✓ Ain Bessem Bouira.
- ✓ Tessala of tessala.
- ✓ Médéa.

- An elaboration of a specific regulation dedicated to the sectors of quality products has been initiated.

For the sectors: Olive cultivation, date, Wine; Fruits and vegetables....

- Decree 76-121 of 16/07/1976 on the procedures for registration and publication of origin appellations and fixing taxes (Which concern only the VAOGs), despite the fact that this device has allowed the performance of quality control prerogatives, this device includes the promotion of local products only in a random manner.

b. Institutional arrangements:

A first mechanism has been a body for standardization and industrial property.

2.1. Annexes:

- (ONPI) the national industrial property office which was created by Decree 63-248 on 10/07/1963.
- (INAPI) the National Institute for Standardization and Industrial Property, which was established by Ordinance 76,62 of 21/11/1973.
- IANOR: the Algerian Institute for Standardization, which was created by Decree 98-68 of 21/02/1998, with the aim of adopting quality labels, marks of conformity with national standards, and control of Use of legislation framework.

1.1. Annexes committees:

- Technical committees.
- The Committee guidance and coordination of the work standardization and technical committees.

3.A second device: (ONDA), the National Office of copyright for objective of protecting works of heritage.

4.A third mechanism: (CNRC) the national center of the commercial register: who organizes the trademarks And services and trade names containing origin appellations.

Centers of initiative in period (2004-2006):

As part of products and labels for geographical indications (Article 136. SPS / WTO Agreements, TRIPS / WTO Agreements - Part 2 Section 3, Article 22-23, Part 2, Section 5, Article (27/31).

- ✓ A proposal of a draft temporary decree, which sets the rules for allocation of labels For agricultural products in particular, and the various forms of labels to promote and to create, (AOP,AOC,IGP,AB).
- ✓ The creation of institution for secularization of agri-food and agricultural products:
(CNLC) the national commission of labels and certifications for the purpose of certifying and accrediting labels.
- ✓ The (CAA) algerian Committee of labels and (CNLC).

- ✓ A proposal to stop an official list of the products to labeling and for the production conditions of each category of products.
- ✓ A proposal for arrested an official list of products to labeling and for production conditions of each category of products.
- ✓ an organization for the marketing of products labeled, and organic ones.
- ✓ An update And an elaboration of the texts on the boundaries Areas of productions, of geographical indications, and conditions of agreement of the appellations of origin.
- ✓ The creation of Device Evaluation by rewards for the organic producers.

Law project:

- Trademarks-the IG of geographical indications, the (AO) appellations of origin.
- On production systems of plant material, And plant varieties:
 - ✓ An Algerian-Italian project for the certification of fruit crops.
 - ✓ The EPPO program for certification protocols.
 - ✓ An action program 2004-2006 for agriculture and rural development.

The main agricultural and agri-food products:

- ✓ The agricultural products concerned by the approach of laïcisation planned for the action Program of 2004-2006 period.
- ✓ Dates and derivatives," Robb, flour of dates" in south west and south east.
- ✓ Olive oil, small and large Kabylia, (East and North east), Guelma, Skikda, Jijel.
- ✓ Table Olive: Mohammedia (north-west).
- ✓ Potato: El Oued, Khenchla, Tébessa, Mascara, Ain Defla.
- ✓ The tomato: Adrar et Biskra.
- ✓ Sweet pepper: Tipaza et Biskra.

There were other products which could be in charge like honey, royal jelly, aromatic plants, condiments, medicinal, the lamb of steppe, artichoke, carrot, apricot, grenades, apples, the white truffle to the south, the grapes of tables.

❖ The policy of agricultural and rural renewal (PRAP) :

This policy was launched in 2008, following the national plan of agriculture development 2000, in which has been added, another dimension which is the Rural Development in 2008 , And therefore a national rural development strategy was launched in 2003 with these objectives: The revitalization of rural terroirs and food security, the (PRAP) Highlighted the responsibility of local actors, decentralization and participatory rural development, Socio-economic objectives have been plotted on this program including the employment.

1. The objectives of the period (2010-2014):

Sustainable economic growth, taken from the private sector through:

- ✓ Promotion of exploitation as a manager of natural resources and creator of wealth.
- ✓ Increase productivity, production, quality, protection, preservation and enhancement of natural resources.
- ✓ Integration of actors, and innovation of sectors.
- ✓ Revitalization and enhancement of rural terroirs.

Another form of governance for the agricultural and rural sector, (a responsibility shared by public and private actors) by:

- ✓ Participatory mode.
- ✓ The structuring of the actors, the organization, the mutualisation, the partnership.
- ✓ The role and relations of the administration with the profession.
- ✓ Human capacity building.
- ✓ Management arrangements.

❖ The Agricultural Guidance law of 13 August 2008:

This law contains PRAR objectives.

Order 32 concerning the valuation and promotion of agricultural products, products of agricultural origin, a quality system was founded which allows:

- ✓ The distinction of products by their qualities.
- ✓ The attestation of the conditions of production on organic Agriculture.
- ✓ Determine the traceability mechanisms that guarantee the origin or the terroir.
- ✓ The attestation that production has been developed according to production methods and related know-how.

Order 33 covers the agricultural product quality system of origin established by Article 32 which contains:

- ✓ Geographical Indications and Appellations of Origin.
- ✓ Agricultural labels.
- ✓ Characteristics enlightening the product of organic farming.
- ✓ The mechanisms for monitoring and evaluating the subordination to technical regulations, labels, designations of origin and requirements for organic products.
- ✓ Traceability mechanisms.

Their application depends on the regulatory domain; The appropriate Executive Decree is being finalized.

The legal and institutional system of quality's agricultural products recognition has been set by the texts:

The Order 1005 of 25 November 2008 of the MADR covering the procedures and arrangements for allocation of geographical indications of agricultural products.

Decision No. 142 of 1 February 2009 of the MADR, which sets out the composition and functioning of the technical committee on agricultural products GI.

Order No. 1005 of 25 November 2008 and Decision No. 142 of 1 February 2009 concerning the Technical Committee on Agricultural GIs and its secretariat was called to be replaced by (the National Committee and its Secretary) when Implementing texts of 3 August 2008 of the Agricultural Guidance Act were adopted.

c. The potentialities:

1- the fruits of quality:

In all regions of the country there are fruit crops, except the Great South (Ourgla, Tindouf, Adrar), The following Wilaya make the largest production: : Ain defla, Blida, Tipaza, Médéa (center), Skikda, Batna (east), et Tlemcen (west), Producing 2.256: 580 quintals, 52% of the total fruit production.

As for fruit crops with nuclei, The almond crops cover the largest area, followed by the cultivation of apricots and peaches with 13,530 ha and 10,840 ha respectively.

The orchards of the plain (Mitidja) and those of the perimeters (high Cheliff) are driven by modern techniques, while the gardens are located in the small oases of Messaad, wilaya of Djelfa practically traditional techniques.

Table N 3: Types of products and systems used.

(Quality fruits)

The systems used	The types of products
<ul style="list-style-type: none"> • Tree system. • Large and medium-sized farms. • Modern techniques: planting, irrigation. • Traditional production: in the mountainous regions (north of the country) and in the Oasis of the south. 	<ul style="list-style-type: none"> • That are fruits of good quality and healthy. • The peaches of Bouhlou (Tlemcen). • The cherries of Miliana and Larbaa, Nath Irathen (kabylie). • The oranges of Mohammedia (Mascara) and Boufarik (Blida). • The grenades and apricots of Messad (Djelfa). • The apricots of N'gaous and the apples of Arris (Batna).

Source: Elaborated by us: on the basis of: Hélène Ilbert, p 119.

There are also fruits that have had traditional drying processes such as: figs, apricots, pomegranates, pistachios of the atlas, are also products of terroir that are appreciated by Algerian populations.

2. The grape of tank and table grapes:

The production of this sector is important so that its yield is high in the region of Medea, (south center of Algeria), there are 2 types of production that are wine grapes and table grapes.

2.1. the grapes of the tank:

2 categories of wines have obtained the guaranteed designation of origin (VAOG), the Médéa, the Ain Bessam, which are produced with the reasons of tank in mountain or hills,

The production areas could be used, Médéa, Bouira and Ain Bessam, these wines are of superior quality, obeying strict production rules, they are intended for export.

Vini viticultural cooperatives ensure production processes, equipment and machinery used in production and storage are aging, not renovated, Cellars have been used since 1962, innovation elements have been introduced by the ONCV in the field of transport equipment, control laboratories, automatic bottling lines, n 2012 production of wine grapes reached

785430, with an average of 545693 over 10 years, wine production reached 149710 (HI) in 2012 with an average of 242385 over 10 years, As for the marketing: ONCV is concerned, the Office puts a large part of wine on the export market, especially (VAOG), wines with a guaranteed designation of origin, which come from Of the areas, Private producers sell their wines with their marks.

2.2. Table Grapes:

The production of table grapes has experienced an important development in case of pace of planting, and area.

In 2012 the production of table grapes has reached 5174536 with an average of 4320558 on 10 years.

The Decree n70-114 of 01 August 1970 has set Grape varieties and the list of authorized varieties.

Table N 4: Varieties in the region of Medea.

	The Date Palm of Beirut	Ahmar Bou Hmar	Mokrani
color	white	pink	Green Yellowish with thick skin
Cultivated area	60%	20%	16%
Yield	Varies between 50 and 100 qx / ha	60 qx/ha	-
Supports transport	Resistant	-	Medium resistant

Beyrouth date	Ahmar Bouhmar	Mokrani
<p>Well liked by the consumer.</p> <p>Variety adapted to Algerian soil.</p> <p>A reference in terms of adaptation.</p> <p>Could have "pseudo product of terroir", "geographical indication".</p>	<p>Beautiful grape that large cluster.</p> <p>Pleasant flavor and sweet.</p> <p>It is a variety self-tone, it is cultivated in all mountain regions (Médéa, Kabylia, Tlemcen, mascara, Jijel).</p>	<p>Crunchy gains with a sweet taste.</p> <p>Grown in the sand land.</p> <p>More resistant to diseases.</p> <p>May be the subject of an approach eco label</p>

Source: Elaborated by ourselves on the basis of: Zoubir Salhi, "local products and local development in Algeria case of rural areas of mountains and foothills", Mediterranean Options, n ° 89, 2009.

4% of the surfaces of the same region (Médéa) are occupied by other varieties such as: Muscat of Alexandria, "Italia" and "Guerbes", nevertheless these varieties are less important than those Mokrani, Ahmar Bou Hmar, date palm in Beirouth.

The circuit of marketing of these types of grapes is not well organized, the approach of sale on foot in the fields is dominant, the demand exceeds the supply of far, and price is not high, and therefore this market may expand and evolve to other parts of the population more concerned with the quality of the agri-food product.

3. The sector of olive cultivation:

3.1 The system of olive production in Kabylia:

200000 ha is the area occupied by the Olive tree in Algeria, which is equivalent to 2.3% of the total agricultural area, and 43% of the national base arboreal (Salhi 2010), 357110 with olive trees isolated, And 13955070 olive trees by mass, 90% of olive production is in the region of Kabylia (Bejaia, Tizi Ouzou, Bouira and Boumerdes), the majority of farms are of small size, 30.000 is the Number of farms in the wilaya of Béjaia, the density of orchards is irregular.

3.1.1 The olive varieties in Kabylia (Zoubir Salhi 2010), (Ouassila Lamani 2014):

- The Chemal variety:

This variety gives from 14 to 18 liters / quintal, the quality of this variety is widespread in the great Kabylia (Bouira), as well as in the small Kabylie (Bejaia) is even considered a true local heritage.

- Other varieties such as "Agraraz", "Azeradj", "Aidel", "Aberkane", "Bouchouk" and "Aime", according to ITAFV there are more than 163 local varieties in the region of Kabylia.

The table below shows the main characteristics of the olive-growing varieties of the wilaya of Bejaia; The oil yield; use ; Diffusion and origin.

Table N 5: characteristics of olive oil varieties in the wilaya of Bejaia.

The denomination of the variety	origin	dissemination	use	Oil yield	Characteristic of the fruit		Specificity of the variety
					weight	Form	
Aberkane	Akbou	2%	Oil and Table olive	16% at 20%	high	Extended	Rustic and seasonal variety
Agrarez	Tazmalt	Restricted	Oil and table olive	16% at 20%	medium	Spherical	Low and alternating productivity
Ahroun	High valley Soummam	Restricted	Oil and table olive	18% at 22%	Medium	extended	High productivity and little

							alternation
Aime	Ait Aymel	Restricted	oil	18% at 22%	Low	extended	Late and rustic variety. High and alternating productivity
Azeradj	Seddouk	10% ^a 20% ^b	Oil and table olive	24% at 28%	high	extended	Variety resistant to drought, shaly soil, it is often the pollinator of the Chemlal variety
Bouchouk Soummam	The valley of Oued Soummam (Sidi Aich)	4% ^b	Olive oil and table oils	22% à 26%	high	avoid	Medium Productivity and little alternating.
Bouichret	Tazmelt	restricted	oil	20% at 24%	Medium	extended	Variety is found in association with the variety ahroun and Chemlal
Chemlal	All kabylia	40% ^a 45% ^b	oil	18% at 22%	low	extended	Self-sterile variety, always associated with other varieties (Azeradj Sigoise).
Limli	Sedouk Sidi Aich	8% ^a 20% ^b	oil	20% at 24	low	extented	Early variety little cold-tolerant but resistant to drought
Tabelout	Versaut North of babors	8% ^b	oil	20% at 24%	Medium	extended	Early variety, resistant to moisture
Tefah	Seddouk	1% ^b	oil and table olive	18% at 22%	Very High	Spherical	Rustic variety, multiplication by herbaceous cuttings gives good results

Takesrit	ower Valley of the Soummam (El Kseur)	limited	oil	16% at 20%	low	extended	Variety resistant moisture	to
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Source: Ouassila Lamani, "local institutions and actors in the valorization of local products, what local approach to valorization of olive oil of Beni-Maouche in Kabylia", thesis to obtain the degree of doctor, in international cotutelle issued By Montpellier Supagro National Center for Advanced Studies in Agronomic Sciences, National School of Agronomy ENSA el Harrach Algiers, 2014, p.139.

3.2 The supply of the olive oil sector:

If olive production was observed, there was an alternating evolution of production. This is according to (Lamani 2014) due to the lack of maintenance of orchards, the wrong technique, and sapling,

Poor climatic conditions also contributed greatly to this alternating production, such as the persistence of snow and frost, the heat wave of the summer season (Ferroudja Adane 2013, by Mohamed Naili 2013), fires, Caused by the hot weather.

3.2.1 Production techniques:

The main crops in this sector are, cereal crops, arboriculture, market gardening and, as regards the means of production, it is light technology, in the majority of cases traditional means are the most used.

The economic conditions of the region and the adoption of the family farming model mean that production techniques are not yet mechanized.

Nationally: 10% of the oil mills are modern and 85% are traditional oil mills on the whole 1705 oil mill, 45 units of packaging of the table olive (MADR, 2002).

3.2.2 The types of exploitation:

Holdings of private type, small in size, parceled dominate the sector. Three types of land statutes characterize these farms:

- ✓ Family land;
- ✓ Earth in division;
- ✓ Earth in association: this concerns of families who live in several cities of the country, could not work their land.

If we took the example of the wilaya of Bejaia there would be 2 types of exploitation according to (Melkhir Boudi, Fouad Chehat, Foued CHERIET 2013).

4. The date sector:

Algeria has a heritage of 18 million date palms³, the chain of dates is a strategic sector.

³ Traduced from : ³ <http://www.presse-dz.com/revue-de-presse/deglet-nour-abandonnee-aux-speculateurs> le 04/11/2016 h 14h32

The distribution of potentials of the date palm zones is located in south east with 60% of the national patrimony. The "Deglet Nour" fruit covers more than 60% of the palm total (Lounes Merrouch, Boualem Bouammar 2015).

The Algeria occupies a place of the most important among the countries exporting dates. As well, it occupies the first place in the framework of quality (Salah Eddine Benziouche, Foued Cheriet 2012).

4.1 The dates system's production:

The production system of the sector of dates is essentially based on the OASIS system, which is divided into 2 types of production systems, the traditional system, and the modern system.

✓ The traditional system:

According to (Salah Eddine.B, Foued.c 2012) the system of traditional production includes three types of strategies, the palm tree or the fruit tree various and those of annual crops (gardening, fodder, cereal), With livestock, the whole of three strategies plant traditional represent 53% of farms, according to (the office of Studies SCANAGRI Sweden.), The traditional production system is characterized by planting density, considerable genetic diversity, and irregular plant spacing.

Exploitation under the traditional system remains difficult for reasons of fragmentation, difficult access to tractors and sometimes the advanced age of the palm, so some varieties are destined to disappear. These varieties are not widely recognized on the market.

✓ The modern system:

This system is characterized by a diversity of varieties very limited, with a planting density of 100 to 150 palm trees/ha, and a spacing between plants rather regular, as well as a system of irrigation of drop by drop to the Farms The most recent.

Of the modern plantations have been put in place through the drilling of the slick Zielfana albienne Guerrara, and development of lands that have begun in 1983, is continuing.

Varieties derived from the varietal structure among the new Berriane plantations are:

- 1- Deglet nour 70%.
- 2- Azezga 10%.
- 3- Ghars 10%.
- 4- (Tafezouine, Tdalat, Bent Q'hala, and other varieties) 10%.

4.2. Algerian date potential:

The Saharan area of Algeria represents 2 million km² with 14 natural Saharan regions that are: (Souf, Ziban, Oued Righ, Saoura, Ouargla, Tindouf, Gourara, Piedmont of the Ksourrs, Touat, M'Zab Hoggar, Tidikelt, Tassili, and the Dayas region.

The potential Algerian date has 18.336.385 bearings whose 14.652.380 are productive and give an annual production of 850,000 tonne/year.

Regarding the variety of palm, the variety of date palm reached 1000 varieties, including 50% of Deglet Nour (Zenkhrî salah).

Table N 6: Algerian date potential

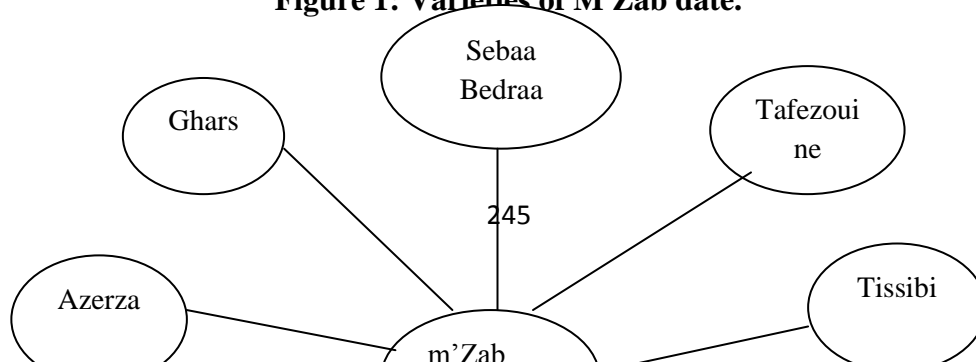
wilaya	Area occupied (n of tree)	Deglet nour (fine dates)	Ghers and similar (n of tree)	Degla Beida and similar Dates (dry) N of tree	Total Date palm number of tree
1 Adrar	27804	0	0	3733350	3733350
3 Laghouat	318	10500	14160	12616	37276
5 Batna	193	8656	9033	10977	28666
7 Biskra	42493	2612862	545626	1090812	4249300
8 Bechar	13945	0	1386738	239394	1626132
4 Tamanrasset	7001	0	0	688822	688822
12 Tébessa	812	39000	22400	0	61400
17 Djelfa	100	6310	2160	813	9283
30 Ouargla	21515	1370357	989538	162800	2522695
32 El Bayadh	639	19820	15900	28200	63920
33 Illizi	1220	7727	74213	43760	125700
37 Tindouf	434	0	45206	0	45206
39 El Oued	36317	2422411	703835	618937	3745183
40 Khenchla	766	51200	61300	11542	124042
45 Naâma	506	1790	48810	0	50600
47 Ghardaïa	10632	521750	219670	483390	1224810
Total Algeria	164695	7072383	4138589	712513	18336385

Source: CDARS 2013.

4.3 The different types of products:

The M'Zab region is the most important region in terms of varietal diversity, with the following varieties:

Figure 1: Varieties of M'Zab date.



Source: developed by us on the basis of: "Participatory management of date palm genetic resources in the Maghreb oases - Diagnostic analysis of the date palm sector in Algeria", study by SCANAGRI Sweden office).

d. the constraints encountered during the valorization of the terroir product in Algeria:

A number of structural constraints and techniques impede the local production, among these constraints:

1. The weakness of Local institutional framework:

only the Classical institutional organizations. are involved in local development as (the daïra, the wilaya, the Department), but civil society is not present.

- ✓ The lack of local agents participation in case of local development that appears as a tool of central assistance and not of participation.
- ✓ The weakness of professional organizations as well as of rural institutions.
- ✓ The institutions of local development cannot yet support important programs launched for the rural development, These institutions are like "cultural organizations and social, political relay, administrations..."

The constraints of local development and the participatory mode:

- ✓ There is weak relationships between rural populations and the institutional framework, as well as very low capacity of participation on the part of these rural populations. Infrastructural constraints create other problems, such as (Health; the transport; flow of goods; educational wastage.

The constraints of agricultural activities:

Algeria's potential in rural mountain areas and foothills, is unfortunately badly operated and poorly valued; it lacks not only the supply of factors of production but also, the marketing infrastructure, as well as the promotion, distribution....

The difficulties emergence of specific quality labels:

In the case of Algeria, it is necessary to overcome the territorial and institutional constraints to achieve specific labeling, Taking as an example the case of viticulture and date palm, that's illustrated in the table below, with the territorial and institutional constraints for the labeling process for viticulture and date palm products.

Table 7: Territorial and institutional difficulties for the labeling process (case of viticulture and date palm).

Institutional Constraint	Territorial Constraint
<ul style="list-style-type: none"> ✓ Problems of governance and specification. ✓ . absence of a representative and efficient professional organization ✓ The weakness of interprofessional mechanisms. ✓ The lack of dialogue between the sector actors and administration. ✓ Producers' mistrust of the administration. ✓ Logistic constraints. ✓ Lack of professionalism. ✓ Lack of awareness of labels importance. ✓ Lack of information. ✓ Lack of consumer contact in cities. 	<ul style="list-style-type: none"> ✓ The downward logic prevents the involvement on approaches to labelling. ✓ Lack of involvement of territorial institutions (Wilaya, university, research center). ✓ Lack of organization of export circuits. ✓ The territorial organization must be reviewed in order to explain the local population.

Source: elaborated by ourselves on the basis of: Lamara Hadjou, Foued Cheriet, institutional constraints and labeling of local Algerian products: the case of wine and dates, the CREAD notebooks, n 103, 2013.

2. Empirical study on attitude of consumer's green food.

Methodology:

Our data was collected from a sample of 94 Dar djeddy's consumer, situated in Algiers using questionnaire, we used the 5-point Likert scale of (strongly agree until strongly disagree). In order to test the reliability of our questionnaire, we found it useful to measure cronbach's alpha coefficient, our measurement coefficient was 0.694.

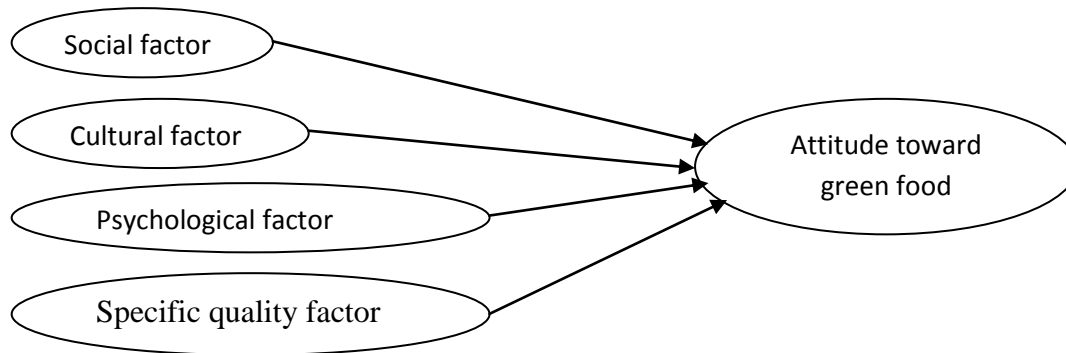
As long as the value of our coefficient is greater than 0.6 our finding is reliable. Then we used the chi-square method to test whether there are a statistically significant link between the influence factors and the attitude towards the green food.

Our survey addresses the consumer's attitude towards green food, as well as the factors that influence this attitude in this context.

The factors that influence attitude toward green food are:

The social factor;
The cultural factor;
The psychological factor;
The specific quality factor of green food.

The conceptual model



Hypotheses:

H1- There is a significant statistical relation between social factor and attitude toward green food.

Attitude:

According to (Anwar 2003) attitude is such of pattern of behavior, tendencies, predisposition to adapt in a social situation, According to (Sarnoff 2000) the attitude toward an object, may be favorable (positive) or unfavorable (negative) toward a particular object, the organization's attitude is settled from motivational, perceptual, emotional, and cognitive aspects of the individual's environment. Attitude is a state when man moves to do a social activity or act with certain feelings in response to a situation or condition of objects in the surrounding environment. The attitude can be influenced by some factors:

Social factor:

According to (Mingyan Yang 2014) social factor is a kind of social pressure on the individual to engage in behavior with group behavior such as family, friends, these norms are the normative beliefs that the group or references have, (Ajzan 1991), (Mingyan Yang 2014) by (Tarkianian and Sund pvist 2005), the subjective norm has a positive influence on consumer attitude toward green food.

(Phunah Kif Teng et al 2012) have found that the company has a positive impact on the consumer's motivation to buy the green food.

H2- There is a significant statistical relation between cultural factor and attitude toward green food

Cultural factor:

In order to better understand cultural diversity between nations, different dimensions have been proposed for the description of cultural orientation as a relationship of populations with their modes and types of activities.

The cultural dimension was developed to study the national culture of country (Liche Seniati Chairy 2013) individualism, collectivism, masculinity, femininity, the power of distance, uncertain avoidance, short-term orientation, restraint - indulgence, and there is another dimension that has been developed through other studies.

According to (Aker et William 1998) consumer behavior is influenced by the culture of consumer, the choice of product is carried out by a set of complicated social influences, values are at the center of culture in any country or organization (Rohini Samarasighe 2012) , many studies have addressed the cultural factors that create demand for green food.

H3- There is a significant statistical relation between psychological factor and attitude toward green food

Psychological factor:

The psychological factor represents the knowledge that concerns the specific problems in the long term, and the commitments that have been made to improve it. Emotional responses to problems include, for example, psychological factors: personal values, personality (Imed Zaim 2005).

H4- There is a significant statistical relation between Specific quality factor and attitude toward green food

Specific quality factor:

according to (Hosein, V et al 1013) the quality of product plays an important role in decision-making process of buying a product, and to choice for or against green food product, however, the level of perceived quality is a way to evaluate and judge the product (Hosein V 2013, par Doom et Verhoef 2011).

Data analysis and findings:

Reliability: Cronbach's alpha:

Cronbach's alpha	items
,912	19

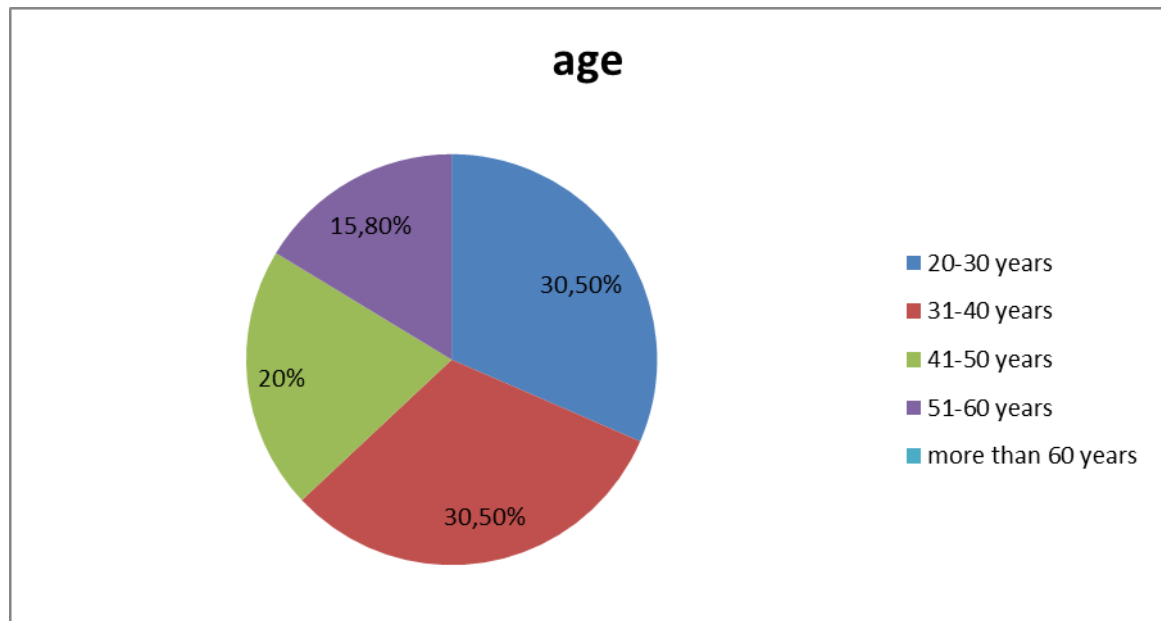
variable	Cronbach's alpha
Social factor	0,79
Cultural factor	0,70
Personal factor	0,77
Specific quality factor	0,82
attitude	0,76

Respondent profile:

95 respondents participated in this study by responding to the questionnaire distributed via facebook page of DARDJEDDI's company. 73.7% of respondents are women, 26.3% are men.

Age:

30.5% are from the age group 20-30 years, 30.5% are in the 31-40 age bracket while 20% are from 41-50 years age group, 15.8% are from 51 to 60 years old, and 3.2% are in the over 60s category. (See Figure 1)



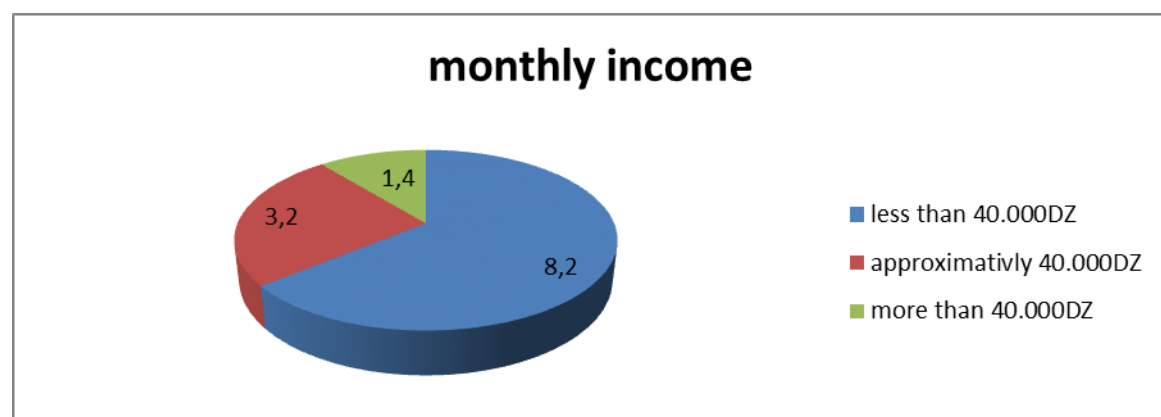
Education level:

95.8% of respondents have a university level, and 4.2% have a secondary level

Monthly income:

20% of respondents have a monthly income less than 40.000DZ, while 6.3% earn about 40.000DZ monthly, and 73.7% have a monthly income more than 40.000DZ. See Figure 2.

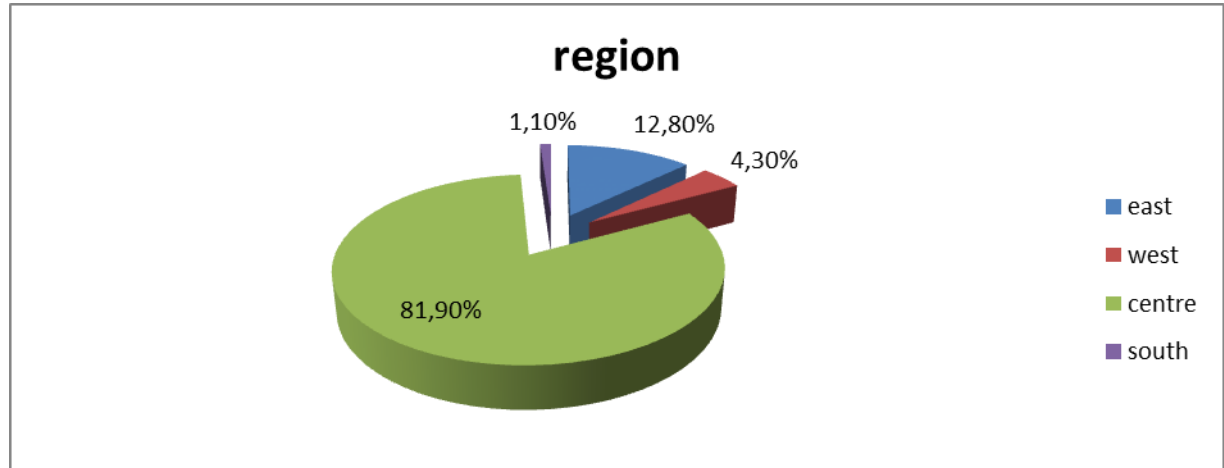
Figure 2 : Monthly income



Region:

12.8% of respondents are from east of the country, 4.3% are from the western region, and 81.9% are from the center, and 1.1% are from the south. See Figure 3.

Region

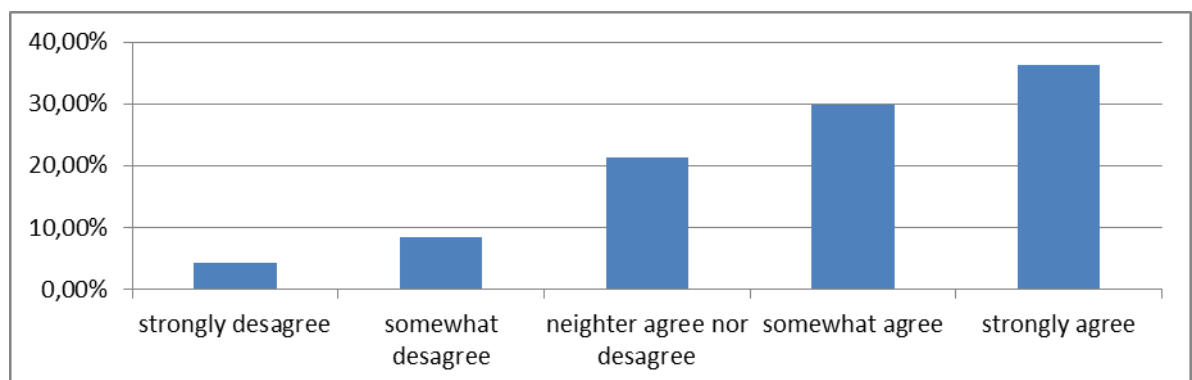


Descriptive analysis:

Attitude toward green food:

- 1- 4.3% of respondents strongly disagree the fact that they try to encourage the production of local farms when they buy green food products, 8.5% do not agree, 21.3% are neutral, 29.8% agree, and 36.2% strongly agree in this regard. See graph 1:

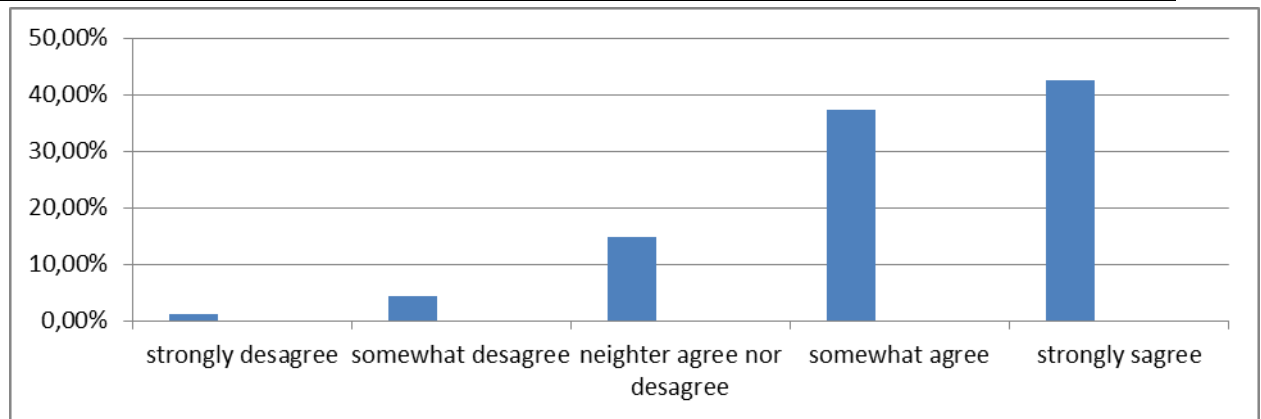
Graph 1



respondents who strongly agree that they try to encourage the production of local farms when they buy green food products make up the majority of our sample with a percentage of 36.2%, then the category of those who agree with a percentage of 29.8%, they represent together more than half of the sample, therefore they have a positive attitude towards the local product.

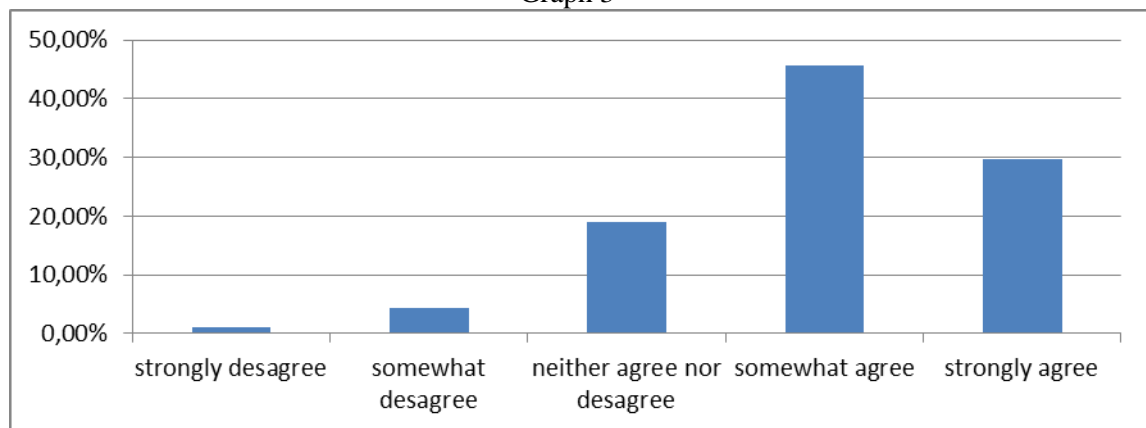
- 2- 1.1% of respondents strongly disagree that Green Farms prevent contamination and pollution of land, air, water, and local product, 4.3% do not agree, 14.9% are neutral, 37.2% agree, and 42.6% strongly agree in this context. See graph 2.

Graph 2



A very small minority representing 1.1% of the sample do not agree at all with the fact that Green Farms prevent contamination and pollution of land, air, water, and 4.3% do not agree, while 42.6% strongly agree, and 37.2% agree, which means that respondents have a positive attitude towards the green food.

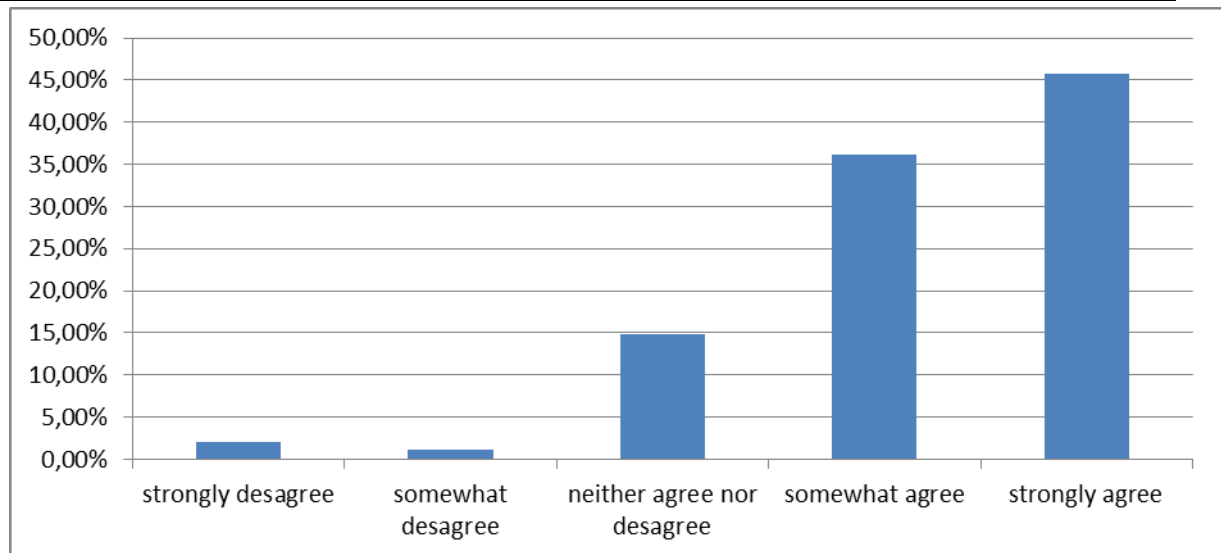
- 3- 1.1% of respondents strongly disagree that green farms use less energy and no chemicals, 4.3% disagree, 19.1% disagree 45.7% agree, and 29.8% strongly agree with this, see graph 3



We notice that the majority of respondents agree that green farms use less energy and no chemicals with a percentage of 45.7%, and those who strongly agree are 29, 8%, which is a sign of a positive attitude towards the local product among the majority of respondents in our sample.

- 4- 2.1% of respondents strongly disagree that green food can reduce the risk of poisoning, 1.1% disagree, 14.9% are neutral in this respect, 36.2% agree, and 45.7% strongly agree. (see graph 4)

Graph 4



We notice that a large majority of respondents in our sample strongly agree that Green local Food can reduce the risk of poisoning by 45.7%, and even those who are agreement follow them with a percentage of 36.2%. This reflects the positive attitude that the Algerian consumer has towards the local product.

Hypotheses discussion:

After reducing the number of items used in the survey through the Principal component analysis.

, we used pearson's correlation coefficient to test whether there is a statistically significant relationship between the variables (social factor, cultural factor, personal factor, and specific quality factor) and attitude via SPSS software version 22. We obtained these results.

H1: There is a significant statistical relation between social factor and attitude toward green food.

H1₀: there is no statistical significant relation between social factor and attitude toward green food.

Nous avons calculé le coefficient de corrélation pearson , afin de calculer le lien statistique entre le facteur social et l'attitude vis-à-vis du green food, ceci est d'une valeur de 0,592, d'un niveau de signification de 0,000 et il est statistiquement significatif (supérieur a 0,05), donc on confirme l'hypothèse H1 There is a significant statistical relation between social factor and attitude toward green food.

We calculated the pearson's correlation coefficient, in order to calculate statistical link between the social factor and attitude towards green local food, this is have a value of 0.592, a significance level of 0.000 and it is statistically significant (greater than 0.05), so we confirm the hypothesis H1 There is a significant statistical relationship between social factor and attitude towards green food.

, and we reject the null hypothesis H1₀

Corrélations

		REGR factor score 1 for analysis 2	REGR factor score 1 for analysis 2
REGR factor score 1 for analysis 2	Corrélation de Pearson Sig. (bilatérale) N	1 94	,592** 94
REGR factor score 1 for analysis 2	Corrélation de Pearson Sig. (bilatérale) N	,592** 94	1 94

The results of SPSS 22 software.

H2- There is a significant statistical relation between cultural factor and attitude toward green food.

H₂₀: there is no statistical significant relation between cultural factor and attitude toward green food.

We calculated the correlation coefficient pearson, in order to calculate the statistical link between the cultural factor and the attitude towards the green food, this is have a value of 0.538, a level of significance of 0.000 and it is statistically significant (greater than 0.05), so we confirm the hypothesis H2 which says There is a significant statistical relationship between cultural factor and attitude toward green food. , and we reject the null hypothesis H₂₀.

Corrélations

		REGR factor score 1 for analysis 2	REGR factor score 1 for analysis 2
REGR factor score 1 for analysis 2	Corrélation de Pearson Sig. (bilatérale) N	1 94	,538** 94
REGR factor score 1 for analysis 2	Corrélation de Pearson Sig. (bilatérale) N	,538** 94	1 94

The results of the SSPSS 22 software.

H3- There is a significant statistical relation between psychological factor and attitude toward green food.

H₃₀: there is no statistical significant relation between psychological factor and attitude toward green food.

We have calculated the correlation coefficient pearson, in order to calculate the statistical link between the psychological factor and the attitude towards the green food, this have a value of 0.542, and a level of significance of 0.000 and it is statistically significant

(greater than 0.05), so we confirm the hypothesis H3 that says there is a significant statistical relationship between psychological factor and attitude toward green food. , and we reject the null hypothesis H3₀.

Corrélations

		REGR factor score 1 for analysis 2	REGR factor score 1 for analysis 2
REGR factor score 1 for analysis 2	Corrélation de Pearson	1	,542**
	Sig. (bilatérale)		,000
	N	94	94
REGR factor score 1 for analysis 2	Corrélation de Pearson	,542**	1
	Sig. (bilatérale)	,000	
	N	94	94

The results of the SSPSS 22 software.

H4- There is a significant statistical relation between Specific quality factor and attitude toward green food.

H4₀- There is a no significant statistical relation between Specific quality factor and attitude toward green food

We calculated the pearson correlation coefficient, in order to calculate the statistical relationship between Specific quality factor and attitude towards green food, this is a value of 0.668, with a significance level of 0.000 and it is statistically significant (greater than 0.05), so we confirm the hypothesis H4 that says there is a significant statistical relationship between psychological factor and attitude towards green food. , and we reject the null hypothesis H4₀.

Corrélations

		REGR factor score 1 for analysis 2	REGR factor score 1 for analysis 2
REGR factor score 1 for analysis 2	Corrélation de Pearson	1	,668**
	Sig. (bilatérale)		,000
	N	94	94
REGR factor score 1 for analysis 2	Corrélation de Pearson	,668**	1
	Sig. (bilatérale)	,000	
	N	94	94

** . La corrélation est significative au niveau 0.01 (bilatéral).

We noticed that all the factors of influence on attitude which are: social factor, cultural factor, psychological factor, and factor of the specific quality of green local food, are in statistically significant relation with the attitude of green food, and the factor most influence among these 4 cities is specific quality factor of the green food which is the

specific characteristics ,which could be the geographical indication, the sign of original specific quality, or then the biological sign, the second influencing factor is the social one which represents influence of the close social circle of consumer, (the families, the friends, colleagues ..), and then the third factor is the psychological one that represents in our context the concern for the environment and health, and finally the last is the cultural factor.

According to the results found in our study the specific quality of green food plays a major role in the influence of the consumer's attitude towards green food products, this could present an important opportunity for producers, who must seize it so to achieve a maximum part of local and even external market.

Conclusion:

The green-food product is a type of specific local food, its development and production can present a real alternative model more interesting in relation to the territories as well as the local economic return. Despite all the constraints that this sector has undergone, the valorization of “terroir” product will remain a no-negligible opportunity. The demand for world markets on these products reflects growth prospects absolutely to seize the profit.

Green food products (products of specific quality, organic, natural ...) should be protected by the label appropriate to their values, like the OAP, PGI.

It is imperative at this stage that the local actors, local institutions and those of the professional organizations are strongly involved in a territorial logic approach in order to highlight the creation of the signs of quality of these products,

The development of these “terroir” sectors in Algeria is a Sin-qua-non condition for the diversification of food market especially in relation to export.

In this article we have shed light on the theoretical notions of green food product and “terroir” product as well as “terroir” product in Algerian context, legislative and institutional initiatives in this framework, then the potential Production of this type of products, finally the constraints faced with regard to valorization of the “terroir” product in Algeria.

We conducted a quantitative study on the attitude that the Algerian consumer has towards this type of product, this study has shown us that the consumer has a positive attitude towards the latter, and the most important that influences this attitude is the factor of the specific quality of local food product, that shows the opportunity represented by this kind of product in case of local consumption.

Source :

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