

Review

Some traditional Algerian products from durum wheat

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Foods derived from durum wheat play an important role in the diet of the Algerian people, this is attributed to the semiarid climate favourable for the cultivation of this staple cereal crop. Flat bread, pasta, couscous and frik are the most common products made from durum wheat in Algeria. It is also used to produce various kinds of traditional cakes. All these products are the major products made from durum wheat in Algeria and most of them are scientifically unknown. This work is a general review on current works on some traditional products such as flat bread, pasta, traditional cake and others. It describes for each product, raw materials used, manufacturing process and end products quality criteria.

Key words: Durum wheat, semolina, traditional product, pasta, pastry, bread, frik.

INTRODUCTION

Algeria is located in northwest Africa, in an area known as the Maghreb, "Sunset" in Arabic. The center of the country is a semi-arid highland region where the climate is conducive for the cultivation of durum wheat, making this staple cereal crop and its derived foods an important element in the Algerian people's diet (Winget and Chalbi, 2004). Flat bread, pasta, couscous and frik are the most common products made from durum wheat in Algeria. It is also used to produce various types of traditional cakes (Abecassis et al., 2013).

This paper is a summary review on some traditional Algerian products from durum wheat such as flat breads, pasta products, pastries and frik.

DURUM WHEAT FLAT BREADS

In Algeria, housewives produce two types of durum flat bread:

Kesra

This means fraction, and designate four kinds of home-

made flat bread. Kesra includes four kinds of flat bread: Mathlouaa, maadjouna, rakhsis and harcha. These appellations vary throughout Algeria but recipes and flow charts are alike.

Khobz eddar

This literally mean home bread, differs from kesra by its recipe (fat, eggs and some additives) and by its flow chart for production (Dagher, 1991).

Kesra types

Mathlouaa

Mathlouaa (Figure 1a) (which means leavened or risen) is one of the most consumed flat breads in Algeria especially during fasting month of Ramadan. It is leavened bread made from fine durum semolina. Usually the leavening agent is dry yeast. It is baked on a clay pan with little spikes all over the bottom called tajine (Figure 1b). The bread is light and spongy, with typical tenacity from the semolina. The bread has a short shelf life. It is good

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Figure 1. Mathlouaa, a leavened flat bread. (a): whole and parts of bread. (b): Mathlouaa baking on tajine (clay pan with little spikes all over the bottom).

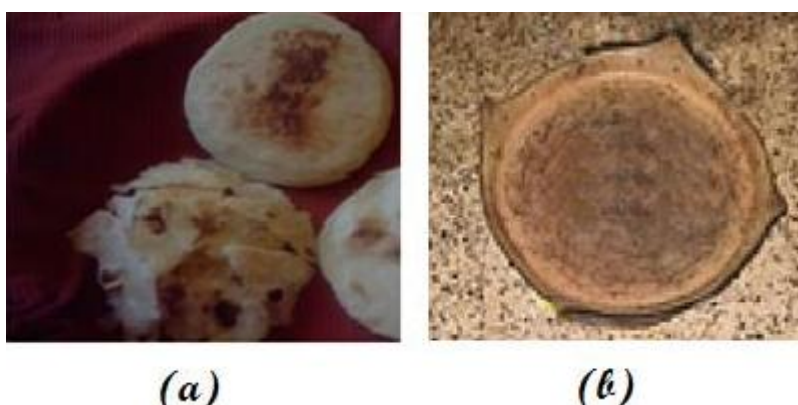


Figure 2. Maadjouna, unleavened flat bread (a): whole bread. (b): Smooth clay pan for baking maadjouna and other products.

only the day it is made (Kezih, 1998; Cheriet, 2000).

Maadjouna

Maadjouna (Figure 2a) (which means kneaded), the recipe for this type of bread is simple (fine semolina + water + salt) as its preparation (kneading, shaping, baking) is quick and easy. Households make maadjouna when they are too busy. It is baked on a smooth clay pan (smooth tajine (Figure 2b)). The bread is chewy and dense, with a pleasant taste from the burned blisters on its faces. The bread has a very short shelf life. It goes to stale quickly. It is good only the hours it is made. It serves as an edible spoon (Kezih, 1998; Cheriet, 2000).

Rakhsis

Rakhsis (Figure 3) (which means soft), this bread has also a simple recipe (fine semolina + fat + water + salt) and its preparation is easy and quick (no fermentation). Rakhsis is thinner than mathloua. It is also baked on a clay pan with little spikes. The end product has a homogenous surface without blisters because fat prevent their

development. With a firm crust and a compact crumb, the product is soft. Rakhsis has a long shelf life because the addition of fat retards staling. Rakhsis is full of flavor (Kezih, 1998; Cheriet, 2000).

Harcha

Harcha (Figure 4) (which means rough) is a kind of bread "kesra" which is prepared a little differently from the above kinds. Coarse semolina, fat with high rate, salt, and water are mixed and undergo a moderate kneading to form unrefined dough which lacks visco-elastic properties. The dough is fragile and must be handled with care. Then it is shaped into squares or lozenges which are baked on a smooth clay pan (Figure 2b). The end product has a rough surface, a long shelf life and it is tasty (Cheriet, 2000).

Khobz eddar

This traditional bread is prepared during major celebrations such as weddings and religious feasts. It is more

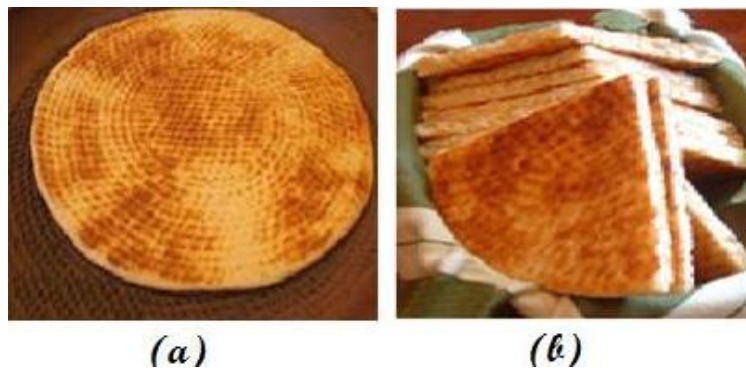


Figure 3. Rakhsis: unleavened flat bread with fat (a): hole bread. (b): slices of bread.



Figure 4. Harcha, unleavened flat bread with high fat content.



Figure 5. Khobz eddar, traditional leavened flat bread.

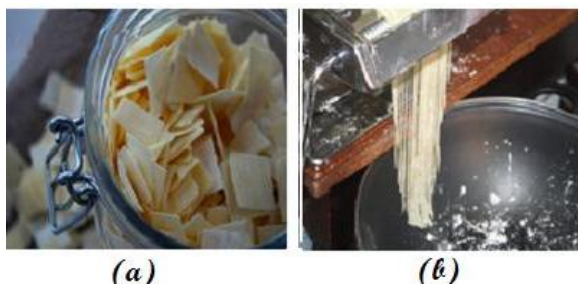


Figure 6. Two types of Algerian traditional pasta. (a): trida, (b): rechta.

challenging to make because its sophisticated recipe (fine semolina + fat + milk + salt + yeast + egg + sesame bread is baked in a bakery or kitchen oven. The end product has a crispy crust and a soft crumb and delicious (Figure 5) (Cheriet, 2000).

PASTA PRODUCTS AND COUSCOUS

Pasta products

Semolina and water are the greatest components of all seeds + water), also it required more steps than kesra: knead, flatten and set on the baking pan to leaven. The

traditional pasta, which is processed by sheeting and cutting the dough into strips, squares or some other shapes (Figure 6). Pasta is consumed either fresh, or undergoes drying and stocked for a later use. Usually traditional Algerian pasta is steam cooked. Good pasta should have the following criteria: yellow amber color, smooth aspect, non-sticky, and when cooked should swell well, do not disintegrate and have a good taste (Namoune et al., 2000; Namoune et al., 2007).

Couscous

Couscous (Figure 7), the Algerian national dish is made from mixing semolina with water. Couscous preparation requires five steps: Blinding, agglomeration, shaping, steaming and drying. However in some regions of Algeria couscous does not undergo steaming and it is dried immediately. Characteristics of good couscous are: amber yellow color, uniform particle size, high sauce absorption capacity, ability to keep its integrity during steaming or sauce application, and particles are non-sticky, good taste (Derouiche et al., 2002).

PASTRIES DURUM WHEAT PRODUCTS

In Algeria, durum semolina is widely used to produce a



Figure 7. Couscous undergoing preparation in a wooden pan.

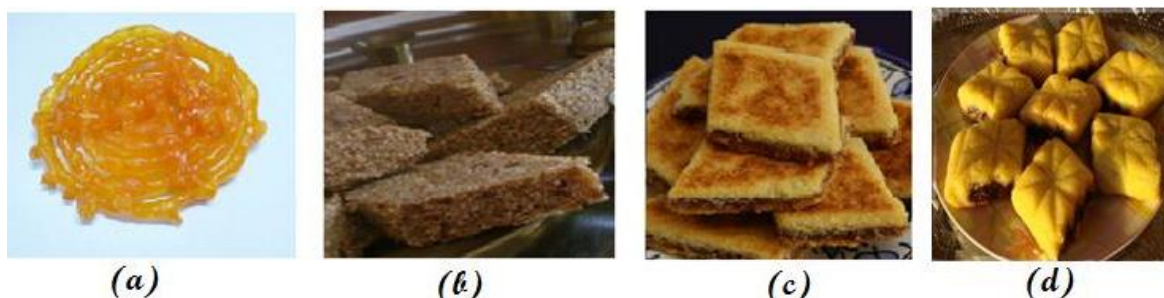


Figure 8. Some traditional Algerian pastries from durum wheat. (a): zlabia, (b): tamina, (c): braje, (d): makroud.



Figure 9. Frik whole grains (a); ground and sieved grains (b); frik soup (c).

range of pastries products (Figure 8), like zlabia, tamina, bradje, makroud and many others. Production and consumption of these pastries increase in Islamic holidays and in summer where families' celebrations are frequent. The recipes of these pastries are various and their manufacturing is different. They share a characteristic: sweet or must be eaten sweet (Ouelhi et al., 2004).

NON-PASTE DURUM WHEAT PRODUCT

Frik

Throughout Algerian eastern regions, immature durum is processed into frik (Figure 9). This is not specific to

Algeria but there are similar traditions in other parts of the world. The grains are harvested during the interval between the "milk stage," and the "soft dough" stage. Wheat is cut with a sickle and the spikelets are stacked on a large sheet metal. The spikelets are then roasted. After which the grains are threshed and winnowed. The fire imparts a smoky flavor to the grain, and the heating stops the maturation of the endosperm and stops the degradation of the chlorophyll. The ideal frik grain is green with just the tip charred. The smoky, sweet and grassy quality of the grain adds a unique taste to frik dish. These green grains are more nutritious than mature grains, high in dietary fiber and low in phytic acid. Frik grains are ground and sieved and used to prepare a soup often consumed

in the Eastern regions of Algeria especially in the month of Ramadan (Ouelhi et al., 2002; Bouza and Nacer, 2006).

CONCLUSION

Traditional products cited in this work are the major products of durum wheat in Algeria. The introduced products are not the only products produced; there are many others products not cited in the work. The review of these products shows that they constitute an interesting research field. Study of these products shows: rational use of durum wheat; research and definition of specific quality criteria for these products; improving the manufacturing process in order to have products with required qualities.

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