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OLIVE PRODUCTION AND OLIVE OIL INDUSTRY IN LIBYA, TUNISIA, ALGERIA AND MOROCCO

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Abstract. The article analyses the production of olive in Libya, Tunisia, Algeria and Morocco it includes comparison of growth in production between 1990 and 2003. The work touches on the problems faced by the olive industry in the production and marketing stage. The objective of the research is to study the modern methods of manufacturing and production of olive and olive oils. Another objective is to get to know about the problems and obstacles faced in the process of developing and improving this particular section of agriculture in the selected North African countries.

Key words: olive oil, olive production, North Africa countries

INTRODUCTION

The economical importance of the olives lies in its additional value added to agricultural production and also its contribution in the national production as well as in coming in the always much needed foreign currencies in export. All these come from exports of olives and olive oils. On the other hand olives occupies an important position in the food production and consumption, in addition to its many other uses.

It constitutes a major source of fatty acids, proteins, vitamins, carbohydrates and fibres. Most of the populations involved in the production of olive live away from towns, in the countryside. Olive production section provides employment for these populations living in the villages. Production of olives here takes advantage of the free labour force at homes. The olive tree plantations cover large areas in most of the Arab countries, for example in Libya area under Olive covers some 100 thousand hectares. In the year 2003 the average production was over 150 thousand tones of lives. In Tunisia olive plantations covers up to one- third of the whole of arable lands and that is the equivalent of some 1.6 million hectares. The annual production in 2003 was estimated at 350 thousand tones. On the other hand, in Algeria the area covered by olive tree plantation is

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approximately 45% of the whole of the country's arable lands and in 2003 alone the annual production was put at 167.29 thousand tones. Finally, in Morocco olive plantation covers almost 50% of the whole of that country's arable lands and this is equivalent to some 560 thousand hectares. In the year 2003 the annual production was almost 830.1 thousand tones.

OBJECTIVE

The objective of the research work is to study the modern methods of manufacturing and production of olive and olive oils. Another objective is to get to know about the problems and obstacles faced in the process of developing and improving this particular section of agriculture in the selected North African countries.

CURRENT SITUATION OF OLIVE PRODUCTION IN SELECTED AFRICAN COUNTRIES

Depending on the land humidity, there are to be found two types of farming in Libya. One of the methods depends on the rainfall directly or indirectly. The indirect depend on the rainfall covers such method of farming which use direct water, dams, rovers and wells for watering the plants. The second method is the type of farming dependent on irrigation system

The indirect method is dependant on the rainfall. The rain falls in the autumn but at times it can continue through the months of winter. During these seasons olive plants are to be cultivated using the mentioned ways. For the region of the country to the west, that is between Zaura and Masrata the rainfall by year does not exceed 200 mm. However, to the east region rainfall per years reach 600 mm and for this reason olive plants are cultivated in the mountains (so-called green mountains) and also in some limited areas in Banzayn.

The spacing between the olive trees depends on the rainfall as well as the type of soil. For regions with little rainfall per year and poor soils (like sandy soil) the clearance can increase to event about 20 metres from tree to tree. In the irrigation system of olive tree farming, the trees get the water indirectly. This system is popular in small areas and occupies limited areas too.

Depending on the specialisation of given plantation, with the use of indirect method of watering it is possible to cultivate:

- olive, almonds, fruits and others plants,
- cultivation of only olive trees,
- using irrigation it is possible to cultivate vegetables, forage, or fruits (including even evergreen plants) as well as fruits which shade leaves during winter like peaches, avocados etc.,
- here there are two methods of cultivation of olive trees, one is when there is plenty of water in an are the other is for areas without enough like mountains found to the west, near the rives (rivers around the town Serd) or lake water is available (like around Wahad lake).

When it comes to Tunisia, olive plantations can be found almost all over the country, from the North to the South of the Country. It covers almost 95% of all the forests. They grow under different conditions depending on the rainfall. The rainfall is between 1200 mm in the North and some 1500 mm in the South. At times, in some areas, it rains only for some 30 days in the whole year. The amount of rainfall differs from place to place and also from year to year. It has place a very big role in converting lands from deserts to agricultural lands with production of live trees.

On the other hand, in Algeria olive plantations are often found in the mountains and cover some 62% of the mountain areas. For example in the provinces situated at the centre of the country these include: Pgaya, Tizywzw, Pwyra, Pomrdas they cover less than 1,8 hectares. However to the east of the country they cover some 3.77 hectares but in the west they cover about 5 hectares. These are the conditions that determine the production of olives in Algeria, here the traditional system and traditional production technology is at use.

The remaining areas covers some 30.000 hectares found to the east of the country and are characterised by production of olives. Most of the new areas to the west or south of the country or in the low-lying areas use modern methods of cultivation. Here the between 200 and 400 olive trees are planted per hectare. These areas are irrigated by the so-called droplet method. Farming here also dependent very much on the funds received sponsor-countries, those countries supporting the projects. The sponsor funds are cover:

- 100% of money for purchasing seedlings,
- 100% of money used for purchasing fertilisers,
- 40% of money used for purchasing irrigation equipment,
- 40% of the money for digging wells and construction of tanks for water storage.

Finally, there are four methods of olive production in Morocco; these methods are to be found in four regions:

- Agricultural area dependent on irrigation for farming, this area covers around 220 thousand hectares and this is the equivalent of 3% of the whole Moroccan olive plantation. It is divided into two sections (1) First section – irrigation non-stop. This area covers some 40 thousand hectares; these 40 hectares include 9 dams in Morocco. (2) The second section covers some 80 thousand hectares. Here irrigation is supplementary. These include areas like Maraksh, Saragin Castle, Shishawh, Tadle Bany Malaial, Swyrah, Warazat, Taflalit, Fikiek, Palman, Malwya Dam, Juwa and Nador;
- Areas irrigated by available seasonal rainfall. These areas cover 100 thousand hectares equivalent to 18% of the whole of the national olive plants and these areas are: Sais, Fas Safer, Miknas, Hajeb and to the west we have: Sidigasem, Sidisliman and Alowkus;
- Areas irrigated by deficient seasonal rainfall. The areas cover 40 thousand hectares – being the equivalent of up to 7% of the whole of the national olive plantation cover. These areas include: Alikamisat, Wastat, Astin and Krybka;
- Sub-urban areas cover about 200 thousand hectares representing about 36% of the whole national area under olive plantation. These areas include: Country mountains (Shawshawin, Tanjahm, Tatwan, Al-tasima) Taza, Twnat, Khnefra and Alzilal.

Table 1. The most important types of olives in selected North-African countries
Tabela 1. Najważniejsze odmiany oliwek w wybranych krajach Afryki Północnej

Country	Types of olives
Libya	Indwy, Zulmaty, Rapyany, Rasli, Oslaty, Hamodi, Shamlali, Zarazy, Marany, Tiboby, Zafrany
Tunisia	Al.-Shatawy, Al.-Shamlaly, Al.-Waslany (Algim), Al.-Shamshaly, Al.-Jarboi, Al.-Zalmaty, Al.-Myski, Al.-Bisbasy, Al.-Marsalin, Al.-Zarazy
Algeria	Dblankanti Galmie Atabany, Aburisha, Shamlal, Azility, Malei, Azrag, Tofah, Limly, Sigwaz, Farkany
Morocco	Bishulin, Al.-Huszja, Al.-Manarah, Al.-Thahabiya

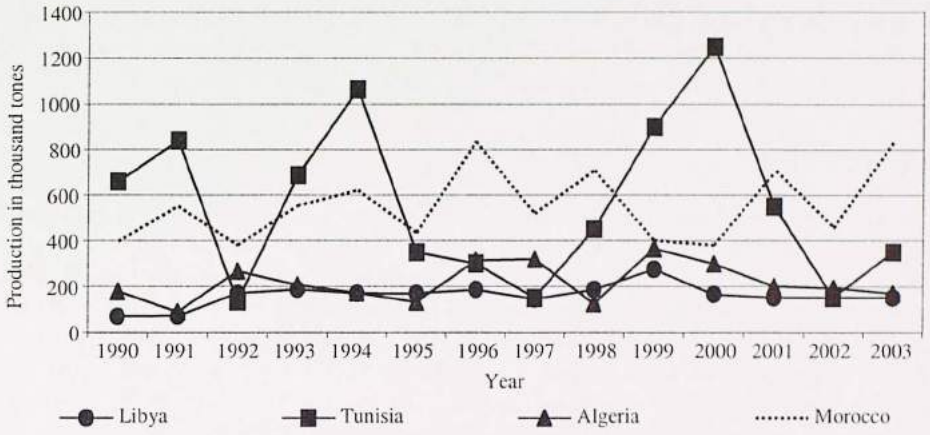
Source: Own research.
Źródło: Badania własne.

Table 2 presents development production of the countries. The statistical results of between 1990 and 2003 show that production in these countries has been growing and this is clearly evident in countries like Libyan, Morocco, Algeria and Tunisia as shown in the table.

Table 2. Production of olives in Libya, Tunisia, Algeria and Morocco in 1990–2003 (in thousand tones)
Tabela 2. Produkcja oliwek w Libii, Tunezji, Algerii i Maroko w latach 1990–2003 (w tysiącach ton)

Year	Libya	Tunisia	Algeria	Morocco
1990	68.0	660.0	177.9	396.0
1991	70.0	839.0	88.0	550.0
1992	168.8	134.0	266.0	380.0
1993	186.6	688.0	206.0	554.5
1994	168.8	1063.0	170.4	622.4
1995	168.8	350.0	131.0	436.3
1996	185.7	300.0	313.3	835.6
1997	145.0	150.0	319.5	517.6
1998	185.9	450.0	124.1	708.5
1999	275.0	900.0	363.4	400.0
2000	165.0	1250.0	298.3	380.0
2001	150.0	550.0	200.3	698.7
2002	150.0	150.0	191.9	455.3
2003	150.0	350.0	167.3	830.1

Source: Data of Arabian Agricultural Development Organisation.
Źródło: Dane Arabian Agricultural Development Organisation.



Graph 1. Production of olives in Libya, Tunisia, Algeria and Morocco in 1990–2003 (in thousand tones)

Wykres 1. Produkcja oliwek w Libii, Tunezji, Algerii i Maroko w latach 1990–2003 (w tysiącach ton)

Source: Data of Arabian Agricultural Development Organisation.

Źródło: Dane Arabian Agricultural Development Organisation.

PROBLEMS IN PRODUCTION AND INDUSTRY OF OLIVES

The problems encountered in the production field include the following issues: failure to select the appropriate types of olives, improper care of the olive trees, limited knowledge on the methods of caring of olive trees, use of bad methods of harvesting of olive fruits, and mixing of good quality and bad quality olives.

Moreover, there are some problems connected with the olive industry. First of all, there are few people with the proper skills and professional education and preparation in the directing of production and manufacture. Another problem is that olives are usually out of national and international standards, i.e. separating water from olives or not separating leaves from the olives during manufacture. In using pressing machines to press oil from olives, the pressers are not properly cleaned and this leads to remnants in the press plates, the remnants lower the quality of the next party of olive oils pressed.

On the other hand, climatic problems cover the olive trees in the hot regions. The plants may be destroyed by the harsh winter conditions also very hot summer days could destroy the plants. Another factor here is the amount of rainfall, where there is no irrigation very low annual rainfall might lead to destruction of plants.

Moreover, economical problems included: competition between the local production and production abroad, lack of exporting companies, lack of funds for marketing purposes, lack of suitable storage facilities, high production costs, lack of investment projects, and high cost of marketing or low demand of olive oil in the internal market – within some countries.

Finally, within marketing problems following can be distinguished: use of improper packaging to transport olive oils as plastic packs, lack of plastic packing for olive oils, use of bad method of pouring oil into bottles, overstaying of olive in storage warehouses

and not sending them in time for pressing leads to low quality, lack of marking appropriate professional skills and knowledge, pouring of olive oil into improper packets and keeping of olive in humid spaces lead to olive being spoiled.

CONCLUSIONS

Olive production occupies a central place in most of the North African countries and mainly in those countries bordering the Mediterranean Sea. For the reason therefore, these countries have been more interested in production of olive. However, because these countries have been mainly only heavily involved in the production and have mainly neglected the marketing and export a lot of olives get spoil for lack of market. Neglecting the marketing and export has resulted in that these countries have almost no ability to compete in the international markets. The report covered mainly North African countries and ways of production of olive and also the most important types of olive and the area covered by olive trees. Also the amount of annual production in the studied countries and study too included review of the problems faced in the: problems with production, problems with manufacturing, economical problems, climatic problems and last of all marketing problems

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PRODUKCJA OLIWEK ORAZ PRZEMYSŁ OLIWKOWY W LIBII, TUNEZJI, ALGIERII I MAROKO

Streszczenie. Uprawa oliwek zajmuje kluczowe miejsce w większości krajów śródziemnomorskich (Libia, Tunezja, Algieria, Maroko). Kraje te zawsze były intensywnie zaangażowane w produkcję oliwek i oliwy z oliwek. Jednak brak właściwie prowadzonych działań marketingowych oraz eksportowych sprawiają, że kraje Afryki Północnej mają problemy ze zbytem produktu oraz ograniczone możliwości konkurowania na arenie międzynarodowej. W niniejszym opracowaniu scharakteryzowano sposoby produkcji oliwek, obszary, gdzie są one uprawiane a także najważniejsze odmiany oliwek. Przedstawiono również wielkość produkcji oliwek w krajach Afryki Północnej w latach 1990–2003. Do najważniejszych problemów związanych z produkcją oliwek zaliczono: brak wystarczającej wiedzy na temat uprawy i przetwórstwa oliwek, problemy klimatyczne, problemy ekonomiczne oraz problemy marketingowe.

Słowa kluczowe: olej z oliwek, produkcja oliwek, kraje Afryki Północnej

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