

APPRECIATED FOR THOUSANDS OF YEARS FOR THEIR EMOLLIENT AND MOISTURISING PROPERTIES, VEGETABLE OILS HAVE ALWAYS PLAYED AN IMPORTANT ROLE IN MANY CULTURES; IN FACT THEY EVEN BOAST HEALING PROPERTIES AND ARE AN EFFECTIVE NATURAL REMEDY FOR THE CURE OF MANY AILMENTS. IN RECENT YEARS, THE MARKET FOR THE PRODUCTION OF OILS AND FATS HAS EXPERIENCED REMARKABLE EXPANSION, WHICH, AS HAS HAPPENED IN ALGERIA, IS DIRECTLY RELATED TO POPULATION GROWTH AND THE INCREASINGLY STRONG TENDENCY TO REGARD SUCH PRODUCTS AS AN ESSENTIAL INGREDIENT IN LOCAL CUISINE AND MEAL PREPARATION. THIS INCREASED DEMAND HAS LED MANY COMPANIES IN THE INDUSTRY TO INVEST IN NEW PRODUCTION FACILITIES, AS DID THE ALGERIAN COMPANY PROLIPOS SARL, WHICH RECENTLY INSTALLED THREE NEW VEGETABLE OIL, BOTTLING AND PACKAGING LINES. PROLIPOS, ONE OF THE LARGEST COMPANIES IN THE NORTH AFRICAN AGRICULTURAL FOOD SECTOR, TURNED TO SMI FOR THE SUPPLY OF MODERN AUTOMATIC SYSTEMS ABLE TO EFFECTIVELY MEET CURRENT MARKET DEMANDS AND TO COPE WITH FUTURE ONES.

# PROLIPOS SARL

➤ **SECTOR: EDIBLE OIL**  
 PROLIPOS SARL  
 Ain M'lila, Algeria  
[www.prolipos-dz.com](http://www.prolipos-dz.com)

➤ 3 complete PET lines for the bottling of edible oil (production of 6,000 to 20,000 bottles/hour depending on bottle format)



VIDEO



GEO LOCATION



**P**rolipos is one of the largest companies in the north eastern Algerian agricultural food industry, specializing in the production of oils and foods made by refining crude vegetable oil. Founded in 2000, by the Bareche family, the company immediately distinguished itself on the Algerian market by selling superior quality products at very competitive prices, and production currently exceeds 700,000 bottles per day. Prolipos does not only produce vegetable oils for food use (though it is the market leader in that sector). Over the years, the company has diversified its business activities in various sectors, to include margarine, soaps for the cosmetics industry, vegetable fats for the chemical industry, paints and varnishes for use by glue producers. Recently, the Algerian

company also opened a production unit for liquid cleaners, that may be diluted and used in many home and hospital areas, for cleaning, deodorizing, bleaching, disinfecting or water purification. Vegetable oil production remains its main activity, with a nominal capacity of 450 tons per day, processed into edible oil with extraordinary purity and marketed in 1 litre and 2 litre bottles and 5-litre tins. The increased demand for this product has prompted the Prolipos owners, to invest in three new vegetable oil, bottling and packaging lines (capable of producing 6,000 to 20,000 bottles/hour depending on bottle format), for the supply of which, the company turned to SMI. The three new systems are intended for the fully automated production of oil packaging in 1 litre, 2 litre and 5 litre PET bottles.



# THE PROLIPOS RANGE OF PRODUCTS

**O**il from the "Lynor" brand is a 100% vegetable soy oil, cholesterol free and rich in Vitamin E, and is an ideal ingredient for the daily preparation of meals. "Lyna" margarine is a light and tasty vegetable margarine with no cholesterol, that is easy to spread and enriched with vitamins A, D and E; it is multi-purpose, ideal for cooking, for preparing sauces or simply enjoying as a spread. The "Hana" brand margarine, is composed of 82% vegetable fat and 16% water and is a rich source of vitamins A, D and E; thanks to its special composition, this product is ideal for preparing puff pastry sheets, brisee and other similar doughs. Prolipos produces even more... In 2011, the Algerian company opened a new factory to produce soap bars to be processed into Marseille soap, soap for personal hygiene and soap for specific uses, areas in which Prolipos meets a good portion of the domestic demand. The "Citadelle" brand of Marseille soap is made from the saponification of oil, especially vegetable oil (palm oil and stearin) without solvents or dyes, and is excellent for the skin.



Citadelle soap, thanks to the quality of its basic ingredients without allergens, is the ideal product for children's hygiene, and for anyone suffering from allergies, and can be used for the daily cleaning of hands and body.



## PROLIPOS SARL



**Year founded:** the company was founded on 6 March 2000 with private funds



**Production facility:** the plant is located in the industrial area of Ain M'lila, in north-eastern Algeria, and covers an area of 40,000 m<sup>2</sup>



**Turnover:** € 43,220,000 (Bareche Group)



**Employees:** the company employs 260 people



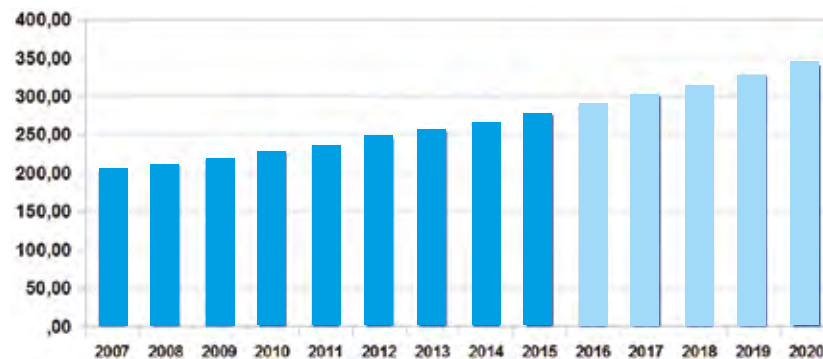
**Production:** the company is specialized in the agricultural food industry and in all human food consumption related activities, in particular the production of margarine, the refining and packaging of oil, plastic processing, and soap production

Oil and fat consumption is on the rise in Algeria, due to an increase in population and the greater availability of income for a growing number of families. In particular, the habits of consumers seem to be oriented to encourage more consumption of vegetable oils and fats; this trend is driven by factors related to health and well-being, and to the fact that vegetable and seed products have no substitutes or alternatives in cooking and, no less in importance, the fact that they are available at much cheaper prices than animal fats. According to accurate market research by the specialized company Canadean, it is estimated that the volume of vegetable oil consumption in Algeria, in 2020, will amount to 341 million kg, about 24% more, than the volume recorded in 2015 (275 million kg). Thus, there is a need for many companies in the industry to reorganize production, in order to adequately meet the demand coming from the market in the years ahead, by investing heavily in new plants or expansion projects and the modernization of existing ones.

# THE EDIBLE OIL MARKET IN ALGERIA



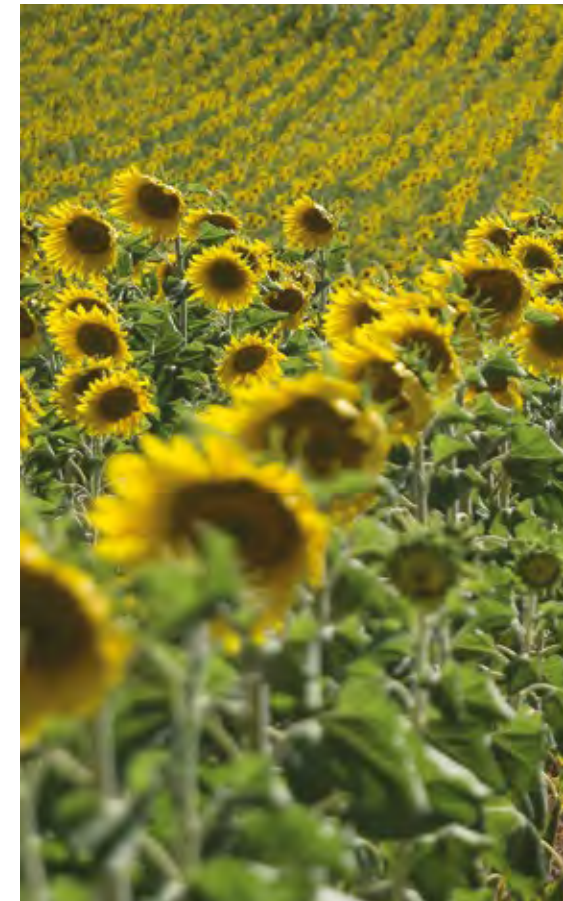
Vegetable oil consumed in Algeria in millions of kgs (predictions are included)



# SMI SOLUTIONS FOR PROLIPOS



The Prolipos facility has installed three new, latest generation production lines supplied by SMI for the bottling and the packaging of oil in PET bottles. Primary packaging is assured by three integrated blowing, filling and capping systems of the ECOBLOC® VMAS series; the secondary packaging is performed using film-only shrink-wrappers of the LSK series (Line 1) and SK series (lines 2 and 3); the tertiary packaging on 1000 x 1200mm pallets is performed by the APS automatic palletising system series, while transport of loose bottles output by the ECOBLOC® systems and outgoing packets from the shrink-wrappers is handled by fully automated conveyor belts.



## ➤ LINE 1

### Primary packaging

- ECOBLOC® 6-24-6 VMAS integrated blowing, filling and capping system
- production of oil in 1 L PET bottles

### Secondary packaging

- LSK 40F packer
- film-only packaging of the 3x2 collation

### Tertiary packaging

- APS 1550P palletiser
- 1000 x 1200mm pallets with plastic pad

## ➤ LINE 2

### Primary packaging

- ECOBLOC® 10-36-10 VMAS integrated blowing, filling and capping system
- production of oil in 2 L PET bottles

### Secondary packaging

- SK 400F packer
- film-only packaging of the 5x2 and 4x3 collations

### Tertiary packaging

- APS 1550P palletiser
- 1000 x 1200mm pallets with plastic pad

## ➤ LINE 3

### Primary packaging

- ECOBLOC® 6-21-4 VMAS large container integrated blowing, filling and capping system
- production of oil in 5 L PET bottles

### Secondary packaging

- SK 600F packer
- film-only packaging of the 2x1 collation

### Tertiary packaging

- APS 1550P palletiser
- 1000 x 1200mm pallets with plastic pad

## ➤ CONVEYOR BELTS AND SUBCONTRACTED MACHINERY

# PRIMARY PACKAGING WITH ONLY ONE MACHINE

# SOLID END-OF-LINE PERFORMANCE

## ECOBLOC® VMAS SERIES INTEGRATED SYSTEMS

In the past, the most widely used container for packaging edible oil was the 3 or 5 litre metal tin; later on, at least for the smaller 0.75 to 1 L sizes, glass containers caught on. The most notable trend of recent years is the gradual transition to PET bottles, which are a convenient, lightweight and unbreakable packaging solution. The SMI investment project, for the three new turnkey bottling lines commissioned by Prolipos, began with the awareness of the many positive aspects PET has over other packaging materials, and led us to design the 1 L,

2 L and 5 L containers and install all the machinery needed, to handle the entire packaging process up to and including palletising for transport and distribution to sales centres. The primary packaging solution proposed by SMI, consists of three integrated ECOBLOC® VMAS series systems for the blowing, filling and capping of PET bottles of various formats. This has been a particularly advantageous solution for the Algerian enterprise, because the grouping of these three functions in one machine, allows them to reduce costs, and to simplify system management compared to conventional solutions that require long conveyor belts to connect separate machines to each other and multiple operators to run them. Moreover, the ECOBLOC® solution SMI supplied to Prolipos ensures high hygiene standards during the filling process, which is a particularly delicate operation, given that the viscosity of edible oil requires precise and accurate filling techniques, which the SMI systems handle by using extremely high capacity electronically-controlled flow meters. The SMI filling machines supplied to the Algerian company, are also equipped with innovative solutions, to preserve the quality of the product and minimize waste; for example, there is no contact between the bottle and the filling valve, and the filling takes place at two speeds, this allows completion of the processing cycle in the shortest possible time and avoids the leakage of product from the bottle.



## LSK AND SK SERIES SHRINK-WRAPPERS

The secondary packaging, chosen by Prolipos, was for shrink-wrap film only; in fact, the three bottling lines supplied by SMI include an LSK 40F shrink-wrapper (line 1), an SK 400F

shrink-wrapper (Line 2), and an SK 600F shrink-wrapper (line 3) that are capable of meeting the different production capacities of the three lines, according to the output pack collation, which ranges from 25 to 60 packs per minute. All three packers, handle the packaging of the filled and capped bottles, coming from the integrated ECOBLOC® system, in practical packs that only use shrink film. Film is the best choice for packaging that is economic, practical, easy-to-handle and attractive to consumers. The film used, may be clear or printed with the customer's advertising. The solution adopted by Prolipos, produces quality packs, and offers an excellent quality to cost ratio for the final package.



## APS SERIES PALLETISERS

The tertiary packaging of the three production lines at the Ain M'lila facility has been entrusted to the modern SMI APS 1550P series palletising systems. A lot of intensive research and innovation has gone into creating, these technologically advanced systems, that

optimize end-of-line operations using multiple logistic configurations. The finished packs, coming from the LSK and SK series shrink-wrappers, are stacked in layers on 1200 x 1000 mm pallets. The SMI automatic system then inserts a pad of plastic, not cardboard, between one layer and another, thereby reducing the environmental impact of the packaging and simplifying the recycling and reuse of materials.



# #VEGETABLE OIL

## HOW IS VEGETABLE OIL EXTRACTED?

Oil may be extracted from plants in two ways:

**chemical extraction:** a modern oil extraction system that has a higher yield and is also faster and less expensive;

**physical extraction:** a system that is often used to produce cooking oil, because it is preferred by consumers (at least in Europe).

Regardless of the method of extraction, vegetable oils have many uses in everyday life; they are used for human food, as biofuels (in rural environments of the Third World), for lighting, heating, and cooking food, and some of them, such as rapeseed oil, cotton seed oil or castor oil must be processed, to render them fit for human consumption, before reaching the consumer's table.

## WHY ARE VEGETABLE OILS BETTER?

The benefits of vegetable oils vary according to the specific properties of the source plant, and to all of the active ingredients (phytochemicals) that each contains. Apart from this, however, all vegetable oils are essential foodstuffs that improve our health and our quality of life. The benefits of adding these products to our diet, and our beauty regimen, are enough to truly guarantee us a healthier life.

## WHAT IS A VEGETABLE OIL?

Vegetable oils are natural products that are obtained by "cold pressing" oleaginous seeds, such as almonds, or extracted from other parts of a plant - from the pulp of fruit for example - like olive oil. Some of the most common vegetable oils are peanut oil, castor oil, olive oil, palm oil, coconut oil, and sesame oil. Some of these products have properties that are good for beauty, others are more suited to be consumed as food and provide well-being and health to the body. Many vegetable oils alleviate the symptoms of several debilitating disorders, and all of them, stimulate our vitality and give us toned, moisturised and radiant skin. Vegetable oils also contain a concentrate of life-giving nutrients, vitamins, minerals, and especially, essential fatty acids. For this reason, more and more consumers are no longer buying products that contain potentially toxic preservatives or are synthetic, and instead are opting for vegetable oils, preferring products that are safe and healthy for the body.

# VEGETABLE OIL: PROPERTIES AND USES



### Internal use

When used as natural supplements, vegetable oils provide significant amounts of lecithin, a phospholipid that is important for many physiological functions (our brain contains a particularly high amount of it); this substance is a source of good cholesterol and cleanses the circulatory system by removing excess cholesterol and triglycerides. In addition, the essential fatty acids contained in vegetable oils strengthen the delicate membranes surrounding skin cells, extending the physiological function and delaying the signs of ageing. The antioxidant action of these products helps tissues to resist attacks from free radicals. Furthermore, vegetable oils are a good source of fat-soluble vitamins, such as vitamins A, D, and E, which the skin needs to maintain its tone and elasticity.

### External use

Many vegetable oils are used in natural cosmetics and body cleansing products. They are also valuable must-have ingredients for the preparation of home-made creams. The nourishing action, combined with emollient properties, provides more elasticity to the skin, preventing wrinkles and stretch marks and giving tone and vigour to our hair. Finally, vegetable oils are also useful for alleviating skin redness, thanks to their soothing and calming action on irritated or inflamed tissues.

