

# **ACACIA GUM**



an important social, economic and environmental role for the Southern Sahel countries



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In the collective imagination, Africa is often perceived as composing of dry lands. This narrow outlook hides a wide part of the potential and resources provided by the African continent.

Acacia is among one of these resources, which products the gum of the same name. This product that we regularly find in our daily life could be a dynamic of the "green revolution" that Africa wishes to start in order to transform its constraints into forces. Focus on the acacia gum (also known as gum Arabic), a natural resource that has many benefits.



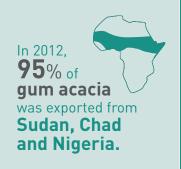
# **ACACIA GUM PRODUCTION**

### Where can we find acacia gum?

Acacia gum, also called gum Arabic, has been used since 2650 BC, at the time of ancient Egypt, when it was used in the manufacture of bandages for mummies1.

After 4 millenniums of use, for medicinal, cosmetic and edible purposes, acacia gum is now on a large part of the African territory.

Indeed, its production area spreads far and wide across the "gum belt", extending from Senegal to Eritrea, in dry and semi-arid areas of the south of Sahara.



Acacia gum is also produced in Senegal, Cameroon, Mauritania, Mali, Niger, Uganda, Burkina Faso, Kenya and Tanzania<sup>2</sup>.

### An economic resource for local communities

Beyond the geographic importance of acacia gum, it is also a tremendous economic resource for poor populations of the Sahel and sub-Saharan Africa. In these territories, around three million people can live their lives thanks to the acacia gum crop<sup>3</sup>. Gum crop represents an important part of the farmers' incomes, particularly in Sahelian areas.

In 2007, the sum obtained by the grower varied between 1256 and 2020 American dollars per metric ton<sup>4</sup>. The cropped acacia gum is then brought directly to farmers with the merchant taking it to market. Consequently, these are important sums that are being injected into the economy, given that the money is directly reinvested on the markets. Régis Peltier, agroforestry expert in the Center for International Cooperation in Agronomic Research for

Development (CIRAD in French), notes that "the gum farming generates a cash income for farmers that can sometimes represent up to half of their monthly incomes. It allows them to pay their children's school fees, buy drugs or different supplies for example". He adds that this additional income is vitally important for these sub-Saharan populations, with many of them just about surviving.

Moreover, according to Célia Coronel, programme implementer for the Institute for Research and Applications of development Methods (IRAM in French), the incomes of the acacia gum are off-season (the crop usually occurres between December and April) because other crops are usually in autumn. This allows the pickers to spread their incomes out over a year.

On the one hand, the acacia gum crop helps to reassure populations and deter illegal organizations, whose main argument for recruiting these people is the rate of unemployment and/or the lack of incomes.

On the other hand, acacia gum farming increases productivity of other cultivations thanks to the protection that it gives to farmlands.

Besides its economic interest for the poorest local populations, gum acacia farming also has a very positive impact on environmental protection.



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# A POSITIVE IMPACT ON THE ENVIRONMENT

# A way to fight against depopulation

Several programs, including those launched by the Food and Agriculture Organization of the United-Nations (FAO), advocate the development of the production of acacia gum to stop depopulation and poverty, two intimately connected facts<sup>5</sup>.

Indeed, the verdict is irrevocable: poverty would be directly linked with depopulation, as Mr Aboubacar already explained in 2000 when he was Secretary General of the Ministry of the Environment in Niger<sup>6</sup>. Poverty leads populations to cut wood nearby to sell it on the markets in the hope of having money to survive.

Therefore, the main issue that arises is how to balance the triptych demographic growth, impoverishment and depopulation?

The main solution would be to diversify economic resources by recognizing and capitalizing on the potential of the local farming that can cope with arid climatic conditions.

The acacia gum seems to be the perfect applicant for a smart and pragmatic redefining of African farming soils.

# According to Nora Berrahmouni, forest expert at the FAO,

Acacia is a tree that offers many advantages. It nourishes the soil by capturing basic nitrogen which restores fertility; it offers shelter and shade to farmlands; it produces the gum Arabic which has an international market, making this tree profitable for the economy. It also supplies fodder for stock and food for local collectivities<sup>7</sup>.

According to Didier Lesueur. soil microbiology expert in the Center for International Cooperation in Agronomic Research for Development (CIRAD in French),

Acacia is a sustainable resource because we don't destroy trees as we would do for wood or for coal mining.

The tree therefore acts as a barrier to desertification while nourishing soils, making it more fertile<sup>8</sup>.

As a result, acacia gum farming is doubly beneficial because it generates both an income for the farmer and productivity growth for other crops.

Acacia trees and their exudates allow to restore green in deserts and contribute to the preservation of local biodiversity.

In addition to supplying forage and shade for cattle, acacias are a genuine home for several bird species and are generally a supportive environment for plan biodiversity. Indeed, these bushes are able to fix atmospheric nitrogen, which is what gives them the properties to fertilize the soil.







The root system of acacias is similar to a "mixed system" composed of a central pivot that can go down to the water table and a lateral system than can hold and avoid the soil degradation9. Acacias are therefore able to hold available water, even from remote depths. The grass carpet created by the bush prevents water run-off and contributes to a reconstruction of water tables, then the water cycle stabilizes rainfall. In periods of water stress, when the water runs out, acacias provide a much needed water supply to wildlife and domestic species<sup>10</sup>.

Beyond the naturalness specific to the product<sup>11</sup>, it is interesting to note that the crop is also 100% natural. Whether it is in the frame of industrial plantations (that represents less than 1% of the acacia gum production) or

the crop made on wildlife trees (they currently represent 99% of the acacia gum production), the acacia gum can't be cropped via a mechanized system, which is a rare occurrence for the products used in the food-processing industry.



Acacia gum supplied by Alland & Robert, one the leading global suppliers, is organic, halal, kosher and also guaranteed without any pesticide<sup>12</sup>.

### An asset for farming and local communities

Acacia also represents a great asset for farming and local communities.

To avoid widespread starvation in the future, Africa must double its food production by the year 2050, while climate change threaten to lead to a significant reduction of the crop yields (that can reach 50%). In this context, the Consultative Group on International Agricultural

Research (CGIAR in French), a consortium of 15 research centers sponsored by the World Bank, highlighted the benefits of the acacia crop<sup>13</sup>.

As specified earlier, acacias can acclimatise perfectly to dry and desert areas. They take advantage of the rains, as weak as it may be. By drawing nitrogen from the air and by transferring it to the soils via their roots and their vegetative cover, acacias contribute to the development of the gas cycle while stabilizing rainfall.

Since 1984, research has shown that acacia plantations, in the form of improved fallow can help to restore some parameters of the soil fertility deteriorated by the continuous cropping and particularly, the rate of organic matter<sup>14</sup>.



 $<sup>9-</sup> http://apac-isabey.asso-web.com/actualite-22-parlons-du-pourquoi-de-lacacia-dans-notre-association.html\\ 10- http://www.fao.org/docrep/v5360f7/v5360f07.htm - 11- http://www.hotelseconews.com/La-gomme-d-acacia-un-produit.html\\ 12- http://www.neoplanete.fr/podcast/lacacia-ca-degomme-gomme-arabique/\\ 13- http://www.banquemondiale.org/fr/news/feature/2013/03/18/an-evergreen-revolution-cuts-fertilizer-costs-for-africa-s-farms\\ 14- http://documents.irevues.inist.fr/bitstream/handle/2042/51853/241_253_Rev.for.fr.3_2013.pdf?sequence=1&isAllowed=y$ 

# ALLAND & ROBERT COMMITMENTS

#### A long-standing partnership

Alland & Robert is a French company specialising in acacia gum production since 1884. Alland & Robert's expertise is well recognized by the world's largest food groups, to which it sends acacia gum for many uses. Alland & Robert is involved in France and in Africa with a policy of social and economic responsibility over many levels.

Over the years, Alland & Robert has developed a unique network of reliable and skilled suppliers through the "Gum belt", the region of acacia gum in Sahelian Africa, which extends from Senegal to Eritrea, giving the company faultless traceability of its production. Frédéric Alland, CEO of the company, travels several times per year to these countries where the farmers are and he has close links with local communities, in order to guarantee sustainability and quality of the supply of raw materials and to ensure an ethical and clean production process.

Indeed, the aim of Alland & Robert in Africa is to **develop a** sustainable partnership with the suppliers and to ensure that its social and safety practices, but also its ethic and the environmental compliance, are applied in the same way as they are in France. The company implemented an ethical charter to ensure this. It was updated in 2015 and must be signed by the African suppliers every 5 years.

The French company often conduct **an audit,** at least **once per year,** to ensure the application of these established practices.





The Charter also includes a census of all people (including their names and ages) who work for the local suppliers of Alland & Robert in order to avoid exploitation through child labor.





#### For instance:

• In Central African Republic, Alland & Robert has supported the Batali charity since 2011. Together, they look after the building and the reparation of schools, the construction of houses and training for teachers and also the provision of equipment, school uniforms, clothes, drugs and treatment products.

- In Burkina Faso, in collaboration with the Cap Solidaire International association, Alland & Robert participated in well drilling, the management and maintenance of water supply points and also in the improvement of hygiene standards by raising the populations' awareness of health problems.
- In Sudan, Alland & Robert also worked with its local supplier of acacia gum, Nopec, to build, a water tank of 189 m3 in 2014. This guarantees the water supply to the village of El Humera where more than 450 families had suffered from a water scarcity for several years. The village had been deserted by almost half of the population, who were able to return home thanks to acacia gum. Since then, Alland & Robert and Nopec have committed to building a school to help educate the children from the village.





The acacia gum cycle, from farming to production, is completely natural.

### A natural product from farming to production

Indeed, acacia gum is a 100% natural plant product that does not contain any pesticide, any GMO or that can't be industrially produced.

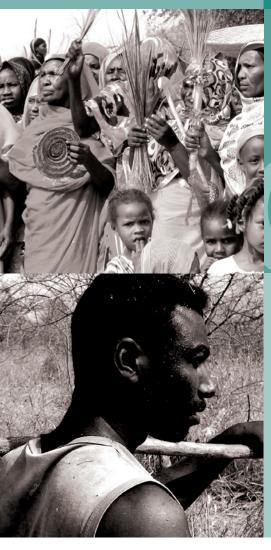
Thus, Alland & Robert works mostly with farmers who crop acacia gum on so-called "wild" trees. A part of them is still unexploited in « gum belt » countries, which guarantees sustainable production and consumption of this renewable resource.

As a matter of fact, Alland & Robert makes every effort to ensure the stability and natural properties of acacia gum thanks to strict standards and a production process that can guarantee its traceability from farming to production.

Acacia crop and gum production solves a huge range of problems encountered in Sahelian and sub-Saharan soils. Nevertheless, so that this promising solution benefits the whole supply chain, the industry must be organized around the principles of solidarity and sustainable development. Over the coming years, Alland & Robert wants to continue to play a leading role in this project.



# For more information: WWW.ALLANDROBERT.COM





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