CAMEROON AGROBUSINESS PLC

CAM-AGRI

CAMEROUN AGROBUSINESS SAS

The Chairman

To

MÜCAHIT SAMI KÜCÜ KTIĞLI
Secretary General AGRICITIES
Konya, TÜRKIYE

Re: CAMAGRI PROJECTS

Mr. Secretary General, Dear MÜCAHIT,

As a follow up to our discussions, I would like to have your support for our Agro Industrial Project.

1) CAMAGRI has been granted the authorization to import fertilizers in the Republic of Cameroon. I have attached a list of Fertilizers Authorized for distribution in Cameroon. We seek to purchase fertilizers from TÜRKIYE for distribution in Cameroon.

2) CAMAGRI is working to setup a 20 000 ha agricultural project in Cameroon. I have attached a feasibility study of our project to establish a corn and soy production coupled with a transformation unit. We wish to have technical and financial support of Turkish businesses.

I look forward to your feedback.

Sincerely yours

Hamad KALKABA MALBOUM

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CAM-AGRI
CAMEROON AGROBUSINESS

FEASIBILITY STUDY

PROJECT TO ESTABLISH A CORN AND SOY PRODUCTION AND TRANSFORMATION UNIT

- **Adamawa Region: Mayo-Banyo and Vina Divisions,**
- **North Region: Mayo-Rey Division.**

Head Office: Yaounde-Cameroun

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PROJECT INFORMATION SHEET

General information on the structure	
Social reason	CAM-AGRI SAS
Acronym	CAM-AGRI
Main promoter	CAM-AGRI
The head office	Yaounde
Current address	Phone: (+237) 620 68 86 56 - 677 50 45 45 Email: Infos.camagri@gmail.com Website: www.camagrisa.com
Tax & legal regime	
Legal status	A simplified multi-shareholder company under Cameroonian law
Special diet	Private structure
Tax system	Real
Scheduled activities and Clientele	
Activities	Production and processing of corn and soya
Strategic vision	Contribute to food self-sufficiency through the production and processing of corn and soybeans
Main clientele	
Implementation site	Region: Departments of Mayo- Banyo and Vina, Northern region: Department of Mayo-Rey.
Completion schedule	2023: Project studies, securing the land base and obtaining the required administrative authorizations, development of the production site 2024: Launch of production on 4,000 hectares
Project title :	**Project to establish a corn and soybean production and processing unit**
Operational objectives of the project:	- Produce 75,000 tons of grain corn - Produce 30,000 tons of grain soya - Produce 52,500 tons of corn flour - Produce 6,000 tons of soybean oil - Produce corn bran (20,625 tons) and cakes (23,250 tons) for the manufacture of feed.
Strategic objectives of the project:	- **Reduce the trade balance through the densification of the local supply of grain corn, grain soya, processed soya and corn products (flour, feed, oilcake, oil, etc.)** - **stimulate local and decentralized economic development through the creation of direct and indirect jobs**
Project cost	**22,749,065,994 FCFA**
Borrowing conditions	**Rate: 7%**

Equity contributions	**4,549,813,199**
State subsidy	- Acquisition of inputs (seeds, fertilizers, pesticides, fungicides) - Exemption on imports of agricultural equipment and machinery - Exemption from land tax
Bank loan	**18,199,252,795**
Financial arrangement:	- Equity: 20% - Loans: 80%
Key stakeholders:	- **Promoter** - **Other Stakeholders** : MINADER, MINMIDT, MINEPAT, MINFI, MINDCAF, MINEE, MINEPDED, MINCOMMERCE, API - **Technical partners:** o MboAgrovision , Precision agriculture study firm, Yaoundé-Cameroon

SUMMARY

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PROJECT SUMMARY

The CAM-AGRI Company plans to set up a corn and soybean production and processing project in the regions of Adamawa and the North, more precisely in the departments of Mayo- Banyo , Vina, and Mayo- Rey.

The company's aim is to make corn flour, soybean oil and other corn and soybean processing products available on the national, sub-regional and international market (corn bran, soybean meal).).

This project is structured around:

- an industrial corn and soybean plantation on a cumulative area of 10 000 hectares including 9 300 hectares for CAM-AGRI, 500 hectares for cooperatives and satellite agricultural companies and 200 hectares for the CTDs;
- a modular industrial mill plant for processing corn into flour with a capacity of 16 t/h;
- a modular soybean oil production unit with a capacity of 7 t/h.

For the first year, the cost of the project is estimated at 22 749 065 994 FCFA including 13 235 513 471 FCFA in investment and 9 513 552 523 FCFA in working capital

The financing of the project comes mainly from two sources: the CAM-AGRI structure which bears 20% of the total cost of the project and the Banks which will provide 80% of the financing needs with an interest rate of 7% with a grace period of 3 years. .

The project will be implemented gradually over three (03) years. The proportion of use of the cultivable area is 40% in the first year, 70% in the second and 100% in the third year. As for the processing plants, the transformation will take place from the second year with 70% of their capacity.

This plan allows an increasing evolution of production and thus of turnover achieved by CAM-AGRI. CAM-AGRI will achieve a turnover of 8,649,000,000 FCFA the first year, 35 936 250 000 FCFA the second year and 51 337 500 000 FCFA from the third year.

The project generates a Gross Operating Surplus of 4 959 758 279 FCFA the first year, 29 803 278 440 FCFA the second year and 42 478 860 977 FCFA the third year. The net result is 2 745 182 906 FCFA the first year and 27 504 867 291 FCFA the third year.

The project is profitable and in the 3rd year, CAM-AGRI will be able to obtain a return on investment. Indeed, the Net Present Value 66 240 846 161 FCFA, the IRR of 38% and the payback period of 2,13.

The implementation of this project will contribute to boosting local and decentralized economic development through the creation of direct and indirect jobs. Indeed, ultimately, this project will generate 2 300 direct jobs and 5 800 indirect jobs.

In addition to improving the standard of living of households, this project will have an impact on the development of the brewing and livestock industries as well as on the trade balance with regard to imports of corn, corn flour, oil and cakes. for the production of feed.

Also, through its social component , this project will contribute to the development of infrastructure such as the construction of roads and tracks, schools, the construction of boreholes and equipped health centers.

1. INTRODUCTION

1.1 Context of the project

As part of the implementation of the 2nd phase of Vision 2035 operationalized by the National Development Strategy 2020-2030 (SND30), the Cameroonian government places emphasis on the structural transformation of the economy to stimulate the implementation implementation of the import-substitution mix policy and export promotion. To this end, he identified nine (09) priority sub-sectors to be developed to lead the country to industrialization by 2030, including the Agro-industry sub-sector. The main objective of the development of this sub-sector is to increase the quantity and quality of the production of agricultural products in order to ensure food self-sufficiency, to supply the growing demand of national agro-industries for agricultural raw materials and conquer external markets (sub-regional and international).

The priority sectors chosen for this purpose are cotton, cocoa-coffee, palm oil, sugar, rubber, rice, corn, plantain, fish, milk and meat. To increase the productivity of these sectors, the aim is to intensify agro-industrial activities and modernize agricultural operations.

As for the corn sector, the Government's ambition is to double the production recorded in 2020 by 2030 to cover 100% of national demand. This request must, among other things, cover the feed needs for livestock, brewing companies and households. To this end, the development of the animal and brewing industries will lead to an increasingly growing demand for corn over time.

Note that corn is the third most cultivated cereal in the world after wheat and rice. Worldwide, it constitutes an essential element in human and animal consumption. In Cameroon, 70% of the population consume corn in different forms. When it comes to animal feed, corn is combined with soy. This grain legume constitutes 98% of animal feed worldwide.

In Cameroon, national corn production is estimated at 2 644 330 tons in 2021; corn imports at 34 082 tons in 2021. Soya is mainly imported in the form of meal; in 2021, Cameroon imported 47 054 tons of cake and other residues from soybean oil extraction.

The yield per hectare of corn is on average around 1.8 t/ha. For better yields, IRAD results show that soya is a good cultural precedent for cereals. In other words, alternating corn and soybeans improves corn yields. The specificity of soya is that it does not require a particular climate, it adapts to any type of soil and its ecological requirements are similar to those of corn.

The establishment of a corn and soya production and processing unit constitutes a contribution of the CAM-Agri project to achieving the objective set for 2030 with regard to corn, and to integrated development of the corn and soybean value chain.

1.2 Problem addressed by the project

The yield per hectare of corn in Cameroon is on average around 1.8 tons. In 2021, the exploited area is approximately 1.5 million hectares. To cover the additional import of corn (34 082 tons in 2021), it will be necessary to mobilize an area of 18 934 44 hectares of additional land surface all things also assuming the yield per hectare of corn at 1.8 t/ha.

Regarding soya, the yield per hectare is between 0.8 and 1.5 tons depending on the area where the crop is grown. The rate of transformation of soybeans into meal in Cameroon is 71.43%. To cover imports of soybean meals and residues (47,053 tons in 2021), additional production of 65,864.3 tons of grain soya would be required.

Compared to other countries with the same agro-ecological characteristics as Cameroon, the yield per hectare of corn and soybeans is low. In addition to the uncertainties linked to rainfall and the costs

of inputs (notably fertilizers), we also note a lack of mastery of the techniques and processes for producing, packaging and storing these foodstuffs; which leads to post-harvest losses.

Furthermore, Cameroon imports on average nearly 600 000 tons of corn (grain corn, corn flour, etc.) per year and spends nearly 14 billion FCFA importing soybeans (grain soybeans, soybean meals). every year. These imports mainly support local demand from national agri-food industries.

1.3 Project justification

The corn and soybean production and processing project is aligned with the strategic objectives of the Cameroonian Government for 2030 with regard to the integrated development of the value chains of the corn, soybean and animal sectors. Indeed, the corn and soy sectors contribute to the densification and integration of the agri-food fabric by means of various cross-transformation processes involving beverages, pig farming, poultry farming and edible oil.

Also, Cameroon has potential in terms of corn and soybean cultivation. These two products are grown in all regions of the country; and soybean cultivation is favorable on cereal production soils.

Furthermore, the choice of the two speculations lies in the fact that the cultivation of soybeans alternated with corn allows corn production costs to be controlled. In other words, their economic interest lies in the fact that production costs will be reduced, particularly with regard to fertilizer requirements (nitrogen for corn production).

Thus, the success of this project has an impact on the improvement of the purchasing power of households, the development of the brewing and animal industries (with the availability of oilcake, an essential element in the manufacture of feed), as well as on the balance trade with regard to imports of corn, corn flour, oil and cakes for the production of feed.

With a view to making the corn and soybean production and processing project sustainable, the Cam-Agri company's strategy takes into account the flexibility of demand for these goods as well as the situation of local farmers.

In addition to the company's plantation, the project integrates into its production process the groups of small producers whom it supervises for the optimization of technical routes. To this end, the implementation of the project will help to interest young people in agro-pastoral activities; the creation of added value in the country's economy through the local transformation of chosen speculations as well as the socio-economic development of local cooperatives

2. the project's objectives

2.1 Global objectives

The project aims to produce and process corn and soybeans locally, to meet national demand for human and animal food and position itself on the sub-regional corn and soybean market. The implementation of this project will contribute to densifying the local supply of grain corn, grain soybeans, processed soybean and corn products (corn flour, soybean oil, feed cakes, etc.) and ultimately will contribute to reduce the Trade Balance for these goods.

On the local level, this project will boost local and decentralized economic development through the creation of direct and indirect jobs, and the development of cognitive infrastructures (construction of roads and tracks, construction of schools, drilling and, the construction of equipped health centers).

2.2 Specific objectives

As part of the corn and soybean production and processing project, it is a question of:

- Produce high-yield corn and soybeans in the Adamawa and North regions;

- Supervise local producer groups which constitute important suppliers of raw materials;
- Set up two (02) modular units for processing corn and soybeans into different derived products.

3. GENERAL INFORMATION ABOUT THE PROJECT

3.1 Genesis of the project

The main promoter of the project Mr. HAMAD KALKABA MALBOUM, icon of international sport, has resolved to mobilize his international network to contribute to the development of Cameroon. A certain number of its partners are committed to supporting it in this ambition in order to fight against poverty and offer Cameroonian youth decent job opportunities. It is in this momentum that the idea of developing agro-industrial projects was born in view of the potential that our country abounds and the opportunities for engagement of key partners already mobilized. Three (03) integrated projects were presented to the Cameroonian government, in particular:

- the project to establish a rice production and processing unit in the Far North region;
- the project to establish a sorghum production and processing unit in the Far North region;
- the project to establish a corn and soya production and processing unit in the Adamawa and North regions.

Furthermore, these projects were also presented to local elites, local administrative authorities, traditional leaders and Decentralized Territorial Communities. All these stakeholders approved the projects presented and are mobilized to support their operationalization.

3.2 Presentation of the project promoter

CAM-AGRI SAS is a simplified multi-shareholder company under Cameroonian law with share capital of 50 million FCFA. Its head office is located in Yaoundé (Tel: (+237) 620 68 86 56 - 677 50 45 45, Email: Infos.camagri@gmail.com , Website: www.camagrisa.com).

Its main shareholder is Mr. HAMAD KALKABA MALBOUM who mobilized reliable technical and financial partners through his international address book to support the implementation of the project.

3.3 Product presentation

The project concerns the production and processing of corn and soybeans. As such, the project intends to produce:

- ❖ On the agricultural level
  - grain corn
  - grain soya
- ❖ in terms of transformation
  - corn flour
  - soybean oil
  - processing waste (corn bran, soybean meal)

3.4 Production capacity

Cam-Agri targets the production and processing of corn and soybeans using cutting-edge technology and cultivation techniques to optimize yields (irrigation system). On an area of 10,000 hectares in alternate cultivation, the project envisages an annual production of corn of 75,000 tons and soya of 30,000 tons.

The project will set up two modular units for the production of corn flour (16 t/h) and soybean oil (7 t/h). This installation will be carried out over two years; factories will operate at 70% processing capacity in the second year, and 100% from the third year.

Table 1: Project production capacity (in tons)

Production	Year 1	Year 2	Year 3	Year 4	Year 5
Grain corn	30,000	52,500	75,000	75,000	75,000
soybean grain	12,000	21,000	30,000	30,000	30,000
Production of finished products					
corn flour	-	36,750	52,500	52,500	52,500
Soya oil	-	4,200	6,000	6,000	6,000
corn bran	-	14,438	20,625	20,625	20,625
soybean meal	-	16,275	23,250	23,250	23,250

4. MARKET RESEARCH

4.1 Target market demand, supply and price projections

4.1.1 Analysis of demand for corn, soybeans and derived products

National demand for grain corn is around 2.8 million tons for an annual production of around 2.2 million tons. The demand for grain soya, on the other hand, is around 50,000 tons for a production of around 30 000 tons per year.

Corn flour is mainly used by households for food consumption. This flour is mainly transformed using mills present in the localities. However, the national demand for flour intended for making bread and other bakery products is mainly imported. In 2021, the country imported 966,397 tons of wheat and meslin for flour manufacturing.

National consumption of soybean oil is residual compared to the consumption of palm oil (crude and refined). Soybean oil is an input in the production of fats such as mayonnaise. National demand can replace the demand of the food industries for mayonnaise production.

4.1.2 Analysis of the supply of corn, soya and derived products

National production of corn, soybeans and their derived products present a deficit compared to local needs. Part of this deficit is covered by imports made by the country.

Table 2: Evolution of imports of corn, soya, products resulting from the processing of corn and soya and their substitutes

Period	2015		2016		2017		2018		2019		2020		2021	
Labels	**Q**	**V**	**Q**	**V**	**Q**	**V**	**Q**	**V**	**Q**	**V**	**Q**	**V**	**Q**	**V**
Cereals	1,339,318	287,404	1,265,082	240 405	1,474,973	299 234	1,332,275	267,415	1,776,935	379,071	**1,466,447**	**302 268**	1,783,054	398,535
Wheat and meslin	610 359	102,024	616 676	90,848	681 778	103,735	745 664	115,918	857,940	142,870	**854 842**	**139 163**	966 397	182,748
But	9,141	1,668	31,959	5,519	45,968	5,801	13,711	3,588	14,679	2,241	**19,615**	**3,066**	34,082	6,482
Wheat flour	1,854	220	195	66	2,083	666	83	48	84	46	**71**	**45**	128	37
Raw or refined oils	13,794	7,786	30,770	18,250	58,003	31,499	56,011	25,787	56,345	24,296	**58,164**	**25,694**	81,281	51,819
Margarine	8,019	4,341	7,316	3,894	7,955	4,115	7,167	3,878	6,892	4,862	**5,768**	**3,864**	6,509	3,317
Residues and waste from food industries; animal food	82,243	23,705	53,299	16,294	66,794	17,067	82,305	23,553	89,024	24,388	**72,366**	**23,868**	84,475	28,040
Cakes and other solid residues..., from the extraction of soybean oil.	65,465	15,819	38,947	9,495	43,979	9,680	56,899	14,257	64,182	14,256	**41,729**	**14,136**	47,054	13,458

Source : DGD/MINFI Q: in tons ; V: in billions of FCFA

4.1.3 Market price

The selling prices of grain corn and grain soybeans vary depending on the period. There is no approved price. The sales price is fixed by mutual agreement between producers, traders and buyers (consumers). Corn records its lowest price during the harvest months (100 FCFA/Kg) and its highest price during the sowing period (250-300 FCFA/Kg). Furthermore, the price of grain soybeans varies between 100 and 250 FCFA/Kg and that of soybean meal (mainly imported) varies between 300 and 450 FCFA/Kg.

The price of corn flour is between 20,000 and 25,000 FCFA per 100 kg bag and the price of soybean oil varies between 1,500 and 2,000 FCFA/liter depending on the change in the economy.

4.1.4 Competition analysis

❖ **For the corn**

Several players are involved in the transformation of corn into finished and semi-finished products:

- **Households** that process corn in the form of couscous, porridge and pastries;
- **The brewers** whose three (03) main operators are SA des Brasseries du Cameroun (and its subsidiary International Brasserie) belonging to the French group Castel and which controls 74% of the country's brewing market; GUINNESS which belongs to the DIAGEO Group (15%) and UCB (10%).
- **MAISCAM** processing industry is 70% owned by the Abbo group and 30% by two public organizations (SNI and CNPS).
- **Poultry industrialists** mainly made up of feed mills **.** There are **six** (06) major feed mills (SPC, EPA, NUTRICAM, GILANN, Lapinière and SOFAL) whose production is estimated at 500 tons per year.
- BELGOCAM
- SAFRIC
- Small production and processing cooperatives.

❖ ***For Soya***

- SOPROICAM
- SAVIC (soybean meals)
- ADER
- SELECT
- SOCOPHACAM

In addition to these structures, with the facilitations put in place by the Government for the implementation of the import-substitution policy, new agro-industrial projects are being put in place. The market for the speculations of this project (grain corn, grain soybeans, corn flour, soybean oil, meal) will be shared between companies already in operation (national and foreign) and new ones that will enter the market.

4.1.5 Analysis of strengths, weaknesses, opportunities and threats

Table 3: Strengths-Weaknesses-Opportunities-Threats Matrix

Strengths	Weaknesses

• Mastery of production and transformation routes • Use of cutting-edge technology and cultivation techniques • Availability of labor • Characteristics of the suitable soil and subsoil • Land availability • Adapted pricing policy • Commitment of the promoter and mobilized partners	• Availability of production inputs • Input costs • Availability of long-term financing • Low valuation of exported products • Weakness of the agricultural financing system • Low level of qualification of agricultural producers
Opportunities	**Threat**
• Demand for corn, soy, flour and oil • Implementation of SND30 • Initiative to develop local production of improved seeds • Availability of partners • Development of private initiatives	• Business environment • Currency fluctuation • Rising inflation • Climate change • Volatility of export prices • Non-tariff barriers

4.2 Sales projections, pricing policy and turnover assessment over the next five years

4.2.1 Pricing policy

The CAM-AGRI project will align the prices of its products with the price imposed by the market. However, a competitive pricing strategy will be applied depending on the opportunities offered by the market.

Part of the grain corn and grain soybean production of the Cam-agri project will be directed towards processing into finished products and finished seedlings, and the rest towards sale on the local market.

Table 4: Average prices charged by the project (in FCFA)

Products	Average price
Corn grains	170 per Kg
Soybean grain	350 per kg
Corn flour	600 per kg
Soya oil	1,800 per liter
Corn bran	100 per Kg
Soybean meals	300 per kg

4.2.2 Sales projection

The project will use 40% of its capacity in the first year, 70% in the second and 100% from the third year. The transformation will take place from the first year

Table 5: Projection of sales achieved by the project

Products	Year 1	Year 2	Year 3	Year 4	Year 5
Corn grains	4,743,000,000	-	-		
Soybean grain	3,906,000,000	-	-		
Corn flour	-	22,050,000,000	31,500,000,000	31,500,000,000	31,500,000,000
Soya oil	-	7,560,000,000	10,800,000,000	10,800,000,000	10,800,000,000
Corn bran	-	1,443,750,000	2,062,500,000	2,062,500,000	2,062,500,000
Soybean meals	-	4,882,500,000	6,975,000,000	6,975,000,000	6,975,000,000
Total sales	**8,649,000,000**	**35,936,250,000**	**51,337,500,000**	**51,337,500,000**	**51,337,500,000**

4.2.3 Commercial strategy

The commercial strategy adopted depends on the type of products to be marketed. To this end, for corn flour, the project will ensure its presence throughout the national territory. The choice of the first regions will be based on the level of consumption of this product by region.

For other products, it will be a matter of identifying the target markets. The main target market for the flow of soybean oil is the food processing industries which use soybean oil as an input. Animal feed production industries will be the main customers for soybean meal and corn bran.

Distribution will be ensured by a network of mass distribution intermediaries and small distributors in order to make the products accessible to all segments of the population.

4.2.4 Communication strategy

Communication will be done using modern communication tools (newspapers, television, radio). This will also involve the creation of pages on social networks, a website, posters and advertising panels. CAM-AGRI will also ensure the presence of its products at fairs.

4.3 Comparative advantages of the project compared to other market participants and substitute products

Due to its integrative approach to agricultural and processing components, the CAM-AGRI project presents a comparative advantage with the availability at optimal cost of the raw material. This will make its products competitive on the market.

5. ANALYSIS OF RAW MATERIAL SUPPLY

5.1 Supply of agricultural inputs

The inputs for agricultural production are mainly seeds, fertilizers and herbicides. IRAD and quality seed production companies will be the main seed suppliers for the CAM-AGRI project. Fertilizers and herbicides will be purchased on the local market.

5.2 Supply of inputs for processing

The raw material for processing is mainly corn and soybean grains. The project will itself ensure the availability of raw materials for the operation of the modular processing units. This will involve the production of CAM-AGRI, cooperatives and satellite agricultural companies and decentralized local authorities.

6. LOCATION STUDY

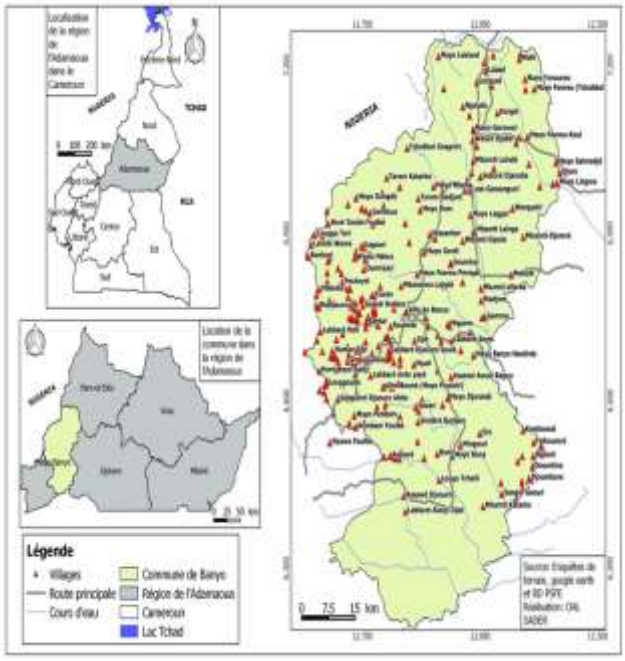
6.1 Project location

CAM-Agri targets corn/soybean production in the regions of Adamawa, particularly in the Departments of Mayo- Banyo and Vina, and in the North, particularly in the Department of Mayo-Rey.

The Adamawa region is located between 6° and 8° north latitude and between 11° and 15° east longitude. It has an area of 64,251 km² and is made up of highlands which cross it and extend from west to east between the Federal Republic of Nigeria and the Central African Republic.

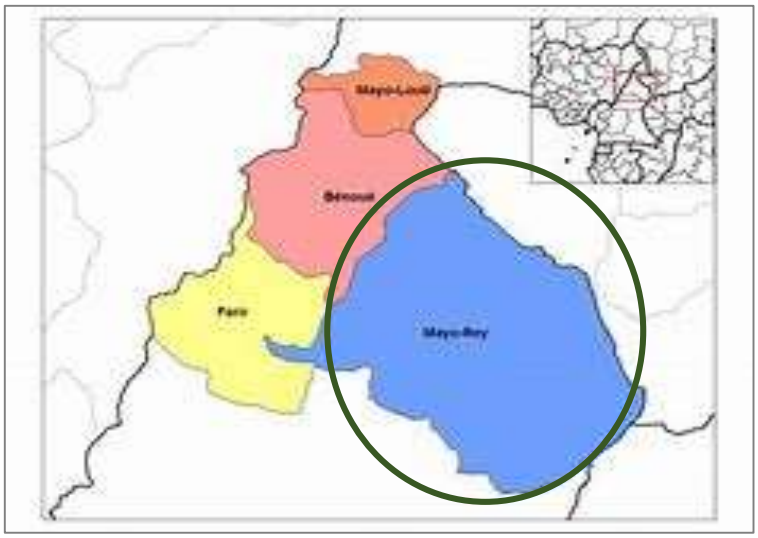
Figure 1: Map of the Departments of Mayo- Banyo and Vina in the Adamawa region

Mayo- Banyo Division ***Vian Division***



The Northern Region extends between 8° and 10° North latitude and between 12° and 16° East longitude. It is limited to the north by the Far North Region, to the south by the Adamawa Region, to the east by the Republic of Chad and the Central African Republic, and to the west by the Federal Republic of Nigeria. .

Figure 2: Map of the Mayo-Rey Division in the Northern region



6.2 Relevance of the production site

Corn and soybean production is closely conditioned by arable land, climate, local vegetation, geomorphology of local soils and hydrology. To optimize the productivity of a corn and soybean field, the analysis of ecosystem parameters in relation to the choice of the site to house our project made it possible to justify the relevance of the chosen Regions.

6.2.1 Climatic characteristic of the area

Regarding Adamawa, this region, being of the Sudano-Guinean type, presents three (03) types of climate: (i) an equatorial climate of the bimodal Guinean type with four seasons including two dry seasons (December to May, July to October) and two rainy seasons (May to June, October to November) in the southern part of the region; (ii) a monomodal Sudanian tropical climate with two seasons, the dry period of which goes from November to April and the rest of the year is humid on

the plateau of the region; average annual precipitation varies between 900 mm to 1500 mm and decreases as we move north; rainfall decreases with altitude ranging from 2000 mm on the Tchabal - Mbabo to 1500 mm in the Mbéré trench (800 m altitude); and (iii) a monomodal Cameroonian equatorial climate where annual precipitation varies between 1500 mm and 2000 mm with an alternation of long dry season and long season.

As for the Northern Region, it is characterized by a tropical Sudanian climate, with a Guinean tendency in the southern part of the Region. The dry season goes from November to April and lasts between 7 and 8 months. The rainy season extends from May to September and lasts 4 to 5 months. The Sudano-Guinean trend is characterized by four arid months per year, each totaling less than 15 mm of rain and by a rainfall greater than 1,250 mm.

6.2.2 Geographic features

6.2.2.1 The vegetation

The Adamawa Region includes the high altitude savannah of Adamawa and the low savannahs. These formations are dominated by plant species (Daniella oliveri and Lophira lanceolata). Thus, grass is the dominant vegetation. This zone is presented in its southern part as the transition zone or buffer zone between the forested south and the Sudano-Sahelian savannahs of the north.

The vegetation in the northern region is mainly made up of wooded, tree and shrub savannahs and some light forests. Woodlands are very sparse, particularly in the north. This is accentuated by increasingly intense anthropogenic agro-pastoral activities and gold panning in this Region and particularly in Protected Areas.

Also, the agricultural sector of the Northern Region is characterized by a wide variety of crops which can be divided into two large groups: cash crops and food crops. The main cash crops are cotton (25% of average annual area cultivated over the period 2014-2018), corn (38% of average annual area cultivated over the period 2014-2018), peanut (35% of area annual average cultivated over the period 2014-2018), onion (2% of annual average cultivated area over the period 2014-2018).

6.2.2.2 Hydrography

The Adamawa plateau, also called the water tower of Cameroon, presents an important hydrographic network divided into three basins, notably those of the Atlantic, Lake Chad and the Niger. The main river of the Atlantic basin is the Djérem , which in its lower part is called the Sanaga. The other major rivers are the Vina, the Lom, the Mbam and the Kim. The Lake Chad basin is represented by the Bini, the Logone and the Mbéré , while that of Niger is fed by the Bénoué, the Déo and the Faro. These different rivers experience flooding from May to September during the rainy season. This Region offers a physical environment consisting of 4/5 of a plain which is watered by the Bénoué River.

Furthermore, a long volcanic history has left behind a number of crater lakes in the Region, the best known of which are Lakes Tison, Mbalang , Ngaoundaba , Marbuwi and Guedeleng near Ngaoundere. We also note the presence of numerous other non-volcanic lakes such as the lakes of Dang, Bini, Panyéré , Yizoro , Mbella-Assom and numerous small lakes in the Djérem department . Generally speaking, the Region has a great hydrological potential in terms of atmospheric water, running water, stagnant water and groundwater if we look at the number of springs that arise in the area.

The physical environment of the Northern Region is drained by a dense hydrographic network, even if some of its watercourses experience the phenomenon of low water during the dry season. Its Sudano-Sahelian type vegetation is essentially made up of three types of savannahs mixed with gallery forests and/or small-scale woodlands.

6.2.3 Soil characteristics

The soils of the Adamawa region are ferruginous and ferralitic types and developed on basalt, granite and sedimentary rocks. These soils are favorable for agricultural activities. They are mostly composed of red or brownish laterite, the result of mountain erosion due to alternating dry and wet seasons. Furthermore, their aluminum and iron content is very high. From this point of view, the soils of Adamawa are very varied and offer enormous opportunities for development on several levels.

Two types of soils predominate in the Northern Region: hydroxide soils and clay soils. The group of hydroxide soils includes lithosols on the Mandara Mountains in the north, Atlantika in the west, Poli in the south and Ngal in the southeast of the Bénoue Department´. We find ferralitic and ferruginous soils on base to the south, in contact with the Adamawa plateau, on its fallout towards Poli and in sectors to the north-east of this locality. Ferruginous soils on sandstone are present to the north and south of Garoua.

6.2.4 Demographic characteristics

The population in the Adamawa region in 2019 is estimated at 1,344,414 inhabitants, including 713,884 in the active population; approximately 61.16% of the population is in rural areas. In this region, the employment rate is around 57.4%.

As for the Northern region, the total population in 2019 is 2,666,718, including 49.26% in the active population and 72.58% living in rural areas. The employment rate in this region is 55%.

Table 6: Distribution of the population of the Adamawa and North regions

	Adamawa	North
Total population (2019)	**1,344,414**	**2,666,718**
Active population	**713, 884**	**1,313,636**
Population in rural areas	**822, 195**	**1,935,522**
Urban population	**522, 219**	**731, 195**
Employment rate	**57.4%**	**55%**

7. ECONOMIC, SOCIAL AND ENVIRONMENTAL COMPONENT

On an economic and social level, the implementation of the project will contribute to:

- Diversification of agricultural production and improvement of income;
- Contribution to the provision of food security at the local and national level of productive employment via the corn and soy value chain;
- Reduction of imports of corn, soya and derived products;
- Creation of wealth at the decentralized level;
- Creation of productive employment via the corn and soya value chain;
- Tax participation.

7.1 Economic impacts of the project

Ultimately, the project plans to produce 75,000 tons of grain corn and 30,000 tons of grain soya per year. In terms of processed products, the project will allow the availability of:

- 52, 500 tons of corn flour per year;
- 6 000 tons of soybean oil per year;

- 20, 625 tons of corn bran and 23, 250 tons of soybean meal intended for the composition of animal feed.

This production will help make cereals (notably corn and wheat), fats (soybean oil is an input in the production of mayonnaise) and oilcakes available on the local market and substantially reduce imports. and feed for animal feed.

7.2 Social impact of the project

7.2.1 Jobs generated by the project

The implementation of the project will contribute to reducing unemployment among populations in the Adamawa and North regions through the creation of approximately 2, 300 direct jobs and 5, 800 indirect jobs.

7.2.2 Impacts on improving the living conditions of the population

Through the development of the value chain of the corn and soybean sectors, and the use of innovative technologies in the production and transformation process, the corn and soybean production and processing project constitutes an outlet opportunity for the production of the populations of the implementation site. Ultimately, the project will also contribute to opening up the regions concerned by reducing the rural exodus.

To this end, the project envisages, in the implementation of its territorialized local development strategy, the supervision of local populations in improving the productivity of corn and soybeans. Ultimately, the project will contribute to the development of basic infrastructure (road, tracks, schools, boreholes, health centers).

7.3 Environmental impact of the project

Table 7: Environmental impact of the project

Positive impacts	Negative impacts	Reduction measures
▪ Rational management of irrigation water ▪ Effective chemical management ▪ Development of the agricultural potential of the area ▪ Preservation of natural areas and wetlands ▪ A reduction in land degradation under irrigation	▪ Air and water pollution ▪ Deforestation ▪ Loss of biodiversity ▪ Climate change ▪ Soil degradation	▪ Compliance with standards in the use of chemicals ▪ Compliance with environmental regulations ▪ Implementation of a plan for wastewater recycling

8. TECHNICAL STUDY

8.1 Agriculture component

Growing corn and soybeans are favorable in the same type of soil. IRAD results show that corn produces a better yield when preceded by soybeans. In fact, the nitrogen fixed by soybeans promotes better corn production, and thus helps to reduce input costs, particularly fertilizers.

Soybeans and corn can be grown two (02) times a year. Corn, depending on the variety, takes 3 to 5 months before being harvested; Harvests are made in July, August, September and October. As for soya, the cultivation period is 5 months.

Considering the agricultural production calendar of these two crops, the choice of alternating corn and soybean cultivation can be made over the course of a year.

To this end, the project's choice is to alternately cultivate corn and soybeans with a pivot irrigation system.

8.1.1 Technical itinerary and crop cycle

- **Choice of plot**

It is not recommended to cultivate corn on sandy, poorly drained soils and in shady, flood-prone areas and steeply sloping lands. Growing corn is preferable on soils with good fertility (rich in nitrogen, phosphorus and potassium); the soils must be clay-loamy, agrily loam , sandy clay or gravel types .

As for soya, the ecological requirements are similar to those for corn. In fact, soybean cultivation is preferable on well-drained, gravelly soil. The soils must be deep, not very sandy, not too humid but with good water retention capacity.

- **Soil preparation**

This will involve cleaning, spreading manure, plowing and harrowing (if necessary). During cleaning, the ground will need to be cleared of grass and tree stumps. Spreading and plowing operations will be carried out mechanically using tractors.

- **Seedlings**

The project plans to use high-yielding hybrid seeds approved by MINADER. Sowing will be done mechanically during the period when rainfall is at least 20 mm. Sowing requires between 12 and 15 kg of seeds per 1 hectare for corn and 35 kg/ha to 50 kg/h for soya.

- **Field maintenance**

This involves weeding and fertilizing plots. For weeding, it will be a question of applying appropriate herbicide to the plantation. Two weedings will be necessary: the first between the 15th and the 20th day after emergence and the second 3 weeks after the first weeding.

When using herbicide, the choice is made for cereal herbicide which is suitable for both corn and soybeans. Application is made on the day of sowing at 1 to 3 doses per hectare.

As for fertilization, two options are available to the project: fertilization with organic manure or fertilization with mineral manure.

In corn fields, organic manure is applied every two years at a rate of 5 tons per hectare. Mineral fertilizer, on the other hand, is applied between the 15th and 25th day after the first weeding at the rate of 150 Kg/ha of NPK and 100 Kg/ha of urea.

In soybean fields, the application of phosphorus (50 kg/ha) and potassium (100 kg/ha) is done either during soil preparation or at emergence.

❖ **Harvest**

The corn harvest is done when 75% of the husks are yellow. This operation, which will be mechanized, will be carried out 35 days after the fields flower.

❖ **Drying and conservation**

The corn and soybeans will be dried using tarpaulins, then processed and stored in the equipped silos or in 100 kg bags.

8.1.2 Equipment and installation requirements

A lot of industrial equipment is necessary to facilitate the exploitation of the land for agricultural production.

Table 8: Types of equipment for agricultural production

No.	Types of equipment
1	Tractors (75, 90 and 100 HP)
2	Cover crop
3	Weeder
4	Electric sprayer
5	Direct spreader seeder
6	Combine harvesters (100 t/h, 220 HP)
7	Seed machine - pasta makers
8	20 Ton Trailer
9	Tractor accessory sowing plowing treatment
10	Weighbridge
11	Pivot irrigation equipment
12	Forklifts
13	Silos

In terms of facilities, CAM-Agri will put in place:

- sheds for machines
- stores for storing inputs and products
- drying areas
- a living base
- an administrative premises

8.1.3 Implementation timeline for the agriculture component

The project ultimately plans to alternately produce corn and soybeans over an area of 10,000 ha. This production is a combination of production from the CAM-AGRI structure, cooperatives and satellite agricultural companies and CTDs.

The total surface area will be divided in two; the first for alternating corn with soybeans; and the second for alternating soybeans with corn.

During the first year, the project will exploit 40% of the total area for production and develop an additional 30% for production the following year. In other words, 40% of the area will be used for production in the first year, 70% in the second year and 100% in the third year.

Table 9: Planning for implementing the agricultural part

	Production area	Year 1	Year 2	Year 3	Year 4	Year 5
Total	But	6,000	10,500	15,000	15,000	15,000
	Soy	6,000	10,500	15,000	15,000	15,000
Cooperatives	But	300	525	750	750	750
	Soy	300	525	750	750	750
CTD	But	120	210	300	300	300
	Soy	120	210	300	300	300
CAM-AGRI	But	5,580	9,765	13,950	13,950	13,950
	Soy	5,580	9,765	13,950	13,950	13,950

8.1.4 Water requirement

Corn cultivation requires a water requirement of between 800 and 1,200 mm of water during the growing cycle. Corn cultivation is favorable on soils rich in organic matter, deep, but above all well drained.

As for soya, it needs a minimum of 400 mm of water during its vegetative cycle, i.e. 250 mm for germination and growth and 150 mm during flowering and fruiting.

8.1.5 Soil requirements

Corn cultivation is favorable on blacks and rich in organic matter and nutrients. It is recommended to avoid sandy soils or hard and compact soils due to their low water retention; also, marshy soils where stagnant water are not recommended because stagnant water causes suffocation of corn plants.

As for soya, it appreciates sandy, deep, loose, fresh, well-drained soils rich in humus. Also, the characteristics of soybeans suggest that soybean cultivation is favorable on any type of soil where cereal cultivation is practiced; The ecological requirements of soy are similar to those of corn.

8.1.6 Heat requirement

Corn adapts to almost all climates, and the duration of its field cycle varies between 90 and 115 days depending on the variety. For good germination and growth, the temperature of the growing area should not be below 10°C (corn does not tolerate temperatures that are too low).

8.1.7 Cost of production of corn and soybeans

The average cost of producing a ton of grain corn is 85,000 FCFA and that of soybean grain is 190, 000 FCFA.

Table 10: Evolution of the production cost of the agricultural component

		Year 1	Year 2	Year 3	Year 4	Year 5
But	**Area exploited**	6, 000	10, 500	15, 000	15,000	15,000
	Production cost	510, 000, 000	892, 500, 000	1, 275, 000, 000	1, 275, 000, 000	1, 275, 000, 000
Soy	**Area exploited**	6, 000	10, 500	15, 000	15, 000	15, 000
	Production cost	1, 140, 000, 000	1, 995, 000, 000	2, 850, 000 ,000	2, 850, 000 ,000	2, 850, 000 ,000
Total cost		1, 650, 000, 000	2, 887, 500, 000	4, 125, 000, 000	4, 125, 000, 000	4, 125, 000, 000

8.2 Transformation component

8.2.1 Steps for processing corn and soybeans into cornmeal and soybean oil

8.2.1.1 Process of transforming corn into corn flour

The transformation of corn into corn flour follows ten (10) main steps. The corn

1. Winnowing and sorting: this involves winnowing and then sorting the grain corn to remove all kinds of impurities (foreign bodies and moldy grains).
2. Moisture: the corn kernels are slightly wetted by sprinkling with water to facilitate the shelling and degerming operation.
3. Shelling and degerming: These two operations, which are carried out simultaneously, remove the husks and germs of corn kernels to obtain corn grits. They are made using a huller or a millstone.
4. Winnowing and sieving: This step firstly removes the bran from the grits and secondly separates the grits from the coarse fraction of the corn flour.
5. Soaking: The grits are then soaked in water for approximately 24 hours to facilitate their grinding.
6. Draining/washing: The grits is then drained and washed again.
7. Grinding: The wet grits are ground to obtain flour.
8. Drying: the wet flour obtained is added the coarse flour (step 4). The whole thing is dried.
9. Grinding the dried flour: After drying the flour is further ground to obtain a finer flour.
10. Sifting: This flour is then sifted to obtain a very fine product free of large particles.

8.2.1.2 Process of converting soybeans into soybean oil

Eight (08) main steps are necessary for the transformation of soybean grain into refined soybean oil.

1. Cleaning and crushing of soybeans: The beans are cleaned to remove all impurities through a group of vibrating screens. The grains devoid of foreign corns are then crushed.
2. Shelling: this involves obtaining the part of the seed richest in oil.
3. Heating: the endosperm fragments are first subjected to dry heat of around 65°C in order to soften them and then transform them into flakes without creating too many fines.
4. Flaking: in order to facilitate the extraction of the oil, the flesh passes through a group of rotating cylinders. The bottling process produces enough pressure to break the cells of the bean, allowing the solvent to penetrate all the pieces of the bean and extract the oil.
5. Cooling: the cake is cooled and contains approximately 10% moisture. The purpose of this operation is to prevent the evaporation of hexane during watering.
6. Watering with hexane: We use miscellas of oil and solvent that become less and less rich in oil as the material advances on the belt and becomes poorer in fat, ending with pure solvent. We thus obtain the miscella of oil and solvent and the deoiled cake.
7. Desolvation / toasting of the cake: the cake leaving the extractor contains around 30% hexane (by weight) which must be recovered and eliminated as perfectly as possible so that it does not present any risks of inflammation and damage. explosion and complies with the specifications accepted for animal nutrition.
8. Distillation: it is carried out in three stages:
    i. The first step consists of using and recovering the latent heat of the vapors coming from the desolventizer to heat the miscella . This step is carried out in a tarpaulin called an economizer. At the outlet of the economizer, the miscella concentrated to an oil content of approximately 75% flows by overflow towards the evaporator. The miscella

passes to the economizer at a temperature of 50°C, and at the exit reaches a temperature of 58°C.

ii. In the second stage steam is used to heat the miscella . The oil obtained is desolventized without drying it completely, this to facilitate the hydration of the gums, this evaporator concentrates the miscella until an oil content of approximately 95% flows by overflow to the finisher. In the latter, the injection of live steam helps with desolventization in order to eliminate as much solvent as possible from the oil. The desolventized oil is transmitted by the pump to the mixer where it is cooled by water then to the centrifuge to separate the oil from the gums then the oil passes to the third stage.

iii. The third step consists of drying the degummed oil and eliminating as much as possible the last traces of solvent which could still be present. After drying the crude oil cooled to be stored in the tanks.

8.2.2 Chronogram for implementing the transformation part

Ultimately, CAM-AGRI plans to install modular units with cumulative capacities of 16 t/h for the production of corn flour and 7 t/h for the production of soybean oil. This installation will be carried out over three years; factories will operate at 40% processing capacity in the first year, 70% in the second year and 100% in the third year.

Thus during the first year of production, CAM-AGRI will acquire a 12 t/h unit for the production of corn flour and 5 t/h for the production of soybean oil. In the second year, CAM- AGRI will increase the capacity of the units by 4t/h for corn flour and by 2t/h for soybean oil. These units to be acquired will start operating from the second year.

Table 11: Evolution of the production capacity of installed units

	Year 1	Year 2	Year 3
Corn flour production units	-	12	16
Soybean oil production units	-	5	7

8.3 Need for human resources

Table 12: Need for human resources

Kind	Number
Administrative staff	15
Factory staff	30
Logisticians	20
Engineers and Technicians	40
Plantation staff	150
Machine operators	20
Maintenance staff	10
Technical support agent/planting	175
Total	**460**

9. ESTIMATED COST OF INVESTMENT

9.1 Need for investments

The investment requirement for the corn and soybean production and processing project stands at 12, 596, 193, 471 FCFA including 8, 881, 642, 971 FCFA in the first year and 4,353, 870,500 FCFA in the second year.

Table 13: investment needs

Designation	Number	unit price	Year 1	Year 2	Total
Production equipment			**5,049,964,500**	**2,164 270 500**	7,214,235,000
Tractors	10	35,000,000	245,000,000	105,000,000	350,000,000
Cover crop	7	25,000,000	122,500,000	52,500,000	175,000,000
Weeder	10	20,000,000	140,000,000	60,000,000	200,000,000
Sprayer	7	65,000,000	318,500,000	136,500,000	455,000,000
Direct spreader seeder	10	15,000,000	105,000,000	45,000,000	150,000,000
Combine harvesters (100 t/h, 220 HP)	6	160,000,000	672,000,000	288,000,000	960,000,000
Seed machine - pasta makers	6	75,980,000	319,116,000	136,764,000	455,880,000
Trailer	15	70,557,000	740 848 500	317 506 500	1,058,355,000
Tractor accessory sowing plowing treatment	6	20,000,000	84,000,000	36,000,000	120,000,000
Weighbridge	7	35,000,000	171,500,000	73,500,000	245,000,000
Forklifts	6	20,000,000	84,000,000	36,000,000	120,000,000
Silos	6	170,000,000	714,000,000	306,000,000	1,020,000,000
Pickup	5	35,000,000	122,500,000	52,500,000	175,000,000
truck	15	65,000,000	682,500,000	292,500,000	975,000,000
drying unit	4	170,000,000	476,000,000	204,000,000	680,000,000
Other accessories for production	1	75,000,000	52,500,000	22,500,000	75,000,000
Processing equipment			**3,015,320,000**	**1,840,600,000**	**4,307,600,000**
Corn flour production line	2	783,000,000	1,096,200,000	469,800,000	1,566,000,000
Soybean Oil Production Line	2	1,370,800,000	1,919,120,000	1,370,800,000	2,741,600,000
Buildings and facilities			**686 358 471**	**258,000,000**	**944 358 471**
Administrative buildings	1	100,000,000	100,000,000	-	100,000,000
factory buildings	2	120,000,000	240,000,000	-	240,000,000
Other constructions			10,358,471	-	10,358,471
Generators	4	75,000,000	150,000,000	150,000,000	300,000,000
installation of drying unit	4	15,000,000	30,000,000	30,000,000	60,000,000
Drilling	6	39,000,000	156,000,000	78,000,000	234,000,000
Layout of buildings	1	130,000,000	130,000,000	91,000,000	130,000,000
Hardware	1	70,000,000	70,000,000	-	70,000,000
Office furniture	1	50,000,000	50,000,000	-	50,000,000
Other arrangements	1	10,000,000	10,000,000	-	10,000,000
installation of irrigation system	4	400,000,000	800,000,000	800,000,000	1,600,000,000
Total investment			**8,881,642,971**	**4,353,870,500**	**12,596 193,471**

9.2 Amortization of investments

Table 14: Amortization of investments

Designation	Lifetime	Year 1	Year 2	Year 3	Year 4	Year 5
Tractors	10	24,500,000	35,000,000	35,000,000	35,000,000	35,000,000
Cover crop	10	12,250,000	17,500,000	17,500,000	17,500,000	17,500,000
Weeder	10	14,000,000	20,000,000	20,000,000	20,000,000	20,000,000
Sprayer	15	21,233,333	30 333 333	30 333 333	30 333 333	30 333 333
Direct spreader seeder	10	10,500,000	15,000,000	15,000,000	15,000,000	15,000,000
Combine harvesters (100 t/h, 220 HP)	15	44,800,000	64,000,000	64,000,000	64,000,000	64,000,000

Seed machine - pasta makers	7	45,588,000	65,125,714	65,125,714	65,125,714	65,125,714
Trailer	15	49,389,900	70,557,000	70,557,000	70,557,000	70,557,000
Tractor accessory sowing plowing treatment	10	8,400,000	12,000,000	12,000,000	12,000,000	12,000,000
Weighbridge	7	24,500,000	35,000,000	35,000,000	35,000,000	35,000,000
Forklifts	7	12,000,000	17,142,857	17,142,857	17,142,857	17,142,857
Silos	15	47,600,000	68,000,000	68,000,000	68,000,000	68,000,000
Pickup	5	24,500,000	35,000,000	35,000,000	35,000,000	35,000,000
truck	5	136,500,000	195,000,000	195,000,000	195,000,000	195,000,000
drying unit	15	31,733,333	45 333 333	45 333 333	45 333 333	45 333 333
Other accessories for production	10	5,250,000	7,500,000	7,500,000	7,500,000	7,500,000
Corn flour production line	15	73,080,000	104,400,000	104,400,000	104,400,000	104,400,000
Soybean Oil Production Line	15	127,941,333	182,773,333	182,773,333	182,773,333	182,773,333
Administrative buildings	20	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
factory buildings	15	16,000,000	16,000,000	16,000,000	16,000,000	16,000,000
Other constructions	15	690 565	690 565	690 565	690 565	690 565
Generators	10	15,000,000	30,000,000	30,000,000	30,000,000	30,000,000
installation of drying unit	15	2,000,000	4,000,000	4,000,000	4,000,000	4,000,000
Drilling	15	10,400,000	15,600,000	15,600,000	15,600,000	15,600,000
Hardware	5	14,000,000	14,000,000	14,000,000	14,000,000	14,000,000
Office furniture	5	10,000,000	10,000,000	10,000,000	10,000,000	10,000,000
Other arrangements	5	2,000,000	2,000,000	2,000,000	2,000,000	2,000,000
installation of irrigation system	15	53 333 333	106,666,667	106,666,667	106,666,667	106,666,667
Total Depreciation		**842,189,798**	**1,223,622,803**	**1,223,622,803**	**1,223,622,803**	**1,223,622,803**

10. ESTIMATED WORKING CAPITAL

Table 15: Working capital requirement

	Year 1	Year 2	Year 3	Year 4	Year 5
Acquisition of inputs*	2,199,829,313	3,849,701,298	5,499,573,283	5,499,573,283	5,499,573,283
Operational expenses	261,900,000	2,731,948,312	4,013,979,239	4,013,979,239	4,013,979,239
Total Working Capital	2,461,729,313	6,581,649,610	9,513,552,523	9,513,552,523	9,513,552,523

10.1 Input requirements for production

Agricultural inputs consist of seeds, fertilizers and corrective elements including pesticides. For the first year, the input requirement is 1,429,383,713 FCFA.

Table 16: Need for agricultural inputs

Input requirements	year 1	year 2	year 3	year 4	year 5
Corn seeds	85,288,531	149,254,930	213 221 328	213 221 328	213 221 328
Soybean seeds	244,367,996	427,643,993	610 919 990	610 919 990	610 919 990

Fertilizers and Patches	1,099,727,186	1,924,522,576	2,749,317,965	2,749,317,965	2,749,317,965
Total input requirement	**1,429,383,713**	**2,501,421,498**	**3,573,459,283**	**3,573,459,283**	**3,573,459,283**

10.2 Exploitation charges

The expenses incurred during the implementation of the project include fixed structural costs and variable costs including the need for consumable materials and other costs. The operating costs of the project stand at 5,331,150,653 FCFA from the third year.

Table 17: Evolution of operating expenses

Designation	year 1	year 2	year 3	year 4	year 5
Input requirements	1,429,383,713	2,501,421,498	3,573,459,283	3,573,459,283	3,573,459,283
Operation of the units	261,900,000	405,325,000	571,750,000	571,750,000	571,750,000
upkeep and maintenance of materials and equipment	474 376 548	830 158 959	1,185,941,370	1,185,941,370	1,185,941,370
Total operating expense	**2,165,660,261**	**3,736,905,457**	**5,331,150,653**	**5,331,150,653**	**5,331,150,653**

10.1 Wage costs

Salary costs consist of staff salaries and other social and tax charges. The payroll (including charges) is 528,003,000 FCFA the first year.

Table 18: Evolution of the payroll

Kind	Effective	Average monthly salary	year 1	year 2	year 3	year 4	year 5
General manager	1	1.5 million	18,000,000	18,000,000	18,000,000	18,000,000	18,000,000
Deputy General Director	1	700,000	8,400,000	8,400,000	8,400,000	8,400,000	8,400,000
Administrative staff	15	200,000	14,400,000	25,200,000	36,000,000	36,000,000	36,000,000
Factory staff	30	300,000	43,200,000	75,600,000	108,000,000	108,000,000	108,000,000
Logisticians	20	250,000	24,000,000	42,000,000	60,000,000	60,000,000	60,000,000
Engineers and Technicians	40	300,000	57,600,000	100,800,000	144,000,000	144,000,000	144,000,000
Plantation staff	150	150,000	108,000,000	189,000,000	270,000,000	270,000,000	270,000,000
Machine operators	20	200,000	19,200,000	33,600,000	48,000,000	48,000,000	48,000,000
Maintenance staff	10	200,000	9,600,000	16,800,000	24,000,000	24,000,000	24,000,000
Technical support agent/planting	175	150,000	126,000,000	220,500,000	315,000,000	315,000,000	315,000,000
Total base salary	**460**	3,950,000	428,400,000	729,900,000	1,031,400,000	1,031,400,000	1,031,400,000
Social charges			**59,976,000**	**102,186,000**	**144,396,000**	**144,396,000**	**144,396,000**
Tax charges			**12,852,000**	**21,897,000**	**30,942,000**	**30,942,000**	**30,942,000**
paid holidays			**26,775,000**	**45,618,750**	**64,462,500**	**64,462,500**	**64,462,500**
Total salary costs			**528,003,000**	**899 601 750**	**1,271 200 500**	**1,271 200 500**	**1,271 200 500**

10.2 Other operating expenses

Table 19: Evolution of other operating expenses

Designation	Quantity	Price	Year 1	Year 2	Year 3	Year 4	Year 5
Acquisition of packaging			770 445 600	1,348,279,800	1,926,114,000	1,926,114,000	1,926,114,000
bags	1,401,420	700	392 397 600	686 695 800	980,994,000	980,994,000	980,994,000
oil bottles	1,575,000	500	210,000,000	367,500,000	525,000,000	525,000,000	525,000,000
cardboard	350 100	1,200	168,048,000	294,084,000	420 120 000	420 120 000	420 120 000
Other services			**219,632,859**	**140 327 410**	**316,423,869**	**316,423,869**	**316,423,869**
Insurance			177,632,859	87,077,410	251,923,869	251,923,869	251,923,869
advertising and reprography			7,000,000	7,000,000	7,000,000	7,000,000	7,000,000
Phones and internet			5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
participation in training and seminars			15,000,000	15,000,000	15,000,000	15,000,000	15,000,000
fees and advice			15,000,000	26,250,000	37,500,000	37,500,000	37,500,000

Others	**5,500,000**	**7,857,143**	**13,750,000**	**13,750,000**	**13,750,000**
total Other operating expenses	**995 578 459**	**1,496,464,353**	**2,256,287,869**	**2,256,287,869**	**2,256,287,869**

11. FINANCING PLAN

11.1 Estimated cost of the project

For the first year, the cost of the project is estimated at 22,749,065,994 FCFA including 13,235,513,471 FCFA in investment and 9,513,552,523 FCFA in working capital

Structure of the financing requirement	Year 1	Year 2	Total requirement for the project
Investments	8,881,642,971	4,353,870,500	13,235,513,471
Working capital	2,461,729,313	6,581,649,610	9,513,552,523
Total	**11,343 372 284**	**10,935,520,110**	**22,749,065,994**

11.2 Mobilizing financing

Funding for the project comes mainly from two sources: the CAM-AGRI structure which bears 20% of the total cost of the project and the Banks which will provide 80% of the financing needs.

Table 20: Sources of financing

Mobilization of financing for investment	Year 1	Year 2	Total	%
Own funds	2,268,674,457	2,187,104,022	4,549,813,199	20
Bank	9,074,697,827	8,748,416,088	18,199,252,795	80
Total	11,343 372 284	10,935,520,110	22,749,065,994	100

11.3 Amortization of the bank loan

Table 21: Terms of repayment of the bank loan

Credit amount	**22,749,065,994**
Durations	**13 years**
Periodicity	**Annual**
Interest rate	**7%**
Deferred	**3 years**

Table 22: Annuity of the bank loan

Year	Capital at the beginning of the period	Rate	annual interest	Amortization	annuities	Net value
1	9,074,697,827	7	635,228,848		635,228,848	9,074,697,827
2	18,199,252,795	7	1,273,947,696		1,273,947,696	18,199,252,795
3	18,199,252,795	7	1,273,947,696		1,273,947,696	18,199,252,795
4	18,199,252,795	7	1,273,947,696	1,819,925,279	3,093,872,975	16,379,327,515
5	16,379,327,515	7	1,146,552,926	1,819,925,279	2,966,478,206	14,559,402,236
6	14,559,402,236	7	1,019,158,157	1,819,925,279	2,839,083,436	12,739,476,956
7	12,739,476,956	7	891 763 387	1,819,925,279	2,711,688,666	10,919,551,677
8	10,919,551,677	7	764,368,617	1,819,925,279	2,584,293,897	9,099,626,397
9	9,099,626,397	7	636,973,848	1,819,925,279	2,456,899,127	7,279,701,118
10	7,279,701,118	7	509,579,078	1,819,925,279	2,329,504,358	5,459,775,838

11	5,459,775,838	7	382 184 309	1,819,925,279	2,202,109,588	3,639,850,559
12	3,639,850,559	7	254,789,539	1,819,925,279	2,074,714,819	1,819,925,279
13	1,819,925,279	7	127,394,770	1,819,925,279	1,947,320,049	0

12. PROFITABILITY MEASUREMENT (CHARACTERISTIC FIGURES)

12.1 Evaluation of turnover

The production of grain corn and grain soya from cooperatives and satellite agricultural companies and CTDs is purchased by CAM-AGRI. Their sales depend on the area cultivated during the year.

CAM-AGRI's turnover is the sum of sales of corn grains, soy grains and products processed from corn and soybeans.

Table 23: Evolution of turnover (in FCFA)

Actors	Products	Year 1	Year 2	Year 3	Year 4	Year 5
Agricultural cooperatives and businesses	Corn grains	255,000,000	446,250,000	637,500,000	637,500,000	637,500,000
	Soybean grain	210,000,000	367,500,000	525,000,000	525,000,000	525,000,000
	Total	**465,000,000**	**813,750,000**	**1,162,500,000**	**1,162,500,000**	**1,162,500,000**
CTD	Corn grains	102,000,000	178,500,000	255,000,000	255,000,000	255,000,000
	Soybean grain	84,000,000	147,000,000	210,000,000	210,000,000	210,000,000
	Total	**186,000,000**	**325,500,000**	**465,000,000**	**465,000,000**	**465,000,000**
CAM-AGRI	Corn grains	4,743,000,000	0	0	0	0
	Soybean grain	3,906,000,000	0	0	0	0
	Corn flour	0	22,050,000,000	31,500,000,000	31,500,000,000	31,500,000,000
	Soya oil	0	7,560,000,000	10,800,000,000	10,800,000,000	10,800,000,000
	Corn bran	0	1,443,750,000	2,062,500,000	2,062,500,000	2,062,500,000
	Soybean meals	0	4,882,500,000	6,975,000,000	6,975,000,000	6,975,000,000
	Total sales	**8,649,000,000**	**35,936,250,000**	**51,337,500,000**	**51,337,500,000**	**51,337,500,000**

12.2 Forecast operating account

The table above presents the forecast employment account for the project.

Table 24: Project forecast employment account

	Year 1	Year 2	Year 3	Year 4	Year 5
Turnover	**8,649,000,000**	**35,936,250,000**	**51,337,500,000**	**51,337,500,000**	**51,337,500,000**
Purchase of raw materials	2,461,729,313	4,255,026,298	6,071,323,283	6,071,323,283	6,071,323,283
Commercial margin (AB)	**6,187,270,687**	**31,681,223,702**	**45,266 176,717**	**45,266 176,717**	**45,266 176,717**
Other purchases and external expenses	699 509 407	978 343 512	1,516,115,239	1,516,115,239	1,516,115,239
ADDED VALUE	**5,487,761,279**	**30 702 880 190**	**43 750 061 477**	**43 750 061 477**	**43 750 061 477**
Margin rate on value added	63.45%	85.44%	85.22%	85.22%	85.22%
(-) Personnel costs	528,003,000	899 601 750	1,271 200 500	1,271 200 500	1,271 200 500
GROSS OPERATING SURPLUS	**4,959,758,279**	**29,803,278,440**	**42,478,860,977**	**42,478,860,977**	**42,478,860,977**
Gross operating margin rate (EBE/CA)*100	57.34	82.93	82.74	82.74	82.74
(-) Allocations to operating depreciation	842,189,798	1,223,622,803	1,223,622,803	1,223,622,803	1,223,622,803

OPERATING RESULT (ER)	**4,117,568,481**	**28,579,655,637**	**41,255 238,174**	**41,255 238,174**	**41,255 238,174**
Net operating margin rate (RE/CA)*100	47.61	79.53	80.36	80.36	80.36
(+) Financial products	0	0	0	0	0
(-) Financial expenses	0	0	0	949 103 950	949 103 950
CURRENT PROFIT BEFORE TAX (G)	**4,117,568,481**	**28,579,655,637**	**41,255 238,174**	**40 306 134 225**	**40 306 134 225**
(-) Employee participation	0	0	0	0	0
(-) Corporate taxes (33.33%)	1,372 385 575	9,525,599,224	13,750,370,884	13,434,034,537	13,434,034,537
NET RESULT AFTER TAX (I)	**2,745,182,906**	**19,054,056,413**	**27,504,867,291**	**26,872,099,688**	**26,872,099,688**

12.3 The bottom line

Analysis of the operating account table allows us to note the evolution of gross operating surplus and net profit. At the end of the first year, the net result is 2,745,182,906 FCFA.

12.4 Cash flow

The cash flow generated by the project is positive. In the first year, the cash flow is 3,261,247,913 FCFA and 21,584,139,815 FCFA in the third year

Table 25: Cash flow generated by the project

	Year 1	Year 2	Year 3	Year 4	Year 5
Turnover	**8,649,000,000**	**35,936,250,000**	**51,337,500,000**	**51,337,500,000**	**51,337,500,000**
NET RESULT AFTER TAX (I)	**2,745,182,906**	**19,054,056,413**	**27,504,867,291**	**26,872,099,688**	**26,872,099,688**
Net margin rate (RNCA)*100	**31.74%**	**53.02%**	**53.58%**	**52.34%**	**52.34%**
Allocations to depreciation and provisions	**842,189,798**	**1,223,622,803**	**1,223,622,803**	**1,223,622,803**	**1,223,622,803**
Self-financing capacity (CAF)	**3,587,372,704**	**20,277,679,216**	**28,728,490,094**	**28,095,722,491**	**28,095,722,491**
Cash flow	**3,587,372,704**	**20,277,679,216**	**28,728,490,094**	**29,044,826,440**	**29,044,826,440**
Discount rate	**10**	**10**	**10**	**10**	**10**
Discounted cash flow	**3,261,247,913**	**16,758,412,575**	**21,584 139,815**	**19,838,007,267**	**18,034,552,061**
Cumulative discounted cash flow	**3,261,247,913**	**20,019,660,488**	**41 603 800 303**	**61,441,807,571**	**79,476,359,632**

12.5 Indicators on project profitability

This section analyzes the indicators on the profitability of the project in particular the Net Present Value (NPV), the Internal Rate of Return (IRR) and the recovery times of the investment.

12.5.1 Actual net value

Net present value refers to the discounted cash flow that represents the incremental enrichment of the investment. This indicator ensures the ability of the investment to create value over time taking into account the rate of return required by the company. The NPV of this project is 66,240,846,161 FCFA.

12.5.2 Internal rate of return

The internal rate of return is a financial indicator which makes it possible to assess the relevance of an investment project. It ensures the project's ability to recover its initial cost. The IRR for this project is 38%.

12.5.3 Recovery times

The payback period makes it possible to measure the liquidity risk of the investment. In other words, it makes it possible to measure the number of periods necessary to recover an investment. The payback time for this project is 2.13; this means that from the 3rd year , CAM-AGRI will be able to obtain a return on investment.

12.6 Forecast cash flow plan

Table 26: Forecast cash flow plan

	Year 1	Year 2	Year 3	Year 4	Year 5
Receipts					
Personal contribution	2,268,674,457	2,187,104,022			
ready	9,074,697,827	8,748,416,088			
Sales	8,649,000,000	12,050,500,000	17,215,000,000	17,215,000,000	17,215,000,000
Total collection	**19,992,372,284**	**22,986,020,110**	**17,215,000,000**	**17,215,000,000**	**17,215,000,000**
Exits					
Immobilization	8,881,642,971	4,353,870,500			
Loan repayment	635,228,848	1,273,947,696	1,273,947,696	3,093,872,975	2,966,478,206
Purchase of raw materials	2,461,729,313	4,255,026,298	6,071,323,283	6,071,323,283	6,071,323,283
Other purchases and external expenses	699 509 407	978 343 512	1,516,115,239	1,516,115,239	1,516,115,239
(-) Personnel costs	528,003,000	899 601 750	1,271 200 500	1,271 200 500	1,271 200 500
Total outputs	**13,206 113,540**	**11,760,789,756**	**10,132,586,718**	**11,952,511,998**	**11,825 117,228**
Treasury	**6,786,258,745**	**11 225 230 354**	**7,082,413,282**	**5,262,488,002**	**5,389,882,772**
Cash accumulation	**6,786,258,745**	**18,011,489,099**	**25,093,902,381**	**30 356 390 383**	**35,746,273,155**

FERTILISERS AUTHORISED BY THE GOVERNMENT OF CAMEROON

N°	FERTILISERS	CHEMICAL COMPOSITION
1	Yara Mila 13-13- 21	N : 13%, P205 : 13% K20 :21%, Zn : 0.01%, B203 : 0.01%
2	Yara vita Croplift Bio	N : 100g/l, P205 : 40g/l, K20 : 70g/l, Mn :1.3g/l, Cu 1.0g/l, D: 1.18g/l
3	YARAMILA GREEN NPK 21 08 12	N : 12%, P205 : 8%, K20 : 12%, Mgo :1.97%, S03: 2.74%, Bore 0.37%
4	YARA MILA UTRA	N : 20%, P205 : 10%, K20 : 10%, S03: 6%, Bore 0.038% Zn 0.08%
5	YARA MILA ACTYVA NPK 23 10 05	N : 23%, P205 : 10% K20 : 5%, Mgo :2.5%, S03: 3%, Zn 0,3%
6	YARA MILA COMPLEX 12 11 18	N : 12%, P205 : 11%l, K20 : 18%, S: 8%, Mgo : 2,7%, Bore 0.015%, Fe: 0,2%, Mn: 0,02%, Zn 0.02%
7	YARA MILA NITRATOR	N: 15,4%, Cao: 25,5%, B: 0,3%
8	YARA VERA AMIDAS	N:46%, S,5%

9	12-24-12+4S	N: 12%, P: 24%, K:12%, +4S
10	OCP NPKS 12 .24 .12 . 4S	N: 12%, P: 24%, K: 12%, S: 4%
11	14-23- 14+5S+1B203	N:14%, P:23%, K:14% S:5%, B203: 1%
12	OCP 14-23- 14+5S+1B203	N:14%, P:23%, K:14% S:5%, B203: 1%
13	OCP 12.24.12.+4S	N:12%, P:24%, K:12%, S: 4%
14	OCP 14-23- 14+5S+1B2O3	N:12%, P:24%, K:12%, S: 5%, B:1%
15	OCP NPKSB 14.23.14.1B_2O_3	N:14%, P:23%, K:14%, B: 1%, S: 5%
16	Plantonus	N: 20%, P: 20%, K: 20% B: 0,01%, Cu: 0,01%, Fe: 0,02%, Mn: 0,01%, Mo 0,0005%
17	Humic plus	N: 0,08%, P: 85,93%, K: 1,95%, C-organic 3,48%, Cu: 0,09%, fluvic acid 0,72%, B: 1,27%, Zn: 18,73%, C/N43,50%, humic acid:11.04%
18	ROOT FEED SP	N:9%, P:5%, Mg: 2%,B: 0,4%, Mo: 0,04%

19	HARVEST MORE	N: 30%, P: 10%, B: 10%, Co: 0,02%, Cu: 0,005%, Mn: 0,05%, Zn: 0,05%,Zn: 0,1% molybden: 0,05%
20	NITRO PLUS 18- 00-00	N: 18%, Ca: 7%, Mg: 1.5%
21	Agrovert demarrage	N: 16%, P:7%, K:6%,Cu:0,06%, Fe: 0,01%, Mo: 0,001%, Zn: 0,06%
22	Agrovert 15-15-30	N: 15%, P: 15%, K: 30%, B: 0,0081%, Cu:0,0020%; Fe: 0,0197%, Mgo: 0,6%,Mo:0,0009%, Zn:0,002%, Mn: 0,0098%, Ci: 8,8%
23	Agrovert croissance	N:7%, P:21%, K:7%,B:0,1%, Cu: 0,06%, Fe: 0,01%, Mn:0,06%, Mo: 0,001%, Zn:0,06%
24	Agrovert Racine	N:2%, N:nitrique 1%, N uréique :1%, P : 5%, Acides aminés : 6,2%, extraits d'algues : 85%, MA : 17,5-20,1%, Carbone organique : 8%
25	Agrovert 30-10- 10-TE	N : 30% P :10% K : 10%, B :0,01%, Cu :0,003%, Fe : 0,025%, Mn :0,013%, Mo 0,0018%, Zn: 0,04%
26	Agrovert Production	N: uréique 4,1%, P: 16,4%, K:27%, B:0.2%, Mo 0,02%
27	Agrovert Foliastin PK	N: 0%,P: 6%, K:12%, Extrait d'algues 15%
28	Agrovert potasse granulé	N/D

29	20-20-20-+TE	N : 20%, P : 20%, K : 20%, Bsolible : 0,08%, SO3 : 17,53%, Fe soluble : 0,02% Mn soluble : 0,009%, Zn soluble 0,002%, Mosoluble :0,0009%, Cu soluble : 0,002%
30	11-46-14+TE	N : 11%, P :46%, K :14%, SO3 : 17,53%, B : 0,008%, Fe : 0,02%, Mn :0,009%, Mo : 0,00009%, Cu : 0,002%
31	6-13-46+TE	N: 6%, P:13%, K:46%, So 17,53%, B soluble eau : 0,008%, Cu soluble eau: 0,002%, Mnsoluble eau: 0,009%, Mosoluble eau:
32	Smartfoil	K : 12,30%, Organic C :19,25%, N : 1%, ashes : 23,8%, Ca : 1,7%
33	Good Havest 15- 15-30 TE	N: 14,5%, P 14,88%, K: 29,75% Mg: 0,069%, B: 0,02% Co: 0,018%, Cu: 0,05%, Mn: 0,0048%, Zn: 0,009% Fe: 0,09%
34	Sulfate d'ammoniaque	N: 21%, Souffre élémentaire: 24%
35	Engrais simple (Urée)	N: 46%
36	NPK 20.10.10	N :20%, N ammoniacal : 11,4%, N nitrique : 8,6%, P :10%, P2O2 eau citrate : 7,5% K : 10%, oyde de calcium (Cao) total 3,5%,S0,1- 0,12%, B2-6ppm,Mn :70- 85ppm, Cu :12-25ppm, Zn :10-11ppm
37	Urée 46%	N 46%
38	Dolomie	Cilicuim(cao) 30%, Mgo 20%

39	Nitrate de cacium	N :12%, Cao : 26%
40	Sulfate de Potasse	K : 50,30%, Cao : 1,3%, So3 : 17,53%
41	Chlorure de potasse	K20 : 60%
42	Phosphate di- ammonium	P2O2 : 46%, N :18%
43	Kiésérite	Mg0 : 25%, S03 : 50%
44	Sulfate d'Ammonium	N :21%, S03 : 60%
45	Urée 46% ETG	N : 46%
46	Sulfate de zinc ETG	N/ 0%, P202 : 0%, Zin> 35%
47	ETG NPK 20-10-10	N :20%, P :10% K : 10%
48	IBUS Urée	N: 46%

49	IBUS DAP	N : 18%, P202 : 46%
50	IBUS N-P-K 20.10.10	N : 20% P :10% K : 10%
51	IBUS Sulfate d'ammonium	N : 21%, soufre : 24%
52	IBUS Chlorure de Potasse	K202: 60%
53	Nitrate de potassium	Purity : 99%min, K202 : 46%min,
54	Sulfate de potasse	K2S04 : K :50%, S04 : 45%
55	Sulfate d'Ammonium Caprolactam	N : 21%, S :24%
56	Chlorure de potasse (KCL) VELIA	K202 :60%
57	Sulfate d'ammonium granulé Compacte	N : 21%, S :24%
58	Kiésérite	Mgo :≥ 25%, S : ≥ 16%

59	NPK 20-10-10 Velia	N : 20%, Ammoniacale : 12%, N nitrique : 8%, P202 : 10%, k202 : 10%
60	UREE Velia	N : 46%
61	NPK 36+11MgO velia	N: 0%, P2O2 0%, K2O: 36%, MgO: 11%
62	Di ammonium Phosphate: DAP	P2O5: 46%, N:18%
63	Calcium nitrate Velia	N: 15,5%, Ammonium-N: 1,1%, Nitrate-N: 14,4%, Ca:19%,CaO: 26,5%
64	Sulfate d'Ammonium poudre Velia	P2O5 :21%, S : 24%
65	CaB	Cao: 6%, B: 2%
66	IRON	Fe 5%, 5% chelated (derived from ferrous and chelated with ethanol, 2-amino-acid, hydroxide- ,1,2,3prpanetricarboxyla te
67	MAGNESIUM	Mg: 3% devived from magnesium oxide, chelated with ethanol, 2-amino-2hydroxyl-1,23- propanetricarboxylate
68	AGRONOR 20-10- 10	N:20%, P205: 10%, K20: 10%

69	AGRONOR UREE	N:46%, élément en trace en partie par million (ppm) du produit brut
70	GRAPHICAM 20- 10-10	N : 20%, P : 10% K : 10%
71	Graphicam Urée	N : 46%
72	UREE CRF SODEAC	N uréique 46%
73	Chlorure de potasse	K202 :60%
74	DOLOMIE SODEAC	Cao30-35%, MgO18-20%
75	NUTRIGA ASN 26N	N : 26%, N ammoniaque : 19%, N nitrique 7% S03 soluble dans l'eau 31%
76	Sulfate de Zinc	Zn total : 35%, ZnS04H2O
77	Urée Multicote 42	N : 42% uréique
78	Urée Multicote 39	N : 42% uréique

79	COMPOST AL MUBARAK	N/D
80	EM compost	N/D
81	VIGOR Chlorure de potasse	K202 :60%
82	VIGOR Sulfate de potasse	K :50%, S04 : 45%
83	VIGOR UREE	N: 46 %
84	VIGOR NPK 20 10 10	20% N, 10% N ,10% k
85	VIGOR ULFATE D'ammonium	N : 21%, S :24%
86	USA-CAM UREE	N: 46%
87	USA-CAM Sulfate d'ammonium	N : 21%, S :24%
88	USA-CAM Sulfate de potasse	K :50%, S04 : 45%

89	USA-CAM 20 10 10	N : 20%, P2O5 : 10%, k2O : 10%
90	UREE DEPAL	N: 46%
91	Sulfate d'Ammonium DEPAL	N : 21%, S :24%
92	20-10-10 Nutrisource	20-10-10 Nutrisource
93	NUTRISOURCE CAMEROUN SARL, BP 4897 DLA-CMR , TEL 679 188 636	NUTRISOURCE CAMEROUN SARL, BP 4897 DLA-CMR , TEL 679 188 636
94	20-10-10 Afcott	N : 20 % P : 10 % K : 10 %
95	UREE 46% AFCOTT	N : 46%
96	RECHARGE	Mirco-organism ; mycorrhiza
97	FIENTE MAXIBOOST	Humic acid : 20% ; Fluvic acid : 5% ; micro- organism : 2%
98	GLEECO BALANCE	N: 17%; P2O5: 17%; K2O: 17%; B: 0.32%; Fe: 0.18%; Zn: 0.12%

99	VIGOR UP	Extraits d'Aloe Vera 90%; Melasse et Ferments 10%;
100	Mag S Aloy	36,5p/v 65,5p/v
101	HEROBOR LIQUIDO	B 15%
102	SUPERFIFTY	K 8%; Ascophyllum Nodosum (MO) : 50%
103	HEROVITAL SERIE ORO	Amino Acides 12,6% Azote (N) Total 11,3% Azote organique 10,8%
104	HEROVITAL VEGETAL	Azote Total N 9,9 % ; Azote organique : 4,9% ; Carbone Organique (C) : 37,2% ;
105	TERRA TIVA SOIL	Azote Total N 9,9 % ; Azote organique : 4,9% ; Carbone Organique (C) : 37,2% ;
106	HARVEST MORE 5- 10-27 + TE	N 5% ; P2O5 10%; K2O 27%; Ca 4%; Mg 1,5%; B 0,15%; Co 0,008%; Cu 0,3%; Mn 0,5%; Mo 0,008%; Zn 0,5%;
107	HARVEST MORE 5- 5-45	N 10 % ; P2O5 45%; K2O 10%; B 0,02 %; Co 0,002%; Cu 0,05 %; Mn 0,05%; Mo 0,005%; Zn 0,1%;
108	HARVEST MORE 10- 45-10	N 10 % ; P2O5 45%; K2O 10%; B 0,02 %; Co 0,002%; Cu 0,05 %; Mn 0,05%; Mo 0,005%; Zn 0,1%;

109	HARVEST MORE 20-20-20	N 20 % ; P2O5 20%; K2O 20%; B 0,02 %; Co 0,002%; Cu 0,05 %; Mn 0,05%; Mo 0,005%; Zn 0,1%;
110	HARVEST MORE 15-15-30	N 15 % ; P2O5 15%; K2O 30%; B 0,02 %; Co 0,002%; Cu 0,05 %; Mn 0,05%; Mo 0,005%; Zn 0,1%;
111	HARVEST MORE MICROMATE CAL	Ca 10%; Mg 6%; S 5%; Zn 3%; Fe 2%; Mn 1,5%; B 1 % ; Cu 0,3%
112	Supercharge DF 70	Acide Humique: 70%; inert Ingredient: 30%
113	UREE CENTROID	Azote 46 %
114	MAWIN	Potassium humate : 10% ; Aqua media : 90%
115	WINOX BIOSTIMULANT	N :0.58% ; P2O5 : 7.5% ; K2O : 3.24% + S :2% ; CaO : 3.8% ; Mg : 0.523%
116	AZOMITE	K2O : 0.2% ; Ca : 1.8% Mg : 0.5% ; Cl ;0.1%; Na : 0.1%
117	AGRO RACIN AKTIVE	N : 6% ; NH4-N : 6% ;P2O5: 40% ;
118	AGRO FACULA 10-52-10	N:10%; NH2-N:2%; NH4-N:8%; P2O5:52%; K2O:10%:Fe:0.02% ;Mn : 0.01% ; Zn : 0.01%

119	AGRO N-FORCE PLUS	N:32%; NH2-N:16%; NO3-N: 8%; NH4-N:8%; B:0.01%; Cu:0.02%:Fe:0.02% ;Mn : 0.01% ; Mo : 0.001% ; Zn : 0.002%
120	AGRO FACULA 20-20-20	N:20%; NH2-N:17%; P2O5: 20%; NH4-N:3%; K2O:20%; Fe:0.02% ;Mn : 0.01% ; Zn : 0.01%
121	AGROWASTER WETT	K2O : 0.2% ; Ca : 1.8% Mg : 0.5% ; Cl ;0.1%; Na : 0.1%
122	GOOD HARVEST 20-20-20 + TE	N : 20% ; P2O5 : 20% ; K2O :20% +TE
123	GOOD HARVEST 30-10-10 + TE	N : 20% ; P2O5 : 20% ; K2O :20% +TE
124	Mairol 18-15-18 +1 MgO	NPK 18%; 15%; 18%; MgO 1 %; Fe 0,1%; Cu 0,02%; Mn 0,11%; 0,002 % Mo 0,001 %; Zn 0,007%; B 0,06%
125	Rich Potassium Phosphate	PK 53 %; 36%;
126	Sulphate d'Ammonium Nutrisource	N 21% S 24%
127	Nitrate de Calcium Nutrisource	N 15 % CaO 26%
128	Di-Ammonium Phosphate (DAP) OCP	N 18%; P_2O_5 : 46 %

129	Mono-Ammonium Phosphate (MAP) OCP	N 12 %; P_2O_5 : 52 %
130	Urée OCP	N 46
131	Phosphate Naturel OCP	P_2O_5 : 27 %-36% Ca 36 %
132	SuperPhosphate Triple (TSP) OCP	P_2O_5 : 46 %
133	Mono-Phosphate Bicalcique (MDC	P_2O_5 : 21 % Ca 17 %
134	FOLIGA C	N 9%; N-NO_3 1.6%; P2O5: 21%; K2O: 2%; B: 0.01%; Cu: 0.008%; Fe: 0.02%; Mn: 0.01%; Mo: 0.001%; Zn: 0.001%;
135	FOLIGA P	N 3%; N-NO_3 3%; P_2O_5: 12%; K_2O: 20%; B: 0.02%; Mo: 0.02%
136	MYCO'SOL BTC	N 13%; N-NH_2: 13%;P2O5: 4%; K2O: 6
137	FOLIGA D	N 10%; N-NO_3 1.5%; N-NH_2: 8.5%;P2O5: 4%; K2O: 7%; B: 0.01%; Cu: 0.002%; Fe: 0.02%; Mn: 0.01%; Mo: 0.001%; Zn: 0.002%;
138	Di-Ammonium Phosphate (DAP) S	N 18 %; P_2O_5 : 46 %

139	CARBONATE DE CALCIUM SODEAC	Ca : 48 %
140	FOSNUTREN	Azote Total : 4 % p/p P_2O_5 soluble dans l'eau 6 % p/p
141	KADOSTIM	Azote Total : 5,4 % p/p K_2O soluble dans l'eau 6,3 % p/p
142	AMINOL FORTE	Azote Total : 1,4 % p/p Acides aminés libres (sur processus de synthèse) 5,5 +/-5 % p/p
143	BIO COMPLEXE LE PAYSAN	N 1,11% ; P_2O_5 0,19 % ; K_2O 5,31% ; Ca 4,5% Na 16,68% ; Mg 0,68%; Zn 1,06%; Mn 0,17%
144	PHOSPHATE TRICALCIQUE	P2O5 : 31% ; CaO : 39%
145	NUTRIGOFOL TRIPLE 21-	N: 21%; P2O5: 21%; K2O: 21% + Cu: 0.002%; Mo: 0.001%; Mn: 0.01%; Zn: 0.002%; B: 0.008%
146	SOLUPOTASSE	K: 42%; K_2O: 50%; S:18%; SO_3: 46%
147	SULFATE DE ZINC	$ZnSO_3$: 35.5%
148	SUPER PHOSPHATE SIMPLE (SSP)	P2O5 :18% ; SO_3 :28% ; CaO : 39%

149	FERTIBOR	B2O3 :48%
150	ROCK PHOSPHATE	Humus plus de potassium ; extraits végétaux + élements nutritifs de source organique et végétale 15%
151	ECOFARMING TMG	N 1,39%; P2O5 1;73 %; K2O 52,07 %; C 4,09 %
152	RHYZOBIUM POLYVALENT TMG	Azotobacter sp; pseudomonas;
153	BIO STIMULANT A- C-G 7-5-6 TMG	Orgganic acid: 70%; auxine:7% ; cytokinin: 5%; Giberelin:6% ; pseudomonas: 5
154	Engrais complex NPK 14-24-14 +3.5MgO +	N : 14% ; P_2O_5 : 24% ; K_2O : 14% ; + MgO: 3.5%;
155	NPK 21-09-11 +5S+ +1.5MgO + 0.15B	N : 21% ; P_2O_5 : 09% ; K_2O : 11% ; + S: 5%; MgO : 1.5% + B :0.15% ;
156	Engrais complex NPK 12-14-19 +3.5MgO + 0.15B	N : 12% ; P_2O_5 : 14% ; K_2O : 19% ; + MgO: 3.5%; B :0.15% ;
157	NPK 20-10-10 BULK	N : 20% ; P_2O_5 : 10% ; K_2O : 10% ; + SO_4: 10.8%
158	NPK 20-20-20 + TE	N : 20% ; P_2O_5 : 20% ; K_2O : 20% ;B :0.01% ; Cu :0.002% ; Fe : 0.06% ; Mn :0.03% ; Mo :0.005% ; Zn :0.01%