Global
INNOVATION TRADE

Business plan of the organization project processing of sheep's wool, as well as organizing the production of yarn and blankets

June 2023.

CONTENTS

1 MANAGEMENT SUMMARY

This business plan was developed by "Global Innovation Trade" (hereinafter referred to as the "Company") in order to implement the investment project of **sheep wool processing, as well as the organization of yarn and blanket production,** partially financed by own funds, as well as with the involvement of credit funds of financial institutions.

PURPOSE OF THE PROJECT

As part of the project it is planned to build a facility for **the processing of sheep's wool, as well as the organization of production of yarn and blankets** with an annual production capacity of 1000 tons. Raw materials will be local raw **camel lamb wool - 95%** and imported raw materials **merino, cashmere, mohair, dyes and chemicals, packaging - 5%.**

PROJECT CAPACITY

Annual capacity of 1000 tons of wool blankets.

PROJECT LOCATION

Kamashi district, Kashkadarya region, Republic of Uzbekistan.

TOTAL PROJECT COST

The total cost of the project is $5,701,781. The total cost of the project is $5,701,781 (including: cost of equipment $3,965,500). The cost of the equipment is $3,965,500, including installation, training and transportation.)

SOURCES OF FUNDING

Estimated sources of funding:

The business promoter's own funds of $1,736,281 (30.5%). Borrowed funds (loans of financial institutions) in the amount of $3,965,500. The loans shall be extended for 7 years (including a grace period of 1 year) at an annual interest rate of 7%; the average monthly payment shall amount to about USD 60,200.

KEY FINANCIAL INDICATORS

- IRR =19%
- NPV = $2,815,630. USD
- Payback (years) - 5

SOURCE

Local raw materials **camel's wool - 95%** and imported raw materials **merino, cashmere, mohair, dyes and chemicals, packaging - 5%.**

MARKETING

World Market.

The wool market is divided geographically into United States, Mexico, Belgium, Germany, United Kingdom, Netherlands, Turkey, China, Australia, New Zealand, and Morocco. The report includes production analysis (volume), consumption analysis (value and volume), export analysis (value and volume), import analysis (value and volume) and price trend analysis. The report offers market size and volume forecasts in metric tons and value in thousands of U.S. dollars for all segments listed above.

2 PROJECT STRATEGY

Wool - collected for processing hair of animals (sheep, goats, camels, etc.). The main mass of wool processed in the industry is sheep's wool. Types of wool fibers: 1) down (the most valuable thin, soft, twisted fiber), 2) intermediate hair, wonk (a thicker, stiffer and less twisted than down fiber), 3) "dead hair" (weak and rigid). Physical and chemical properties of wool: Heat resistance of wool is low: maximum drying temperature is 60-70 ° C, at 100-105 ° C wool loses moisture, the fiber becomes tough and brittle, and at 120 ° C wool turns yellow and begins to decompose. Wool has low thermal conductivity, so wool fabrics have high thermal protection properties. When burning, wool gives off the smell of burnt hair. The crispness of wool determines the elasticity and porosity of the finished fabric;

sheep wool has a high elastic elongation, so it has little crease and is very flexible; under the influence of hot water the wool extensibility is greatly increased - by 25-50 % compared to the original length. Under normal conditions the hygroscopicity of wool is 15-17%, and under conditions of high humidity wool absorbs up to 40 % of moisture, remaining dry to the touch. Wool swollen in water after drying takes its original shape, this property is the basis of such types of wool processing, ike decanting, iron, pressing.

For wool bleaching should not use compounds containing chlorine, as chlorine darkens wool, becomes stiff, greatly reduces the strength of the fibers; it is recommended to bleach wool with sodium peroxide, sodium perborate, sodium hydrosulfite or rongalite in a slightly acidic environment. Any solvents can be used to remove stains from wool, as they do not have a negative effect on the wool fibers. Wool from animals is usually obtained by shearing, less often by combing. Angora is from rabbit wool, cashmere and mohair from goat wool, and alpaca from alpaca wool. Wool is used to produce yarn - with subsequent processing primarily into fabrics and knitwear. Wool fabrics, produced mainly from sheep's wool, are on sale under the names bobber, Boston, bouclé, velour, gabardine, diagonal, drape, cravat, plush, ratin, file, cheviot, tartan and others. Also, wool is used to produce felting and felting products, etc. For 2017 [3], the international wool market was valued at $4.31 billion. US DOLLARS.

Wool is a natural, natural fiber, grown for about a year by huge numbers of sheep in various areas under clear sunshine, clean air and fresh grass. Unlike most artificial fibers, wool naturally decomposes in the ground for several years. It is also used as a soil fertilizer because it is a source of delayed-release nitrogen. After shearing, the animals regrow new wool within a year, making it a completely renewable source of fiber.

Wool is the hair cover of animals, which consists of the padded (longer, coarser, thicker) and downed (softer, finer, twisted) hair.

The task of the down hair is to form the structure, protection, volume of the coat, and the task of the down hair - "undercoat", to keep the optimum body temperature. Due to the spatial structure of the wool cover, a large number of air pockets arise, thanks to which the air is retained by the body and the animal

does not freeze or, on the contrary, does not overheat. Also any wool perfectly absorbs moisture - up to 40% of its own weight and has good "breathability" indicators.

High propertie s of hygroscopicity has its pros and cons: Wool well absorbs evaporation from the body and in further transports moisture to the outside, and at the same time keeps you warm even when wet. But by absorbing moisture, wool takes a very long time to dry and gets very heavy, which can be uncomfortable in the field. High-quality wool products not only keep you warm, but also have some therapeutic effect due to the peculiarities of the chemical composition of the fibers. Another amazing feature of wool is its antibacterial properties. Nature has tried to equip wool fibers with a special protective weapon - the negative electric charge, thanks to which bacteria are repelled, the wool keeps clean and there is no unpleasant smell. There are types of wool, the fibers of which are hollow, thus increasing the air layer and increasing insulating properties of wool by several times. For example, the wool of polar bear has a hollow structure. This feature has long been used by developers of modern thermal underwear for its products - for example, a brand Accapi produces a line of thermal underwear for use at low temperatures, made of hollow fibers, imitating the structure of polar bear wool. The series is called Polar bear.

There are different types of sheep's wool:

- Wolle - pure wool, used on products of medium quality;
- Schurwolle, new wool, virgin wool - high quality wool with no more than 7% of other fibers in the product.

- Lambswool is the wool of a lamb shorn for the first time.
- Merino wool is merino wool of the highest quality.

Wool yarn is a yarn made from animal hair - wool. Wool yarn relatively wool yarn is relatively widespread in the cold countries of Europe, America and Asia. It has high thermal insulation properties. It is obtained by shearing sheep, goats, llamas, camels, alpacas and Asian rabbits of a special species (angora). It is used to make any kind of clothing. The amount of wool cut is called

- haircut. It varies from breed to breed in weight and volume. The average cut of a merino sheep is 7 kg, 3.5 kg of Edilbay sheep, 2.5 kg of Edilbay sheep, 5.5 kg of Texel sheep, 7 kg of rams, Altai sheep.

- 15 kg. After shearing, the received wool has many different impurities: plant fibers, sand, dirt, mixture of sweat - fats - urine, etc., so after collecting it is cleaned and combed on the industrial equipment, as a result the output of clean fiber is about 45 - 50% of the originally collected wool. The combed fibres are then carefully rolled into rovings, which are subsequently dyed, spun and wound on cones or spools. There are many types of wool:

Cashmere is the down of a highland cashmere goat. They are found in the region of Tibet as well as in the province of Kashmir, located between Pakistan and India. Cashmere is a fashionable, sophisticated and expensive material, also called "wool diamond." To get cashmere, the sheep is not sheared, but the down is combed out in the spring, once a year.

Wool blankets are unique in their kind. Such blankets are radically different from their Soviet-era counterparts. If back then blankets made of wool was prickly, causing discomfort, today they are presented in a favorable light.

These are the best models of all manufacturers' lines, they have a natural, soft, pleasant to the body texture, are made using the latest technology, without detracting from the best properties.

Made from animal wool, such blankets consist of hollow fiber with "dry" heat. Some wool is so good that it is used in the clothing of polar explorers, astronauts, submariners. Considering the degree of temperature in which people of these professions have to work, one can imagine the effectiveness of the warming properties of wool used in blankets.

The fibers themselves are quite voluminous, they differ in softness, length and density. Two types of wool go into processing: undercoat (down from young animals) and wool, which can be removed during shearing or molting of the animal.

The most valuable raw materials involved in the processing are considered to be the wool of camels, sheep (mainly Australian merino), Angora goats, yaks and llamas. Each animal gives a different amount of raw material, which is reflected in the cost of the finished blanket. In addition, the color of the wool also differs: it can be cream, beige, grayish, brownish and less often brown. The most valuable shade of finished raw material is cream: it is used in premium blankets.

The uniqueness of wool blankets is that they perform several functions. Due to their composition, such products:

- are used as ordinary blankets;
- Depending on the type of performance are capable of becoming daytime The "blanket" of the bed (sofa);
- If necessary, can become a mattress cover, providing the right atmosphere (relevant for sick people and babies);
- are a kind of cocoon-sweater, covering the user from head to toe when the room is cold.

The most important feature of wool blankets is their usefulness: they are not simple products designed only to keep your body warm while you sleep. Blankets made of wool are good for health, and this is a proven scientific fact. Today doctors themselves acknowledge the tangible benefits of such products.

Benefits of blankets made of natural wool

It is obvious that natural blankets made of animal wool can not compare in their properties to the sleeping accessories with synthetic filling. Wool product will provide you with comfort and warmth even in the coldest and dankest time of the year. When the wind is raging outside, the rain is pouring or the temperature drops below zero, a wool blanket or blanket will keep you warm and give you a comfortable sleep or proper rest.

The wool of sheep, merino, llamas and camels is usually used to fill or make plaids. Of course, the price will depend on the filling. The most inexpensive is considered a blanket made of sheep's wool, the most practical - camel's wool.

The main advantages of wool blankets are:

1. Quite high (compared to synthetic) thermal insulation qualities. The structure of natural wool creates a kind of air pillow, which does not allow the loss of heat. Therefore, it is very comfortable to sleep under a blanket with a natural filling even in the off-season, when it is cold outside, and the heating season has not yet begun.
2. Antistatic effect, thanks to which the human body is freed from static tension when the skin comes into contact with the wool. This relieves headaches and depressive states.
3. Good air permeability. Due to the breathability of wool blankets, sleeping people do not sweat, the product itself does not accumulate odors, which excludes the development of inflammatory processes on the skin
4. Hygroscopicity. Wool products excellently dissipate moisture. Thus, if the room is humid, or a person went to bed after taking a bath with wet skin, the blanket will remain completely dry. This quality prevents the occurrence of fungus.
5. Therapeutic effect. The therapeutic properties of wool have been known for a long time. If you suffer from joint pains, lower back pains, rheumatism or respiratory diseases, the purchase will relieve you from all these health problems.

The only disadvantage of a natural wool blanket is its weight.

It always weighs more than synthetic and is about twice as heavy as down.

Rules for taking care of wool blankets

Once bought a quality product made of natural wool, everyone wants it to last a long time and not lose its positive qualities. To do this, you need to follow the simple rules of care and storage of woolen bedding.

First of all, blankets should be stored in a dry, well-ventilated room. Humidity and dampness can cause irreparable damage to natural materials. Basements are absolutely not suitable for storing natural bedding.

In dry, warm or summer weather, it is best to air the product to prevent fungus. If the room is quite dusty, or if the blanket has not been used for a long time, it can be cleaned with a vacuum cleaner. This will prevent the formation of dust mites.

To prevent the wool from piling up and rolling into rolls, it is not recommended that the blanket be washed. The best way to freshen or clean your garment is to have it dry-cleaned.With proper care and storage, yours will last for many years.

A DESCRIPTION OF THE CHOSEN LOCATION:

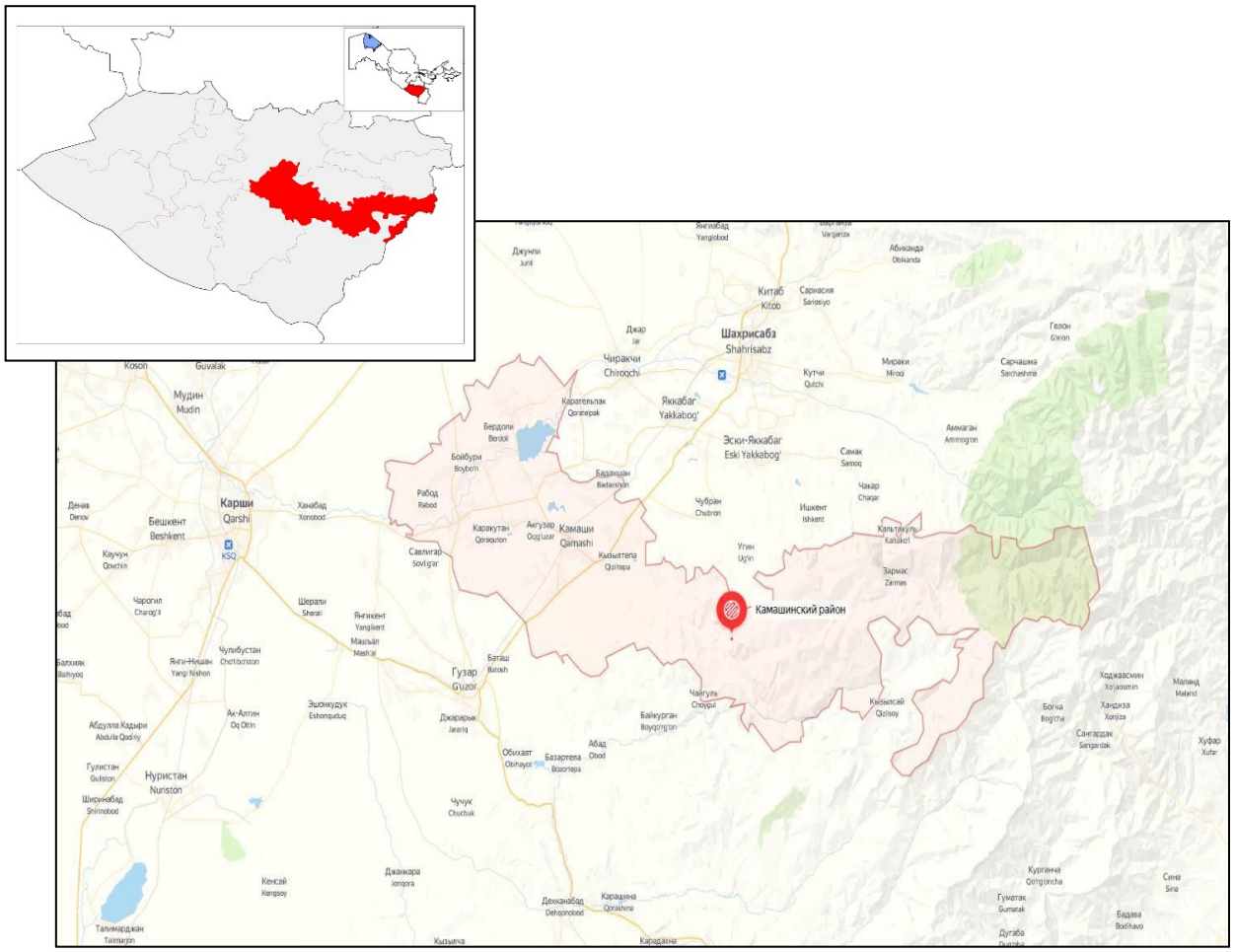
The production site is located in Kashkadarya region, Kamashi district at the following address: Qiziltepa village.

The district occupies an area of more than 2.66 thousand square kilometers. It is located 60 kilometers from Karshi city and 485 kilometers from Tashkent.

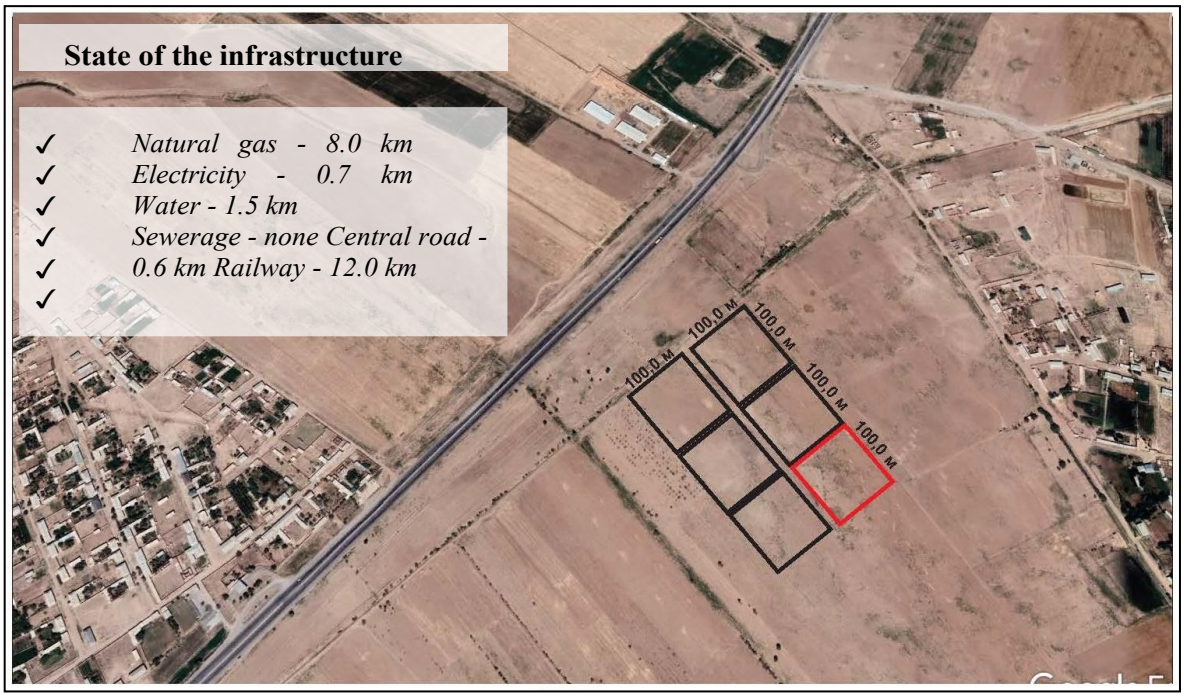
The district is connected to Karshi city by a road.

The population of the Kashkadarya region as of 2023 is 3.5 million people, and the population of the Kamashi district is 286,000.

Project Location



Production area



Production building

3 MARKET AND MARKETING

THE PROPERTIES OF THE FINISHED PRODUCT.

Wool processing has two main directions:

Washing wool - private farms often outsource this service, since wool can only be delivered to the factory if it meets all the standards and requirements for raw materials at the acceptance stage. It is important that the wool is clean, free of flakes and thoroughly combed. Farms do not always have time to do this, so they can sell unwashed wool cheaper. Such raw material can be washed, combed and handed over to the factory as a quality raw material. In this case, the cost of acceptance at the plant will exceed the cost of purchasing dirty wool at several times. However, you should keep in mind that it is not so easy to wash and comb the wool. There is special equipment for this, but most of the operations have to be done manually.

The production of wool thread is another area with its own production nuances. To produce threads from washed wool, you have to
to purchase equipment costing from 12 to 21 million rubles. The cost of the machines will depend on the capacity of the line.

Production Advantages:

- year-round supply of raw materials, because wool, if properly stored, does not spoil for a long time;
- does not require specialized knowledge and long training;
- no medical certificates are required for the staff;
- high profitability and fast self-sufficiency;
- If you have your own sheep farm, you do not need to buy raw materials.Disadvantages of production:
- high cost of equipment (line);
- a specific market because of the high price of the finished product;
- seasonality, if there is no warehouse for raw materials or conditions for its proper storage

As in any other business, in the production of wool or woolen thread, you need to pre-calculate all the costs and think about the market, so as not to go bankrupt in the first few months of work.

Financial and economic evaluation of the project is made within the planning horizon and the term of this project (from the beginning of its financing and to the actual completion with the repayment of credit and interest on it) is calculated for 7 years.

Продукция			
Номенклатура продукции			
Наименование продукции	Шерстяная пряжа		
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SUPPLY AND DEMAND

The wool market is divided geographically into United States, Mexico, Belgium, Germany, United Kingdom, Netherlands, Turkey, China, Australia, New Zealand, and Morocco. The report includes production analysis (volume), consumption analysis (value and volume), export analysis (value and volume), import analysis (value and volume) and price trend analysis. The report offers market size and volume forecasts in metric tons and value in thousands of U.S. dollars for all segments listed above.

Demand				
Uzbekistan				
List of consumers products or services	Cloth textile companies			
Number of endpoints consumers of a product or service	15 000 000.00			
Consumption rate (for 1 year) in kg	15	000.00		
Volume of similar productions of this product in this market, unit. (tons)	225 000.00			
Forecast of increased consumption, demand	1%			
Demand for the project's products at of this market, units	15 000.00			
Demand for the project's products at of this market, mln.	150.00			
Additional analysis of statistical information (import/export, production volume, price statistics, etc.) in Uzbekistan				
Name	**2017**	**2018**	**2019**	**in average**
Volume of product imports				

Demand				
Uzbekistan				
of the project (Uzbekistan), $ million, (for the forecast import substitution)			11.26	11.26
Volume of exports of the project products (Uzbekistan), unit. (quantity) (to identify foreign importers)			5.10	5.10
Production volume of the project (Uzbekistan), mln.			78.63	78.63
The volume of demand in this market by statistics , millions of dollars	11.26			
What benefits and preferences, as well as laws and regulations apply to the project	In accordance with Annex 3 of PKM № 196 of 10.04.2017 in the FEZ company has benefits and incentives to pay taxes and fees (tax on land, property, improvements, social infrastructure and profits, in addition, bringing The joint venture is exempt from all taxes and fees for 10 years and pays 50% of the rate of these taxes and fees for another 5 years) and customs duties. Exemption of imported raw materials (chemical fibers, paints, etc.) from import duties (UP5989 of May 5, 2020)			

Demand	
Uzbekistan	
Name	2019
Volume of exports (Russia), $ million, (other EU and CIS countries)	16.2
Import volume, $ million, (Russia)	36.8
The volume of demand in this market according to statistics , $ million	53.00
Laws, Regulations, Fees and benefits	In order to be conservative, the calculation takes into account all taxes

MARKET OVERVIEW

The global wool market is projected to grow at 4.8% over the forecast period (2022-2027).

The COVID-19 pandemic outbreak globally restricted the transportation of goods, resulting in inaccessibility of raw materials and finished products, causing the manufacturing industry to temporarily shut down. In addition, the blockage also disrupted the supply chains of the wool industry, affecting wool demand and production during the pandemic. Thus, the world is having a moderate impact on the wool market.

With the technological advancement in wool production comes the rapid development of spinning and weaving tools, leading to an increase in clothing sales worldwide. In the long term, growth opportunities are mainly related to millennial consumers, whose buying behavior, such as a preference for quality, authenticity and transparency, defines the wool market.

Various measures taken by the IWTO, the body that regulates the quality and traceability of wool, lead to an increase in the price of wool, thereby stimulating production. Population growth and increasing urbanization are factors leading to an increase in the wool market.

As the population grows, the demand for woolen clothing increases. According to the International Wool Textile Organization (IWTO), 50.0% of the weight of wool is pure organic carbon, which is economically friendly to the environment. A factor driving the demand for wool is the growing domestic consumption of luxury wool fabrics in countries such as China, the United States and Europe. Wool itself is a natural decomposer because it is biodegradable and also causes less harm to the environment. In addition, wool itself has thermal insulation properties, which makes it suitable for consumers.

KEY MARKET TRENDS

According to research, about 1.53 million kilograms of pure raw wool are produced by more than 1.18 billion sheep worldwide in 2020, and the sheep population has increased by 3.7 billion compared to 2020.

The wool supply chain is long, with many stops along the way. from farm to fashion. To ensure transparency and facilitate the flow of information about wool, to assure buyers of the quality of the wool they purchase, IWTO members have developed many traceability systems. One such system is the National Wool Declaration Integrity Program.

The National Wool Declaration is an industry initiative recognized worldwide for its transparency and traceability from the farm. The NWD Integrity Program (NWD-IP) is an extensive program of on-farm audits and inspections with a single goal: to create a wool production pipeline and increase consumer confidence in Australian wool. With all of these initiatives put forth by the regulator, wool is being sold at a higher price because sheep rearing for wool is also increasing.

China is the world leader in sheep breeding. According to the Food and Agriculture Organization, China's sheep population increased from 164.08 million in 2017 to 173.01 million in 2020.

Asia Pacific dominates the market

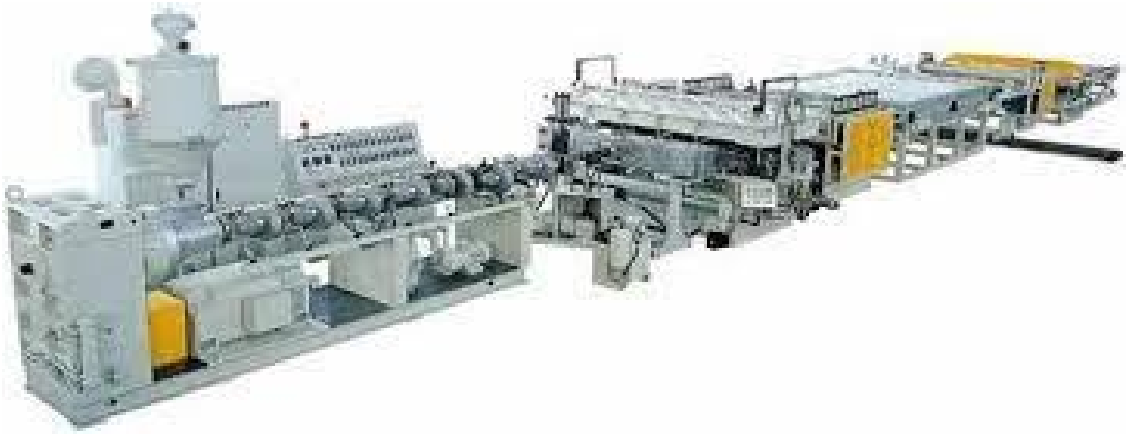
Wool is a commodity traded all over the world, and its variety on the market is enormous and constantly evolving. Most of the wool sold with an IWTO test certificate guarantees the buyer confidence in the quality. With the trend towards eco-friendly, sustainable and biodegradable parameters in the garment industry, the demand for wool is growing worldwide as it provides comfort for the skin.

Thus, the market is clearly being driven by millennials and Generation Y. According to FAOSTAT, the major wool producers are Australia, China and New Zealand. According to ITC Trade, Australia accounted for the highest exports of $1,595,320,000 in 2020, followed by China, which accounted for the highest exports of $1,543,868,000 in 2020, accounting for 36.2% of total exports.

4 PRODUCTION CYCLE DESCRIPTION

TECHNOLOGY DESCRIPTION

Technology for wool



Making wool and wool products is a set of interrelated activities, as well as methods of obtaining products. **It is a misconception that technology includes only the methods of making yarn or cloth from which things are subsequently sewn or knitted**. In fact, technology includes the entire production stage from raising the animal, its feeding and care, breeding, as well as the collection of wool itself and then the direct processing of the material.

Production chain of making woolen clothes

So, the entire process of making a wool product includes seven interrelated steps. If any of them is skipped, the chain will be broken, which means that the quality of the threads and the products as a whole will suffer.

Raising animals

The primary and fundamental step is the breeding and rearing of animals. Wool is the hair cover of a number of mammals. It **consists of thick, spindly hairs, which determine the length and shape of the entire coat, as well as thin, fluffy and curly hairs** (these form the undercoat). Wool is harvested from many species of mammals, particularly sheep, goats, camels, alpacas and llamas, and rabbits. The following important components go into the process of raising animals:

- content. The form of keeping depends on the type of production. It can be either a small private farm or huge farms;
- breeding. Usually on farms, farms form quite large herds in which animals are raised both for shearing wool and for other agricultural needs, such as meat or dairy production;
- feeding. It occurs depending on the lifestyle of the animals. They can live both year-round in stables and with a grazing system and naturally feeding (when animals consume food in meadows or other special areas);
- grooming. Animals are examined by veterinarians for coat quality, and they eat only quality food and other healthy supplements.

Of course, the first method is the most common and convenient for both man and animal. The shearing of wool takes place at certain times of the year. For example, **sheep are necessarily sheared in spring, but some breeds also need additional, autumn shearing**. Young sheep born in winter are usually sheared a little later, in June or July, when the hair cover grows longer.

The shearing is performed by specially trained people so as not to hurt the animal. Well-sharpened and sufficiently large scissors are used for this purpose. In modern conditions, shearing is often done with a special machine.

Sorting

The harvested crop is subject to compulsory sorting. **The main criteria are**

- length and fineness (in fact, the thickness of the hair). The length of the hair depends on the type of animal: in some breeds it can vary considerably. For example, the merino breed has a hair length of about 7-12 cm, and the coarse-haired representatives have a length of up to 30-40 cm. It becomes clear why they have to be sheared and how hard it is for them to carry such a burden.

The wool sheared from a single sheep is called a fleece. The wool even of a single sheep is rather heterogeneous in composition. On different parts of the body the coat has an uneven texture.

The best wool grows on the sides, back and shoulder area. Those hairs that grow on the legs are usually of poor quality. **This is why it is subject to compulsory sorting, both in length and fineness, as well as in its coarseness.** Different coarseness of the material is subsequently used to make different fabrics. Coarse wool is usually used to make felts and construction materials, while softer wool is used to make personal items, clothing and furnishings.

Cleansing raw materials

Only the wool that has been cut from the animal is called rawhide, that is, material that has not yet been subjected to any treatment and cleaning. Externally, it looks like something very shaggy and a little untidy. But this can be remedied. For the subsequent creation of the yarn, this step is a must. It consists of:

- washing the wool. This is done at a temperature of about 40-50 degrees Celsius. On an industrial scale, the washing is done with special equipment that performs all the steps, including thorough rinsing and squeezing of the material;
- cleaning up debris. There are often various particles in the raw material that are completely unnecessary for creating quality yarn. These can be thorns, dry grass that gets stuck in the wool when the sheep graze in the fields. In some modern farms, sheep are protected from dirt getting into their wool. For example, they can be covered with a special mesh cape while they graze.

Comb

After the raw material has been cleaned, the combing stage comes **so that the wool can be transformed from a twisted and shaggy substance into fairly even strands**. In the past, this entire process was done by hand. Now, in the age of new technology, all the basic work is done by carding machines. These devices are equipped with special rollers, which can pass the wool through themselves. They are covered with wire bristles, which help to straighten out all the tangled wool fibres to form straight, separated fibres. Some machines not only comb but also clean the material at the same time. This saves the producer a lot of time because the 2 steps are combined into one

Spinning

In former times, spinning was the main occupation of unmarried girls. We all remember the spinning loom from the fairy tale
"Sleeping Beauty." It was on such a tool that women used to make yarn with their own hands. Now the whole process is greatly mechanized and simplified. **The weaving machine at the factory forms wool yarns hundreds of times faster than it would be done manually by a hundred women.**

Sometimes the wool is also run through a blending machine before spinning. This is done when a material with a partial wool content is made up. This is where wool is mixed with synthetic fibers such as acrylic.

The spinning process itself is called spinning. To make it easier to understand it, we can describe it with the example of spinning by hand. To do this:

Separate a small piece of material and stretch it; pile it up a bit;

then use twisting motions to form a yarn. In order to keep the thread from breaking and being long, it is important to simply put in more and more wool scraps.

On factory equipment, the process is exactly the same, but by the hands of a machine, not a man. The master only needs to check that the work is being done correctly and that the raw material is being put in on time.

Making fabric or yarn

Two types of material can be obtained from the resulting wool yarns: either yarn for knitting or fabrics. The latter are made on a loom. **The higher the quality of the wool and the better cleaning and processing it has undergone, the higher the quality of the finished fabric**. Both all-natural fabrics (e.g. those containing only cotton and wool) can be made at this stage. Most modern fabrics are made with synthetic threads. There is nothing wrong with this, because all-wool fabric has some disadvantages, in particular, it is quite prickly.

If the wool is used to make yarn, however, the yarn can either be left in a derivative thickness or folded several times to produce a thick yarn.

Sewing or knitting

The last step is the direct production of the woolen garment. The method of production will depend on the finished material:

Wool fabric is used to sew a wide variety of products. It can be both a business suit and a casual sweater. Dense fabrics make outerwear, such as cashmere coats. Household items, such as a rug on the couch or a warm blanket, are also made of solid fabric; a huge number of warm and cozy items are made of yarn. Grandmothers knit socks and mittens for their grandchildren. You can also find hand-knitted items in stores, such as a patterned sweater or a beautiful hat and scarf set.

Important: The last step in the production of a wool garment can be completely different. Even spinning is skipped for this purpose. **We are talking about felting** - the very method of making warm felt boots, house slippers, headwear for the bath. This method consists in the fact that the cleaned wool is kept in almost boiling water, due to which it becomes coarse and ceases to be so fluffy. This material is excellent for shaping valenki or children's toys, which will delight you for a long time.

Since sheep graze outdoors, the wool is heavily contaminated, so the fibers are first processed. The yarns are produced in spinning mills, compressed in packs of 250kg. The fibres are loosened and pounded in openers and pounding machines. In machines fibers are cleaned of trash impurities. From the blowroom the fibers come out in the form of a linen which is rolled up into a roll. The linen then enters the carding machine where it is run between two surfaces covered by fine metal needles. The combed linen is transformed into a sliver which is fed to the draw frames where it is drawn and slightly wound to form a roving. The roving then enters the spinning mill, where the yarn is made.

Wool fiber primary processingFiber sorting

Cracking (loosening and picking out debris) in opening and cracking machinesWashing fibers with soap and soda

Fiber drying Preparatory production

Scratching (carding shop) - obtaining fibrous sliver

Ribbon shop - alignment of wool fiber direction in the ribbon, stretching, reduction of ribbon thickness (thinness) on the draw frame

Roving mill - twisting and pulling fiber tape into roving

Spinning: Drawing and twisting roving into wool yarn on a spinning machine and winding it up as a cob. Short wool fibers are used to produce thicker and coarser yarns, while long fibers are used to produce thin, even, smooth yarns.

Weaving: Fabric production. **Finishing production**:

Bleaching, **dyeingCharacteristics of wool fabrics**

Fine and semi-fine wool is used in the manufacture of fine dress and suit fabrics; coarse wool is used in the manufacture of felt, valenki.

Wool fabrics do not get dirty, crease little, absorb water, retain heat well, almost no creases, drape well, have a high dust capacity. Wool fabrics have the property of piling, piling fibers.

Wool fabrics are produced plain dyed, mottled, printed or printed.

The label "natural wool" may be used if the wool fabric fibers contain no more than 7% of other fibers. The label
"pure natural wool" is awarded if the composition of the fabric contains no more than 0.3% of other fibers.

Wool products are washed with special detergents at water temperature 30, do not rub, do not twist, do not soak for a long time. The washed products are spread out on a flat surface until they are completely dry.

Properties of wool fibers

FACILITIES AND EQUIPMENT

For production is suitable space of 500 square meters. The main requirements for it are:

- availability of water supply and sanitation; connection to the electricity grid; heated workshops;
- room for staff, storage of raw materials and finished products, administrative room;
- installed fire alarm and fire extinguishing system, since the production is a fire hazard.

The construction and placement of the project will be located on the territory of Kamashi district.

It is desirable to locate the enterprise for the production of auto filters in an industrial area or outside the city. Such a location will provide convenient access with parking for cars, as well as provide significant economy at rent payment

- Approximately the same amount of space is needed to accommodate the rest of the rooms: office space;
- warehouses (with raw materials and finished products); auxiliary rooms with sanitary facilities.

When equipping a production shop, it is necessary to comply with the requirements of these standards, rules and sanitary regulations regarding the microclimate and fire safety.

Equipment			
Leading manufacturers of project equipment, existing advanced technologies and other overviews	Weihai Woollen Fabric Group Co.	CARDMASH LLC. (Russia)	TRAITEX (Belgium)
Productivity, (number/year)	0.43 tonnes per day (1000 tonnes/year)	0.40 tons per day (950 tons/year)	0.48 tons per day (1,100 tons/year)
The cost of the set of equipment, $	3.500 000,00 $	5.800.000,00 $	6.800.000,00 $
Supplier contacts, website, internet link	Weihai Hign&New Tec. Deve.District Beihai Industrial Zone.	2b Umetbaeva St., Novotroitsk, Russia, KardMach@gmail.com	Rue de Limbourg, 145 4800 Verviers E-mail: info@traitex.be VAT - BE 0421.677.014
Name of technology used	Yarn production technology of organic fiber, sewing quilt (made of wool).	All technological The equipment is manufactured using modern and high-quality components, fully complying with technical requirements.	Traitex can process all kinds of animal fibers, such as cashmere, goat and camel hair, alpaca and others special fibers.

A brief description of the technological process of manufacturing GPs in offered equipment	Production process of wool yarn and blanket: reception and sorting of raw materials processing of wool on the de-wooling machine line processing of tangles and cleaning of debris immersion baths and squeezing machines, providing 5 cycles		
Equipment			
	washing, drying washed fiber-washing and drying-crushing, and loosening-combing and spinning-dyeing-drying sewing-packing		
List of raw materials and their consumption, formulation (loss of raw materials) to get GS (per unit, for a certain volume) at this equipment	90% wool and 10% dyes, chemicals, packaging		
List of energy resources (electricity, fuel, water, etc.) and its consumption during the operation of the equipment by to receive GPs	Electric power 500 thousand kW, water 0.5 thousand cubic meters, gas 0.5 thousand cubic meters		
Area of the building, structure necessary to accommodate this equipment, sq.m.	10 000	11 000	9 000
Number of employees per shift (per day, per season) when operating of this equipment	40	45	30

Information about the selected equipment	
The technology used and its description	Production process of wool yarn and blanket: processing of wool on the de-wooling machine - line of processing of tangles and cleaning of debris section of immersion baths and squeezing machines, providing 5 washing cycles, drying washed fiber washing and drying-cracking, and loosening-combing and spinning-dyeing-drying-sewing packing
he selected equipment and guaranteed productivity, per year, per hour.	0.43 tonnes per day (1000 tonnes/year)
Country of origin equipment	Weihai Woollen Fabric Group Co.
Total cost of the kit equipment	3.500 000,00 $
Occupied equipment area, sq.m.	10000
Delivery and commissioning time equipment	12
List of equipment to be purchased locally	Transformer, electric car, water tower

SOURCE

Raw materials and resources							
Name list of the main raw materials, supplies, packaging	camel hair - 25 %	Lamb wool - 70%	merino, cashmere, mohair, dyes and chemicals, package - 5%				
Sources of raw materials (local or import)	local	local	local / imported				
Name of the source region, examples.	In Uzbekistan there is sufficient						
Volume of raw material reserves (mln. tons, cubic meters, etc.)	23,000 tons (wool)						
Wholesale prices (Briefly, the price of raw materials, materials, etc. on the market) $/kg.	0.1	0.10	0.80				
RECIPE % (In brief, the recipe for the consumption of raw materials, supplies, packaging for 1 ton, cu. m., pcs. finished products), examples of	25%	70%	5%	0%		0%	0%

List of energy resources, unit.	El. Power,kW	Water, cu. m.	Natural gas, cu. m.	Other fuel, tons		Other	Other
Raw materials and resources							
The need for energy resources per year	500 000.00	50 000.00	100 000.00	no		no	no
Expenses, $	20 000.00	4 000.00	10 000.00				
Rates, $	0.04	0.08	0.10				

VOLUME OF ENERGY RESOURCES CONSUMED AND CONNECTION REQUIREMENTS

№	Consumption	per annum
1	Power consumption	500.0 thousand kwt.
2	Water	50 thousand cubic meters.
3	Gas	100 thousand cubic meters.
4	Fuel	-
5	Number of employees	40
6	Area for plant location	1.0 ha
7	Area of production buildings and facilities	0.50 ha
8	The area adjacent to the buildings Territories	0.50 ha

5 A SUMMARY OF THE PRELIMINARY COST AND SOURCES OF FUNDING

1	Project cost (dollars)	5 701 781
2	Cost of equipment	3 965 500
3	Supervisor installation service and staff training	3% of the cost
4	Annual capacity of the plant	0.43 tn in per day (1000 tons/year)
5	A brief description of the technological process of GP manufacturing in the proposed equipment	Production process wool yarn and blanket: reception and sorting of raw materials --- processing wool on despraying machine --- line of tangle treatment and debris removal --- immersion baths area and squeezing machines, providing 5 wash cycles --- drying of the washed fibers---washing and drying--- cracking and loosening--- combing and spinning---dyeing--- - drying-----sewing -- packing
6	Raw materials	
	Local	camel and sheep wool 95 %
	Imported	merino, cashmere, mohair, dyes and chemicals, packaging - 5%.

7	Power consumption	500.0 thousand kwt.
	Water	50 thousand cubic meters.
	Gas	100 thousand cubic meters.
	Fuel	-
8	Number of employees	40
9	Area for plant location	1.0 ha
10	Area of production buildings and facilities	0.50 ha
11	The area adjacent to the buildings	0.50 ha

Thus, the total amount for this project is $5,701,781. THIS AMOUNT WILL BE FINANCED BY THE ENTERPRISE'S OWN FUNDS AND A LOAN FROM THE ENTERPRISE'S BANK. This amount will be financed from the company's own funds and a loan from the company's bank.

6 ANNUAL COSTS OF RAW MATERIALS, COMPONENTS AND SUPPLIES

Name of the list of basic raw materials, materials, packaging	camel hair - 25 %	Lamb's wool - 70 %	merino, cashmere, mohair, dyes and chemicals, package - 5%
raw materials (local or import)	local	local	local imported
Name of the source region, examples.	In Uzbekistan, there is a sufficient amount of camel hair, and sheep and goats should be raised in mountainous regions		
The volume of raw material reserves (mln. tons, cubic meters, etc.)	23,000 tons (wool)		
Wholesale prices (Briefly, the price of raw materials, materials, etc. on the market) $/kg	0,1	0,10	0,80

7 ANNUAL ENERGY COSTS

List energy resources, units.	El. Power, kW	Water, cu.m.	Natural gas, cu. m.	fuel, tons
The need for energy resources per year	500 000,00	50 000,00	100 000,00	-
Expenses , $	15 000,00	3 500,00	10 000,00	-
Rates, $	0,03	0,7	0,1	-

8 HUMAN RESOURCES

Personnel

The planned staffing of the company will be in the amount of about 40 units.

Also, employees of the company may be provided with a full social package: free travel (transport of the company), free lunch (consisting of 3 dishes), paid annual leave, paid sick leave, bonuses for the year.

Overhead costs (general and administrative)

Full-capacity overhead consists of the following major cost items:

- Salaries of employees who are not directly involved in production;
- transportation costs;
- taxes and other deductions not directly included in the cost of production;
- costs of scheduled maintenance and repair of equipment;
- purchase of spare parts and consumables;
- HSE costs, etc. The need for available labor resources

A new professional staff is needed to work on the production, as the company currently has qualified personnel.

Below is the composition of the production staff of the company:

Position	Quantity	Annual fund wages (USD)
Director	1	12 000
Deputy Director	1	9 600
Head of Production Department	3	25 200
Skilled workers	6	28 800
Unskilled workers	25	90 000
Cleaners	4	14 400
Total	*40*	*180 000*
Single social payment		*1 800*
Total with ESP		**181 800**
Total payroll	**40**	**181 800**

9 TAXATION

Taxes for Kamashin District are applied on the basis of exemptions applicable to Category 4 districts.

10 ORGANIZATIONAL AND OTHER EXPENSES

Other production costs (not provided for) are assumed to be 10% of the cost of raw materials and energy resources, taking into account the transportation of raw materials. Other administrative costs are 50% of other production costs.

11 INVESTOR ROLE

The project is at the stage of determining a potential investor, the choice of the investor will be based on the experience of investment in similar projects, presented commitments and guarantees for the project.

12 PROJECT IMPLEMENTATION SCHEME

For effective to effectively implement project it is planned

The following activities are planned for effective implementation:

1 Conducting marketing research market at for market needs for the products to be produced;

2 Study of production possibilities;

3 Development of a strategy and business plan for the sale of products, an analysis of the sales market;

4 Conducting Preparatory work and choosing used technology, manufacturer and supplier of technological equipment;

5 Coordinate the scheme of supply of equipment, raw materials, consumables with the Supplier;

6 Generalization and analysis of the information obtained in order to determine its own internal capabilities, as well as the amount of attracted credit funds;

7 Organizational measures to attract credit funds;

8 Organizational measures to prepare the existing areas for the installation and placement of the acquired technological equipment, in accordance with the Manufacturer's recommendations;

9 Concluding a contract with an equipment supplier and purchasing new equipment;

10 Installation, commissioning of the equipment by specialists of the Supplier;

11 Enterprise Test Tests;

12 Putting the enterprise into operation;

13 Organization of production, storage and sale of products.

The time required to implement the project (from its financing to the actual completion) is 4 years.

It should be noted that much of the work on the project (market research market research products, the definition of the manufacturer and supplier of technological equipment) has already been carried out.

Conducting organizational activities to attract credit funds, the execution of the contract of pledge and preparation of industrial premises, thus, the total duration of the project is 18 months.

The original cost of this project is $5,701,781, of which:

- 3,965,500. The purchase of the necessary technological equipment is estimated at $3,965,500.

- 1,736,281. The company's main goal is to provide the company with the necessary funds for the preparatory work for the construction of the enterprise, the purchase of raw materials, etc.

The total amount for this project is $5,701,781.

13 FINANCIAL EVALUATION

13.1 Full investment costs

The total cost of the project is $5,701,781.

13.2 Project financing: mechanism and sources of financing

Articles	Means of initiation (USD)	Investor funds (USD)	Total (USD)
The project's main funds			
Production of blankets made of wool	1 736 281	3 965 500	5 701 781
Total	**1 736 281**	**3 965 500**	**5 701 781**
Total project cost	**1 736 281**	**3 965 500**	**5 701 781**
funding share	*30,5%*	*69,5%*	

13.3 Financial plan of the project

Financial plan

Name of work	view	unit.	quantity	rate	Amount
Production building	SMR	sq.m.	4 000	200	800 000
Production line	Equipment	pcs.	1	3 965 500	3 965 500
Administration building	SMR	sq.m.	300	200	60 000
Warehouse	SMR	sq.m.	700	150	105 000
Road and infrastructure	SMR	km	0,5	100 000	50 000
Auxiliary equipment	Equipment	pcs.	1	70 000	70 000
Working capital	Other				651 281
Total					**5 701 781**

Costs consist of three groups of costs:

- Intrafarm production costs of sold products (including the value of inventory - $114,727), which for the first year of the project are $2,634,111.
- Operating costs, which for the first year of the project are $209,588.
- Financial costs, which for the project is in the first year of production activities: 257,758 dollars. The project will be carried out, including borrowed funds.

Thus, the full cost of the project for the first year is $3,101,456. US$3,101,456

Evaluation economic of economic efficiency with considering Payback and timely repayment of borrowed funds, currency payback

The main indicators of economic efficiency of the project

№	Indicators	Value of the indicator
1	Discount rate, %	7
2	Payback period, years	5
3	Discounted payback period, years	5
4	Net present income - NPV, USD	2 815 630
5	Profitability index, average	2,06
6	Internal rate of return - IRR, %	19

The break-even point of the project is 32% of production capacity utilization.

1. Calculation of profits and losses

In the calculation of profits and losses, taxes and other deductions are taken into account according to their sections of application.

Estimated profit, cash flow from the project for a period of 7 years is calculated in accordance with the production and sales plan.

When preparing the profit and loss statement, it was taken into account that the company is a taxpayer of the general tax regime and will pay 15% of profit.

VAT is not taken into account, as excessive VAT received from customers will be directed to the relevant STI accounts.

Losses в during throughout horizon planning horizon of the production activity of the enterprise are not observed.

2. Forecast of net working capital

Working capital is necessary for the normal functioning of production.

Optimal planning of working capital allows you to avoid unnecessary diversion of funds, as well as to avoid a shortage of funds, which can cause the shutdown of the enterprise.

Optimal planning of working capital has a positive effect on the flow of funds in the production process: the more turns working capital makes, the faster the company receives the planned income, even with a decrease in the price of the sale of products.

The calculations show the availability of net working capital throughout the planning horizon, which indicates that the company will not need to divert cash for its formation and use current borrowed funds in the form of raw materials. This fact has a positive effect on cash flow, and, as a result, helps avoid negative cumulative cash flow.

3. Cash flow

The cumulative cash flow for the project as a whole throughout the planning horizon will be mostly positive.

14 APPLICATIONS

Initial project cost

Articles	Initiator's means (USD)	Investor funds (USD)	Total (USD)	Structure (%)
The project's main funds				
Production of blankets made of wool	1 736 281	3 965 500	5 701 781	100%
Total	**1 736 281**	**3 965 500**	**5 701 781**	**100%**
Total project cost	**1 736 281**	**3 965 500**	**5 701 781**	**100%**
funding share	*30,5%*	*69,5%*		

Financial plan

№	Name of work	view	unit.	quantity	rate	Amount
1	Production building	SMR	sq.m.	4 000	200	800 000
2	Production line	Equipment	pcs.	1	3 965 500	3 965 500
3	Administration building	SMR	sq.m.	300	200	60 000
4	Warehouse	SMR	sq.m.	700	150	105 000
5	Road and infrastructure	SMR	km	0,5	100 000	50 000
6	Auxiliary equipment	Equipment	pcs.	1	70 000	70 000
7	Working capital	Other				651 281
	Total					**5 701 781**

Depreciation charge

Fixed assets	Rate	Amount	2024	2025	2026	2027	2028	2029	2030
Machines and equipment	10,0%	4 035 500	403 550	403 550	403 550	403 550	403 550	403 550	403 550
Construction and installation work	5%	1 015 000	50 750	50 750	50 750	50 750	50 750	50 750	50 750
Total		**5 050 500**	**454 300**	**454 300**	**454 300**	**454 300**	**454 300**	**454 300**	**454 300**

Sales plan by volume

Manufactured goods	Annual capacity	
Sheep's wool blanket	400 000	kg
Goat hair blanket	300 000	kg
Camel hair blanket	300 000	kg

	2024	2025	2026	2027	2028	2029	2030
Design capacity	**60%**	**73%**	**85%**	**95%**	**95%**	**95%**	**95%**
Sheep's wool blanket	240 000	290 000	340 000	380 000	380 000	380 000	380 000
Goat hair blanket	180 000	217 500	255 000	285 000	285 000	285 000	285 000
Camel hair blanket	180 000	217 500	255 000	285 000	285 000	285 000	285 000

Sales Plan

Products	price per kg
	US dollars
Sheep's wool blanket	7,40
Goat hair blanket	5,92
Camel hair blanket	4,93

	2024	2025	2026	2027	2028	2029	2030
Sales in U.S. dollars							
Sheep's wool blanket	1 776 000	2 146 000	2 516 000	2 812 000	2 812 000	2 812 000	2 812 000
Goat hair blanket	1 065 600	1 287 600	1 509 600	1 687 200	1 687 200	1 687 200	1 687 200
Camel hair blanket	887 964	1 072 957	1 257 950	1 405 944	1 405 944	1 405 944	1 405 944
Total	**3 729 564**	**4 506 557**	**5 283 550**	**5 905 144**	**5 905 144**	**5 905 144**	**5 905 144**

Cost of raw materials at full capacity

Name	Unit.	Total need	Price per unit	General USD value
Sheep's wool	kg	2 100 000	1,32	2 772 000
Goat hair	kg	90 000	0,66	59 400
Camel hair	kg	225 000	0,66	148 500
Other component raw materials	kg	100000	2,00	200 000
Electricity	thousand kWh	500	30,0	15 000
Gas	thousand m3	100	100,0	10 000
Water	thousand m3	50	700,0	35 000
Total				**3 239 900**

Other expenses

Name	Amount
Other production expenses	323 990
Other administrative expenses	161 995
	485 985

Wages

Position	Quantity	Salary per month (USD)	Annual salary fund (USD)
Director	1	1 000	12 000
Deputy Director	1	800	9 600
Head of Production Department	3	700	25 200
Skilled workers	6	400	28 800
Unskilled workers	25	300	90 000
Cleaners	4	300	14 400
Total	*40*		*180 000*
Single social payment			*1 800*
Total with ESP			**181 800**
Total payroll	**40**		**181 800**

Production costs at full capacity

Article name	Total costs *US dollars*	Fixed *%*	The variable *%*	Fixed costs *US dollars*	Variable costs *US dollars*
Raw materials and supplies	3 239 900	1,85%	98,15%	60 000	3 179 900
Salary of the production department	133 200	72%	28%	95 359	37 841
ESP	1 332	72%	28%	954	378
Other production costs	323 990	10%	90%	32 399	291 591
Salaries of administrative staff	46 800	100%	0%	46 800	0
ESP	468	100%	0%	468	0
Other administrative expenses	161 995	100%	0%	161 995	0
Depreciation	454 300	100%	0%	454 300	0
Property and land taxes	162	100%	0%	162	0
Taxes	17 185	0%	100%	0	17 185
Total	**4 379 332**			**852 437**	**3 526 895**

Annual costs of products sold

Power/Name of the item	2024	2025	2026	2027	2028	2029	2030
	60%	73%	85%	95%	95%	95%	95%
Raw materials and supplies	1 967 940	2 365 428	2 762 915	3 080 905	3 080 905	3 080 905	3 080 905
Salary of the production department	118 064	122 794	127 524	131 308	131 308	131 308	131 308
ESP	1 181	1 228	1 275	1 313	1 313	1 313	1 313
Other production costs	207 354	243 802	280 251	309 410	309 410	309 410	309 410
Depreciation	454 300	454 300	454 300	454 300	454 300	454 300	454 300
Production cost	**2 748 838**	**3 187 552**	**3 626 265**	**3 977 236**	**3 977 236**	**3 977 236**	**3 977 236**
Stocks at the end of the year	114 727	136 663	158 598	176 147	176 147	176 147	176 147
Plant costs of products sold	**2 634 111**	**3 165 616**	**3 604 330**	**3 959 688**	**3 977 236**	**3 977 236**	**3 977 236**
Administration salary	46 800	46 800	46 800	46 800	46 800	46 800	46 800
Social security and other deductions	630	630	630	630	630	630	630
Other administrative expenses	161 995	161 995	161 995	161 995	161 995	161 995	161 995
Property and land taxes	162	155	147	140	132	124	117
Operating expenses	**209 588**	**209 580**	**209 573**	**209 565**	**209 558**	**209 550**	**209 542**
Finance costs	**257 758**	**247 018**	**204 058**	**161 098**	**118 139**	**75 179**	**32 220**
Interest on the loan	257 758	247 018	204 058	161 098	118 139	75 179	32 220
Total costs of products sold	**3 101 456**	**3 622 214**	**4 017 961**	**4 330 351**	**4 304 933**	**4 261 966**	**4 218 998**

FC	852 437	852 430	852 422	852 414	852 407	852 399	852 391
VC	1 991 262	2 522 767	2 961 481	3 316 839	3 334 387	3 334 387	3 334 387

Principal repayment

Grace period	12 months
Interest rate	6,5%
Amount of credit	**3 965 500** US dollars

Periods disbursements	Payments of basic debt	Balance of credit debts	Interest payments	planned payments
1 year / I		3 965 500	128 879	128 879
1 year /II		3 965 500	128 879	128 879
Year 2 / I	330 458	3 635 042	128 879	459 337
Year 2 /II	330 458	3 304 583	118 139	448 597
Year 3 / I	330 458	2 974 125	107 399	437 857
Year 3 /II	330 458	2 643 667	96 659	427 117
Year 4 / I	330 458	2 313 208	85 919	416 378
Year 4 /II	330 458	1 982 750	75 179	405 638
Year 5 / I	330 458	1 652 292	64 439	394 898
Year 5 /II	330 458	1 321 833	53 699	384 158
Year 6 / I	330 458	991 375	42 960	373 418
Year 6 /II	330 458	660 917	32 220	362 678
Year 7 / I	330 458	330 458	21 480	351 938
Year 7 /II	330 458	-0	10 740	341 198
Total	**3 965 500**		**1 095 469**	**5 060 969**

Other fees and payments

One-time fee		0,50%	19 828
Total			**19 828**

Profit and loss forecast

	60%	73%	85%	95%	95%	95%	95%
	2024	2025	2026	2027	2028	2029	2030
Revenue	**3 729 564**	**4 506 557**	**5 283 550**	**5 905 144**	**5 905 144**	**5 905 144**	**5 905 144**
Raw materials and supplies	1 967 940	2 365 428	2 762 915	3 080 905	3 080 905	3 080 905	3 080 905
Other production costs	207 354	243 802	280 251	309 410	309 410	309 410	309 410
Gross income I	**1 554 271**	**1 897 327**	**2 240 383**	**2 514 828**	**2 514 828**	**2 514 828**	**2 514 828**
Wages	118 064	122 794	127 524	131 308	131 308	131 308	131 308
ESP	1 181	1 228	1 275	1 313	1 313	1 313	1 313
Gross income II	**1 435 027**	**1 773 305**	**2 111 584**	**2 382 207**	**2 382 207**	**2 382 207**	**2 382 207**
Administrative expenses	47 430	47 430	47 430	47 430	47 430	47 430	47 430
Other administrative expenses	161 995	161 995	161 995	161 995	161 995	161 995	161 995
Property and land taxes	162	155	147	140	132	124	117
EBITDA (Earnings before interest, taxes, depreciation, and amortization)	**1 225 439**	**1 563 725**	**1 902 011**	**2 172 642**	**2 172 650**	**2 172 657**	**2 172 665**
Depreciation	454 300	454 300	454 300	454 300	454 300	454 300	454 300
EBIT (Earnings before interest, taxes)	**771 139**	**1 109 425**	**1 447 711**	**1 718 342**	**1 718 350**	**1 718 357**	**1 718 365**
Financial costs	257 758	247 018	204 058	161 098	118 139	75 179	32 220
Taxes	7 711	11 094	14 477	17 183	17 183	17 184	17 184
Net income	**505 670**	**851 313**	**1 229 176**	**1 540 060**	**1 583 027**	**1 625 995**	**1 668 962**
Cumulative profit	505 670	1 356 983	2 586 159	4 126 220	5 709 247	7 335 242	9 004 203
Gross profit/total sales	0,4	0,4	0,4	0,4	0,4	0,4	0,4
Net profit/total sales	0,1	0,2	0,2	0,3	0,3	0,3	0,3

Working capital planning

Article name			Turnover rate (360 / Coverage Days)
Revenue period from sales	30	days	12
Stocks of raw materials in stock and on the production line	90	days	4
Stocks of finished products	18	days	20
Spare parts	360	days	1
Period of payment for supplies raw materials and supplies	15	days	24

Working capital planning

	0 year	2024	2025	2026	2027	2028	2029	2030
Accounts receivable		310 797	375 546	440 296	492 095	492 095	492 095	492 095
Stocks of raw materials/wages	651 281	491 985	591 357	690 729	770 226	770 226	770 226	770 226
Finished goods inventories		125 198	147 134	169 070	186 618	186 618	186 618	186 618
Spare parts		0	0	0	0	0	0	0
Total	651 281	927 980	1 114 037	1 300 094	1 448 940	1 448 940	1 448 940	1 448 940
Accounts payable		114 535	132 815	151 094	165 718	165 718	165 718	165 718
Net working capital	651 281	813 445	981 223	1 149 000	1 283 221	1 283 221	1 283 221	1 283 221
Changes in working capital	651 281	162 164	167 777	167 777	134 222	0	0	0

Cash flow

Article name	0 year	2024	2025	2026	2027	2028	2029	2030
Total net sales		3 729 564	4 506 557	5 283 550	5 905 144	5 905 144	5 905 144	5 905 144
Changes in working capital	651 281	162 164	167 777	167 777	134 222	0	0	0
Flow from sales	-651 281	3 567 400	4 338 780	5 115 772	5 770 922	5 905 144	5 905 144	5 905 144
Plant costs of products sold		2 634 111	3 165 616	3 604 330	3 959 688	3 977 236	3 977 236	3 977 236
Gross cash flow	-651 281	933 289	1 173 164	1 511 443	1 811 234	1 927 907	1 927 907	1 927 907
Depreciation		454 300	454 300	454 300	454 300	454 300	454 300	454 300
Taxes		7 711	11 094	14 477	17 183	17 183	17 184	17 184
Administrative costs		209 588	209 580	209 573	209 565	209 558	209 550	209 542
Operating cash flow(A)	-651 281	1 170 290	1 406 789	1 741 693	2 038 786	2 155 466	2 155 474	2 155 481
Improvement expenses	0							
Expenses on fixed assets	-5 050 500							
Total investment	-5 050 500							
Property	5 701 781							
percent (C)	0	257 758	247 018	204 058	161 098	118 139	75 179	32 220
Other financial expenses	0							
Net cash flow	0	912 532	1 159 772	1 537 635	1 877 687	2 037 327	2 080 295	2 123 262
Payment of principal (C)		0	660 917	660 917	660 917	660 917	660 917	660 917
Cash flow	0	912 532	498 855	876 718	1 216 770	1 376 411	1 419 378	1 462 345
Cumulative cash flow	0	912 532	1 411 387	2 288 105	3 504 876	4 881 287	6 300 664	7 763 009

Balance forecast

Article name	0 year	2024	2025	2026	2027	2028	2029	2030
Cash	0	912 532	1 411 387	2 288 105	3 504 876	4 881 287	6 300 664	7 763 009
Accounts receivable	0	310 797	375 546	440 296	492 095	492 095	492 095	492 095
Stock of raw materials and supplies	651 281	491 985	591 357	690 729	770 226	770 226	770 226	770 226
Finished product stock	0	10 471	10 471	10 471	10 471	10 471	10 471	10 471
Spare parts stock	0	0	0	0	0	0	0	0
Current assets		1 725 786	2 388 762	3 429 601	4 777 669	6 154 079	7 573 457	9 035 802
Fixed assets		5 050 500	4 596 200	4 141 900	3 687 600	5 050 500	5 050 500	5 050 500
Depreciation	0	-454 300	-454 300	-454 300	-454 300	-454 300	-454 300	-454 300
Net fixed assets	5 050 500	4 596 200	4 141 900	3 687 600	3 233 300	2 779 000	2 324 700	1 870 400
Total assets	**5 050 500**	**6 321 986**	**6 530 662**	**7 117 201**	**8 010 969**	**8 933 079**	**9 898 157**	**10 906 202**
Accounts payable	0	114 535	132 815	151 094	165 718	165 718	165 718	165 718
Current liabilities	0	114 535	132 815	151 094	165 718	165 718	165 718	165 718
Long-term loans	3 965 500	3 965 500	3 304 583	2 643 667	1 982 750	1 321 833	660 917	0
Share capital		0	0	0	0	0	0	0
Reserve Capital		651 281	651 281	651 281	651 281	651 281	651 281	651 281
Retained earnings		505 670	1 356 983	2 586 159	4 126 220	5 709 247	7 335 242	9 004 203
Equity	1 085 000	2 241 951	3 093 264	4 322 440	5 862 500	7 445 528	9 071 522	10 740 484
Total liabilities	**5 050 500**	**6 321 986**	**6 530 662**	**7 117 201**	**8 010 969**	**8 933 079**	**9 898 157**	**10 906 202**
	0	0	0	0	0	0	0	0
Equity/Liability		*0,35*	*0,47*	*0,61*	*0,73*	*0,83*	*0,92*	*0,98*

Taxes

Types of tax	Rate	2024	2025	2026	2027	2028	2029	2030
Income tax	1,0%	8 860	11 315	14 698	17 360	17 185	17 185	17 185
Total taxes		**8 860**	**11 315**	**14 698**	**17 360**	**17 185**	**17 185**	**17 185**

NPV and IRR

Period	Cash Flow	NPV, 7%	IRR
0 year	-5701780,83		
2024	912 532	-4531726,18	-84%
2025	1 159 772	-3585007	-46%
2026	1 537 635	-2411952,74	-18%
2027	1 877 687	-1073187,8	-1%
2028	2 037 327	284 369	9%
2029	2 080 295	1 579 872	15%
2030	2 123 262	2 815 630	19%

Break-even point analysis

№	Indicator name	value
1	Sales at full capacity	6 215 941
2	Fixed production costs	852 437
3	Variable production costs	3 526 895
	Breakeven point	**32%**

15Information about the project executor

Business plan "Opening of clinker production" was made by the research agency "**Global Innovation Trade**". All our specialists have impressive experience in developing business plans, supported by deep knowledge in various areas of economics and business, the presence of a strong information base, knowledge of the most advanced approaches to business organization, knowledge of the latest methods of calculation and their competent adaptation to the specifics of the region or a particular industry.

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