

原始数据 中文 英文

详细

翻译41

列表

编辑

删除

所属渠道	CEE
备注	
联系人	Grigore Munteanu
邮箱	gora.technology@gmail.com
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所属公司	Gora Technology Group LTD
职位	Director
所属公司介绍	<p>Gora Technology Group LTD was foundet at 28.05.2018. At the moment it has 5 employees and has the possibility to increase the team until 25 members. The registration capital is 60000 EURO. The location of the company is in the Republic of Moldova, Chisinau city, Vasile Pogor 5 Street, MD-2051.</p> <p>The company profile is based on personal inovative technologies in agriculture. At the moment it is specialized in producing an innovative greenhouses for growing trees, fruits and vegetables.</p> <p>In the same time it is now working on a totally new and innovative support and protection system for the orchards and vineyards.</p>
公司网站	
技术名称	Production of block greenhouses for the cultivation of fruits and vegetables, on a slope and flat terrain, with automations and innovative systems.
所属国别	其他国家
所属领域	现代农业
细分领域	Modern Agriculture. Organic Agriculture.
技术基本介绍	<p>Four types of block greenhouse, with automatic opening of the roof and walls, which can be installed both on flat ground and on a slope, so that a good part of the land can be used. The innovative system allows the total opening (over 95% of the greenhouse area) of the automated roof and walls compared to other greenhouses, creating an advantage for better ventilation inside, which influences the quality of cultivated fruits and vegetables. This type of greenhouse offers the possibility of growing ecological crops, as a result of the total opening of the greenhouse and benefiting from a natural climate, with snowfall in the cold period of the year and rain, sun in the warm period. The innovative system allows the total opening of the roof from the top to the bottom of the arch, which allows the elimination of moist air from the greenhouse, while keeping the warm air at the bottom, avoiding stressing of the plants. Attaching the automated system with anti-insect net makes the plants protected from pests. The installation of the greenhouse on metal piles with automated equipment, makes the installation much faster, with minimal labor and low costs. Greenhouse pillars are used as a support system for growing plants, especially fruit trees, shrubs. The automated system that increases the brightness in the greenhouse creates a brighter environment and enhances</p>

increases the brightness in the greenhouse creates a brighter environment and enhances plant development. Greenhouses can be equipped with double film, which will form an air cushion on the roof, sides and gutter, for better storage of the temperature inside. The

removable gutter avoids major investments in fortifying the greenhouse. Also, these greenhouses can be equipped with shading mesh, to protect crops from sunlight and very high temperatures.

## 技术创新性和先进性

### Field of application of the invention:

The achievements of the present invention relate to agricultural equipment and constructions, to the protection systems of fruit and shrub plantations and, in particular, to block type greenhouses with total automatic aeration, for a more natural growth of plants.

### Technical study:

At the moment, are well known several types of greenhouses and solariums for growing vegetables and fruits, as well as protection systems with anti-hail, anti-rain and anti-insect nets.

There are known greenhouses with automatic retractable roofs that offer a full roof opening and good ventilation, but which have a number of disadvantages:

- it is not possible to use double film and air cushioning to better maintain the temperature inside the greenhouse, relative to the temperature outside, so as to speed up the ripening period,
- have a multitude of spaces through which cold air can enter from the outside,
- a much more fortified construction is needed, so that the cost of the greenhouse is much higher, especially in the case of protecting crops from snowfall,
- the impossibility of ventilation only on the top of the greenhouse, where moisture accumulates, the roof opening on the width of the greenhouse modules,
- the use of reinforced film with a lower percentage of light transmission, so that it can slow down the growth of plants that need more light,
- technical maintenance of the greenhouse is more difficult and involves more workforce,
- the installation is made on concrete foundations, which increases the costs and installation time.

There are also known greenhouses with partial automatic roof openings, based on windows, which have good insulation, can use double film, but which also have several disadvantages:

- does not provide good ventilation at high temperatures, as they have a window or two on the top of the roof and a fairly large space remains covered, so that crops lose productivity and become ill more often,
- a process of growing as natural as possible cannot be maintained, as the roof of the greenhouse cannot be opened completely, thus losing the taste qualities of the product,
- fruit trees may not be planted in such greenhouses due to insufficient ventilation,
- the installation is made on concrete foundations, which increases the costs and installation time,
- it is difficult to install on steeper slopes,
- are vulnerable to strong winds, hurricanes.

There are also greenhouses with a roof consisting of two large windows that provide good insulation and ventilation, but also have several disadvantages:

- due to the strengthening of the structure and the mechanisms used are highly priced,
- are not effective in winds, due to the opening mechanism used, so that the windows can be slightly damaged,
- snow or rain may not be ventilated or left open if necessary, when there are higher winds,
- the installation is made on concrete foundations, which increases the costs and installation time,
- it is difficult to install on steeper slopes,
- are vulnerable to strong winds. hurricanes.

Greenhouses with partial or complete rolling of the roof are also known, which have as a disadvantage, the rolling of the film from the ridge to the top, so that in the aeration process the hot air inside is lost. The installation is done on concrete foundations, which increases the costs and installation time. It is difficult to install on steeply slopes. They are vulnerable to strong winds, hurricanes.

There is also anti-rain, anti-hail, anti-insect systems, but they also have several disadvantages:

- having no water drainage gutters, it does not protect the crops from heavy rains, the water accumulated in the soil is absorbed by the plant and affects the quality of the products. Also, rainwater cannot be stored and used for irrigation in order to reduce production costs,
- if you need several protection systems simultaneously, it is very difficult to install, to tighten, it also involves high costs for the use of labor. It is impossible to automate the tightening of both,
- static anti-rain systems can affect plant development during periods of high temperatures,
- due to manual tightening, they can be damaged more easily,
- the use of reinforced film with a lower percentage of light transmission, so that it can slow down the growth of plants that need more light,
- use reflective film to increase the brightness, but which must be collected and unfolded manually, which in the cultivation process involves labor, given that the soil must be worked, the plants must be treated and irrigated,
- are vulnerable to strong winds, hurricanes,
- does not protect against frost, does not form an enclosed space to speed up the ripening period of the fruit.

#### **Presentation of the technical problem solved by the invention**

##### **The objective is achieved due to:**

1. Equipping with a double plastic film greenhouse, which forms an air pillow that better keeps the temperature inside. The double plastic film is present on the roof of the greenhouse, the gutter, the entrance door and the sides.
2. Automated openings (rain, wind, temperature, humidity sensors) of the roof and walls of the greenhouse, which can be stopped at any closing or opening point, thus maintaining the desired microclimate inside.
3. The system that allows the roof and side parts to be opened in a proportion of 95% of the greenhouse surface, more than the other greenhouses, creating an advantage for more ventilation inside, which influences the quality of the fruits and vegetables grown.
4. Rolling up the plastic film from the roof, from the top of the arch to the bottom, so that the humidity accumulated at the top of the greenhouse is eliminated and the warm air below is kept.
5. The innovative roof opening system that allows to be used also in the model of slopes.
6. The automated system with anti-insect net that can open when the plastic film is rolled, or it can remain intact, if it is desired to obtain an open space (in case of falling of snowfall in the winter time and also, destruction of viruses and pests from the soil) for keeping the natural processes of growth.
7. Use of metal frame with brushes on the edges, which protects the greenhouse from the cold air from entering from outside, on the corners, on the middle of the lateral parts and on the edges of the lateral parts of the arches, which allows avoiding of the sails.
8. Using of double plastic film gutters, inflatable and automatically removable, which ensure better isolations and keeping warm air inside the greenhouse. Also due to the detachment of the gutter is preventing the fortification of the greenhouse, so that the structure can maintain a lower load of snow, and when an accumulation of a larger quantity of snow, it can be unloaded through the gutter area, but between the crop rows, so that the plants should not be affected. These gutters also allow us to connect the drainage system to accumulate water from the greenhouse.
9. Automation of the system to increase the brightness in the greenhouse by the reflection of the sun rays.

10. Use of the screw piles in the greenhouse frame as support poles for the plant support system (especially fruit trees and shrubs).

11. Using of galvanized screw piles and easy-to-install components, without welding, provides the possibility of quick installation of the greenhouse without involving too much labor.

12. Use T-type parts in the frame of the greenhouse so that the support piles can be used as a support system for trees and shrubs, so as not to tangle the film rolling system on the roof.

13. Existing automated shading system, which protects crops from high temperatures.

#### **Disclosure of the invention**

- Four types of greenhouse, according to the invention, eliminate the above disadvantages, and also, the greenhouses can be mounted both on flat and sloping ground. The metal new frame formed by the specific arches for each type of greenhouse, having as components the parts type T, pillars with profiles with gutters that form the plant support system and metal piles.

- The roof, according to the invention, eliminates the above disadvantages by:

o the ventilation system occurs from the top to the bottom of the arches and, the process of rolling the membrane from top to bottom is new;

o the roof can be fully opened and there are new rack-and-pinions on the basis with wheels attached to the clamps, sheet metal formations that form the roof for / and pipe-type profiles, the rolling gear system, chain and bearings with metal fabrications, geared motor based on wheels or threaded shaft, cardan shaft and gearbox mechanism, brush profiles;

o can be installed a system with mobile and automated insect net and, the procedure of opening by rolling the net while the membrane tightens and vice versa, as well as its detachment and keeping at the top of the spring through the fixing plates is new. Automation of the system by connecting with gear, chain and bearings with pipe type profile with film;

o is equipped with removable membrane gutters and, all the components from it are new, as the membrane that attaches to the entire perimeter in aluminum profiles using plastic profiles, on one side of the gutter two profiles and on the other a profile, so that be detached under pressure is new. Fixing the corrugated hose to remove water from the gutter;

o the system with double membrane and air pumps can be installed and, the procedure of fixing the membrane on the roof of the greenhouse so that hoses with air pumps can be installed, so as not to affect the other systems of the greenhouse, including its installation and gutters is new;

o an automated shading system can be installed on the roof and, the frame which is easy to assemble and disassemble and the fastening systems, does not have high weight and does not resist the ventilation of greenhouses is new.

- The sides, according to the invention, eliminate the above disadvantages by opening, excludes the formation of sails and the metalwork with brushes on the edges installed at the corners and in the middle of the sides are new. The above disadvantages are also removed by the fact that the anti-insect net can be rolled automatically from the sides, and the rolling process and its welding to the membrane is new. The door, according to the invention, removes the above disadvantages in that it can be rolled entirely and in it is new the metal constructions with brushes on the edges and the rolling system. The system with double membrane and air pumps can be installed and it the procedure of fixing the membrane on the sides and the greenhouse door so that hoses with air pumps can be installed, so as not to affect the closing-opening systems is new.

- The brightening system, according to the invention, eliminates the above disadvantages, so the system is automated and the process of tightening and stretching the white membrane strips by motors with reducer, profile pipe and pipe, fixed to the frame greenhouse with clamps with bearings, and on them mounted washers to guide the white membrane and plastic steel wires is new.

#### **Presenting of the advantages**

The invention relates to protected areas that are required in the development of modern agricultural business, especially, for the cultivation of organic vegetables and fruits with a high productivity and quality.

#### **The goal of the invention is:**

1. To control the growing period of fruits and vegetables, in order to obtain the fruit either earlier or later. In this way the farmer can obtain a higher profitability.

2. To keep the microclimate (temperature, humidity) in the greenhouse, so that the plants will be exposed less to the stress caused by the fluctuations of temperature outside.

3. Obtaining organic products grown in greenhouses, as a result of the reduced use of preparations for control and preventing plant diseases.
4. Keeping the cultivation process as natural as possible, through the possibility of total opening of the greenhouse roof, to obtain a taste of the product as close to that of an open space.
5. Reduction of expenses as a result of the reduction of the preparations used for the protection of the plants and the agricultural maintenance works.
6. Reduction of greenhouse costs as a result of the automation of closing and opening of ventilation zones.
7. Reducing investment costs in fortifying the greenhouse structure by using the removable gutter.
8. Reducing the additional costs for the plant support system, especially for fruit trees and shrubs, by using screw piles as support pairs.
9. Protecting greenhouse crops against pests (insects, birds, animals) by using the automated mosquito repellents system.
10. Protecting crops from climate risks (wind, rain, snow, frost).
11. Protecting the greenhouse against hurricanes by completely opening the plastic film and avoiding the formation of sails.
12. Possibility of storing water from rainfall on the surface of the greenhouse, accumulating it in the water storage tank and using it in the irrigation system.
13. The possibility to increase the brightness of the greenhouse to stimulate the growth of the plants and the uniform ripening of the fruits, with the help of the automated system of reflection of the sun rays.
14. The possibility of growing plants in slopes due to the use of the greenhouse model with inclination according to the existing land.
15. Reduction of installation time and costs due to the using of screw piles and its components that are easy to install.
16. Avoid losses as a result of possibility of moving the greenhouse, so that all the pieces could be easily disassembled and installed on any other ground.
17. Possibility to install any irrigation system, due to the metal frame of the greenhouse, depending on the requirements of the plants.
18. Reduction of costs for irrigation and protection of plants from high temperatures due to the equipment of the greenhouse with automated shading system.

项目所属阶段

商品化/产业化阶段

技术目前发展水平

At the moment we are in the process of searching the suppliers of the equipments and machinery for building our own factory to produce parts and components of the greenhouse.

Machines we are looking for at the moment are:

- CNC pipe bending machine;
- End forming machine;
- Roll forming machine;
- Cutting pipe and profile machine;
- Laser cutting machine;
- Laser welding machine;
- CNC cutting and welding machine;
- Hydraulic press machine.

Now we are buying the parts and components from foreign companies in order to be able to produce our type of greenhouse.

### 技术优势的可持续性和不可替代性

- The risk of the COVID-19 pandemic - isolating countries, stopping flights, limiting the movement of cars and people.  
Due to the establishment of collaborative relationships with most suppliers of raw materials, components for greenhouses, motors, automation, film and nets, but also suppliers of machinery and machines for the production of certain components for greenhouses, we practically managed to exclude this risk. without going to suppliers' factories and factories.

- The risk of political instability in the Republic of Moldova - freezing of financing programs and delaying the disbursement of money for the purchase of equipment.  
Due to the established relationships with suppliers of components for innovative greenhouses, we also negotiated the execution of custom parts to order, so that the process is not stopped, surely this will involve higher production and transportation costs, which will influence the selling price of greenhouses .

- The risk of insufficient funds as co-financing under the program.  
Due to the existence of a strategic partnership with the consulting company Magazin Financiar SRL, this risk can be eliminated at any time.

- The risk of insufficient funds from potential customers - due to the final cost of an innovative greenhouse as a relatively large turnkey business, potential customers will also have to access credit resources.  
In this sense, our partner, the consulting company Magazin Financiar SRL, is in the process of establishing collaborations with potential financiers, with advantageous conditions for potential beneficiaries of innovative greenhouses. At the moment there are important steps in this direction, negotiations are taking place in two directions, and by the end of the year it will be possible to develop the financing plan, with clearly defined conditions.

- The risk of insufficient quality of labor for the commissioning of the machine.  
Due to the initiative to collaborate with the Technical University of Moldova, the lack of specialists will be solved, at the same time the good salary level will favor the attraction of specialists in the field.

- Currency risk - currency depreciation.  
This risk will be eliminated due to the setting of the commercialization price related to the currency (euro, usd).

- The risk of a smaller number of clients than necessary for the profitability of the project.  
This risk will be controlled through active promotion, both online and television, on the territory of the Republic of Moldova and abroad. A marketing strategy will be developed where the steps will be clearly outlined to achieve a successful result.

### 知识产权情况

专利

### 成果权属

独占

### 知识产权数量

IP Number: 10109 (Deposit number: 20200050 from 02.06.2020, by Grigore Munteanu

### 知识产权描述

Four types of block greenhouse, with automatic opening of the roof and walls, which can be installed both on flat ground and on a slope, so that a good part of the land can be used. The innovative system allows the total opening (over 95% of the greenhouse area) of the automated roof and walls compared to other greenhouses, creating an advantage for better ventilation inside, which influences the quality of cultivated fruits and vegetables. This type of greenhouse offers the possibility of growing ecological crops, as a result of the total opening of the greenhouse and benefiting from a natural climate, with snowfall in the cold period of the year and rain, sun in the warm period. The innovative system allows the total opening of the roof from the top to the bottom of the arch, which allows the elimination of moist air from the greenhouse, while keeping the warm air at the bottom, avoiding stressing of the plants. Attaching the automated system with anti-insect net makes the plants protected from pests. The installation of the greenhouse on metal piles with automated equipment, makes the installation much faster, with minimal labor and low costs. Greenhouse pillars are used as a support system for growing plants, especially fruit trees, shrubs. The automated system that increases the brightness in the greenhouse creates a brighter environment and enhances plant development. Greenhouses can be equipped with double film, which will form an air cushion on the roof, sides and gutter, for better storage of the temperature inside. The removable gutter avoids major investments in fortifying the greenhouse. Also, these greenhouses can be equipped with shading mesh, to protect crops from sunlight and very high temperatures.

### 该技术潜在应用场景及目标客户

The implementation of this project will have a significant impact both directly and indirectly. The direct impact will be achieved due to the opening of the plant for the production of parts for the innovative greenhouse and the procurement of the necessary equipment, which will create more jobs for Moldovan citizens, including young graduates of engineering faculties. Taxes and fees from the activity of production and sale of innovative greenhouses will be paid

in the state budget. Due to the sale of greenhouses for export, the money supply in circulation on the territory of the Republic of Moldova will increase.

The indirect impact of the project implementation will encourage young people to access

specialized faculties in the study of mechanics, machine building, etc., and those who have innovative ideas will be encouraged to patent inventions and even implement them in practice. Due to the continuity of the project, by installing an innovative greenhouse based on a long-term collaboration with the Agrarian University of Moldova, the number of students who want to study more deeply the cultivation of different plants in innovative greenhouses will increase.

Due to the launch of this project, farmers in the Republic of Moldova will have the opportunity to opt for growing plants in innovative, risk-free greenhouses with high productivity, high profitability and safe markets. Given the drought of the previous year, but also the calamities of recent years, we can realize that farmers would like to migrate to safer business directions, without risks, but have little alternative, of course, until the project is launched with innovative greenhouses .

If we refer to the diaspora, many citizens of the Republic of Moldova who have worked abroad for several years and who would like to return to the country, do not do so for reasons of not having a perspective in Moldova, do not they find a well-paid job, they don't know what business they would create and in what field, so that they can support their family and not lose the money invested. Thanks to the project with innovative greenhouse and the project partner, the consulting company Magazin Financiar SRL (which operates under the brand www.euconsult.md), we will be able to propose to potential beneficiaries (migrants, farmers, young people) turnkey business ideas, which will have at the base innovative greenhouse. As a result of this partnership, but also of subsequent partnerships (Agrarian University), we will be able to develop growth guidelines for certain crops, but we will also be able to provide advice in the field of plant growth in innovative greenhouses.

Due to the growth of high value-added crops in the greenhouse, it will increase the profitability of the business, so that the owners of such plantations will be able to hire workers with a salary equivalent to EU countries, so that migration will be stopped and population growth in Moldova will begin. .

Such a business in agriculture will cause the population to stay in the villages, or even to migrate from the city to the village.

It will increase the well-being of the population, of the villages, it will increase the birth rate.

Due to the massive export of quality fruits and vegetables, with high added value, without risks, the money supply in circulation will increase, the revenues to the budget will increase, the infrastructure in urban and rural areas will be rehabilitated.

In the end, the image of the Republic of Moldova will grow externally.

The market where block greenhouses can be capitalized is a global one, as a result of climate change more and more countries are expressing their interest to migrate from open field agriculture to agriculture in protected areas. According to our research, we have highlighted a number of countries in which we will promote sales, due to the specifics of the innovative greenhouse, such as: Moldova, Romania, Ukraine, Russian Federation, Poland, Netherlands, Germany, France, Italy, Spain, Turkey, USA.

The global change in the specific consumption of fruits and vegetables, the transition from dried, frozen, processed products to fresh and naturally grown fruits and vegetables, creates a niche market in which the demands for such an innovative greenhouse will be growing.

Potential internal and external customers are:

- Farmers - primarily those who are familiar with growing fruits and vegetables in the open field who have experience in this branch and can be easily persuaded to switch to protected agriculture. Another class of farmers are those who grow cereals and have understood that they can get a higher return, without risks from high value-added crops and in protected areas.

Both inside and outside, due to a growing demand for organic products, with taste and aroma, I am referring here to fruits and vegetables; farmers have begun to look for more efficient cultivation solutions to obtain organic and customer-friendly products. These farmers are also in the group of potential customers targeted by innovative greenhouses. We can mention that research studies are already being carried out on retractable greenhouses (which completely open the roof), in the USA by profile Universities (profile specialists Lynn E. Long, Gregory A. Lang) and in Europe, so that the advantage of these types of greenhouses is demonstrated in practice.

- Young people and migrants who want to return to the Republic of Moldova and start a business - thanks to the innovative project but also the partnership with the Consulting Company, it is possible to attract a large number of people in this category.

- Business people who want to diversify their fields of activity, being an innovative project that will have a high profitability and risks covered.

产品形态

最终消费产品

产品描述

The embodiments of the present invention relate to the field of agricultural equipment and constructions, to the protection systems of fruit and shrub plantations and, in particular, to

block greenhouses with total, automatic aeration, for a more natural (organic) plant growth. This type of greenhouse offers the possibility to cultivate any variety of fruits and vegetables in an intensive or super-intensive system, including nurseries and exotic fruits.

From fruits we can first list those with high added value:

- cherries, apricots, peaches, etc.
- blackberries, blueberries, raspberries, strawberries, etc.
- table grapes
- exotic fruits - kiwi, pomegranate, lemon, persimmon, avocado, etc.

From vegetables we can list:

- tomatoes, cucumbers, peppers, eggplant, including greens, etc.

To simplify the explanation of the potential for exploiting the invention in practice, I would like to give the following example:

We take as a case the natural growth of the cherry in the greenhouse, in order to obtain the fruit 3-4 weeks earlier.

Requirements for growing cherries in the greenhouse:

- Very good ventilation - due to the high degree of respiration of the cherry, it can not be grown in ordinary greenhouses, because it will suffocate. Instead in innovative greenhouses it is possible, due to the full opening of the roof and sides. So that at the moment of total opening, the plants are like in the open field.
- As much light as possible - the cherry needs as much light as possible for the process of photosynthesis. Thanks to the automated light reflection system in the innovative greenhouse, this level can be reached.
- Frost protection - the cherry is more sensitive to frost, especially during flowering, budding. Due to the double film that forms the air cushion, but also to some devices (4 un./ha) that emit heat, based on biofuel, we excluded this risk.
- Protection from heavy snow - due to heavy snow, there is a risk of damage to the buds or flowers of the cherry, and in the worst cases also the branches, so the greenhouse through the removable gutter can discharge the accumulated snow.
- Protection from strong sun and high temperatures - due to strong sun and high summer temperatures, fruit buds for next year are affected, so fruit defects can occur. By installing the automated shading system in the innovative greenhouse, we managed to rule out this risk.
- Reducing investment costs - given that the cherry needs not only the greenhouse, but also all the protection systems, irrigation system, it would be better to lower the investment costs, so as not to block the management and development of further activity . Thus, thanks to the removable gutter, the use of pillars as a support system and metal piles, we managed to reduce costs in the innovative greenhouse.
- High productivity - given the relatively high investment costs, it is necessary to increase productivity, which we achieved by using the super-intensive type V system with the help of the greenhouse support system.
- Protection against birds and insects - to minimize the losses caused by the invasion of birds and insects, we have introduced an automated system of safety nets that eliminates these risks.
- Automation of systems - in order to respect the necessary climate inside the greenhouse, the closing-opening systems must be put into operation by climatic sensors (wind, rain, temperature), which we also introduced in the innovative greenhouse.

合作方式

提供技术服务

合作方式描述

The ideal cooperation consists from:

- Partnership for selling our product on the Chinese market;
- Collaboration for raw material suppliers, equipments and machineries.

是否在中国建立分公司

否

技术融资情况及融资需求

Our financing needs to build a factory in Moldova are around 500000 EURO. This amount is needed for buying all the machineries and equipments for producing inovative greenhouse. a

创建时间

2021-06-03 21:23:53

更新时间

2021-06-03 21:27:11

project team

刷新 新增

<input type="checkbox"/>	ID	Is Leader	姓名	头像	职位	最高学历	毕业院校	所属国别	Contact	操作
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从 1 到 2 , 总共 2 条

20 ^ < 1 >

project file

刷新 新增

ID 名称 路径 操作

⊙ 暂无数据

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