

The
Recirculating Hydroponic
System



NGS
New Growing Systems

For a clean and
efficient agriculture







For a clean and efficient agriculture



New Growing Systems is a Spanish company solidly established in the agro-food sector, with more than 25 years developing and implementing worldwide a unique recirculating hydroponic system that allows a complete control of the crop, improving quality, savings, productivity and benefit.

New Growing System has executed over 1,000 projects in more than 20 countries around the world, ranging from the basic cultivation systems customized according to customer's needs, to the more complex turnkey projects, including: greenhouses, NGS system, irrigation system and other auxiliary equipment.

New Growing System continuously works on the development of new solutions for the production of quality crops and higher planting densities, which optimize the profitability of farms.

To achieve this, New Growing System collaborates with important universities and research organizations, both public and private, at national and international scale.

The Multi-layer. The System

The multi-layer is the master piece of the system specifically designed to house the root system of plants and achieve their optimal development.

The multi-layer is light, very versatile, and fits to all types of terrains without taking into account its composition, location, extension that it may have.

It is composed of a series of interconnected sheets, which create a circuit at different levels, generating small cascades, which favors the oxygenation of the nutritive solution and the plants.

One of the main virtues of the multilayer is its ability to induce the development of strong root systems, which redounds in a maximum productive potential of plants and strengthens their resistance to diseases.





It is presented in different formats, depending on the type of crop that is going to be grown.

- Advantages of the NGS System:
- Water saving
 - Agrochemicals saving
 - Agricultural work and labor saving
 - Does not produce water discharges
 - Recyclable materials



NGS Irrigation systems are closed circuits, where water and fertilizers not absorbed by the plant are continuously reused, while controlling each and every one of the elements that intervene in their growing process.

Large plant crops

Large plant crops develop large foliar and root systems, such as tomato, courgette, aubergine cucumber, etc ... For them, NGS has a specific and versatile solution, which allows to use it indistinctively with any of them without having to practice modifications in the system.

It is the first substrate-less hydroponic system applied to these crops in a professional way.



The NGS system allows early harvesting, products of higher quality and uniformity, as well as important savings in water and fertilizers.



NGS presents two ways to place the crop lines on the ground, in a FIXED or a SUSPENDED way. In both modes the lines will be arranged at a distance of 1.60 m between them and at an approximate height of about 70 cm from the ground, although all measures are adaptable to the producer's convenience.



Strawberry cultivation

The strawberry is a short-stemmed crop, with a small root system. This feature allows the plants to be placed at close distance from each other, without compromising their performance which, with the NGS technology, results in planting densities of up to 300,000 plants per hectare.



With the NGS system we can obtain significant savings in water and fertilizers, ranging from 50 to 80%.





The NGS system favours products of higher quality, uniformity and cleanliness, in addition to showing precocity in their growth. Ergonomics is also greatly improved in manual work with the corresponding benefits for operators and performance.

Leaf crops and brassicas

NGS system offers several solutions for leaf crops such as lettuce, chard, spinach, aromatics, as well as brassicas family, such as cauliflower, cabbage and broccoli, all of them designed to maximize density and number of cycles.



Thanks to its multi-level conformation that promotes the oxygenation of the nutritive solution throughout the multi-layer through, it is possible to carry out large crop lines, which can reach up to 300 m, allowing its application in large areas outdoors.



With the NGS system we can obtain higher planting densities, a greater number of growing cycles and significant savings in water and agrochemicals, ranging from 50 up to 80%.



MaxPro Leaf Automation

High Performance Crops

The MaxPro systems of NGS are a completely new generation of production methods based on the industrialization of farming and harvesting tasks, in an automated and even robotized way, which opens the door to 21st century agriculture.



- Integration of "12-months greenhouse" concept and continuous production system
- A system capable of performing 10 -14 cycles per year *
- Reaching a planting density of up to 300,000-400,000 plants / ha and cycle
- Unmatched results for commercial exploitation

**(may vary according to variety and climatology)*





The MaxPro Leaf system is a production method based on the NGS Recirculating Hydroponic System. This system is capable of producing throughout the year with greater quality, uniformity, cleanliness and minimum labor costs.

MaxPro Baby Leaf Automation

High Performance Crops

The MaxPro system of NGS represents a new generation of production methods, based on the industrialization of farming and harvesting tasks in an automated and even robotized way, which opens the door to 21st century agriculture.

MaxPro Baby Leaf is the first automatic system for the continuous production of baby leaf at a professional level, reducing the input and labor requirements to the minimum expression, resulting in outstanding profitability.

- The system is capable of holding 27,200 trays per hectare
- Able to generate 10-14 cycles per year*
- And obtain a yield of 150-170 tons per year of young shoots*

**(according to varieties and climatology)*





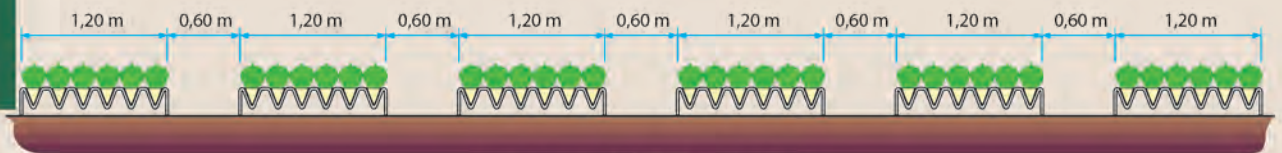
MaxPro Baby Leaf is a system patented by NGS with maximum reliability in the programming and performance that allows to obtain unmatched commercial yields, with productions of great quality, cleaning and uniformity.

Crops layout

NGS allows different configurations for the distribution of the lines according to the type of crop, either in the open field or within the greenhouse, as well as the number of plants per hectare obtained according to the modality.

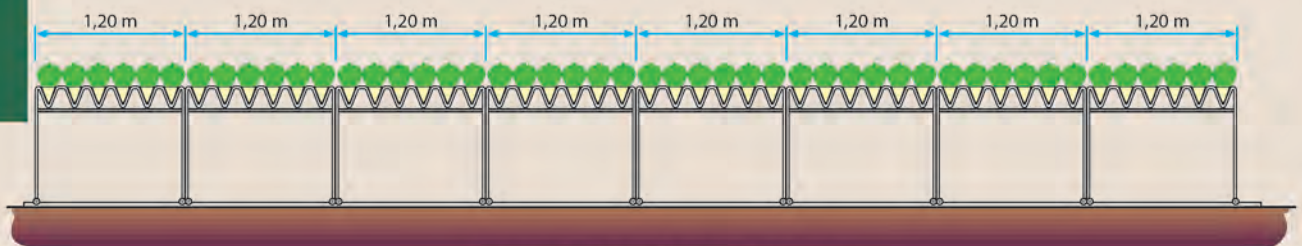
Lettuce Crop

Fixed
165,000
plants/ha



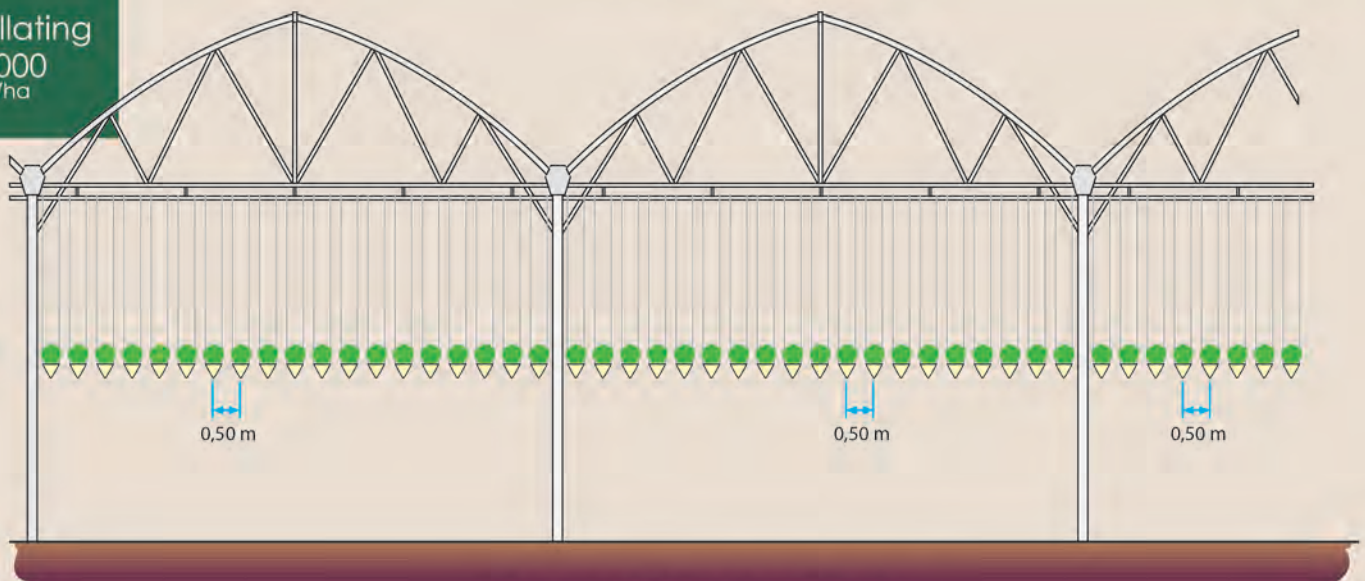
Lettuce crop in NGS by fixed lines

Mobile
250,000
plants/ha

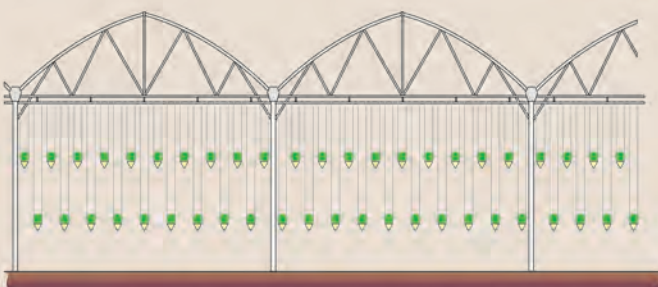


Lettuce crop in NGS using mobile lines

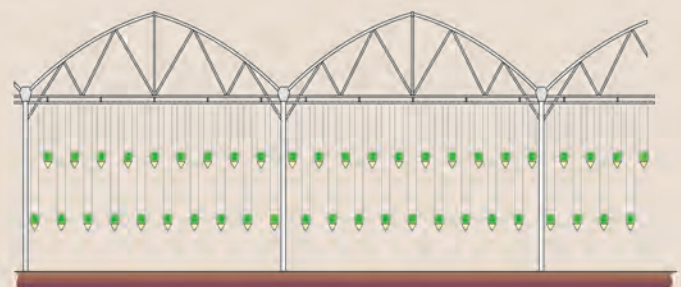
Oscillating
200,000
plants/ha



Lettuce crop in NGS through oscillating lines
(position 1)

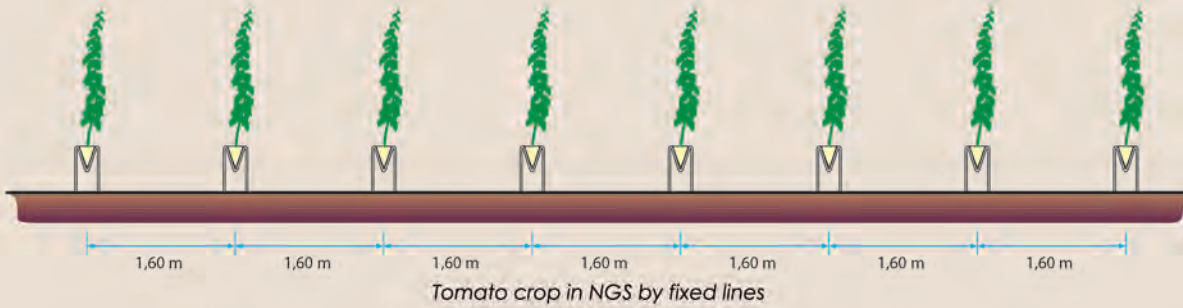


Lettuce crop in NGS through oscillating lines
(position 2)

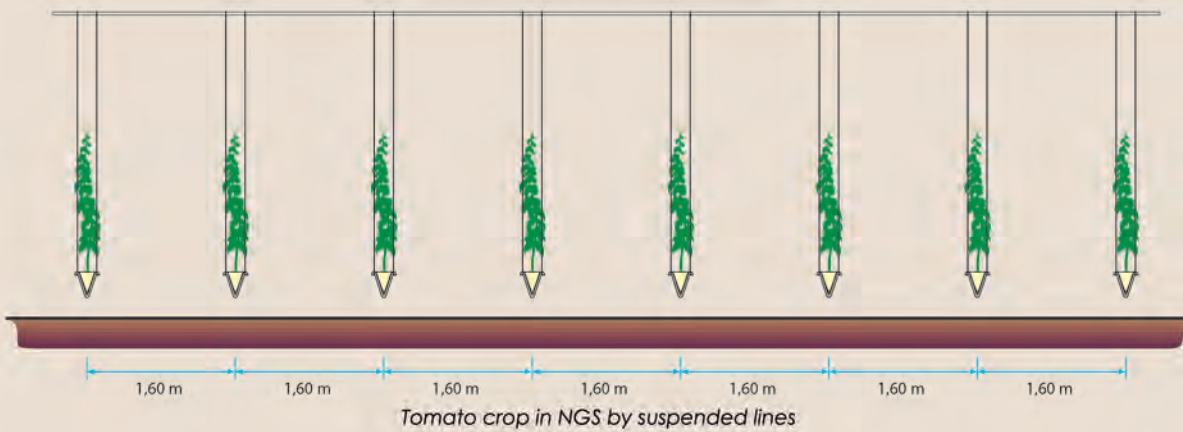


Lettuce crop in NGS through raised lines
(position 3)

Tomato Crop

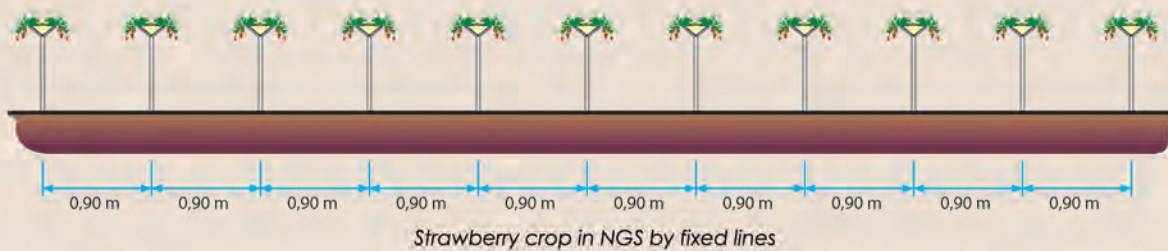


Fixed
15,500
plants/ha

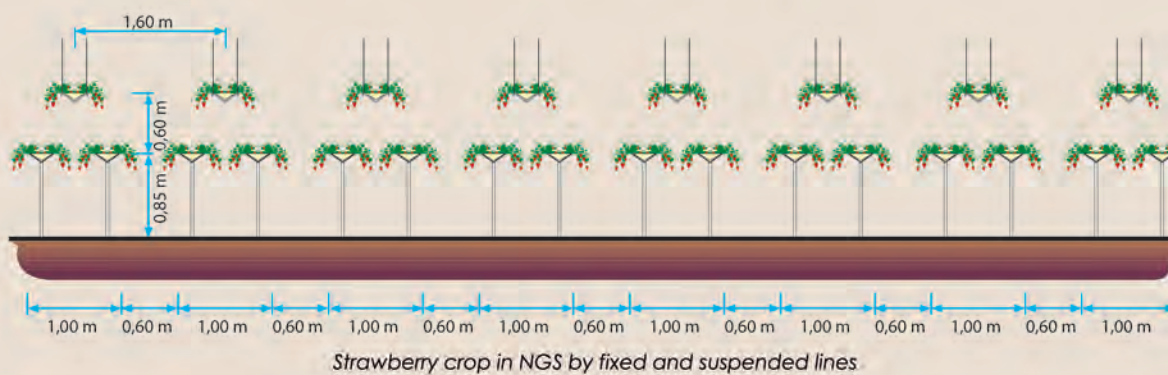


Suspended
15,500
plants/ha

Strawberry Crop

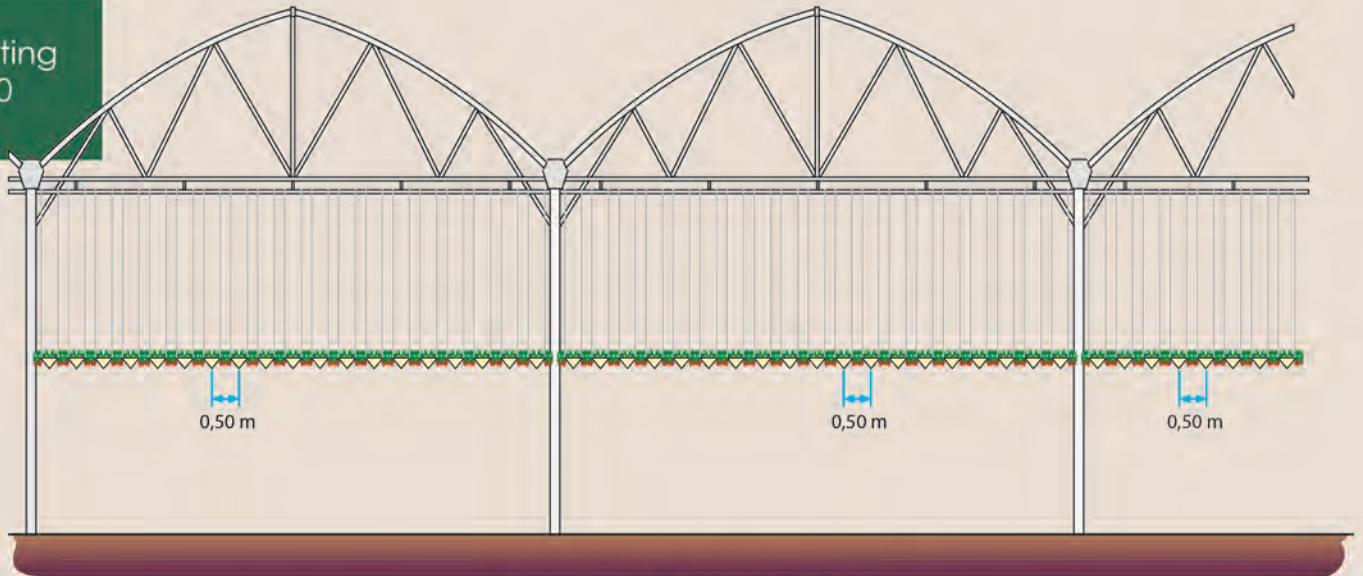


Fixed
111,000
plants/ha

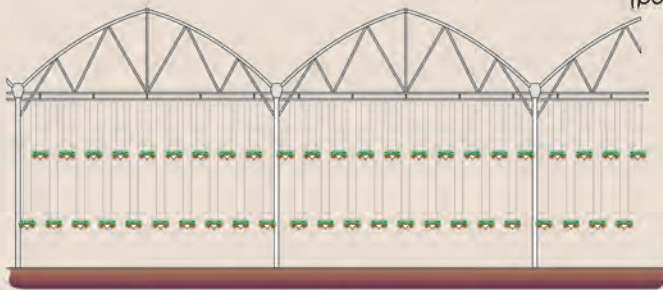


Mixed
139,500
plants/ha

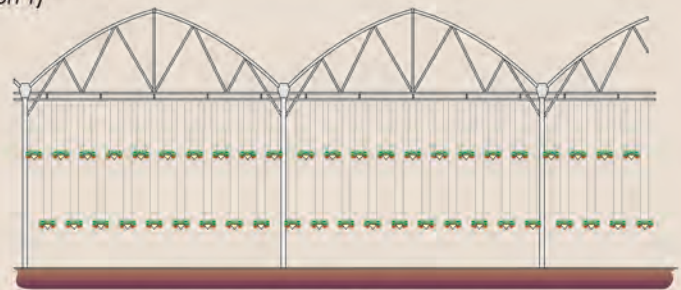
Oscillating
200,000
plants/ha



Strawberry crop in NGS by oscillating lines
(position 1)

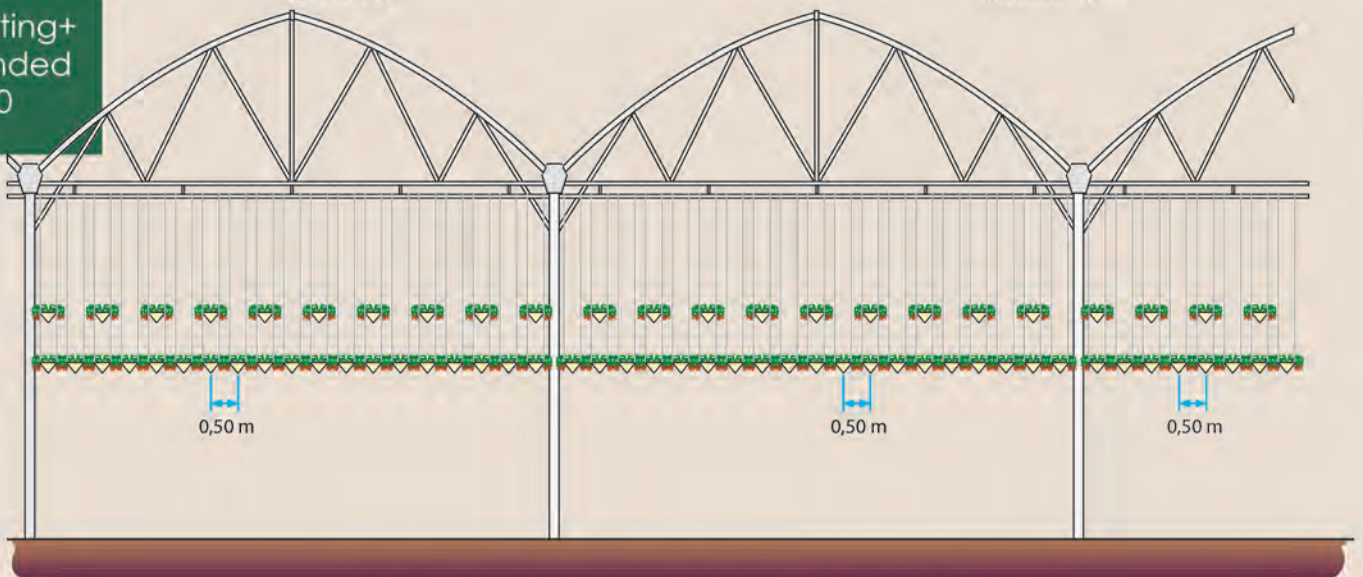


Strawberry crop in NGS by oscillating lines
(position 2)

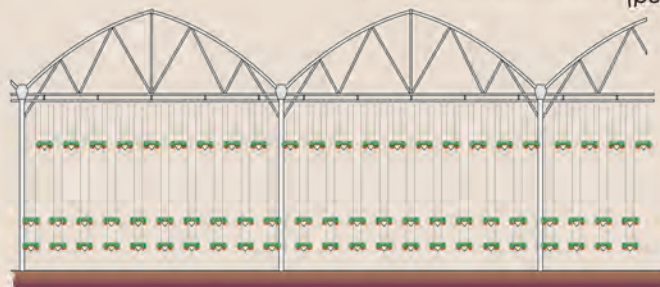


Strawberry crop in NGS by oscillating lines
(position 3)

Oscillating+
Suspended
300,000
plants/ha



Strawberry crop in NGS by oscillating and suspended mobile lines
(position 1)



Strawberry crop in NGS by oscillating
and suspended mobile lines
(position 2)



Strawberry crop in NGS by oscillating
and suspended mobile lines
(position 3)

Properties

The NGS Recirculating Hydroponic System for horticultural crops brings with it a set of values that make it essential for 21st Century agriculture.

Clean and sustainable

NGS has always been determined to take care of environmental resources. For this reason, we have developed a formula that allows the full control of all the necessary parameters for the correct growth of crops, while minimizing the consumption of water, energy and consumables, avoiding spills. The carbon footprint and the water footprint of agricultural activities practiced with NGS technologies is reduced to the minimum.

Profitable

High planting densities, greater number of crop cycles per year, early harvesting, better commercial yields and higher production together with savings in water, agrochemicals and labor, make the NGS system a highly profitable model.

Global

The characteristics of the NGS system allows its application in any corner of the planet, whatever its climate and soil conditions. Currently, NGS projects are present in more than 20 countries.

Technical support

NGS counts on a highly qualified Technical Department, providing a range of services that fit the user for best facilities results. From the agronomic advice and the training in various modalities, to the out-sourced management of the farm, NGS provides the best response for producer's success assurance.





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