

Agrospace Ferrari Farm

Global Governance offers numerous off-campus activities with the purpose of providing group learning experiences outside the daily university's lectures. Indeed, on April 22nd 2016, we as the first year Global Governance students had the opportunity to visit the Agrospace Ferrari Farm, which is located on a marvelous hill near the Salto Lake (Rieti).

The farm carries out agritourism activities by interacting with the tourism's sector and it offers an educational experience as the one offered to us students.

As we arrived, a power point presentation was shown to us by one of the main responsible of the farm. The explanation started from the ancient origins of cultivation until the new generation agriculture, which is part of our everyday life.

The art of cultivating developed in Mesopotamia (currently Iraq) when people used seeds in order to harvest in every period of the year. Thanks to this, men were able to stabilize and became independent to produce their own food without the need to migrate.

Throughout the centuries, and with more intensity during the period of Industrial Revolution, men developed new ways of cultivating by applying technologies in order to increase production. On one hand, the progress brought many benefits but on the other it was the cause of serious damages and negative impacts on the environment, primarily pollution.

Given that, the Agrospace Ferrari Farm promotes new generation cultivations which exclude the use of chemical treatments and work in a more biological way. The two main techniques are the organic and the hydroponic cultivation.

Organic cultivation follows the seasonal rhythm of the Earth in order to avoid using fertilizers. In this way, the soil is not damaged but it is well-balanced so it can produce nutrient and healthy food.

The cultivations in the farm include just rural plants of the area (thus avoiding transportation and the further pollution) which are protected by a layer of material (called "*mulch*") applied to the surface of the area in order to avoid the formation of holes in the soil (because of precipitations) and to avoid the growing of unwanted weed.

Hydroponic cultivation refers to a method of agriculture which replaces the use of soil with mineral nutrient solutions present in water. Besides, no soil means no nickel, to which a large part of the population is allergic to.

The term "*hydroponic*" was introduced for the first time in 1937 and derived from the two Greek words "*hydro*", which means water, and "*ponos*", whose meaning is work. This method was already used by Egyptians, Babylonians and Aztecs in their hanging cultivation in the water.

The Agrospace Ferrari Farm also has two greenhouses and a *phytotron* (a building with artificial light replacing sunlight in the growing process) which are used to monitor the interactions between plants and environment in order to create the best habitat for the

specific cultivations. Both the buildings are provided with the most innovative ways of irrigation. The first is the **DRIP** irrigation in which each plants receives the precise quantity of water it needs. Then there is also the system of **NFT** (*Nutrient Flux Technique*), which flows continuously but it stores the surplus water that otherwise would go wasted.

The peculiarity of the farm is that water, humidity and levels of CO₂ are under computer control so there is no need of human presence in the buildings. All machinery is sterilized and sealed and connected to a laptop in the control room.

The Agrospace Ferrari Farm realized how the chemical treatment is dangerous for the environment so they developed the previous-mentioned methods of cultivating in order to increase a sustainable and more biological farming. This new cultivation paths will lead to further innovations in the field, such as residential greenhouses, vertical farms and roof gardens. Indeed, lots of alternatives are being developed to produce without causing further damages to the environment. There are lots of ways to save the planet and agriculture is one of them.

Biological agriculture leads to healthy food but its complexity implies higher costs of production, especially in the Agrospace Ferrari Farm where the use of sustainable and renewable energy is strictly forbidden due to Italian limits established for natural reserves and rural zones. Given that, costs of biological food is higher than usual products.

This factor must not be taken as an obstacle as we should consider that the money spent on medical specialized visits are in most cases due to illness from malnutrition. When we spend money on biological products we are paying also for quality and safety and, most importantly, for our health.

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