

A visit to the agricultural farm - a business with a sounding success -

The students from Liceul Tehnologic “Marcel Guguianu” are implementing with Bulgarian and Turkish partners an Erasmus+ project KA210 called “ENTERpreneurs in EUROPE” (a small scale partnership in the field of vocational education and training, project nr. 2022-1-BG01-KA210-VET-000082022).

One of the project activities was a visit to an agricultural farm, in January 2023. Thus, some students from the target group visited a huge greenhouse in Trestiana (a village 12 km from the village of Zorleni, where Liceul Tehnologic “Marcel Guguianu” is located). They were joined by Tamara Iftemie, the coordinator of the Romanian project team, and Florina Timofticiuc another team member.

They were guided by the owner and his workers to see the seedlings, and how the greenhouse is prepared in this season. They found out who is in charge with the different tasks and how much work is needed.

They were explained the irrigation system, based on dripping, for tomatoes, which are very sensitive and predisposed to diseases. They were explained that they use foil to prevent the grass from growing and use less labour force.

The workers showed to the students the irrigation system with sprinklers for parsley, and even put them to do some chores. The owner shared that the technology they are using is from Italy, as he learned farming there for 10 years. He explained the characteristics of the thermic foil covering the greenhouse. The water for irrigations comes from a well, drilled for 3.80 metres. The water is pumped with submersible pumps, and the water goes up to 700 metres in the length of the greenhouse, where it irrigates through aspersion. So it starts form the base with 12 atmospheres. He said that this consumes a lot of energy, which comes from the solar panels they have. He said that they intend to acquire more photovoltaic panels this year. He recommended them, saying they are great. He said that for now they have a power of 5005 kilowatts, at 220. They want to have 380, but they need another type of transformer. He said that the investment (of 50,000 lei/ about 10,000 Euros) in the solar panels is recovered in 3.5 years.

The irrigation pumps work non-stop. He said the greenhouse produces all year round and they sell the products on the local market immediately. But they also provide to a local Carrefour. He was not very satisfied with the conditions of that contract, as they dictate the prices. So, the majority of their products are sold on the market. He said that they adapt to the demands of the market. This varies, so they can have different crops each year. He gave the example of last year when a big part of the greenhouse was with tomatoes, because they were in demand. He explained that they tomatoes don't grow outside if the temperatures vary a lot and the soil is not rich enough. He recommended crop rotation. But if this is not possible, he recommended an ecological way of enriching the soil: by planting what as soon as the tomatoes

are cropped, and then grinding it in the spring before planting the tomatoes again. He said that the wheat absorbs much of the toxicity of the soil.

He said that they collaborate with the neighbours and they rotate the crops together. He gave the example of the fact that when he plants cabbage, a neighbour plants wheat or corn, which enriches the soil and maintains the water and substances in it, and then they change. The hosts emphasized that it matter a lot how you maintain the soil. Another example given of this was that last year they had tomatoes in the greenhouse, but they will plant something else this year. He also said that they use chicken droppings as fertilizer, with azote (he said it's impossible without it). He said that two years ago he had used a chopper of vegetation which was very beneficial. He didn't need any more the workforce to cut all the plants and carry them; the soil was enriched by the thick layer of vegetation ground by the chopper. This is also a good solution, as, for the last 3 years, there has been a low forbidding burning the vegetation from the fields. He said that they try, as much as possible, to keep everything natural, because if they use chemicals they kill the ground worms. They have the purpose of loosening the soil, and their droppings are the best fertilizer. But, he admitted, that they have to use some substances against some pests are too harmful for the plants. He gave the example of peppers which need a treatment once at 7 days. But, he emphasized that they are focusing on greens (parsley, dill, lovage and onion), which don't need treatment.

They he showed the students the ventilation system of the green house, adapted to the wind power and the temperature. He said that they use a mechanical system because the electronical one is much more expensive. He admitted that it is great, with sensors, but for now they use the mechanical one. He showed the students how easy it is.

About the foil covering the greenhouse, he said they have the thickest, 20 microns thick, with several treatments, which increases the temperature by 5 degrees Celsius. It is good for 7 years on the metal structure of the greenhouse. He also showed some bug traps they had hung.

Answering the students' curiosity, the owner shared he started this greenhouse five years ago. He said that you can't build a business without loaning from a bank. He recollected that one winter the bank doubled the interest on his loan, and this determined him to make an effort and pay off the loan.

He said the metal pipes supporting the greenhouse are very expensive, but if you take care, you can leave them to your grandchildren. They are very resistant to winds and storms. He said that the metal frame is buried half a meter in the ground and anchored in concrete. He showed how the construction of the greenhouse developed; bow much they built during the first winter. He said that after that they stopped for two years, due to lack of funds. He pointed out that they brought soil to raise the ground because from a certain point on, water became stagnant on the soil.

The owner said that weight of the structure is about 45 tones, and he did all the welding. He had to buy a machine for bending pipes (6,600 lei/1,320 Euros) because he needed bent pipes for the structure, which are very expensive to buy as such. He covered this expense with the first structure built. Much of the work to build the greenhouse was done by him and the workers.

His wife, and partner, shared that they work all day long, even until 10 p.m. The owners said that the farming can be easier if you manage to schedule works appropriately. He said that he changes the water, does the treatments and supervise his employees.

At the end of the visit, as an advice to the students, the owner of the farm said they should do what they like. If they do what they like, everything will work out; you don't feel you go to work. He said: "I, myself, do what I like!"

Beni, one of the students, made a video about the visit to this farm, and uploaded on Youtube. You can find it at: https://youtu.be/-FtSrJDeC_w