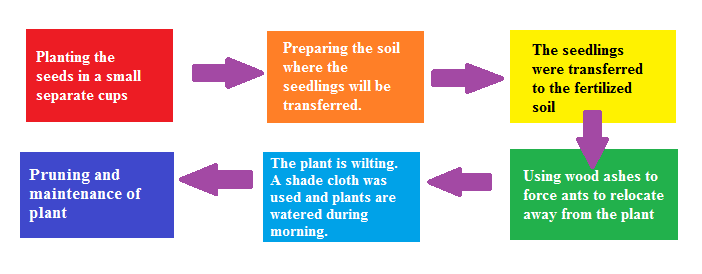
**Implementation report**

# **Implementation process**

Cucumber (*Cucumis sativus L.*) is a member of Cucurbitaceae. It is a thermophilic and frost-susceptible plant species. Its optimal temperature is above 20 °C (Tatlioglu, 2012). The variation that I used was burpless. I used this because this type of cucumber is available year-round. The seeds were all first planted individually in small cups. It is important to ensure that each seedling will not compete with other seedlings in nutrients. It increased their chance of surviving. The amount of sunlight, the richness of the soil, and the composition of the soil were considered before transferring them to the area. The seedlings were transferred into the garden after 20 days. They were transferred for it to be able to grow properly. The hole that was dug in 10 inches deep, and additional organic oil fertilizer was added. To increase the nutrients in the soil, rice husk and dried leaves were used as fertilizer. The fruit length and health of cucumber were significantly enhanced when using organic farmyard fertilizer (Eifediyi & Remison, 2010). Vermicast was also added to enrich the soil more. The seedlings were transferred carefully due to the sensitivity of their roots. There were also spaces between the holes where the seedlings were transferred. It aims to reduce the competition in the resources between the seedlings. The richer it soil is, the healthier it is. Healthy soil will provide more nutrients to the plants as it continues to grow. Fertile soils are used for the cultivation of cucumber; infertile soils result in bitter and misshapen fruits which are often rejected by consumers. Bush following has been an efficient, balanced, and sustainable agricultural system for soil productivity and fertility restoration in the tropics (Ayoola and Adeniran, 2006). The increasing number of unwanted insects such as ants around the area where the seedlings were planted. The elders living near the area that adding wood ash can drive them away. A study conducted by Derso (2020) shows that the farmers use various plant species as herbal medicine, wood ash, hot water, benzene/Nafta, soil damping, and DDT against ants. It was shown to be effective against avoiding the plant. The amount of ash used was regulated to not drastically change the pH level of the soil and instantly kill the plant. It is the first problem that I encountered while doing this. It shows how complex it is to plant your food. It changed the value of food in my eyes. It is the reason why people who know how hard it is to grow your food knew that you must not waste food. There are also many things I need to consider and understand to make this thrive.

The ash drove the ants away. It also helped the plant to grow faster. Weeks after, the seedlings grew larger. My relatives are all teaching me to place a wooden trellis because it is where the vines will grow on. The height of the lowest part of the trellis was enough to super the two weeks old plants not to curve. It will also help the fruit to develop naturally and will avoid being curved. The second challenge I encountered was here. I think that the plant is exposed to too intense direct sunlight. I can feel that there is too much water loss in the plants during transpiration. It is why I decided to use a shade cloth to protect it from direct sunlight and water it early in the morning. I cut some of the leaves that died and took more care of the remaining leaves. Additional organic fertilizer was added to help the increasing needs of the plants. It was also a cultural practice by the Asians to add the water you used to wash the rice. They believed that it will be beneficial because it will help the soil bacteria that help the *Anabaena*. It helps in its nitrogen fixation process. The water will help to increase the plants by adding vitamins, minerals, and a small amount of nitrogen, phosphorous, and potassium that are all important to the growth of the plant.

Pruning is also needed to remove the pest and animal infestation in the lower parts of the plants that eat the plant or share its nutrients. It is also done to remove the dead and dying branches to help the plants have a new room for growth. It also maintains the beauty and the shape of the plant. The best time to do this is 3-4 weeks after transferring the plant to the gardening area. Weeks after, the growth of the small fruit is evident. It can be harvested once it reached the size that is big enough like those that are commercially available.



I learned a lot from this activity. It taught me how complex this is and that there are many aspects that you need to consider. It seems that planting your food will not only give us benefit by the easy access of food. It will also contribute to sustainability. We will also help to reduce the scarcity of food in our current situation. In this way, we will also be able to be closer to eat nutritional food at a very low price. We can also give the excess supplies that we have to other people, especially those who are less fortunate. It can also be a way to help those who are in need by giving the excess in your harvest to them. In this way, the problems in hunger and poverty can somehow be eased. It does not also necessarily need a large piece of land. There are also ways to maximize the small area to have more yield. It requires a lot of hard work and patience, but it is very rewarding. It will also change the way you eat and your perspectives about food. It made me realize that the process of food production is a lot of hard work, and you would not want any of it to go to waste. It will help to reduce mass food wasting. It can also be an economic opportunity. It also made me feel that I can contribute to society by increasing the number of those who produce food. In this way, food security is more possible to achieve.

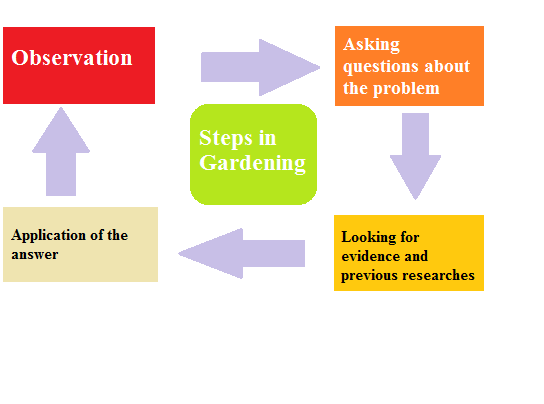
## **Challenges**

During the implementation, I experienced multiple problems. The first problem that I encountered is the increase of ants in the area. Colonies are forming in the area, and they stay near my plant. I also encountered a problem when I saw my plants. I noticed that there are wilting parts. I did some research about the ways of how it can fix each problem. It made me consider a lot of factors that will help the plant to thrive.

**Deviation and Solutions**

When I saw the colony of ants, it made me worried about the harm that it can bring to my plants. It will eat the leaves and the fruit once, and it will kill my plant. So, I decided to read some research articles about it. In practical gardening, people use wood ash to force them to relocate. According to a study that was conducted by Derso (2020), this practice increases the pH of the soil forcing them to find a place that is more suitable for their tolerance. It solved the problem about ants, and though I did not expect it to work. The calcium in the wood ash also help to improve the situation and growth of my plant. Several days after, I noticed that the plants start to wilt, I tried to change a lot of things in hopes that the situation of my plant will improve. I suspect that this is because of the excessive water loss due to transpiration. I asked other people about their thoughts, and they also said the same thing. They suggested that I should place a shade cloth to avoid the plants receiving direct sunlight. I also changed my routine and water my plants early in the morning. It will also help them to thrive and not wilt due to excess water loss.

All of these problems and the steps that I made helped my plant to thrive. The process of how I decide what will I do is primarily made up of four parts. It shows the importance of having a good background in planting to conduct this activity smoothly.

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