

Charles Root

ctroot0

Frostburg State University

Greenest Challenge

Frostburg State University is in a unique area of agricultural usage. The city is located within the mountains of western Maryland, specifically the Appalachian mountains. The climate is very speculative as the cold from the winter sometimes leaves early or late and comes sooner rather than later. Just in the past year there was snowing in April and cold weather in May, and as of now it is hitting freezing in early October. So when you try to plant crops you have to take into account the drastic weather that can come, and the plants you grow have to be able to withstand the temperatures.

For our garden we planned an outside only function but if taken inside can have a simple solution. The plants will include many vegetables and also fruit, these will be able to withstand the cold temperatures and provide rich soil to the ground to keep the plants alive all year round. These plants include Tomatoes, Beans, Peas, Garlic, Kale, and Strawberries.

The tomatoes which will cover the whole length of the garden will provide many antioxidants and also be a great tasty choice for students looking to get a good that will improve their dish. Tomatoes also will provide a colorful atmosphere for the garden and can be easily grown with many legumes to keep the soil from becoming depleted. Tomatoes are heavy eaters in terms of nutrients, specifically phosphorus and potassium.

Beans and Peas are the next items for our garden as they will provide the soil with many nutrients that will be consumed by other growing plants. These legumes are able to capture the nitrogen within the air and take it and use it to grow throughout the next growing season, they also provide the necessary nutrients that the tomatoes and kale will be consuming. The nitrogen which is dangerous towards the atmosphere, being captured will make the air quality better and because they repurpose it in the soil it will be beneficial for itself but others around.

Garlic is an interesting plant to add to the group, because of the nature of the city and the wildlife that comes through it. This plant is a great deterrent for many animals and pests that will try to invade a garden and infect or eat your plants. Garlic also carries another positive to the garden and that it can be used as a treatment and prevention of mildew and a variety of diseases.

Kale is a broad green that is used in many colder states. The vegetable also contains a lot of nutrients that are good for students but also the soil beneath it as it will provide healthy soil to surrounding plants. Also kale can come in many colors and can add texture and life to a dreary garden.

Strawberries add some flavor to the garden and attract pollinators through their flowers, if you also nip the flowers you can keep the roots strong and healthy as they will redirect their energy there.

Some of the techniques we will use to make the farm sustainable is, LED growing lights to keep energy costs low and usage low. A reusable water system through rain collection and water runoff collection from the garden into a container. The last technique is the use of crop rotation to keep the soil and nutrients mixed around.

9:07



Instagram



projectgreenchallengeadx



- LED light system - reduce cost, reduce energy usage
- Reuse water - system to catch rain water, have a way for water going into ground to runoff into usable container
- Crop Rotation - switching near plants will be can help the soil stay healthy and mixed

Tomatoes	Beans	<ul style="list-style-type: none"> • Capture nitrogen • Reduce Fertilizer • Nutrient based
	Peas	<ul style="list-style-type: none"> • capture nitrogen • Early planter
	Garlic	<ul style="list-style-type: none"> • Deter pests • Can be used for treatment • Prevent mildew
	Kale	<ul style="list-style-type: none"> • nutrient dense • visual aid • cool weather
	Strawberries	<ul style="list-style-type: none"> • Healthy roots • attract pollinators • control pests



projectgreenchallengeadx Our outdoor garden will provide many vegetables for students. With the intent to have plants that can withstand the harsh colder temperatures experienced many months of the year in Frostburg. With many legumes we are able to plant flavorful and colorful fruit and veggies. LED lights and a reusable water system make it so the garden is as

