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# Victory Garden Handbook

Columbia University Gardening

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*Dedicated to plant lovers.*

# Preface

This handbook is a guide to any curious folk and future gardeners at the Columbia University Victory Garden. I invite future gardeners to fix mistakes, document future seasons, and improve the handbook.

Created, August 2023  
Revised, May 2025

*Berkan Ottlik*  
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## **Acknowledgements**

Thank you to Professor J. Thomas “Tommy” Vaughan, Jr. for reviving the garden in the summer of 2020 during the COVID-19 pandemic. Thank you to all the gardeners who have kept the garden alive. Thank you to all those who taught us all about gardening. Thank you to Columbia Landscaping and Grounds Services for allowing our garden to exist, even when the garden is just a patch of dirt in the winter. Thank you destiny for helping me find love at the garden.

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# **Part I**

## **The Gardening Community**

This part describes the history of the garden, outreach programs, and administrative matters.

# **Chapter 1**

## **History**

The known history of the Columbia University Garden is described in this chapter.

### **1.1 Before 2020**

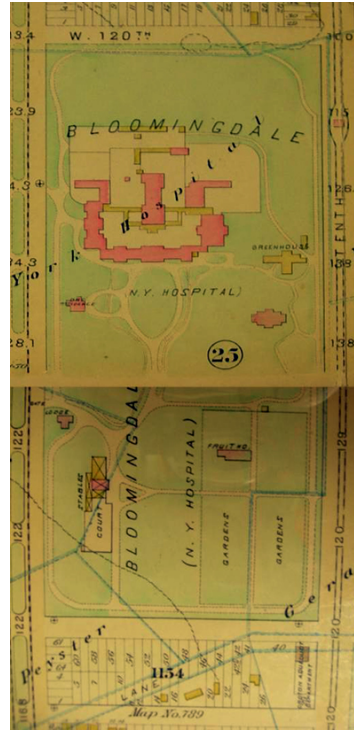
Our earliest knowledge of the land of our garden is from the time of the Lenape Native Americans. They are the earliest known occupants of Manhattan. However, due to very steep topography, much of Morningside heights was hard to access. Native American settlements are found in central park, south east of where the garden is today. After negotiations between the Dutch and the British in the 17th century, and the battle of Harlem Heights of the American revolution in 1776, the land firmly belonged to the United States. Morningside Heights remained rather underdeveloped in the 18th and 19th centuries, with the Bloomingdale Insane Asylum being one of the few major developments, see figure 1.1 for the old map. The Asylum operated from 1821 to 1889, after which Columbia University bought the land in 1890 and established the current Morningside Heights campus in 1896.

We unfortunately don't have any records of the garden from 1896 to 2003. However, we have high resolution satellite images since 2004 that showcase the development of the nearby land, see figure 1.2.

Since 2004, we believe the garden was under the management of various student organizations. Unfortunately, we don't know much about these organization and what they did. We were able to recover the Facebook, "columbiagardenclub", of the group in the fall of 2019, see figure 1.3.

### **1.2 Revival in 2020**

In the spring of 2020, when the COVID-19 pandemic was starting and Columbia was shutting down, Professor J. Thomas "Tommy" Vaughan, Jr. started the garden



**Fig. 1.1** Bloomingdale Asylum map [2].

back up. He named the garden the “George Washington Carver Victory Garden”. We have records of an interview he did with Eileen Barroso from Columbia News, where he explained the naming of the garden.

“As I mentioned earlier, I learned my gardening skills—from what to grow to how to grow it—from my family in Tuskegee, Alabama. My grandfather, H.A. Vaughan (see photo of his store above) was a partner with Dr. Carver, the famous agriculturalist at Tuskegee Institute. He was the county agricultural extension service agent for Macon County, Alabama, and some of the funding that supported Dr. Carver’s agricultural experiments flowed through my grandfather.

My grandfather supplied many of the seeds, fertilizers and farming implements to Dr. Carver and area farmers, many at the recommendation of Dr. Carver who was working hard to diversify agriculture away from a one-crop (cotton) economy. My grandfather had a large farm and was an experimentalist and early adaptor of Dr. Carver’s agricultural developments. I still have and manage some of that farm today. In a fairly direct line of mentorship, I learned and loved many of Dr. Carver’s vegetable varieties and gardening methods early and have continued them in my life, if for more of a hobby than a career.

In the depths of World War I and the Spanish Flu, Congress enacted a War Gardens program. Dr. Carver, in close advisement to Congress on this, recommended the name “Victory Garden” instead. The stated mission of the Victory Garden program

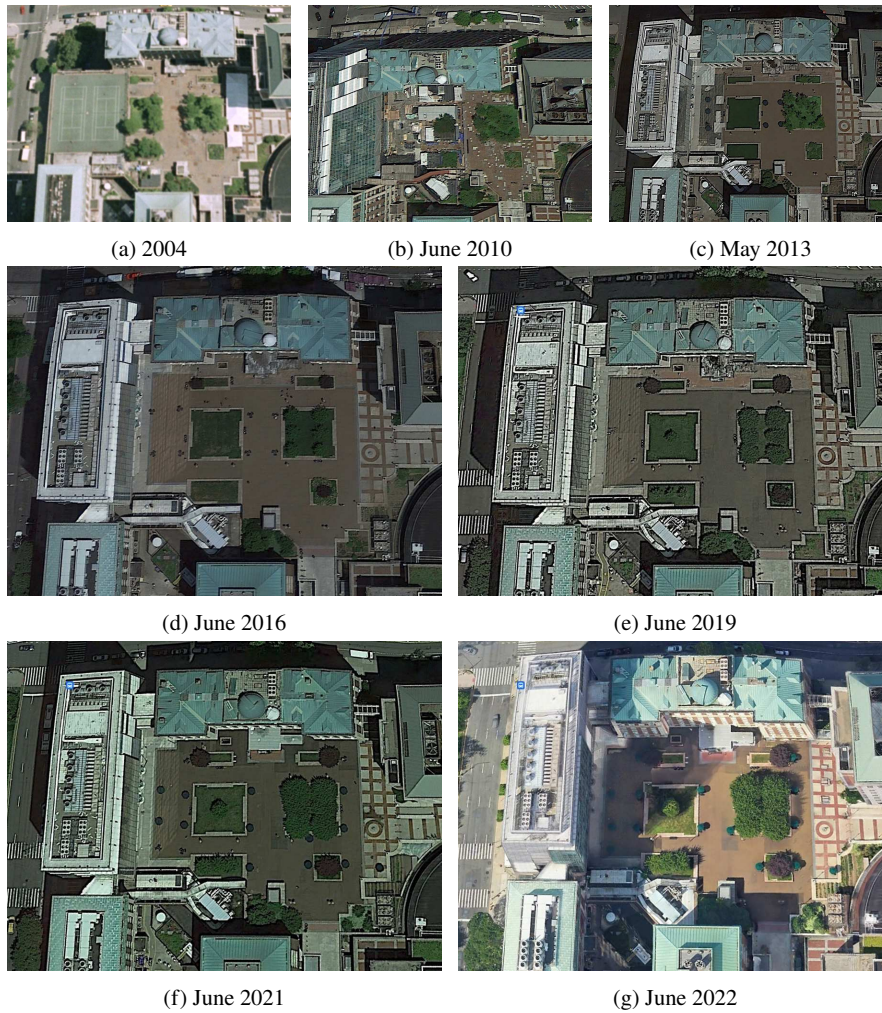


Fig. 1.2: Satellite images of the garden and surrounding areas since 2004 from Google Earth. Construction of the Northwest Corner building occurred in the late 2000s and was completed in 2010.

was to provide sustenance and to boost morale during this difficult period for our country and the world. These gardens became an international sensation and were practiced in many other countries around the world. They were revived in the U.S. in the Great Depression and again in World War II. For all of these reasons and more, like the Black Lives Matter movement, we thought it appropriate and timely to name the garden the George Washington Carver Victory Garden.”

In the interview, he also explained the logistics of how he got started. “I started by finding Helen Bielak, operations manager of environmental stewardship, online to





**Fig. 1.3** Columbia University Gardening Club Facebook profile picture from September 8, 2019.

ask permission to plant a garden since the students were no longer on campus because of COVID-19. Then, she introduced me to Richard Bussert, facilities director, who has helped me with the garden. Since we began, three additional gardeners have joined: Elaine Perlman of Teachers College, Jay Walker at Columbia College and Elise Engler of CUNY. They've all helped out with planting and weeding. Elaine created the row labels and garden sign. Jay helped build the pea and tomato trellises and Richard provided general facilities support and backup, from new dirt to hoses to tools to seeds and helped to dig the garden." [1] As far as we know, Elaine, Elise, and Jay are no longer involved.

Around fall of 2021, Matthew J. Camp from Teachers College got involved as well. He was passionate about organizing community events and helped out with sending emails and running the club. He is also no longer involved.

### 1.3 Gardening Space

The land allocated to the club by the university has changed over time. Satellite and in-person images indicate that we had an additional plot of land to the South West of the current garden from at least 2010-2019. It is believed that one day Columbia Landscaping and Grounds Services simply planted trees and took away the land, see figure 1.4.

Additionally, the land in the North Eastern part of the garden has at times been maintained by the grounds people, and at times been ours. Through image evidence, we know that in 2020 we had the North Eastern part of the garden, see figure 1.5. However, from 2021 to 2023, the university took back the land and planted some

trees in that place, as seen in figure 1.6. In 2024, through lots of back and forth communication with the Columbia administration, specifically Donald Schlosser (manager of Columbia Grounds at the time), Timothy Doherty, and Ricky Gonowrie, we managed to reclaim the land, see figure 1.7.



Fig. 1.4: Southern gardening patch in May 2016 (Left) and in August 2023 (Right).

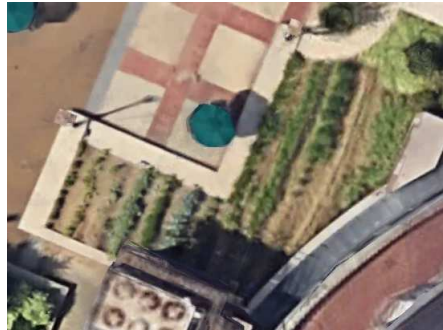


Fig. 1.5: Tommy by the garden in 2020. Notice that there are basil and other crops in the North Eastern part of the garden.

## References

1. Eileen Barroso. A garden grows on morningside campus, Jul 2020. <https://news.columbia.edu/news/garden-grows-morningside-campus>.
2. Scout. Searching for the remains of manhattan's bloomingdale insane asylum, Oct 2013. <https://www.scoutingny.com/searching-for-the-remains-of-manhattans-bloomingdale-insane-asylum/>.

**Fig. 1.6** Satellite image of the garden in June 2022. Notice that the top right corner of the image doesn't have crops.



**Fig. 1.7** North eastern part of the garden in 2024.



## Chapter 2

# Outreach Programs

This chapter some describes community outreach programs Columbia University Gardening has engaged in.

### 2.1 Recent Outreach

In the fall of 2021, we volunteered at a Riverside Park Conservancy event to rake up leaves in Sakura Park. We had approximately 2-5 students show up.

Tommy volunteered at the General Grant Houses between Amsterdam Avenue and Morningside Avenue, and between 123rd and 125th street on Saturdays during the summer of 2023. There is a community garden with dozens of attendees every week. See figure 2.1 for an satellite view of the gardens. They use raised beds, much to the dislike of Professor Vaughan.

We have volunteered at the garden by the George Bruce Library in 2024. This was set up by Tommy.



**Fig. 2.1** Community garden at the Grant houses, June 2022.

## **Chapter 3**

### **Administration, meetings, and attendance**

This chapter describes some administrative matters regarding space usage, what we do during meetings, and how to manage attendance.

#### **3.1 Administration**

The administrative side of the club is very multi-dimensional and has been documented in various places. Most notably, Joanna Wang has written up several documents in the club Google drive folder. I just want to touch on how to interact with Columbia. Their support is essential to acquiring / maintaining our space and getting soil, water, closet space, and other gardening essentials.

The advice given by Tommy is “You can always count on the world to get in the way (of projects). Diplomatic persistence and nagging are required to. Asking and waiting assure that it will not get done. Doing and asking for forgiveness is almost always better. If you take the risk, take charge and succeed, people will praise you for your leadership.” It is really important to figure out who the important Columbia grounds people are and to nag them to do what you want, e.g., acquire more soil, turn on the water in the spring, and acquire more gardening space. The same thing needs to be done with our club advisors to make sure we have funding and can order all the materials we need.

To make a case for ourselves, it is important to sell the benefits of the garden. These include a fun time for students, a chance to relax and get in touch with nature, a fun social activity, pretty flowers and veggies to look at, etc. To sell all these benefits in good faith, we must do the basics right. We must maintain a lush and pretty garden, always clean up after ourselves, and ensure many students from all around the Columbia community enjoy our meetings.

### **3.2 Meetings**

It is important that there is always someone who knows what to do at meetings and that they arrive on time (at most 10 min late). If the main person can't come, they should tell the others what to do in advance.

It is also always nice to introduce everyone to each other and encourage everyone to participate in all the activities. Those who know what they are doing should do a lot of teaching and ensure there is a fun, welcoming, and friendly atmosphere.

We typically divide up harvests among the meeting attendees.

### **3.3 Attendance**

The fall always has a ton of people after club fair. However, it is important to keep this spirit alive during the late spring (i.e., April and May) when the real fun begins. These are some of the most important meetings because that's when we sow many of our seeds and lay the groundwork for the rest of the season.

Additionally, it is crucial that a few people who know what they are doing are present during most of the summer. Yes, there are many meetings during the summer consisting of just watering, weeding, and harvesting. But especially early in the summer, there is also likely some planting to do. Lettuce dies within a month or two, so do peas. Those rows can be replanted with more lettuce or peas, sunflowers, etc. During the summer, it is also CRUCIAL that the garden is watered at least every other day when it is not raining. The next part of the handbook details all the needs of the garden.

## **Part II**

# **Inside the Garden**

This part describe our garden and how to manage the plants.



## Chapter 4

### Our Current Plot

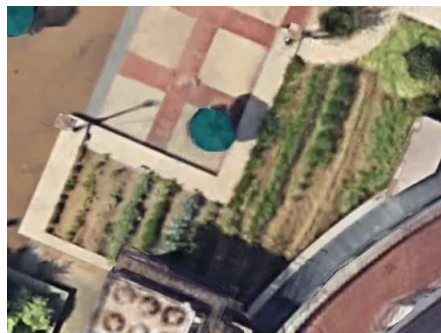
This chapter describes our current plot of land.

#### 4.1 Garden Layout

The layout of our garden is shown in figure 4.1. Measurements are given in the graphic in figure 4.2.

#### 4.2 Details of our Plot

The garden plot is right above the Uris swimming pool and the soil is not very deep. If one tries to dig deep with a shovel in the garden, they will hit the roof of the pool. This makes for poor drainage, increasing the risk of root rot. Protecting from root rot is one of the advantages of using rows.



**Fig. 4.1** Satellite image of the garden in June 2022. Since April 2024, we again occupy the North Eastern part of the garden (top right corner of the image).



The vent on the East side of the garden releases warm, often chlorine smelling, air year round. This keeps the sweet potatoes warm.

Due to Uris and the small building to the South of the garden, the Southern part of the garden doesn't get as much sunlight, which also causes the soil to regularly be damper than elsewhere in the garden.

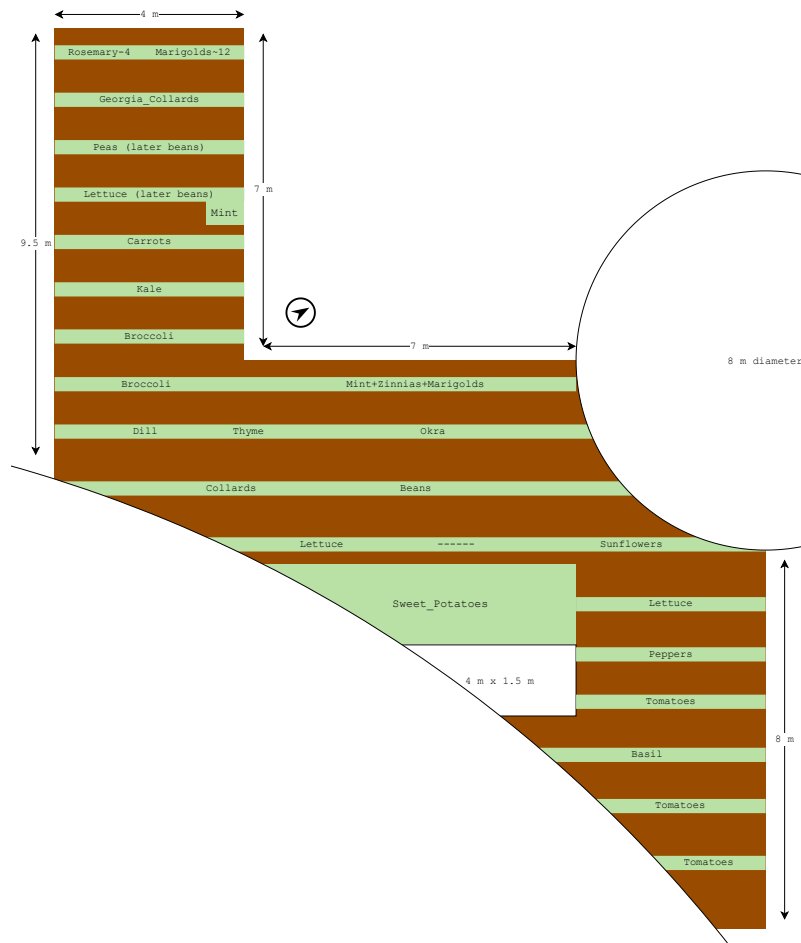


Fig. 4.2: Graphic of the garden layout with the 2024 expansion.

## Chapter 5

# How to Keep the Garden Alive

This chapter explains the basics of how to keep plants in the garden alive and the main tasks in the garden during different parts of the year.

### 5.1 Philosophy

Tommy set the current gardening philosophy in 2020. Of course, the Columbia Gardening Club is a **student club**, meaning students have the final say. Historically, students have made administrative decisions on their own with some advice from Tommy, and directly adopted Tommy's gardening philosophy since he is very experienced, wise, helpful, committed, and kind. Plus, his philosophy aligns with many of the values of students at Columbia University.

The **goal** of the garden is for students to get in touch with how humans have grown food for thousands of years. Therefore, we emulate traditional agricultural practices suitable to vegetables in New York City's climate. Occasionally, we cut corners to maintain a lush garden with our busy schedules.

We focus on vegetables because they are typically annuals, ensuring students have agency over their garden. Many fruits / berries require multi-year commitments, which can be difficult with a constantly changing student body. Additionally, vegetables typically don't attract rats and other pests the way fruits and berries might. We create traditional rows in the garden and we do not use any pesticides, herbicides, insecticides, or anything of that sort. When necessary, we use fertilizers. We rotate crops, we plant a diverse set of crops, and we love worms and other beneficial bugs. We don't kill plants prematurely that can survive parts of, or the entire, winter.

### 5.2 Common Dos and Don'ts

These are particularly important for new members to understand in their first meeting.

- **Don't** step on the rows.
- **Do** step in between the rows when needed.
- **Don't** walk in the garden when it's wet.
- **Do** water the garden very frequently over the summer.
- **Don't** throw pulled out weeds back into the garden because we don't want them to grow again.
- **Do** throw dead or uneaten parts of plants we planted back in because we want all those nutrients back in the soil.
- **Don't** feed the pigeons. They force us to use netting when sowing seeds. Sometimes birds get trapped in and die in our netting.

## 5.3 Seasonal Needs

### 5.3.1 Spring

Winter crops can be planted around March/April, and summer crops can be planted around April/May.

#### 5.3.1.1 Adding New Soil

It helps to add at least 40 large bags of top soil each season (ask the Columbia grounds people for free soil).

#### 5.3.1.2 Turning the Soil

The soil in the whole garden needs to be properly turned with a shovel by digging deep into the ground with shovels. This aerates the soil and helps decompose plant remains from the previous season. Try not to kill too many worms.

#### 5.3.1.3 Forming Rows

Rows work great for preventing root rot and improving drainage, creating pathways, and more. They are very standard in traditional agriculture and work better than raised beds for growing respectable quantities of food.

We typically use cultivator hoes for form rows that are 50 cm to a meter apart. Depending on what ends up being planted, rows can be thicker or thinner. Tomatoes, okra, sunflowers, and broccoli for instance are big plants and can use large rows. Carrots, thyme, dill, rosemary, and peas for instance are smaller plants and don't need as large rows as far apart from each other.

#### 5.3.1.4 Fertilizers

Fertilizers can be used. Plants need nitrogen, phosphorus, and potassium. We have had good results with using organic fertilizers with these elements.

#### 5.3.1.5 Crop Rotation

It is important to rotate plants around the garden, especially the plants with nitrogen fixing bacteria in their roots such as peas and beans.

#### 5.3.1.6 Sowing Seeds

Historically, we have always sown seeds much denser than advised. Our philosophy is “plant ’em thick, weed ’em thin”. We plant them thick so we can ensure enough seeds will germinate. We weed them thin so that plants have enough room to grow.

#### 5.3.1.7 Netting

When seeds are first sown, some sort of netting to prevent pigeons from eating them all is essential. Birds will eat almost all seeds that are left out in the open. We have had great success assembling a large wooden structure to cover half of the garden when we first plant it, and then getting the other part when it is ready to be planted, see figure 5.1. Netting is necessary until little 1-2 centimeter tall seedlings appear. This should take about 1-3 weeks depending on the plants.



**Fig. 5.1** Netting in April 2023 after sowing seeds.

### **5.3.2 Summer**

#### **5.3.2.1 Watering**

Plants need to be watered at least every other day when it doesn't rain in the summer. During the hottest and driest weeks, it should maybe be every day. In the spring and fall, we can get away with watering a few times a week, especially during cooler weeks.

The easiest way to water is to place the sprinkler at 2-3 locations to cover the entire garden and let it run for 20-30 minutes at each.

#### **5.3.2.2 Cultivating**

On a weekly basis, it is recommended to cultivate parts of the garden. Cultivating the soil loosens it, which helps plants form roots, helps with aeration, and improves drainage.

To cultivate, use a cultivator hoe. Don't drag the cultivator through the soil. That would pull all the soil to one side and break plant roots. Instead, chop deep into the soil with an up-down motion.

#### **5.3.2.3 Thinning**

Many plants need to be thinned since we typically plant very thick. We believe, it is not necessary to thin crops until they start competing with each other.

### **5.3.3 Fall**

Sweet potatoes can be harvested around November. The soil should be turned when everything dies.

### **5.3.4 Winter**

Order new materials such as tools, seeds, trellises, and netting. Also start planning the layout of the garden for the next season, take care of finances, and relax.

## 5.4 Specific Plants

This section provides quick facts about plants we have tried. Note that more research might have to be done to figure out how to plant and take care of the plants. This is not a complete list.

Note that “winter crops” are crops that can be planted earlier in the spring and do well late into the fall, whereas “summer crops” need warmer weather and must be planted later and die earlier.

### 5.4.1 Okra

Quick Facts:

- **Season:** Summer
- **Water:** Lots
- **Sunlight:** 6 to 8 hours a day
- **Thinning:** Thin such that plants are 15 to 30 cm apart.
- **In Our Garden:** Typically does alright but sometimes suffers from a fungus.

Okra should be harvested when it is about 2 to 3 inches long. In our garden, they sometimes die due to fungal infections, which we believe happened during the 2022 season.

### 5.4.2 Georgia Collards

Quick Facts:

- **Season:** Winter (planted in the spring harvested all the way into November)
- **Water:** Medium
- **Sunlight:** Medium
- **Planting:** Thick row
- **Thinning:** Rows can be thick with plants just 10 to 20 cm apart.
- **In Our Garden:** Grows amazing and produces a lot!

Georgia collards thrive in our garden. Sometimes late in the season they get attacked by aphids, but these don’t damage them much and the leaves are still edible (extra protein). Collards can be blanched by boiling them quickly and then stored in the freezer for many months.

### 5.4.3 Broccoli

Quick Facts:

- **Season:** Winter (planted in the spring harvested all the way into November)
- **Water:** Medium
- **Sunlight:** Medium
- **Thinning:** Broccoli can get very big, so leave them 10-30 cm apart.
- **In Our Garden:** Grows tall and lush but doesn't produce heads.

Broccoli grows well in our garden, often reaching a meter tall. However, we've rarely seen head formation, likely due to late planting or warm weather. The leaves taste very similar to collards and can be cooked in the same way. Aphids sometimes appear but aren't a major issue.

#### 5.4.4 Kale

Almost the same as collards and broccoli — another cool-season leafy green that grows very well in our garden.

#### 5.4.5 Lettuce

Quick Facts:

- **Season:** Middle (lettuce is sensitive, it does best in the late spring and early fall when it's not too hot or too cold)
- **Water:** Lots
- **Sunlight:** Medium
- **Thinning:** Give plants 2–15 cm depending on variety.
- **In Our Garden:** Doesn't grow great and collects a lot of hard-to-wash dirt between the leaves.

Some people love the delicate leaves in salads, others think it is a waste of space. It often tastes bitter in our garden and bolts quickly in the heat.

#### 5.4.6 Purple Sweet Potatoes

Quick Facts:

- **Season:** Comes back every year and we harvest in the late fall.
- **Water:** Medium / Low
- **Sunlight:** Medium
- **In Our Garden:** Comes back every year and spreads aggressively.

Harvest after the first frost in November or December. The leaves are also edible and make a great addition to stir fry dishes.

### 5.4.7 Peas

Quick Facts:

- **Season:** Winter (planted early spring or fall, doesn't love heat)
- **Water:** Lots
- **Sunlight:** Lots
- **Thinning:** A few cm between plants, not too necessary though.
- **In Our Garden:** Grows great as long as you water enough.

You can probably get away with planting two rounds of peas each season. Important because the roots have nitrogen fixing bacteria which bring nitrogen into the soil. These plants are very important to rotate well throughout the garden. Peas also die within 2-4 months of planting so you can plant them twice times in a season.

### 5.4.8 Green Bush Beans

Quick Facts:

- **Season:** Summer
- **Water:** Lots
- **Sunlight:** Lots
- **Thinning:** A few cm between plants, not too necessary though.
- **In Our Garden:** Grows great as long as you water during critical stages.

Important because the roots have nitrogen fixing bacteria which bring nitrogen into the soil. These plants are very important to rotate well throughout the garden.

### 5.4.9 Cucumbers

Quick Facts:

- **Season:** Summer
- **Water:** Lots
- **Sunlight:** Lots
- **Thinning:** Plants become huge on the ground and fall in-between the rows. Don't need to thin.
- **In Our Garden:** Grows amazing in the sun.

Cucumbers can die due to some bug that drills holes into the stems. We believe this killed our cucumbers in August in the past.



### 5.4.10 Mint

Quick Facts:

- **Season:** Perennial (dies back in Winter, regrows in Spring)
- **Water:** Any
- **Sunlight:** Any
- **In Our Garden:** Grows like a weed and comes back by itself every year.

Mint can be harvested freely without damaging the plant. Dried mint makes excellent tea and seasoning. It wilts in winter to conserve energy but returns robustly in spring. We believe most of our mint is spearmint, with a little apple mint in the west. Bees love the mint flowers in summer.

### 5.4.11 Yellow Cherry Tomatoes

Quick Facts:

- **Season:** Summer
- **Water:** Lots
- **Sunlight:** Lots
- **Thinning:** Plant 50 to 100 cm apart with support.
- **In Our Garden:** Grows great and is very sweet. We've only grown from starter plants purchased from Amazon, farmers markets, or other stores, not from seed.

Yellow cherry tomatoes thrive in our garden. We suspect passersby think they're unripe, so they don't pick them. Plants need sturdy supports or cages at least 1 meter tall to prevent sprawling and dirty tomatoes on the ground. Volunteer plants often pop up from dropped fruit the following year.

We have tried other kinds of tomatoes bought from Lidl or acquired from other places in the 2024 season. They didn't produce as much crop or taste as sweet. This could be due to other issues though.

### 5.4.12 Bell Peppers

Quick Facts:

- **Season:** Summer
- **Water:** Lots
- **Sunlight:** Lots
- **Thinning:** Plants become large and should be planted about a 30 cm apart.
- **In Our Garden:** We had great success buying the plants and planting them in the garden. We haven't tried from seed.

Bell peppers grow huge in the garden and taste very good when harvested fully ripe.

### 5.4.13 Spicy Thai Peppers

Quick Facts:

- **Season:** Summer
- **Water:** Lots
- **Sunlight:** Lots
- **Thinning:** Plants should be planted 10-20 cm apart, they don't grow too large.
- **In Our Garden:** We had great success buying the plants and planting them in the garden. We haven't tried from seed.

They are very spicy! Should be eaten when the peppers turn red / black.

### 5.4.14 Rosemary

Quick Facts:

- **Season:** Perennial (survives mild winters)
- **Water:** Medium
- **Sunlight:** Lots
- **Thinning:** Plants should be planted 15-30 cm apart.
- **In Our Garden:** We had great success buying the plants and planting them in the garden. We haven't tried from seed.

Grow nice and go well on salmon.

### 5.4.15 Basil

Quick Facts:

- **Season:** Summer
- **Water:** Medium
- **Sunlight:** Medium
- **Thinning:** Plants should be planted 15-30 cm apart.
- **In Our Garden:** We had great success buying the plants and planting them in the garden. We haven't tried from seed.

Is a favorite and grows very well. When it starts flowering, it becomes a little bitter, but still delicious.

### 5.4.16 Thyme

Quick Facts:

- **Season:** Winter (cold-tolerant; sometimes perennial in our climate)
- **Water:** Low
- **Sunlight:** Lots
- **Thinning:** Plants should be planted 10-20 cm apart, depending on how large they are.
- **In Our Garden:** We had great success buying the plants and planting them in the garden. We haven't tried from seed.

They can even sometimes survive the winter so don't dig them back into the soil, let the live! Super hardy and delicious when dried and used as a spice.

### 5.4.17 Dill

Quick Facts:

- **Season:** Summer
- **Water:** Medium
- **Sunlight:** Lots
- **Thinning:** Plants should be planted 10-20 cm apart, depending on how large they are.
- **In Our Garden:** Dill was nice for a few weeks. However, it quickly flowered and died in the hottest and driest summer weeks.

### 5.4.18 Apple Tree

Quick Facts:

- **In Our Garden:** Tastes great and we don't have to do anything!

To the west of the garden, there is actually an apple tree. We don't know where it came from, we thought it might have been from the Bloomingdale Asylum, but apple trees typically only live 50-80 years and edible apple trees always come from clones and not seeds, so it probably isn't an offspring of a tree at the time of the Asylum. It is possible that the tree was planted sometime in the late 20th century on campus.

### 5.4.19 Carrots

Quick Facts:

- **Season:** Winter
- **Water:** Medium
- **Sunlight:** Medium
- **Thinning:** Should be a few cm apart to allow for carrots to get big.
- **In Our Garden:** Grows really nice if planted apart.

The greens of the carrots can be eaten and can be used as a stronger version of parsley.

#### 5.4.20 Squash and Pumpkins

Quick Facts:

- **In Our Garden:** Don't work well.

They can die early due to fungus and vine borers before being harvested. This is a problem if we don't use pesticides or herbicides. The vines also take up a lot of space.

#### 5.4.21 Corn

Quick Facts:

- **In Our Garden:** Not great, takes up lots of room and gets eaten early.

It takes up a lot of space, as three or four rows must be planted together for cross pollination to occur and create full ears. One problem is that rats and students often eat the ears before they get nice and big.

#### 5.4.22 Sunflowers

Quick Facts:

- **Season:** Summer (can be planted mid-season)
- **Water:** Medium
- **Sunlight:** Medium
- **Thinning:** They grow huge, so make sure plants are 30-50 cm apart
- **In Our Garden:** Grows huge super quickly, even if planted in early August.

### 5.4.23 Zinnias

Quick Facts:

- **Season:** Summer
- **Water:** Medium
- **Sunlight:** Medium
- **Thinning:** Should be a few cm apart.
- **In Our Garden:** Does really well.

We often plant them behind the mint in the middle area of the garden.

### 5.4.24 Marigolds

Quick Facts:

- **Season:** Winter
- **Water:** Medium
- **Sunlight:** Medium
- **Thinning:** Should be a few cm apart to allow for carrots to get big.
- **In Our Garden:** Grows really nice if planted apart.

Volunteer plants often show up in the garden.



## **Part III**

# **Seasonal Logs**

This part describes what was planted and how it went for each season on record.

## Chapter 6

### 2020 Season

2020 the first year that Tommy started maintaining the garden. Naturally, we have continued many of the practices he began this year. We unfortunately don't have much data on this season apart from what was planted and a few pictures, see figure 6.1.



Fig. 6.1: North Eastern part with Tommy (Left) and Western part (Right).

#### 6.1 Crops

We planted a mix of leaf lettuce, spinach, collards, kale, broccoli, beets, carrots, spring onions, beans, peas, squash, corn, basil, mint, peppers, tomatoes and cucumbers. We also planted a border of zinnias and marigolds.

This was when we learned about the problems with corn. Since, 2020 was the first year Tommy started maintaining the garden, we have continued many of the practices he began this year. For example, we still commonly plant a border of zinnias and marigolds around parts of the garden. The sweet potatoes and mint that he planted still come back each year on their own.



## **Chapter 7**

### **2022 Season**

We unfortunately have incomplete data of the 2022 season.

#### **7.1 Overview**

In 2023, we planted marigolds, peas, lettuce, carrots, okra, mint, peas, Georgia collards, arugula, broccoli, marigolds, tomatoes, cucumbers, beans, small red peppers, long green peppers, basil, rosemary, sweet potatoes, and more unknown vegetables.

We learned that the basil and rosemary does really well and is very popular. Carrots must be thinned a lot in order for them to grow large.

## **Chapter 8**

### **2023 Season**

In 2023, we were lucky to have some great students taking care of the garden throughout the entire season.

#### **8.1 Overview**

In 2023, we planted rosemary, marigolds, peas, lettuce, carrots, okra, mint, chives, peas, Georgia collards, kale, arugula, broccoli, beets, zinnias, turnips, tomatoes, cucumbers, beans, green bell peppers, cilantro, squash, and sweet potatoes.

Collards, broccoli, tomatoes, and cucumbers were the biggest successes. For the collards specifically, the plants that had a bit more room due to sufficient thinning performed the best.

#### **8.2 Mistakes**

We planted the beets under the broccoli so they were kind of blocked and didn't do too well in the end. After the peas died about halfway through the summer, we tried planting new greens, but we didn't put up any netting so everything was eaten by the birds. The arugula was very annoying, produced lots of flowers which came back within a week of cutting, and didn't yield much crop at all.

We missed a critical stage of watering the green beans, which really stunted their growth and made their leaves turn white. They eventually recovered, but this greatly damaged the crop. The turnip greens were great, however the roots were very very bitter. We unfortunately didn't put up great cages or trellises for the tomatoes, resulting in some sprawling between the rows. They still tasted great.

Missing a lot of meetings in the fall caused some attendance problems, see next section.

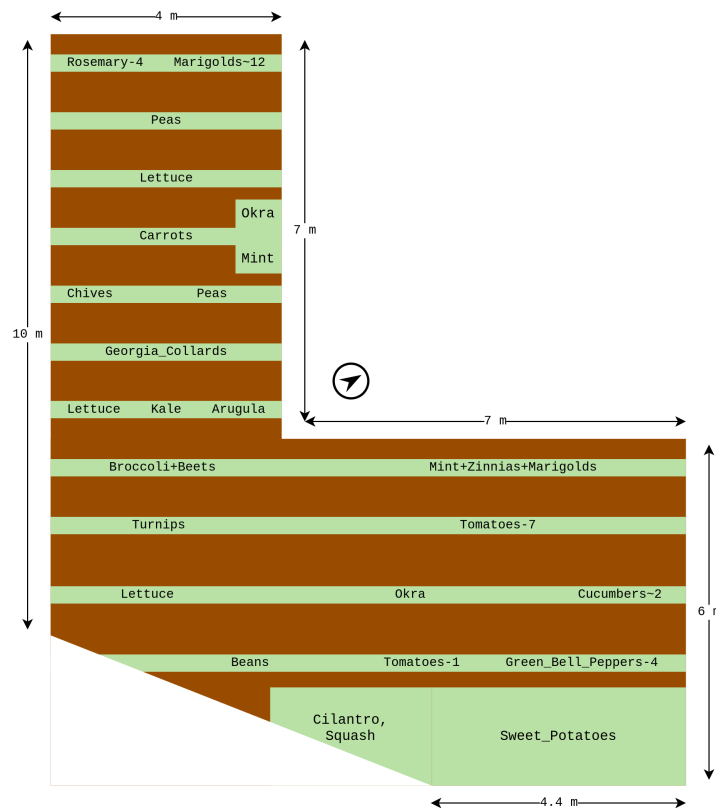


Fig. 8.1: Detailed view of everything that was planted in 2023.

### 8.3 Meetings and Attendance

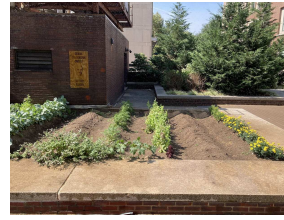
It rained almost every single Saturday in the fall of 2023. Thus, we canceled most meetings in the fall and didn't reschedule them. The problem is we recruited fewer committed members. This was a slight problem in the spring of 2024. Fortunately, extensive recruitment efforts to acquire a new board in the fall of 2024 saved the situation and ensured the survival of the club.



(a) North part



(b) Central part



(c) West part

Fig. 8.2: The garden from three angles.

## **Chapter 9**

### **2024 Season**

2024 was the first season we reacquired the North Eastern part of the garden.

#### **9.1 Overview**

In 2024, we planted rosemary, marigolds, Georgia collards, peas, bush beans, lettuce, mint, carrots, kale, broccoli, zinnias, dill, thyme, okra, sweet potatoes, sunflowers, small spicy Thai peppers, basil, and various tomatoes.

We also attempted cucumbers, but, due to insufficient watering, a sweet potato invasion, and fungus, they died quickly and were replaced by the sunflowers in August.

The collards in the far western part of the garden did not do particularly well. We think this was due to insufficient watering, insufficient weeding, and perhaps too much sun and dryness in that part of the garden. It is a tough corner of the garden.

Peas did well, but they don't last particularly long. We planted them in about May or early June and they only lasted 4-6 weeks. They would've maybe lasted longer if we had watered more but it was fine because we replaced them with beans.

The green bush beans were incredible in 2024. We had incredibly huge harvests many weekends in a row, during the summer and in September. This is despite the fact that the row of beans right by the sweet potatoes struggled a lot during August when we didn't water it sufficiently. We strongly recommend planting tons of green bush beans because they do incredibly well and are good for the soil!

#### **9.2 Mistakes**

We really struggled with watering the garden enough during the summer, particularly during times when most people are traveling such as graduation and back-to-school.

In August, the okra died due to insufficient watering. In general, when it doesn't rain, the garden should be watered at least every other day.

We also struggled with planting the larger garden in time. We planted okra and tomatoes a little late in the season, which, combined with insufficient watering, really stunted their growth.

We once again failed to acquire sufficient tomato trellises. Therefore, especially the Eastern most tomatoes struggled to grow large and much of the fruit was on the ground.

Instead of getting yellow cherry tomatoes, tried various kinds of red tomatoes bought from Lidl or acquired from other places. They didn't produce as much crop or taste as sweet. This may partially be due to issues of the trellises or watering, but we had a better experience with the yellow cherry tomatoes.

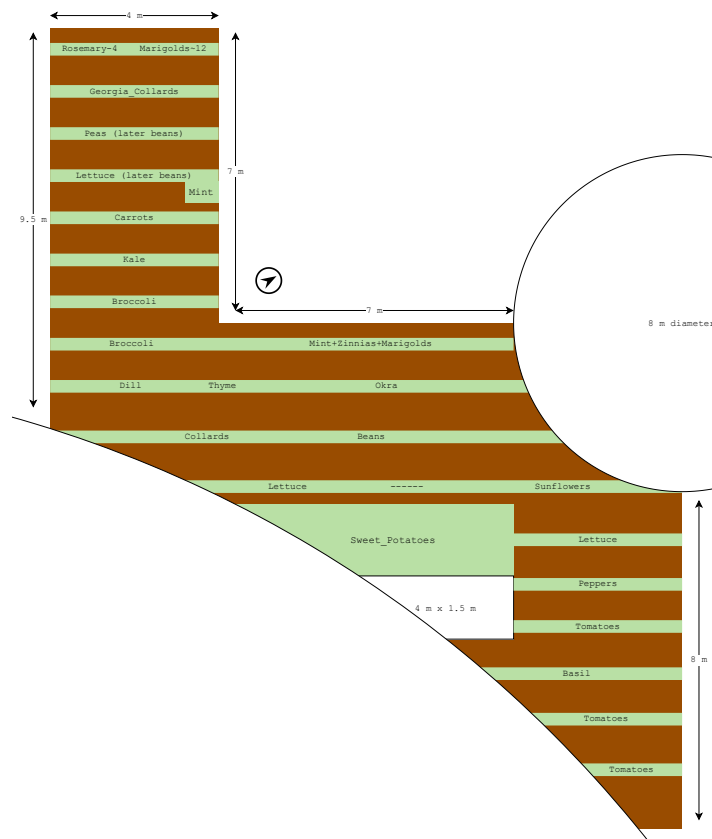


Fig. 9.1: Detailed view of everything that was planted in 2023.

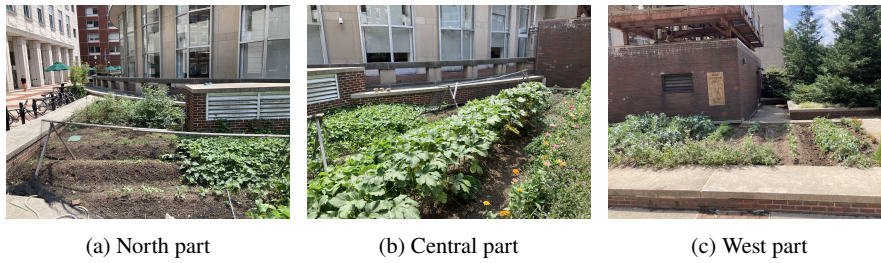


Fig. 9.2: The garden from three angles.

### 9.3 Meetings and Attendance

We could have used more people in April / May to help us form the rows and sow all the seeds. We got by though. During the summer, it would have been useful to have more people to water outside of our normal meeting times. In September, we had incredible turnout (see figure ??) since everyone is excited to join new clubs after club fair (see figure 9.3).

During the meetings, we also had a few incredible harvests, see figure 9.4



Fig. 9.3: Club fair 2024.



Fig. 9.4: Harvest on September 8th, 2024 (Left) and September 14th, 2024 (Right).