UBC Community Garden Biodiversity

Athena, Lynn, Ning, Pauline

Background

What is a community garden?

A piece of land **collectively** cultivated by a group of people, with an emphasis on **community building**

What are the roles of a community garden?

Environmental

- Biodiversity
- Refuge, food source for wildlife
- Increase habitat connectivity

Social

- Food security & sovereignty
- Transmission of knowledge
- Community building

Goals & Objectives

Goals

To gain a **baseline** understanding of the **biodiversity of food plants** and

gardening knowledge at UBC

Objectives

1. Survey community gardens at UBC campus on food plants grown
2. Interview the community gardeners on agricultural knowledge at UBC campus

Methodology & Methods

- Community Based Action Research
- Survey 11 gardens the UBC Survey Tool (Qualtrics)
  - Acadia Park Garden
  - Agronomy Garden
  - ANSO Community Food Garden
  - GeoGarden
  - *Hawthorn Community Garden*
  - Michael Smith Lab Garden
  - *Nobel Park Community Garden*
  - *Orchard Garden*
  - *Rhododendron Community Garden*
  - Roots on the Roof
  - *UBC Farm*
- Conducted interviews with lead garden organizer





Results

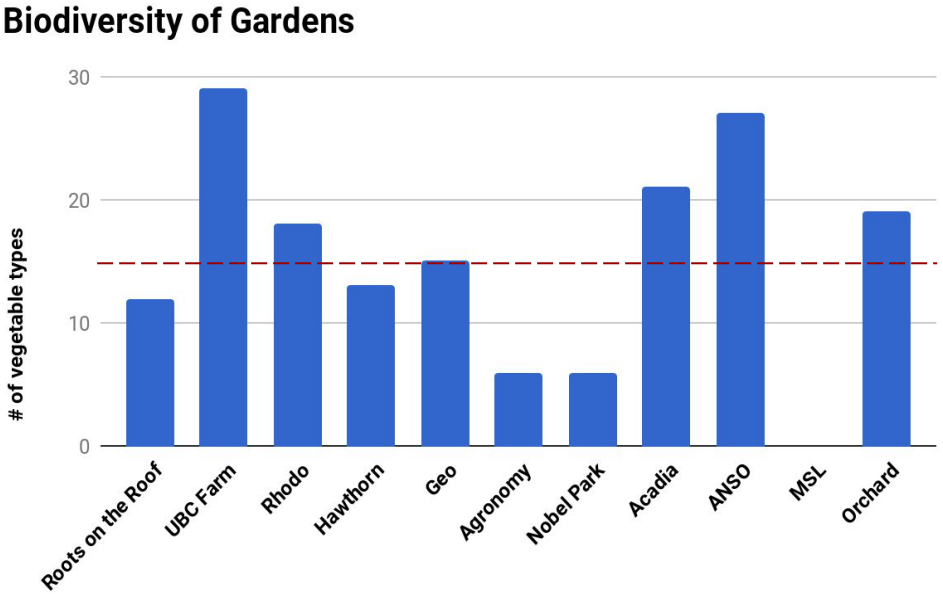
Survey & Interview

Biodiversity - Campus and garden

42 out of 46 vegetable food plants surveyed were present on campus.

On average, gardens grew **15** types of plants.

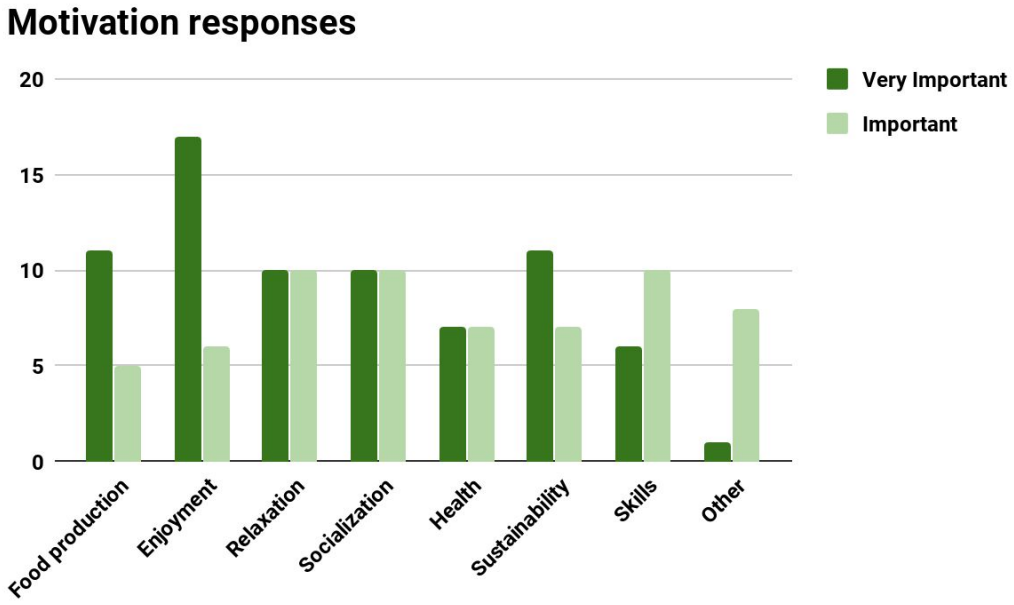
UBC Farm had the highest biodiversity, with **29+ plants.**



Motivation - Why are you gardening?

Most gardeners felt that **Enjoyment** was a Very Important reason to be gardening.

Food Production was not more popular than other options.



Results- Interview

	Acadia Park	Agronomy Garden	ANSO	Geo Garden	Michael Smith Lab	Roots on the Roof
# Plots	**70**	4	18	6	**1**	6
Plot Size (ft)	8 x 10	4 x 10	2 x 4	5 x 10	4 x 12	45 x 45 2 x 10
Total Plot Area (ft^2)	**5600**	160	144	300	**48**	2100
Communal or Individual	Individual	Communal	Individual	Communal	Communal	Communal/ Individual

Results- Interview

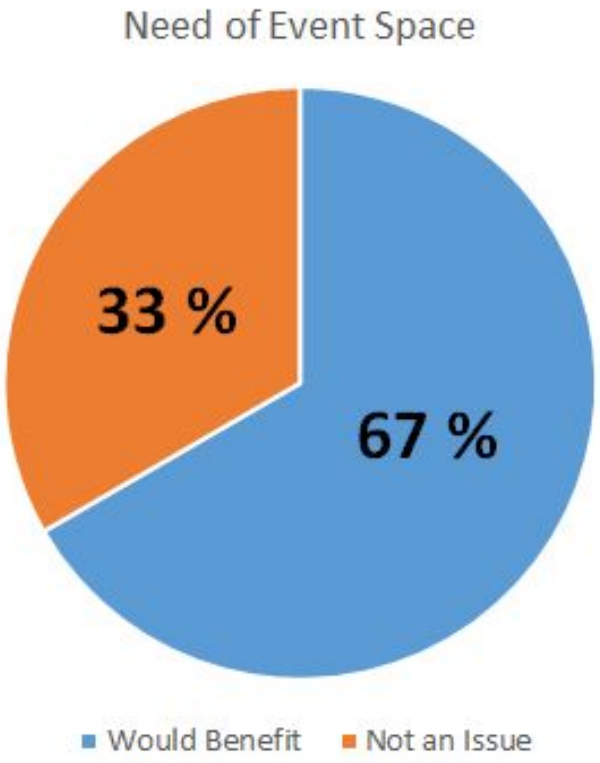
5 of 6

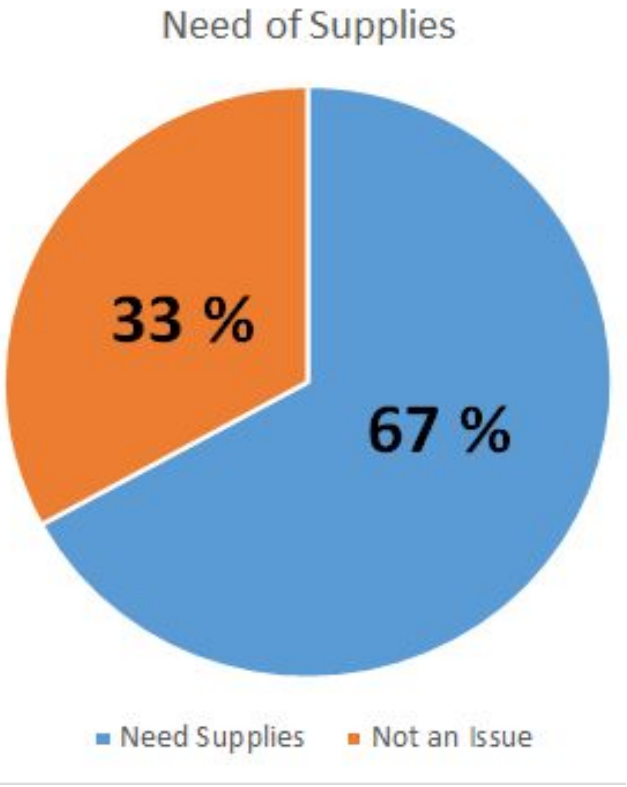
Gardens considered “**social**” or “**community building**” as a goal

1 of 6

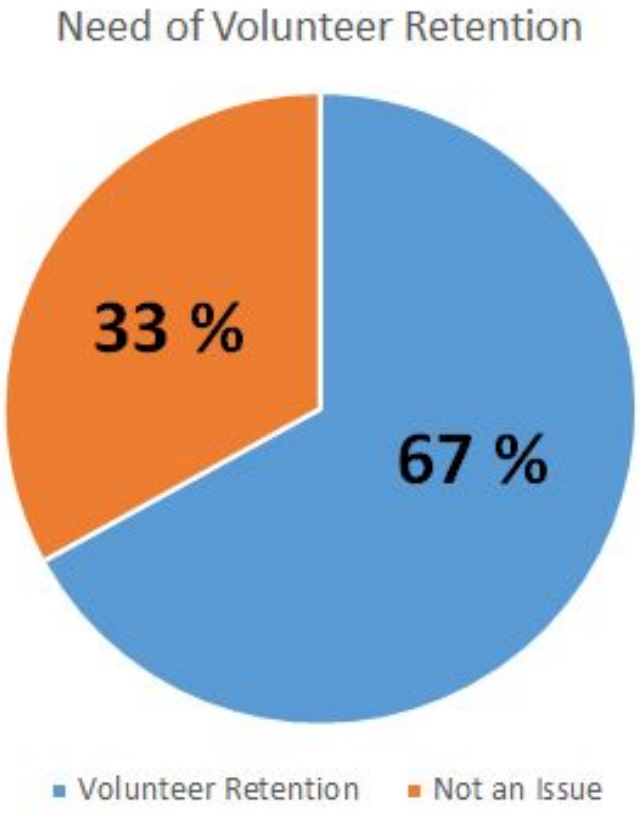
Garden considered “**gardening**” as a goal

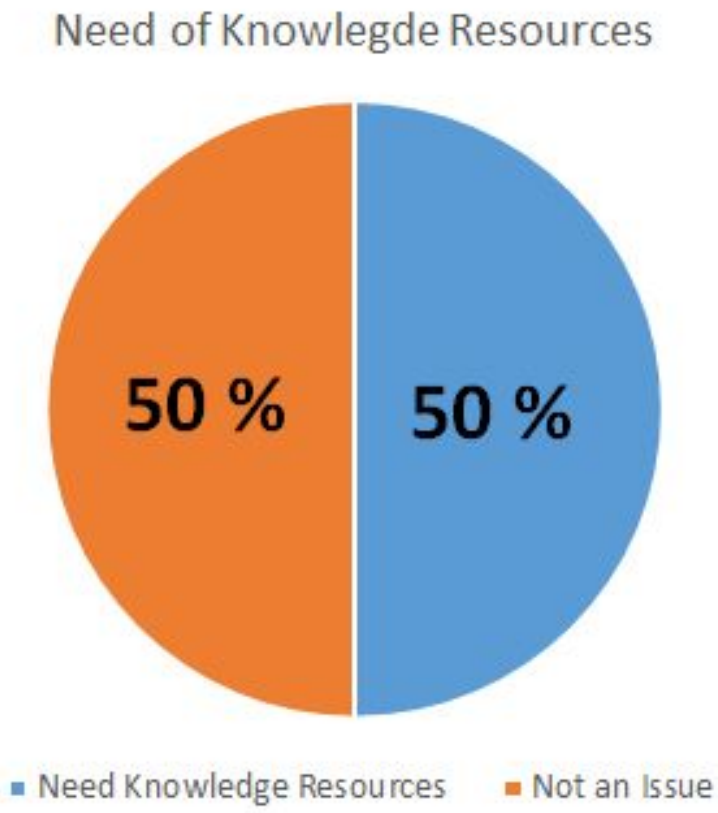
Results- Interview





Results- Interview





Discussion

What influences biodiversity and gardening knowledge?

Biodiversity - Factors

Motivation x Income x Experience

=

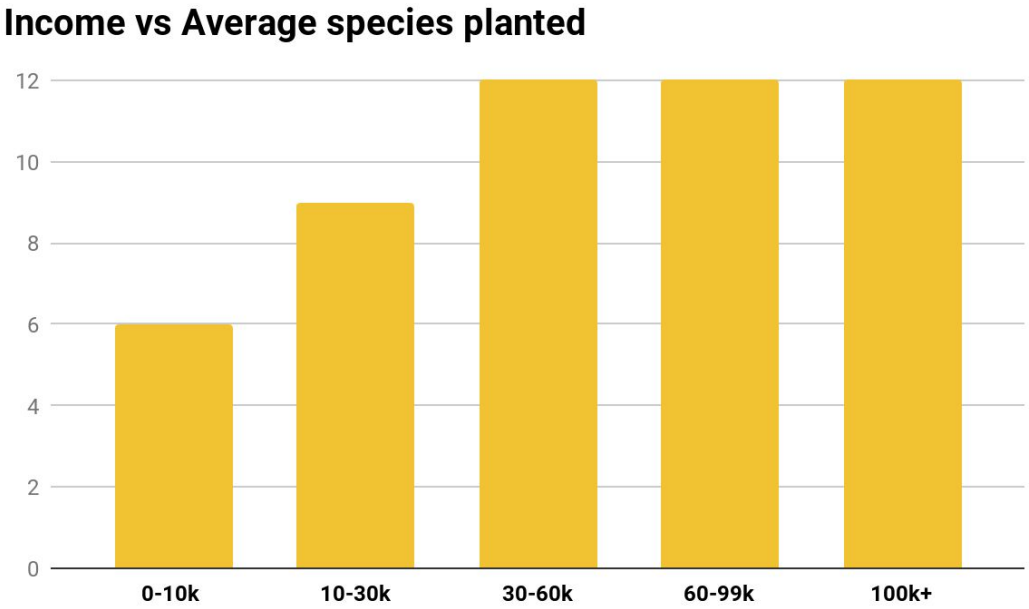
Biodiversity

Income x Biodiversity

Average diversity increased with income, consistent with 'hierarchy of needs' hypothesis

However:

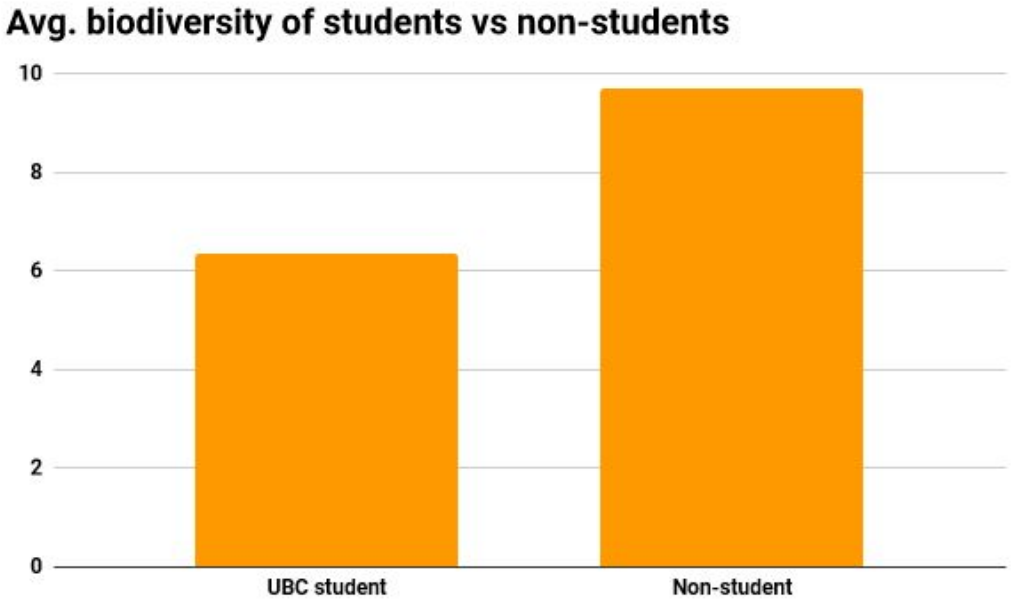
- All participants favoured Enjoyment over Food Production.
- **Alternative explanation**: All students represented in lower 2 income brackets



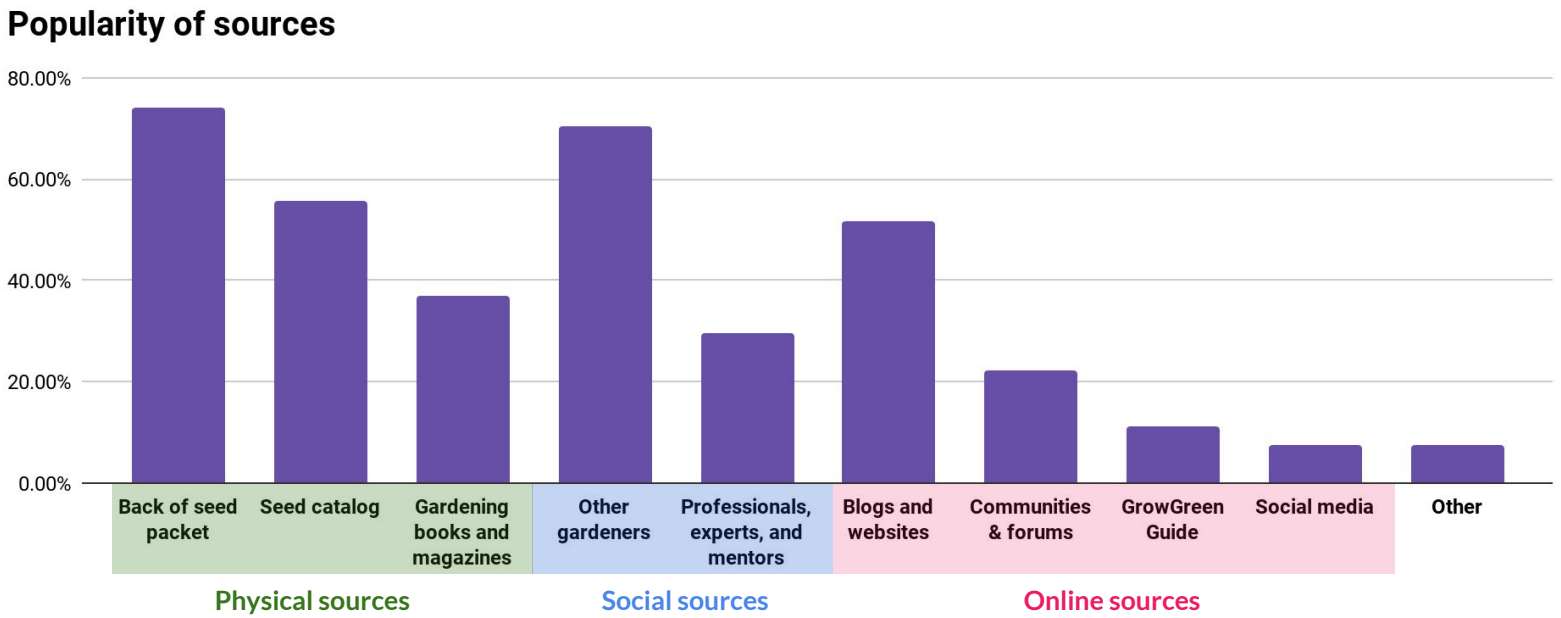
Student status x Biodiversity

Distinct divide in ‘Student’ vs ‘Resident’ biodiversity.

Conclusion: Student status-related factors responsible for income x biodiversity effect



Knowledge Sources



Physical sources and **social sources** were extremely popular.

Online sources, less so.

Discussion-Interview Results

-Varied size of gardens at UBC leads to different **needs** and **garden goals**

-Gardens prioritize **social engagement** and need event space and supplies to carry out

-High turnover rates leads to need for **knowledge resources** and **volunteer retention**.

Recommendations

Future Research:

-**Visual assessment** during growing season

-Keep record of the success of cultivars

Future Actions:

-UBC Botanical Garden run inter-garden

educational events

-Support creation of **Community Garden network** to share resources and record agricultural knowledge

Conclusion

61 food crops grown in 2017

82 known cultivars

- Utilize social/community building activities to improve biodiversity and agricultural knowledge