



**HỌC VIỆN NÔNG NGHIỆP VIỆT NAM**

VIETNAM NATIONAL UNIVERSITY OF AGRICULTURE

# Consumers' Self-Provisioning of Vegetables in Urban Vietnam and Maslow's Hierarchy of Needs

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# INTRODUCTION

## Vegetable self – provisioning in urban areas

- Fresh, safe vegetables for the your family and society
- Utilize unused spaces
- Utilize the city’s resources
- Reduce environmental impact
- Helping young children connect with nature in the city

There is little research on how to directly connect Maslow's theory with vegetable self-provisioning in urban areas

This study aim to:

## Maslow's Hierarchy of Needs

self-actualization  
REACHING ONE'S POTENTIAL

esteem needs  
SELF-CONFIDENCE AND RESPECT

love and belonging  
RELATIONSHIPS, FEELING ACCEPTED

safety needs



Explains



of vegetable self-provisioning in potential connection to Hierarchy of Needs

Policy recommendations to support urban consumers/residents

# Literature review

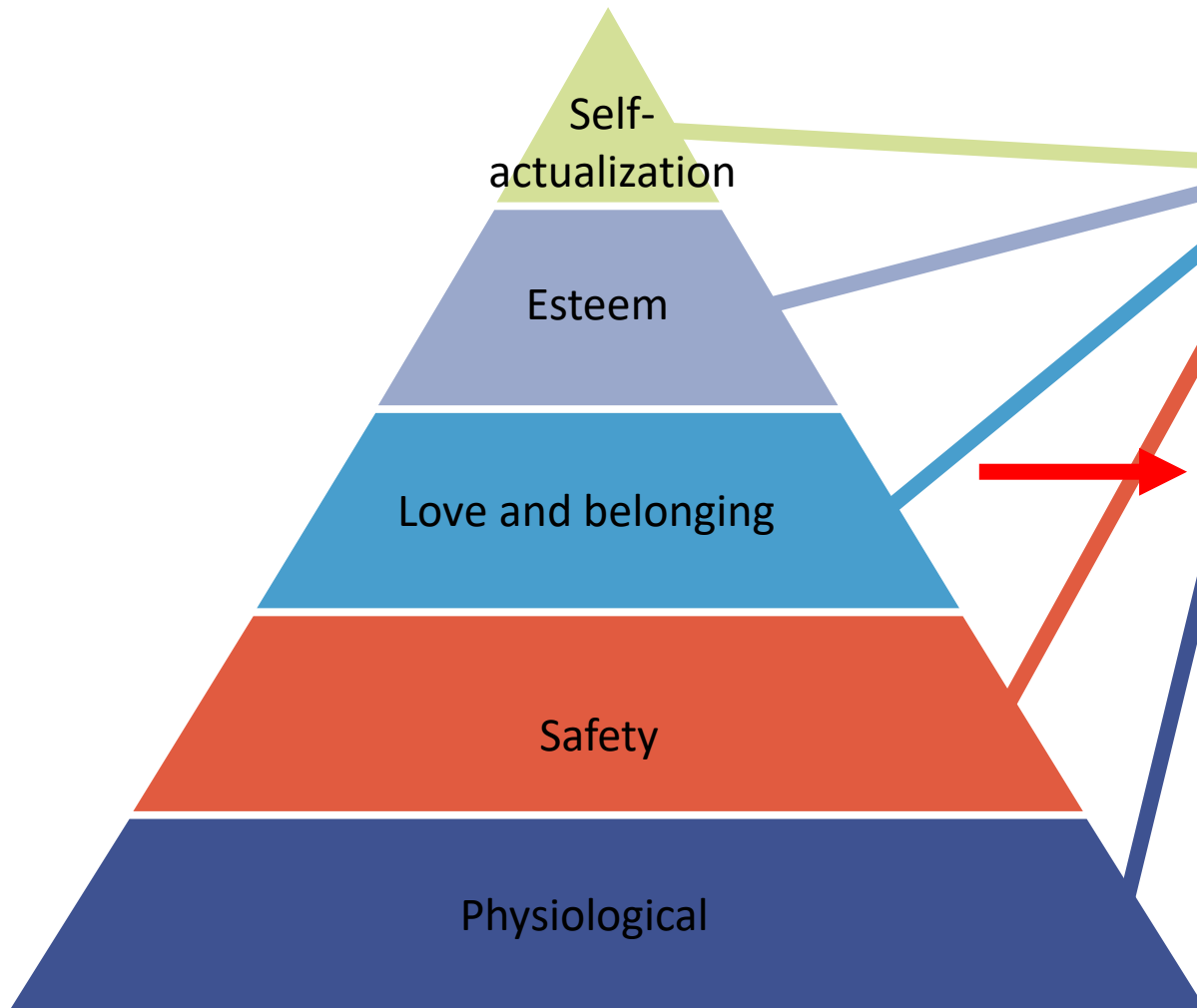
- Food self-provisioning in Croatia is not only a means of food production but also holds significance in terms of social class dynamics, environmental motivations, and individual well-being. *(Ančić, B., Domazet, M., & Župarić-Iljić, D. (2019))*
- The research examines a home-gardening programme in San Jose, California, La Mesa Verde, asking whether some of the benefits found in community gardens can be found in home gardens. *(Gray, L., Guzman, P., Glowa, K. M., & Drevno, A. G. (2014))*
- Urban farming is important, as it will help reduce urban consumers' distress about food safety *(Ha, T. M., Shakur, S., & Pham Do, K. H. (2019))*
- The articles show Better management of food safety and better risk communication toward attenuating consumer anxiety about vegetable safety is essential to improve both producer and consumer welfare. *(Ha, T. M., Shakur, S., & Pham Do, K. H. (2020))*

# Literature review

- Maslow's Hierarchy of Needs provides a framework for understanding human motivation and behavior, highlighting the importance of meeting basic needs before striving for higher-level fulfillment
- The fields have applied the Maslow's hierarchy of needs to research:
  - Psychology
  - Management and leadership
  - Education
  - Health and human development
  - Marketing and sale
  - Finance and business
- The problem of self-provisioning vegetables in urban is very important. The motivation research that promotes people's behavior is necessary, but there is no specific study on this issue.



# Theoretical framework



Self-provisioning of Vegetable behavior in Urban Vietnam

Policy support to promote effective self-provisioning of vegetable in Urban Vietnam

# Research area

## Sample:

### Inner-city area:

Van Chuong wards (n=40)

(Dong Da District)

Area: 0,33 km<sup>2</sup>

Population: 16.619 peoples (2022)

### New urban area:

Viet Hung ward (n=40).

(Long Bien District)

Area: 3,025 km<sup>2</sup>

Population: 27.352 peoples (2022)

### Sub-urban area:

Dang Xa urban area (n=40)

(Dang Xa commune)

Area: 0,696 km<sup>2</sup>



# Data Analysis

## Methodology:

- Descriptive data analysis
- Likert scale

$$\bar{X} = \frac{\sum_{i=1}^k X_i K_i}{n}$$

$\bar{X}$ : Average score

$X_i$ : Score at level  $i$

$K_i$ : Number of participants rated at level  $X_i$

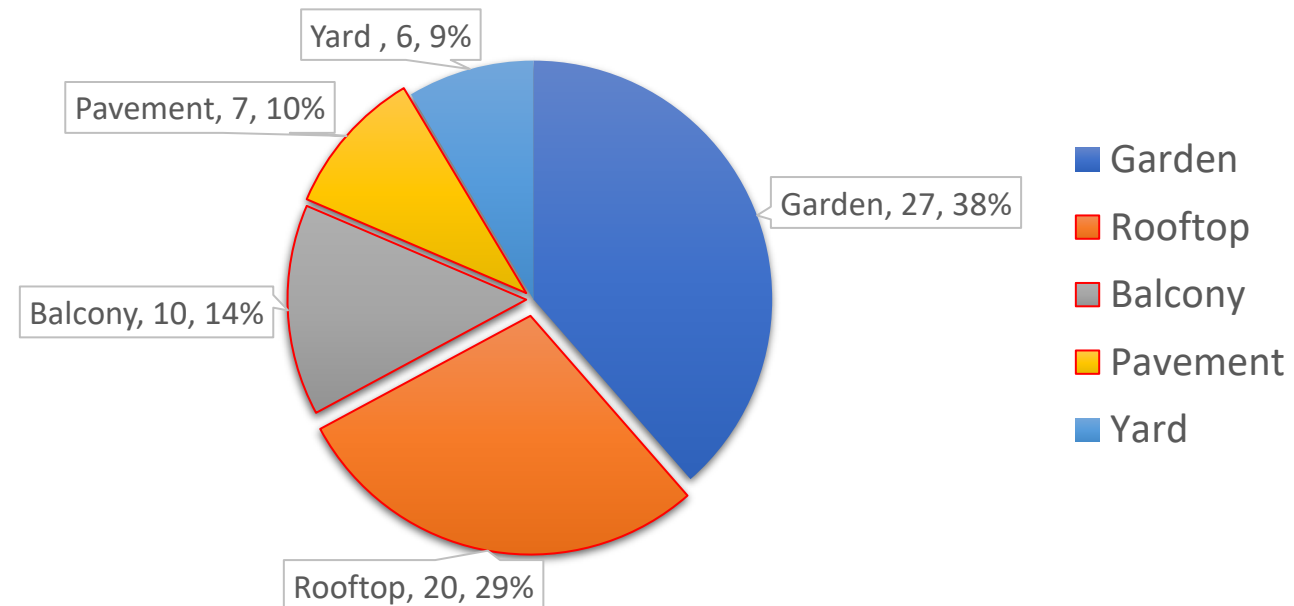
$n$  : Number of participants

Scale	Range	Rating level
5	4.21 – 5.00	Strongly agree
4	3.41 – 4.20	Agree
3	2.61 – 3.40	Neutral
2	1.81 – 2.60	Disagree
1	1.00 – 1.80	Strongly disagree

# Situation of home-grown vegetable

Sample background: 70 people has home-grown vegetables in 120 interviewers

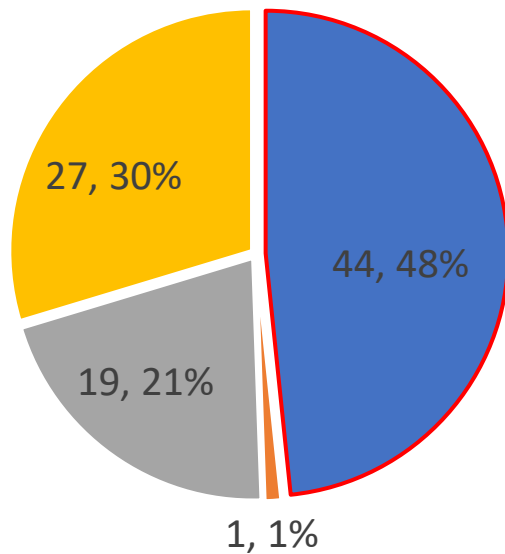
Place for vegetable growing





# Situation of home-grown vegetable

## Cultivation method











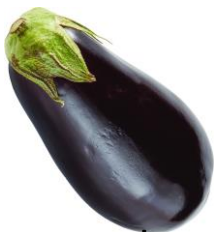













- Styrofoam box
- Hydroponic system
- Sowing trellises
- Ground



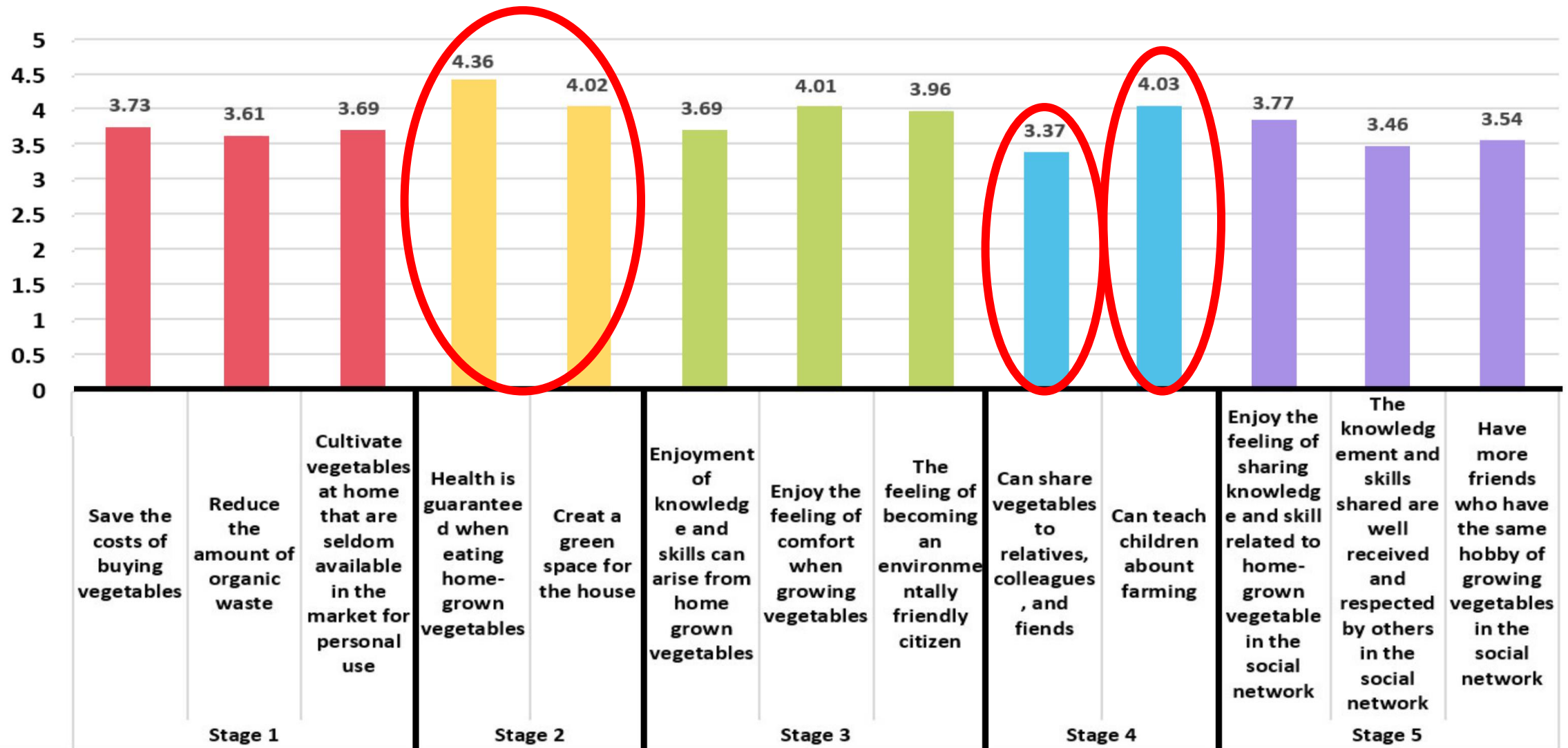
# Quantity of self-provisioned vegetable

Quantity of self-provisioned vegetable per household per week (kilogram)

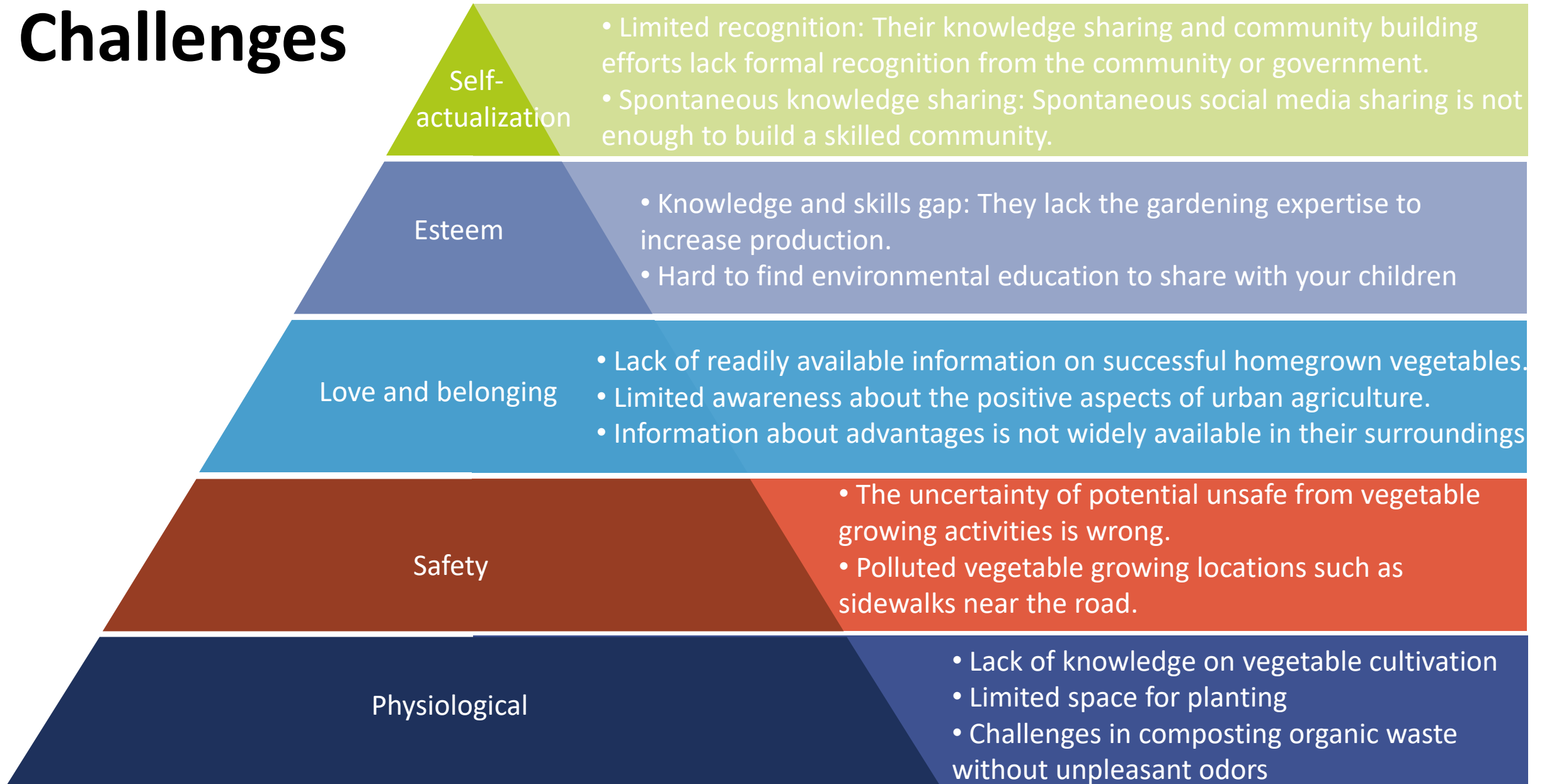
						
Swam spinach	Malabar spinach	Amarant	Sweet leaf	Lettuce	Cabbage	Others
0,65	0.61	0.62	0.46	0.29	0.17	0.64
						
Bottle gourd	Tomato	Bean	Eggplant	Cucumber	Chayote	Chili pepper
0.29	0.16	0.25	0.13	0.19	0.02	0.22
						
Carrot	Radish	Kohlrabi	Spring onion	Herb		
0.01	0.01	0.09	0.16	0.49		

-  Leaf vegetables
-  Fruit vegetables
-  Tuber
-  Spice vegetables

# Reasons for urban residents to self-provision vegetables following Maslow's hierarchy of needs theory



# Challenges



# Suggestions

1

Promote education and awareness among urban consumers about self-provisioning vegetables

2

Promoting community engagement in self-provisioning vegetable

3

Enhancing role of social media for urban consumers

# Suggestions

1

Promote education and awareness among urban consumers about self-provisioning vegetables



Workshops/Webinars: Offer in-depth sessions on home gardening techniques.



Educational Materials: Create leaflets and online resources for easy reference.



Expert Collaboration: Partner with local gardening professionals for enhanced learning.

# Suggestions

## 2 Promoting community engagement in self-provisioning vegetable

### Fostering Community:

- Organizing gardening clubs, meet-ups, or online forums.
- Encouraging knowledge and skill sharing among urban gardeners.

### Intergenerational Activities:

- Organizing family-friendly events.
- Establishing partnerships with schools to promote gardening as an educational activity.



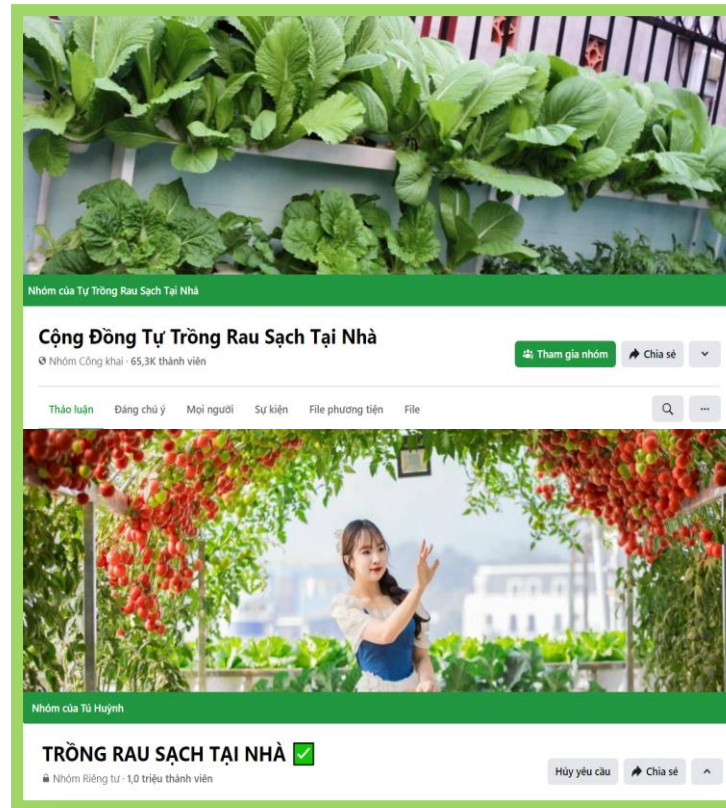
Source: [thanhdoan.bacgiang.gov.vn](http://thanhdoan.bacgiang.gov.vn)



# Suggestions

## 3 Enhancing role of social media for urban consumers

- Dedicated social media groups for urban gardening
- Share knowledge & skills for self-provisioning vegetables
- Encourage interaction, collaboration, and support



Source: [afamily.vn](http://afamily.vn)

- Foster a positive & inclusive atmosphere
- Recognize achievements of urban gardeners
- Share success stories & celebrate journeys
- Motivate others through community inspiration



# Conclusions

- ✓ The reason for growing vegetables at home comes from Maslow's hierarchy of needs that is **highly recognized by consumers**
- ✓ **Food safety** is the foremost concern among urban consumers regarding self-provisioning of vegetables
- ✓ Other important reasons for motivating urban consumers engaging with self-provisioning vegetables include: **Educate children** about agriculture, **create green spaces** around the house, experience **the satisfaction** of cultivating vegetables, become **environmentally conscious citizens**, **save on the expenses** of purchasing vegetables, **find joy and enlightenment** from homegrown produce, **share expertise** in vegetable cultivation within their social circles, **earn respect** from peers, and have the opportunity to **share their homegrown vegetables** with relatives and friends
- ✓ The recommendations include **promoting education and awareness** among urban consumers regarding self-provisioning of vegetables, **fostering community engagement**, and **enhancing the role of social media** to facilitate urban consumers' self-actualization.

# Conclusions

- ✓ Suggestions for further study:
  - Increase the number of samples size. Expand the survey area.
  - Statistical classified by demographic characteristics:
    - Income
    - Job
    - Age
    - Etc.

# References

- Ančić, B., Domazet, M., & Župarić-Iljić, D. (2019). “For my health and for my friends”: Exploring motivation, sharing, environmentalism, resilience and class structure of food self-provisioning. *Geoforum*, 106(3134), 68–77. <https://doi.org/10.1016/j.geoforum.2019.07.018>
- Bennett, M., & Shangreux, C. (2024). *Applying Maslow 's Hierarchy Theory*.
- Do, K. C. (2021). *Agricultural Economics*. Vietnam Agricultural University Publishing house.
- Gray, L., Guzman, P., Glowa, K. M., & Drevno, A. G. (2014). Can home gardens scale up into movements for social change? The role of home gardens in providing food security and community change in San Jose, California. *Local Environment*, 19(2), 187–203. <https://doi.org/10.1080/13549839.2013.792048>
- Ha, T. M., Shakur, S., & Pham Do, K. H. (2019). Consumer concern about food safety in Hanoi, Vietnam. *Food Control*, 98, 238–244. <https://doi.org/10.1016/j.foodcont.2018.11.031>
- Ha, T. M., Shakur, S., & Pham Do, K. H. (2020). Risk perception and its impact on vegetable consumption: A case study from Hanoi, Vietnam. *Journal of Cleaner Production*, 271, 122793. <https://doi.org/10.1016/j.jclepro.2020.122793>
- Jehlička, P., Kostelecký, T., & Smith, J. (2013). Food Self-Provisioning in Czechia: Beyond Coping Strategy of the Poor: A Response to Alber and Kohler’s “Informal Food Production in the Enlarged European Union” (2008). *Social Indicators Research*, 111(1), 219–234. <https://doi.org/10.1007/s11205-012-0001-4>
- Kirkpatrick, J. B., & Davison, A. (2018). Home-grown: Gardens, practices and motivations in urban domestic vegetable production. *Landscape and Urban Planning*, 170(December 2016), 24–33. <https://doi.org/10.1016/j.landurbplan.2017.09.023>
- Kumar Rawat Associate Professor, S., Sudhir Kumar Rawat Associate Professor, C., & Kumar Rawat, S. (2022). The potential of environmental benefits of urban agriculture and their future. ~ 41 ~ *South Asian Journal of Agricultural Sciences*, 2(1), 41–46. [www.agrijournal.org](http://www.agrijournal.org)
- Loan, L. T. T., Takahashi, Y., Nomura, H., & Yabe, M. (2019). Modeling home composting behavior toward sustainable municipal organic waste management at the source in developing countries. *Resources, Conservation and Recycling*, 140(August 2018), 65–71. <https://doi.org/10.1016/j.resconrec.2018.08.016>
- Maslow, A. H. (1943). A theory of human motivation. *Climate Change Management*, 50(4), 370–396. [https://doi.org/10.1007/978-3-030-36875-3\\_12](https://doi.org/10.1007/978-3-030-36875-3_12)
- Orsini, F., Kahane, R., Nono-Womdim, R., & Gianquinto, G. (2013). Urban agriculture in the developing world: A review. *Agronomy for Sustainable Development*, 33(4), 695–720. <https://doi.org/10.1007/s13593-013-0143-z>
- Pourias, J., Aubry, C., & Duchemin, E. (2016). Is food a motivation for urban gardeners? Multifunctionality and the relative importance of the food function in urban collective gardens of Paris and Montreal. *Agriculture and Human Values*, 33(2), 257–273. <https://doi.org/10.1007/s10460-015-9606-y>
- Saediman, H., Gafaruddin, A., Hidrawati, H., Salam, I., Ulimaz, A., Sarimustaqiyma Rianse, I., Sarinah, S., & Adha Taridala, S. A. (2021). The contribution of home food gardening program to household food security in indonesia: A review. *WSEAS Transactions on Environment and Development*, 17(i), 795–809. <https://doi.org/10.37394/232015.2021.17.75>
- Sanyé-Mengual, E., Anguelovski, I., Oliver-Solà, J., Montero, J. I., & Rieradevall, J. (2016). Resolving differing stakeholder perceptions of urban rooftop farming in Mediterranean cities: promoting food production as a driver for innovative forms of urban agriculture. *Agriculture and Human Values*, 33(1), 101–120. <https://doi.org/10.1007/s10460-015-9594-y>
- Thaman, R. R. (1995). Urban food gardening in the Pacific Islands: A basis for food security in rapidly urbanising small-island states. *Habitat International*, 19(2), 209–224. [https://doi.org/10.1016/0197-3975\(94\)00067-C](https://doi.org/10.1016/0197-3975(94)00067-C)
- Vávra, J., Daněk, P., & Jehlička, P. (2018). What is the contribution of food self-provisioning towards environmental sustainability? A case study of active gardeners. *Journal of Cleaner Production*, 185, 1015–1023. <https://doi.org/10.1016/j.jclepro.2018.02.261>

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