

Hands on Learning: Designing a Vegetable Garden for the Hilton College of Hotel and Restaurant Management

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Background

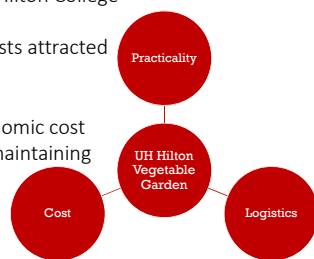
The UH mission: to offer nationally competitive and internationally recognized opportunities for learning, discovery and engagement to a diverse population of students in a real-world setting.

In keeping with this core value, Hilton College cooking classes could be enriched by allowing students to grow the vegetables they will be cooking.

Purpose

The objectives of this project were:

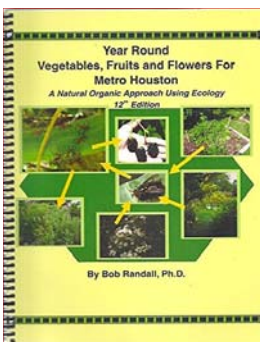
- to determine which vegetables and plants would grow best on soil outside Hilton College
- To determine the pests attracted to the garden.
- To examine the economic cost of establishing and maintaining a vegetable garden



Methods

Information was collected from Dr. Bob Randall's Metro Houston Gardening Book, other gardening resources and local retailers.

The information collected was then compiled into an 80-page guide book to planting at the UH Hilton.



Plants: There are 29 different vegetables, 14 herbs and 22 companion plants that will grow easily in the Hilton courtyard.

Each of the plants were classified by the amount to nutrients they take out of the soil, to allow them to be rotated from year to year.

Example of some vegetables & their soil use classifications:

Heavy Feeders	Soil builders	Light Feeders
Bok Choy	Beans	Carrots
Broccoli	Broad Beans	Rutabaga
Cabbage	Sugar Snap Peas	Turnip
Cauliflower	Bush Snap Bean	Swiss Chard
Collards	Lima Beans	Ginger

Then a dossier was written for each plant about its specific growing needs, as well as its designated crop rotation year.

Example Plant Dossier:

Beans (General)

Suggested species: long beans, bush beans



Amount of sunlight: full sunlight or as much as possible, preferably 8-10 hours per day.

Amount of water: up to 4-6 inches of water per one watering, but at least one inch per week, water deeply but gently to soak the roots and encourage them to grow further down into the soil.

Ideal temperature: Like to be warm but with cooler nights (good fall crop)

Suggested planting date: (depends on the type of bean) Fall beans while the temps are still above 70 deg.

Plant spacing: Plant .5 inches to 1 in deep, space 6 in apart

Companion plants: marigolds, onions, garlic

Harvesting: Wait 3 mo. to harvest green pod, 4 to harvest dry (for seeds)

How to collect seeds: wait until pods turn dry and brown, save and store in a cool dry place. Husk the pods and plant the following seasons.

Rotation schedule: Year B / year D

Troubleshooting/Look out for: Don't handle while wet to prevent mold/wilt.

Pests: Mexican bean beetle (lays yellow eggs under leaves), bean leaf beetle (large holes in leaves), nematodes, weevils (for beans in storage)

Other: Grow like bush beans

Image: (B. L. Grant, n.d.-b)

Results

Pests: There are 25 common pest that these plants are liable to attract, listed in the gardening book along with easy solutions in case of infestation.

Example of Pest Solutions:

Ants – add coffee grounds to the beds to deter ants. Throw a handful on top of the soil and let them mix in naturally.

Image:(LaVasseur, n.d.)



Aphids – spray with a mixture of dawn soap and water (1 teaspoon of soap per bottle of water) to kill them without harming the crops. Will also be repelled by dill, nasturtiums and catnip, but beware cat visitors!

Image: ("Aphids - PlantInfo - EVERYTHING and ANYTHING about plants in SA," n.d.)



Cost: Establishing the garden will incur an initial cost of \$2,000-\$2,500 and an additional \$100-300 in yearly maintenance.

Total Cost - Summary

Tool/Item/Supply	Cost
Planter/Raised beds	\$1,384
Herb pots (7 pots)	\$104.79
Soil	\$256
Mulch	\$83.88
Fertilizer	\$22.99
Ground covers	\$22.99
Trellises/trellis materials	\$54.66
Tomato cages	\$37.77
Compost bin	\$169
Bed covers (winter)	\$59.96
Shovels/trowels	\$58
Large Shovel	\$29.02
Shears	\$0
Buckets	\$15.56
Watering Can	\$21.98
Seed storage – envelopes	\$7.79
Newspaper/straw	\$0-12.99
Bird Bath	\$22.62
Total Cost	\$2,364

5-Year Plan: After several years the garden can be evaluated to see its successes and areas for improvement, and subsequently expanded if it is producing well.



Visualization of the UH Hilton Vegetable Garden

Conclusion

Starting a vegetable garden at the UH Hilton is not only economically and practically feasible, but will provide students with the unique opportunity to grow the foods they will use in class.

Reference

Randall, B., Ph.D. (2006). *Year round vegetables, fruits, and flowers from metro Houston: a natural organic approach using ecology* (11th ed.). Houston, TX: Year Round Gardening Press

Additional Photo references can be found in The Garden Book: A Guide to Planting at the University of Houston

Acknowledgment

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