

Fruit and Vegetable Consumption Among Urban Gardeners in Cleveland



Punam Ohri-Vachaspati, Ph.D., R.D.

Marisa Warrix, M.A.

June, 2000

Community Gardening Movement

- Community gardening concept took root in the 1970's
- Grew out of energy crisis
- Increased cost of fresh produce



Extension Community Garden

- U.S. Rep. Jamie Whitten appropriated funding
- 23 cities funded with federal dollars from USDA
 - Way for city people to grow their own food
 - Learn about agriculture
 - Exercise

Cleveland Urban Gardening

- To develop gardens on vacant inner-city lots
- To improve nutrition of low income families



Key Collaborators

- Ohio State University Extension
- City of Cleveland Summer Sprout Program



Funding Then ... And Funding Now

- Ohio State University Extension (Federal \$)
- Cleveland City Summer Sprout Program
- Cuyahoga County Juvenile Courts
- Cleveland Municipal School District
- Foundations
- Corporations
- Individuals in the Community

Making the Partnership Work

- OSU Extension provides educational outreach and volunteer training
- Summer Sprout provides plowing, plants, and soil amendments



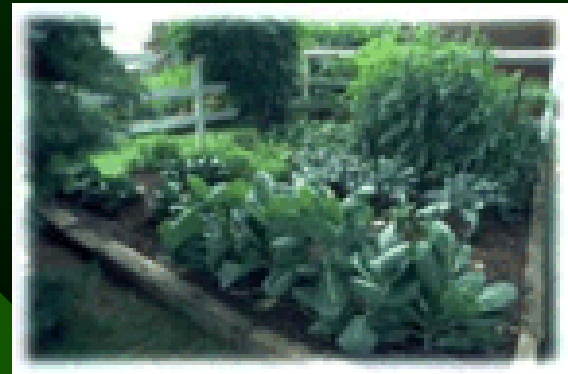
Gardening Statistics



- 1 million households involved in community gardening in the U.S.
- 2500 community gardeners in Cleveland
- 50 acres of vacant land cultivated in Cleveland
- Annual harvest valued at more than \$1.8 million

Other Benefits

- Leadership skills
- Self-esteem
- Neighborhood pride and development
- Community spirit
- Physical activity



Who Are The Gardeners?

Over 80% come from
Cleveland's poorest
neighborhoods



Low income seniors



Court referred youth and
school children

Demographics of Urban Gardeners

Income

\$< 10,000	32%
\$10-19,999	20%
\$20-29,999	9%
\$30-39,999	15%
\$40,000+	23%

Race

Black	64%
White	27%
Other	9%

Demographics

Age

33-50 yrs	26%
51-65 yrs	21%
65-75 yrs	29%
75+ yrs	24%

Gender

Male	48%
Female	52%

Demographics

Birth State

Southern State	52%
Ohio	27%
Other	21%

Education

<12 years	36%
HS / GED	22%
2 year college	15%
4 year college	10%
Other	17%

More Demographics

Employment

Retired **56%**

Unemployed **6%**

Employed **38%**

Demographics

Year Gardening

< 5 yrs	9%
5-9 yrs	8%
10-19 yrs	23%
≥ 20 yrs	60%

Years Gardening with Extension

<2 yrs	6%
2-4 yrs	33%
5-9 yrs	25%
10 + yrs	34%

Gardening and Fruit and Vegetable Intake

- National 5-A-Day campaign
- Some studies indicate higher intake of selected vegetables among gardeners
- No data available on overall consumption among gardeners

Objectives of the Study Phase I

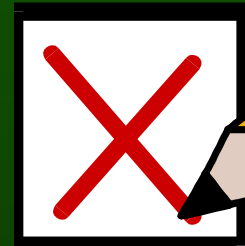
- Assess fruit and vegetable consumption among urban community gardeners
- Compare consumption of fruits and vegetables with the 5-A-Day target
- Determine the extent of use of different types of fats in preparation of vegetables.

Methodology

- Telephone survey
- Data collected at
 - peak harvest time
 - lean season
- Modified Food Frequency instrument
- Two dimensional drawings of portion sizes



Methodology



- Interviews conducted by trained public health dietetic interns from CWRU
- 81 garden leaders completed the survey in both fall and spring
- Response rate between 67 - 75 %

From the Garden

- Produce obtained for 1-3 months by 35%
- Produce obtained for 4-6 months by 56%
- 74% preserve produce from the garden
 - *freeze, canning, pickling, drying*
- 95% share produce
 - *neighbors, charity, other*



Vegetable, Fruit & Juice Intake

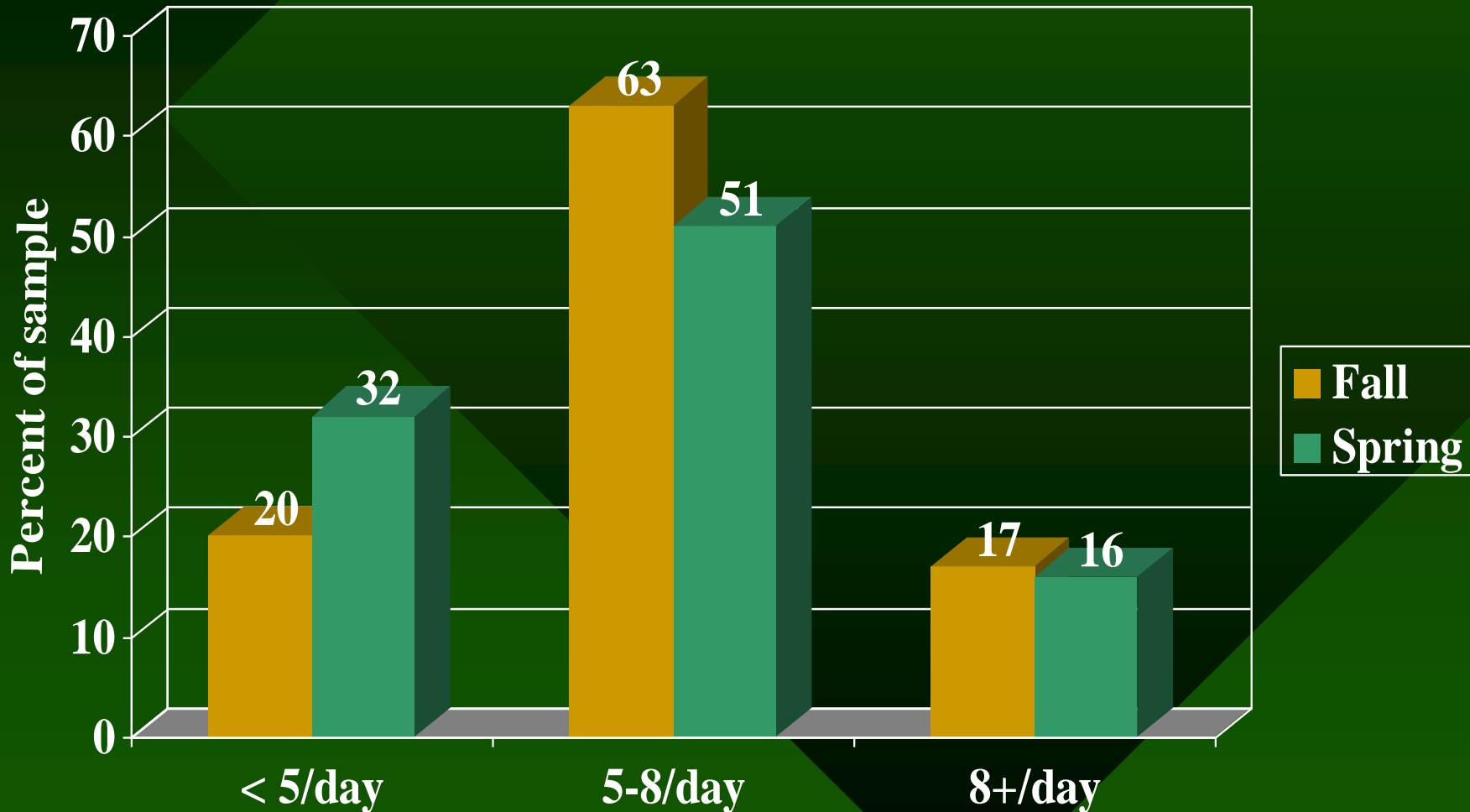
Fall

	Total	Vegetable	Fruit	Juice
Mean (SD)	7.3 (3.1)	4.1 (2.2)	2.1 (1.3)	1.1 (0.7)
Median	7.1	3.8	1.9	1.0
20th Percentile	5.0	2.2	0.9	0.6
40th Percentile	6.7	3.2	1.7	0.8
60th Percentile	7.7	4.3	2.3	1.0
80th Percentile	8.9	5.5	3.4	1.6

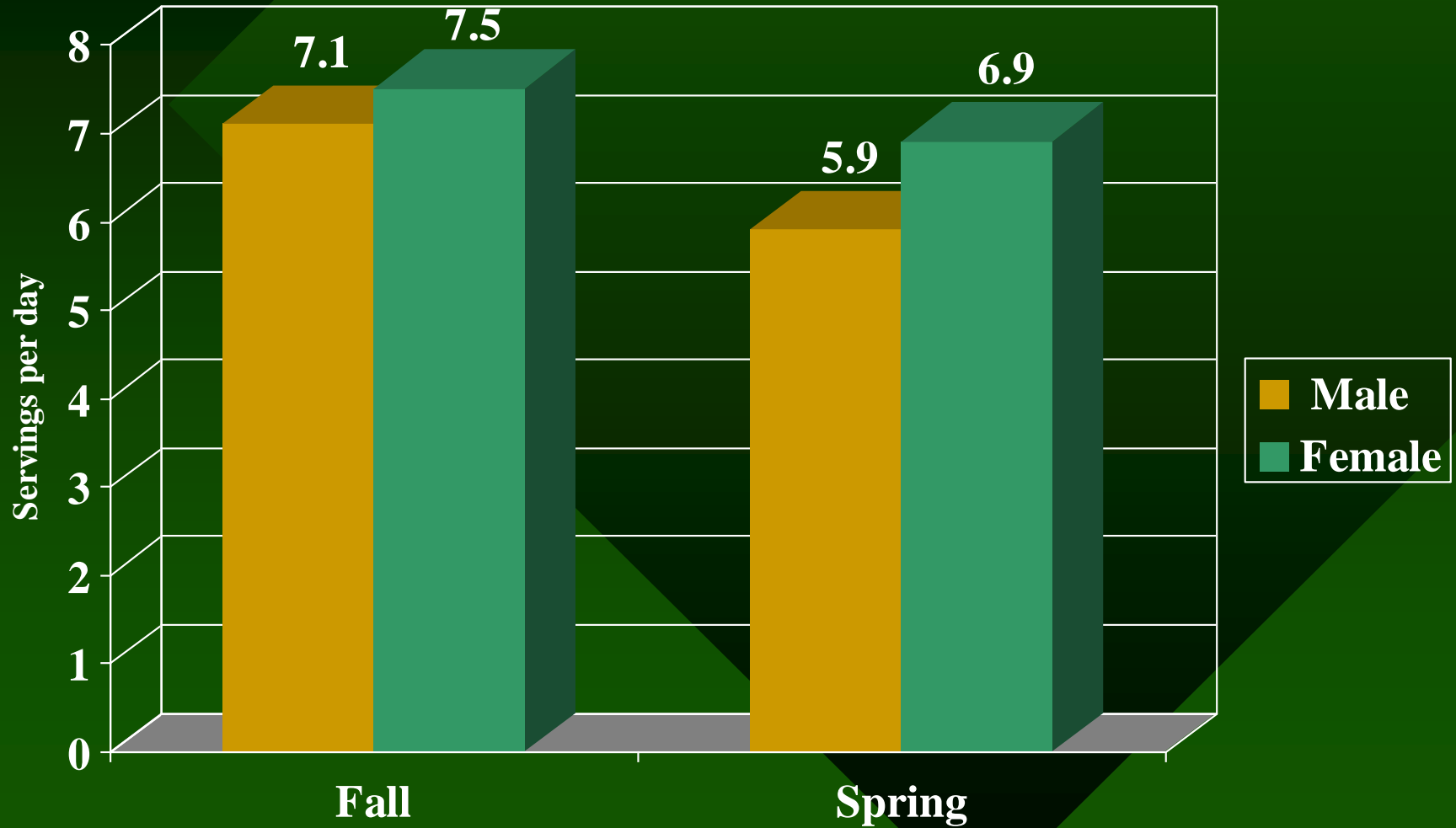
Vegetable, Fruit & Juice Intake Spring

	Total	Vegetable	Fruit	Juice
Mean (SD)	6.5 (2.9)	3.4 (2.0)	1.9 (1.1)	1.2 (0.7)
Median	5.9	2.9	1.8	1.0
20th Percentile	5.4	2.0	1.0	0.5
40th Percentile	5.4	2.7	1.5	1.0
60th Percentile	6.6	3.2	2.0	1.3
80th Percentile	8.5	4.7	2.6	1.6

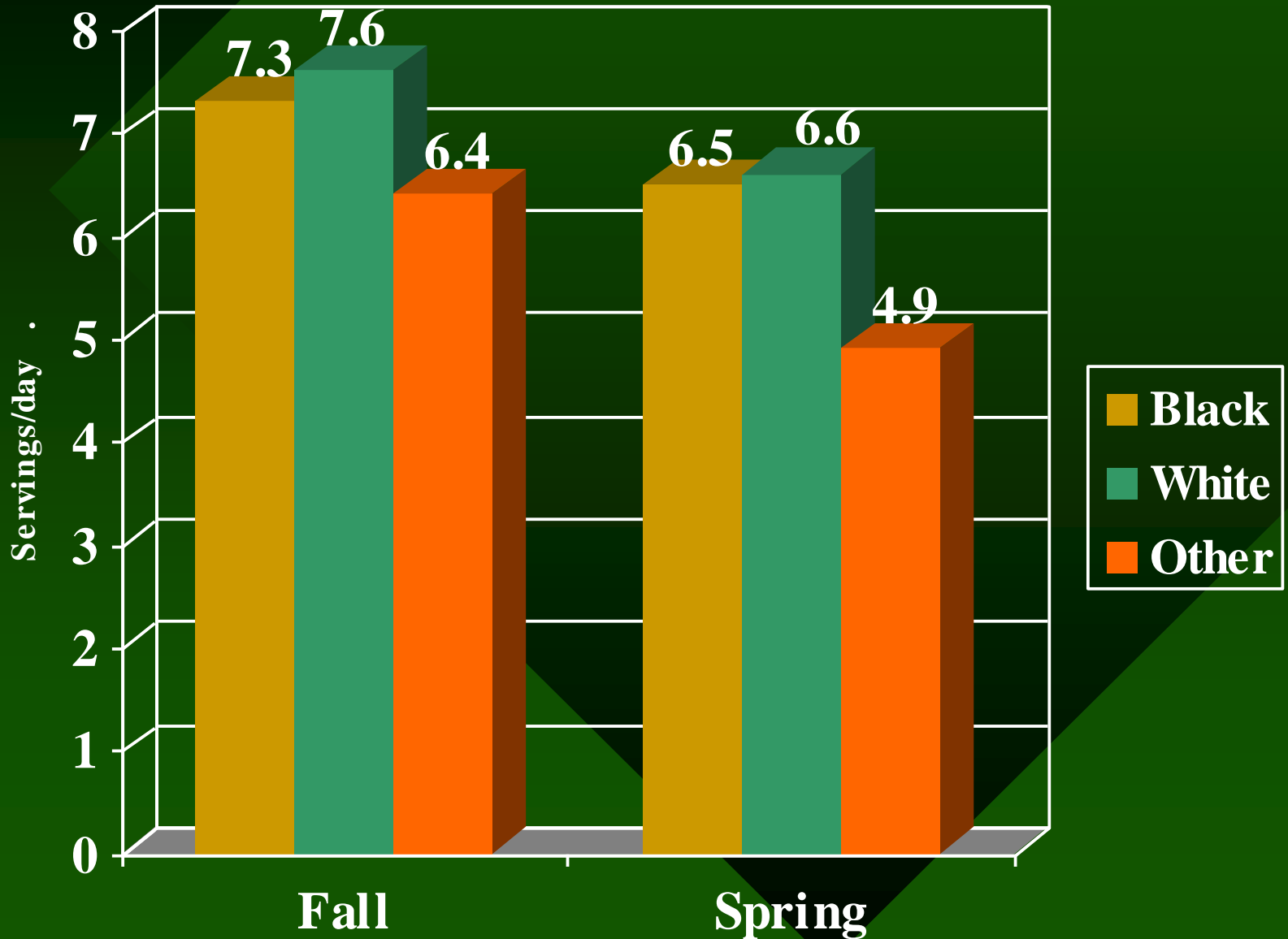
Are We Meeting the 5-A-Day Target?



Fruit and Vegetable Consumption Gender

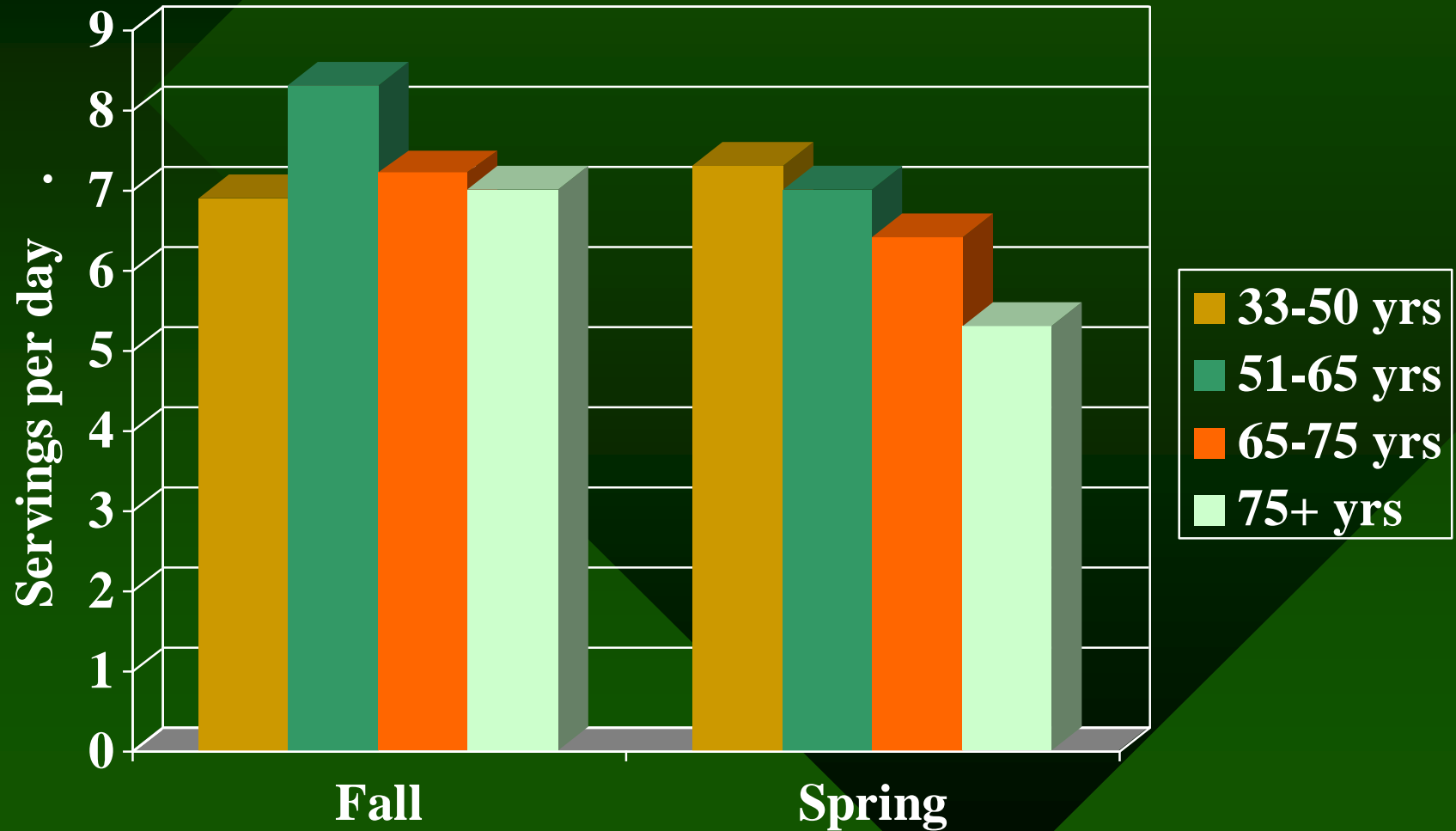


Fruit and Vegetable Consumption Race

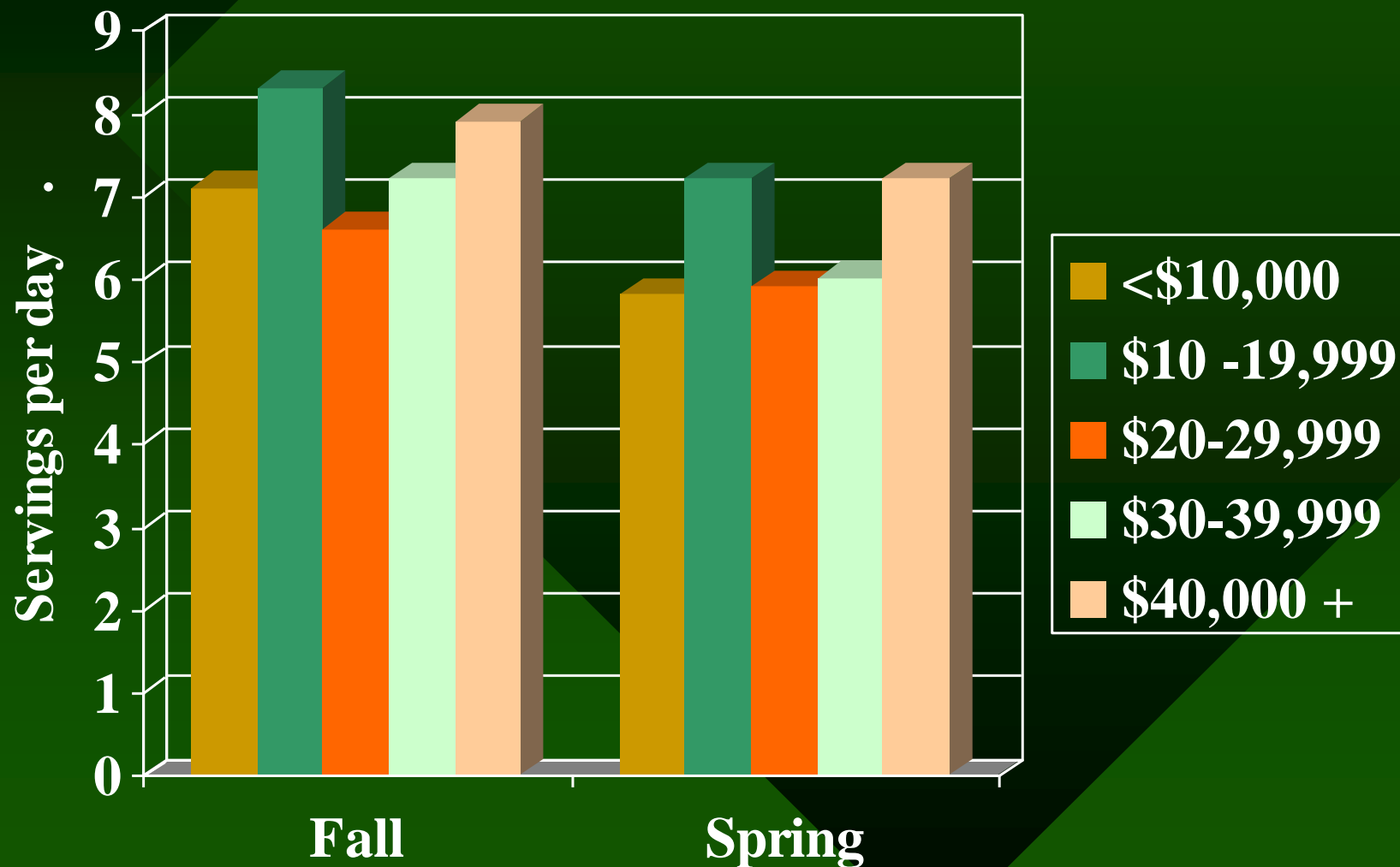


Fruit and Vegetable Consumption

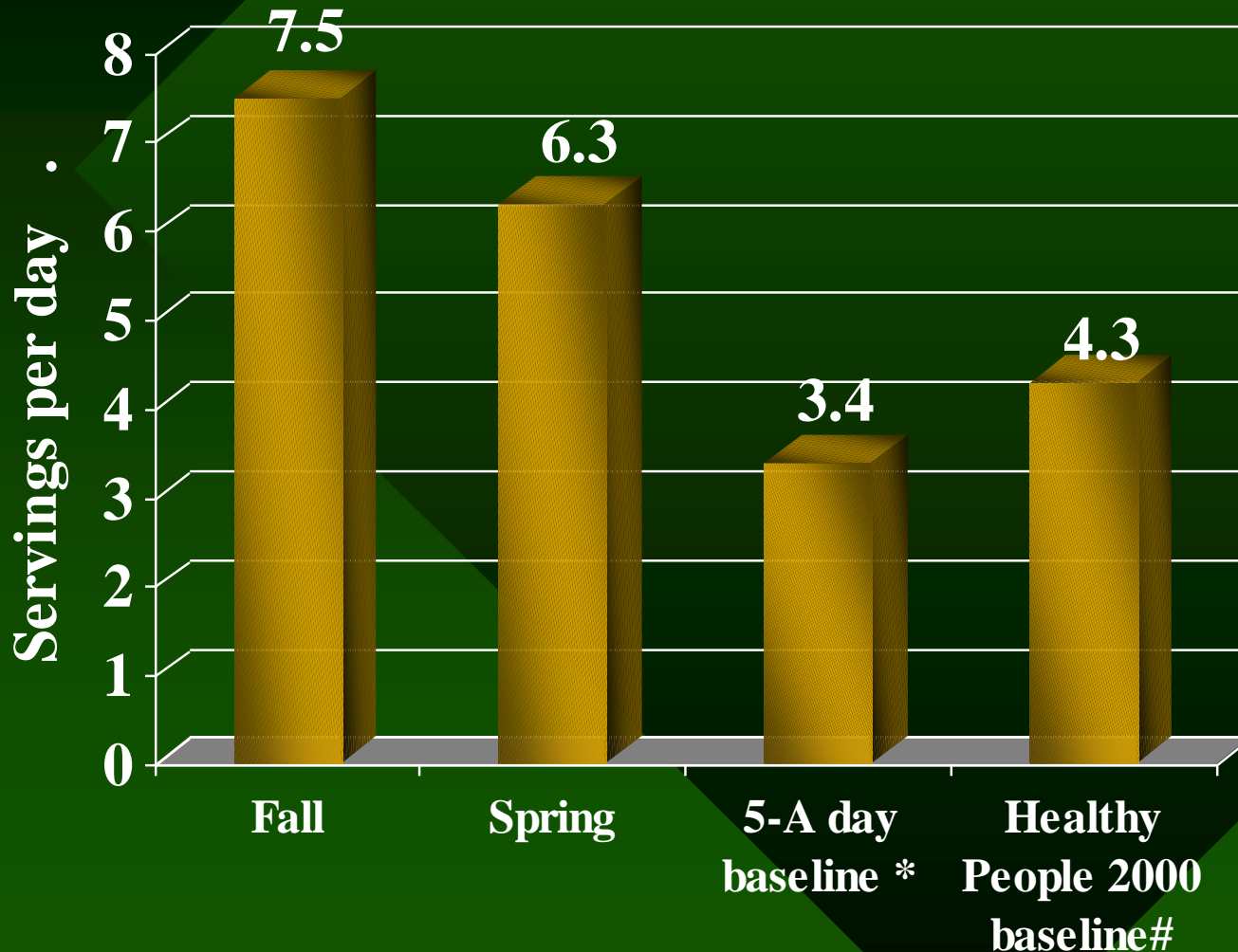
Age



Fruit and Vegetable Consumption Income



Comparing Results with Other Studies



■ Servings per day

* AJHP, 1995
AJPH, 1995

Top Five Vegetables

Fall

- Tomato
- Potato (no french fries)
- Greens (Collard, Kale, Mustard etc.)
- Salad
- Peas / Beans

Spring

- Tomato
- Potato (no french fries)
- Greens (Collard, Kale, Mustard etc.)
- Salad
- Carrots



Types of Fat Used in Preparing Vegetables

Fat Type	Percentage	Score
Butter, Oil Margarine	99%	1-21 times Mean: 9.8
Salty High Fat Meats	53%	1-11 times Mean: 1.8
Mayo/ Salad Dressing	93%	1-9 times Mean: 3.2
Low Fat Meats	33%	1-19 times Mean: 5.5

Conclusions Phase I



- Urban community gardeners in Cleveland consume higher amounts of fruits and vegetables.
- 70 - 80 % of the gardeners consume at least 5 servings of fruits and vegetables per day.
- A large proportion of gardeners use high fat / high salt ingredients to season.

Objectives of the Study Phase II

To design an intervention to:

- inform the gardeners of the results
- reinforce the benefits of consuming fruits and vegetables
- promote healthy ways of preparing fruits and vegetables
- promote growing a variety of nutrient dense vegetables

INTERVENTION

Workshops for gardeners

- Congratulations for meeting the Healthy People 2000 goal
- Why are fruits and vegetables important?
- How does gardening help the gardener?
- Benefits to the community
- Seasoning options - Make it Healthy
- How to eat more fruits and vegetables

INTERVENTION

- Recipe book with low salt, low fat recipes
- Suggestions for growing nutrient dense garden
- Monthly feature in Common Ground Newsletter - focus on low salt, low fat recipes using what is available from the garden
- Recipe contests – encourage gardeners to submit their favorite low-fat, low-salt recipes

EVALUATION

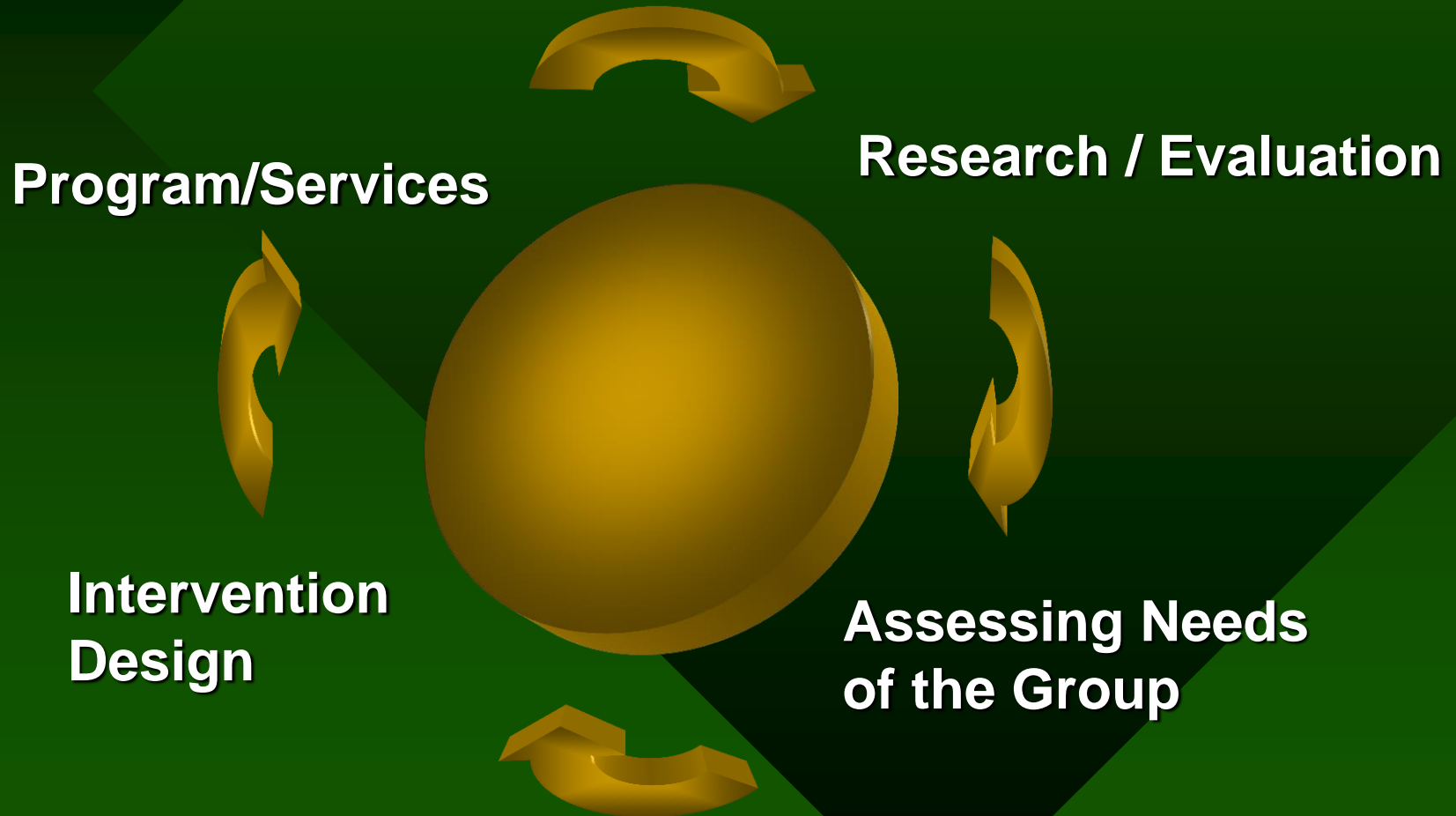
- Gardening for Better Health workshops offered at six different neighborhood sites - 149 community gardeners participated.
- 43 % of the gardeners were using healthy seasonings to prepare their vegetables and greens before the intervention.
- After the intervention, an additional 27% said they plan to use healthy seasonings for vegetables and, an additional 16% for greens.

Highlights Of The Study

- Collaborative effort between
 - EFNEP
 - FCS
 - Urban Gardening program

A Full Circle

Bringing Research to Benefit the Community



Plans for the Future

- Extend programming to include workshops on healthy lifestyles
- Continue efforts in the monthly newsletter
- Use the results of the study for advocacy purposes