

UNIVERSITY OF THE DISTRICT OF COLUMBIA

CAUSES

COLLEGE OF AGRICULTURE, URBAN SUSTAINABILITY, AND ENVIRONMENTAL SCIENCES

Dwane Jones, Ph.D.
Dean



HEALTHY CITIES, HEALTHY PEOPLE

A Comprehensive Model for Food Security: Food Access + Nutritional Security

Dwane Jones, Ph.D., Assoc. AIA, ACC

Dean + Director of Land-Grant Programs

*College of Agriculture, Urban Sustainability, and Environmental
Sciences (CAUSES)*

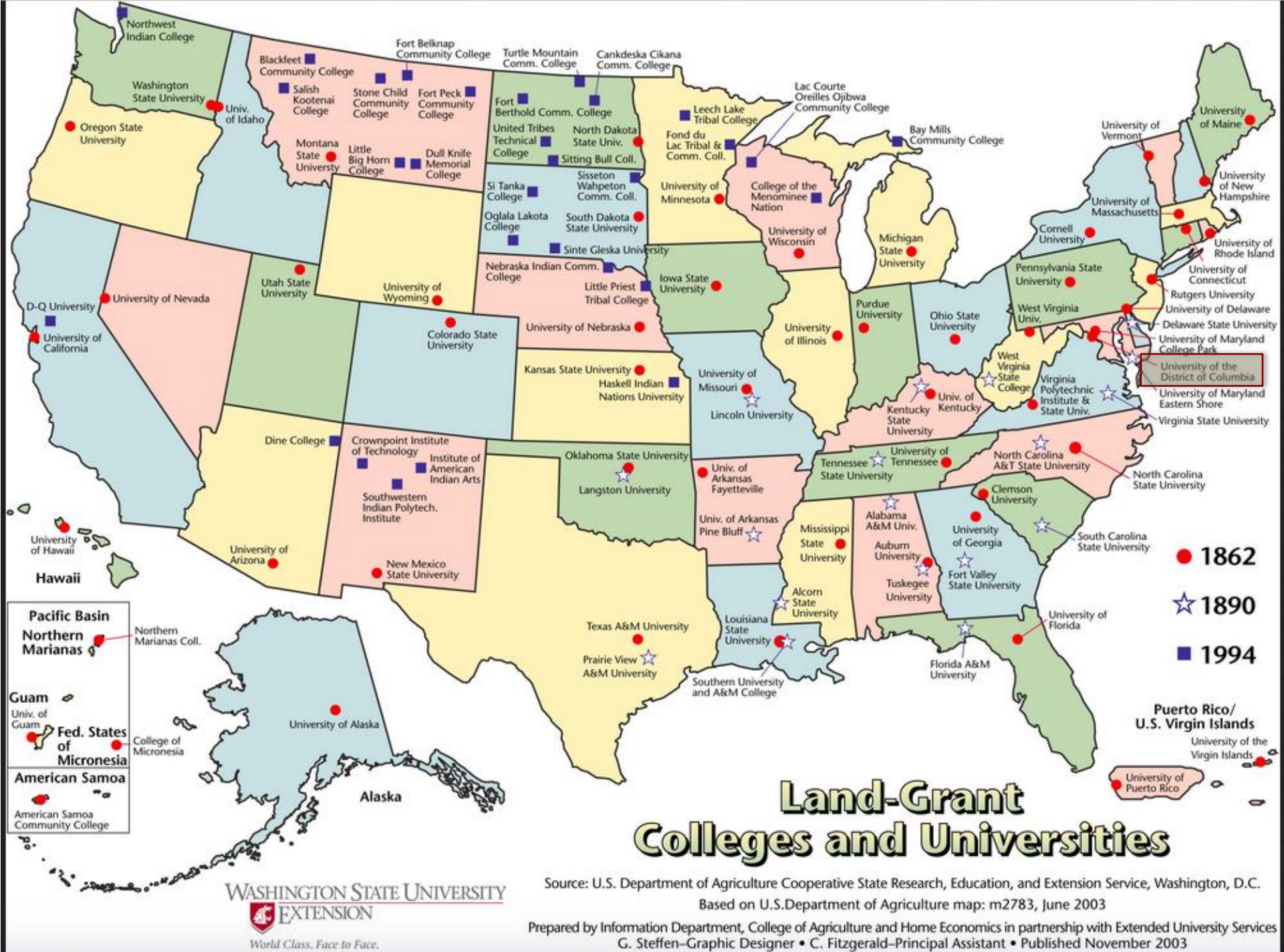
Washington, DC

Agenda

- Context
- Overview of CAUSES
- Current State of Agriculture in the U.S.
- A Model
- Questions + Comments

Context + Washington, DC + UDC





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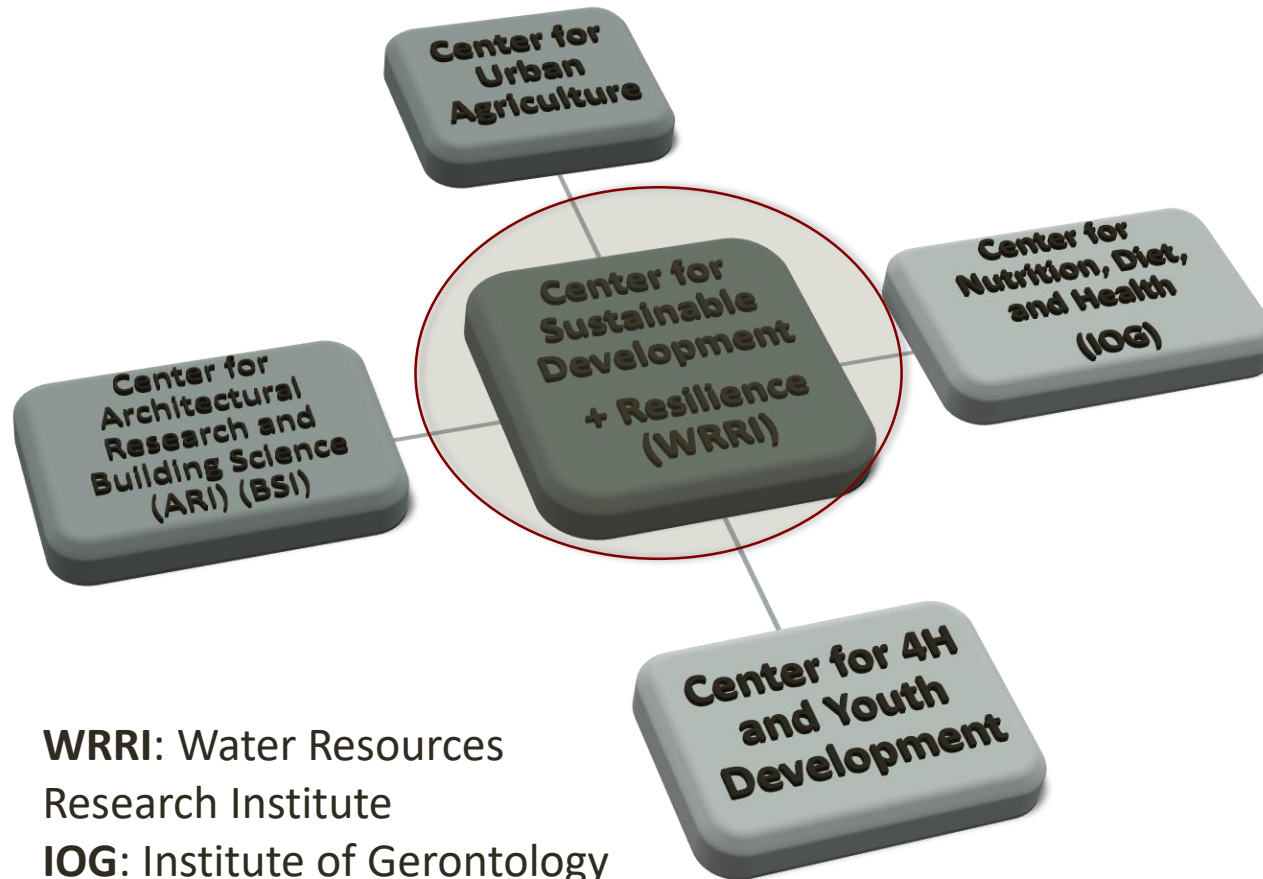
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Land-Grant Centers & Academic Programs in CAUSES

College of Agriculture, Urban Sustainability, and Environmental Sciences



WRRI: Water Resources
Research Institute

IOG: Institute of Gerontology

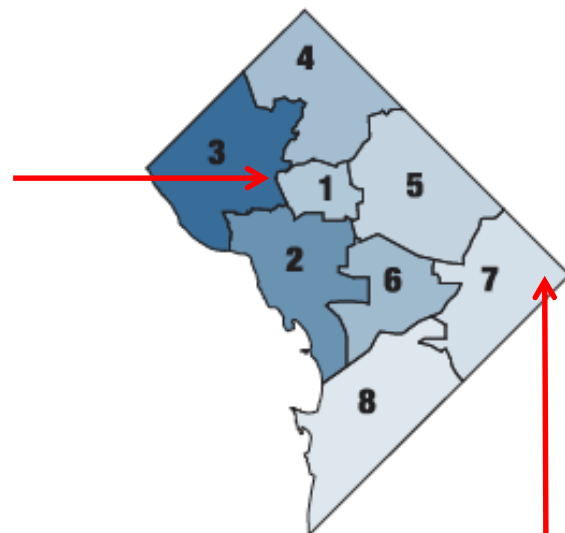
ARI: Architectural Research
Institute

BSI: Building Science Institute

Academic Programs

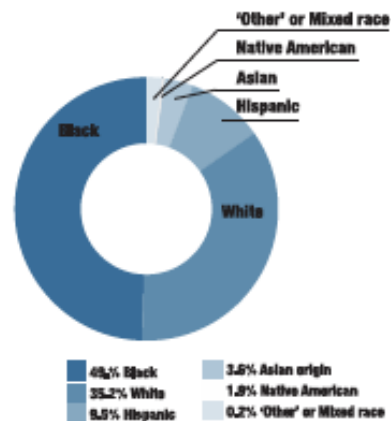
- Architecture & Community Planning + Master's
- Nutrition & Dietetics + Master's
- Urban Sustainability
- Health Education
- Nursing
- Master's-Water Resources Management
- Master's-Urban Sustainability
- Master's-Urban Ag
- PhD in Urban Leadership + Entrepreneurship

AVERAGE HOUSEHOLD INCOME BY WARD



Ward 1: \$98,485	Ward 5: \$78,559
Ward 2: \$190,692	Ward 6: \$120,526
Ward 3: \$257,386	Ward 7: \$54,667
Ward 4: \$116,668	Ward 8: \$44,076

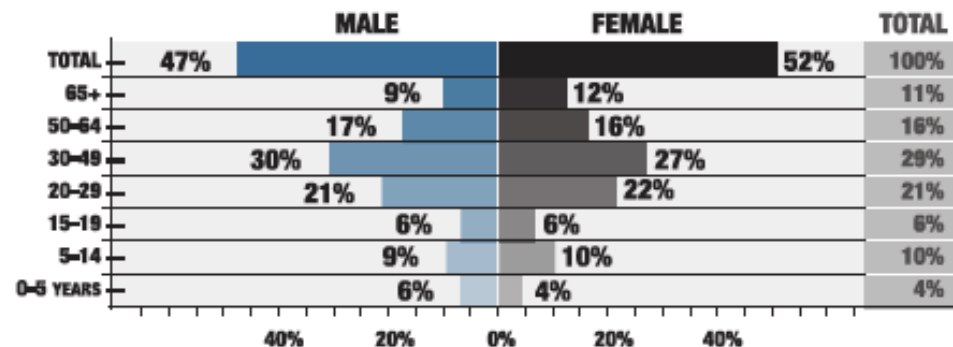
ETHNIC DIVERSITY AS % OF DC'S TOTAL POPULATION¹³



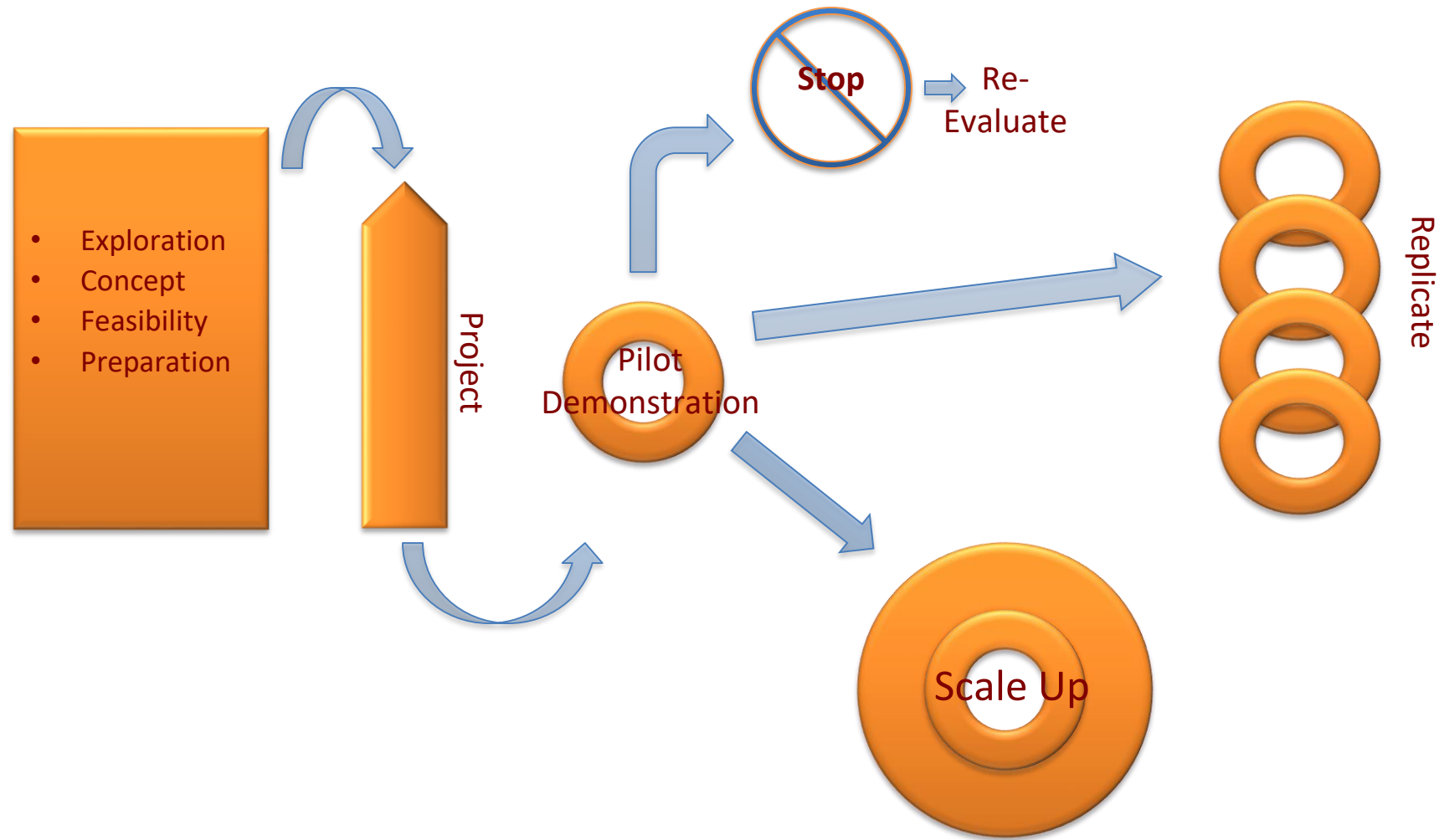
632,232:
TOTAL POPULATION
OF THE DISTRICT¹⁴



PERCENTAGE OF RESIDENTS BY GENDER AND AGE (2011)¹⁵



CAUSES Demonstration Project Model



Adapted from CCIA

U.S. Farm History

American agriculture and rural life underwent a tremendous transformation in the 20th century. **Early 20th century agriculture was labor intensive, and it took place on many small, diversified farms in rural areas where more than half the U.S. population lived.**

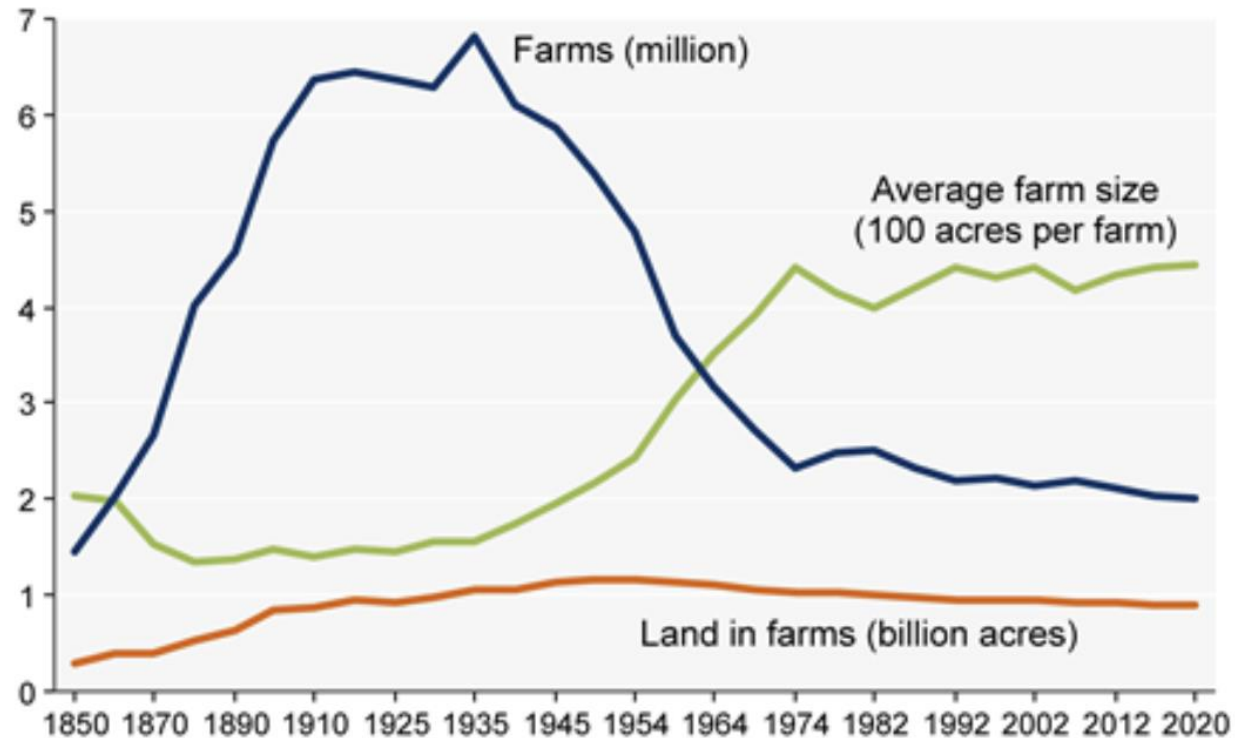
Agricultural production in the **21st century, on the other hand, is concentrated on a smaller number of large, specialized farms in rural areas where less than a fourth of the U.S. population lives.**

U.S. Farm History

The number of U.S. farms continues to decline slowly

Farms, land in farms, and average acres per farm, 1850-2020

Million farms, billion acres, or 100 acres per farm



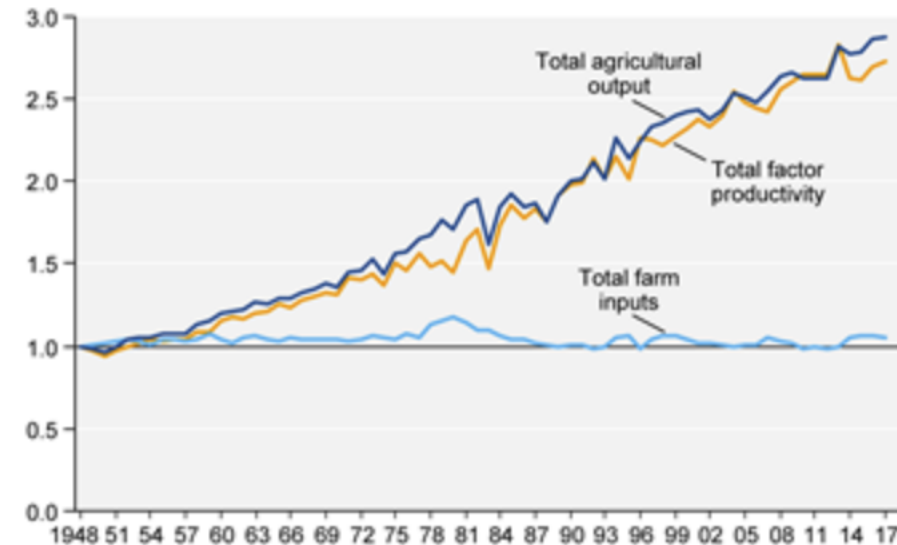
Source: USDA, Economic Research Service using data from USDA, National Agricultural Statistics Service, Census of Agriculture (through 2017) and *Farms and Land in Farms: 2020 Summary* (February 2021).

U.S. Farm History

Productivity growth is still the major driver of U.S. agricultural growth

Technological developments in agriculture have been influential in driving changes in the farm sector. Innovations in animal and crop genetics, chemicals, equipment, and farm organization have enabled continuing output growth without adding much to inputs. As a result, even as the amount of land and labor used in farming declined, total farm output nearly tripled between 1948 and 2017.

U.S. agricultural output, inputs, and total factor productivity
Index, 1948=1



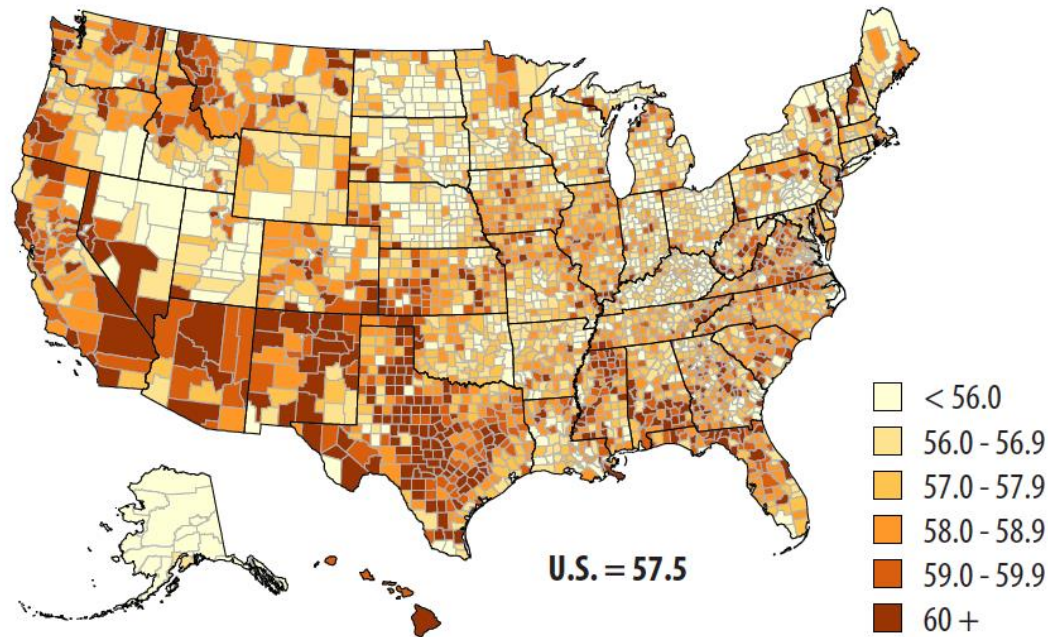
Source: USDA, Economic Research Service, *Agricultural Productivity in the U.S.* data series. Data as of January 2020.

U.S. Farm Statistics

Average Age Continues to Rise

The average age of all U.S. farm producers in 2017 was 57.5 years, up 1.2 years from 2012, continuing a long-term trend of aging in the U.S. producer population. Producers also tend to be experienced; they had been on their current farm an average of 21.3 years.

Average Age of Producers by County, 2017

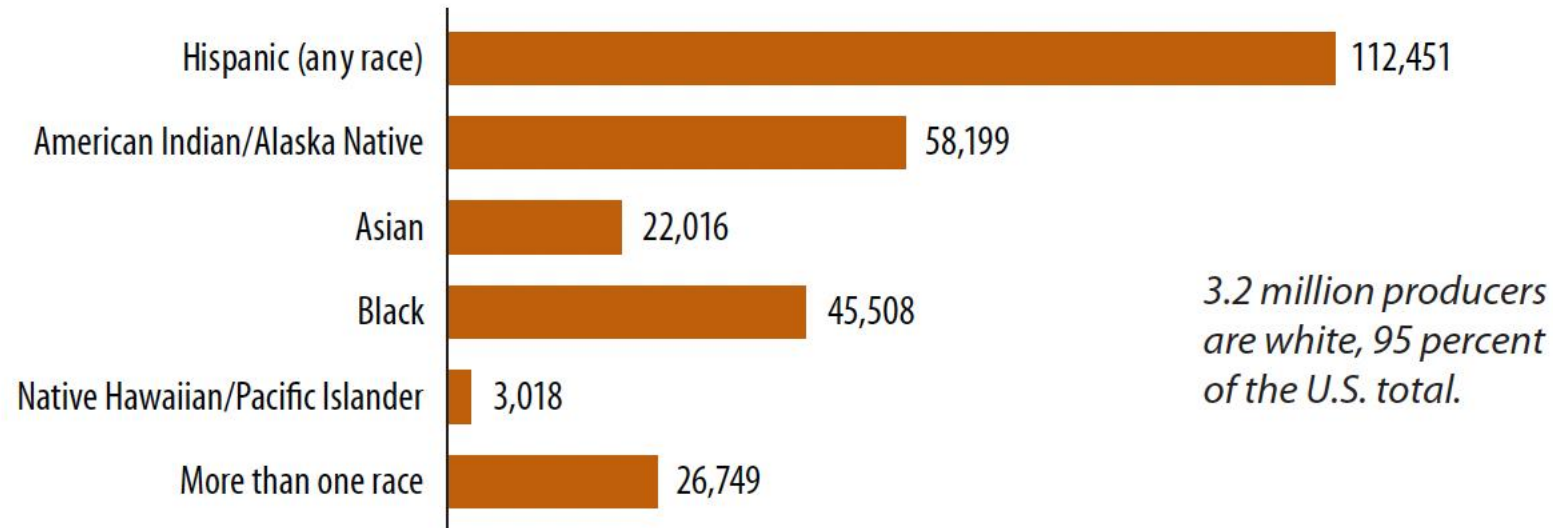


On average, producers are older in southern states and younger in Midwestern states.

U.S. Farm Statistics

Producers by Ethnicity and Race

Consistent with Office of Management and Budget specifications for federal statistical agencies, the Census of Agriculture asked separate questions for ethnicity and race.



U.S. Farm Statistics

Beginning Producers

Beginning farmers have ten or fewer years of farming experience. They were 27 percent of U.S. producers in 2017. Their average age was 46.3, and their farms were smaller than average in both acres and sales.

	Top States	%
<i>As a percent of producers in the state, Alaska ranks first in beginning farmers.</i>	Alaska	46
	Georgia	33
	Maine	33
	Hawaii	32
	Florida	31
	Rhode Island	31
	West Virginia	31
	New Hampshire	31
	Colorado	31



CAUSES URBAN FOOD SYSTEMS (HUBS)



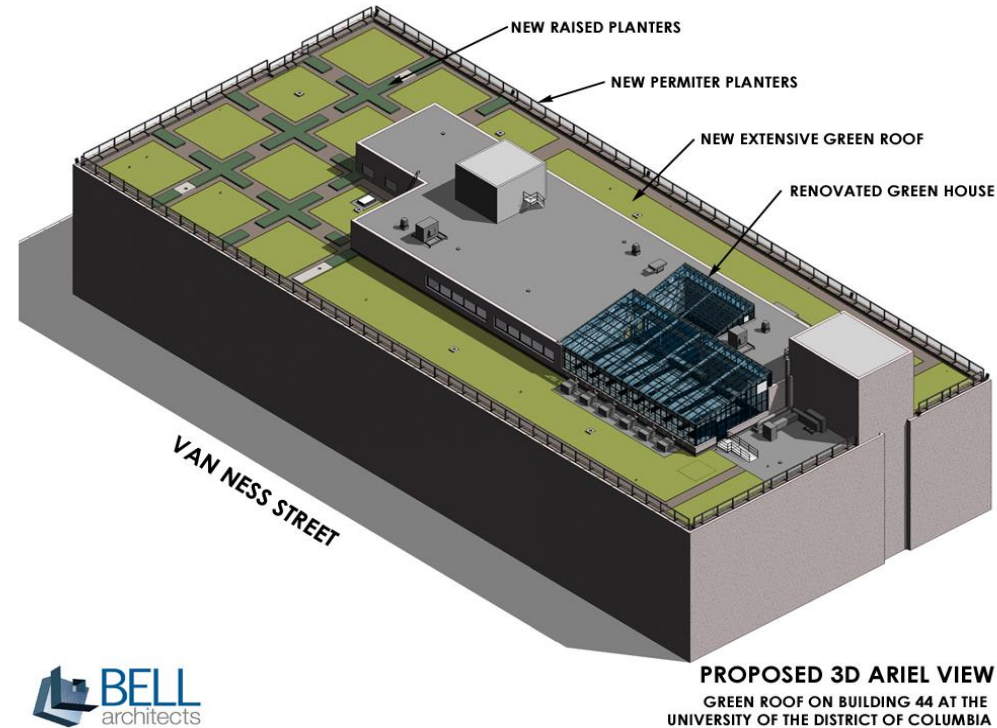
Jones & O'Hara© 2013

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"Healthy Cities-Healthy People"

dwane.jones@udc.edu

"Building for the Future"
UNIVERSITY OF THE DISTRICT OF COLUMBIA
CAPITAL CONSTRUCTION PROJECT



INSTALLATION OF GREEN ROOF & RENOVATION OF GREENHOUSE – BLDG 44

The green roof installation and renovation of the greenhouse on Building 44 created a living laboratory in support of the College of Agriculture, Urban Sustainability, and Environmental Sciences (CAUSES). The project added approximately 20,000 sq. ft. of green space and will feature water re-use irrigation systems and garden planters for urban agricultural research and demonstration.

Contractor: **CONSYS Inc.**
Architect: **BELL Architects**

Completion Date: **March 2015**

Food Security: Entrepreneurship + Charitable Donations



udc.edu/causes

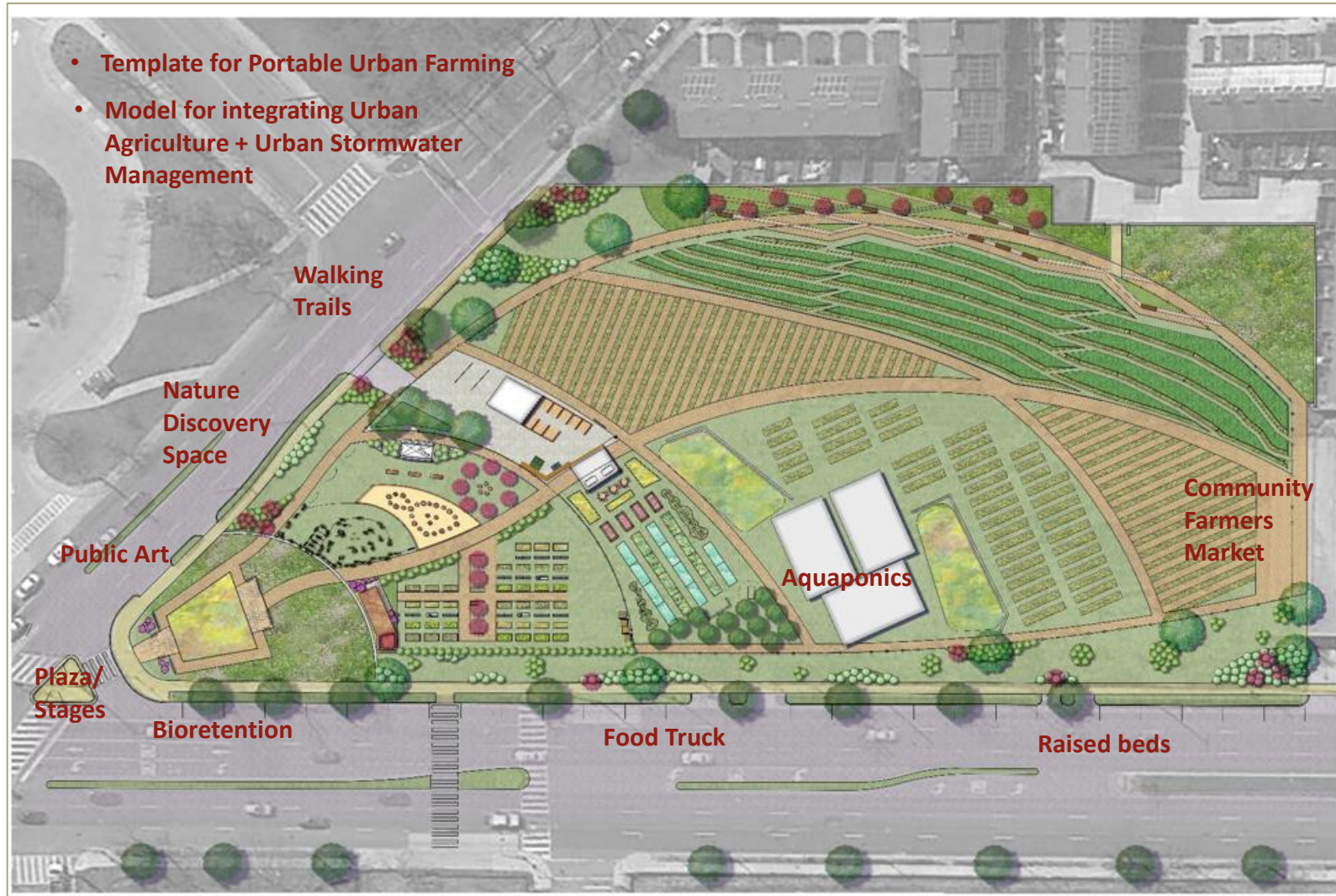
“Healthy Cities-Healthy People”

dwane.jones@udc.edu

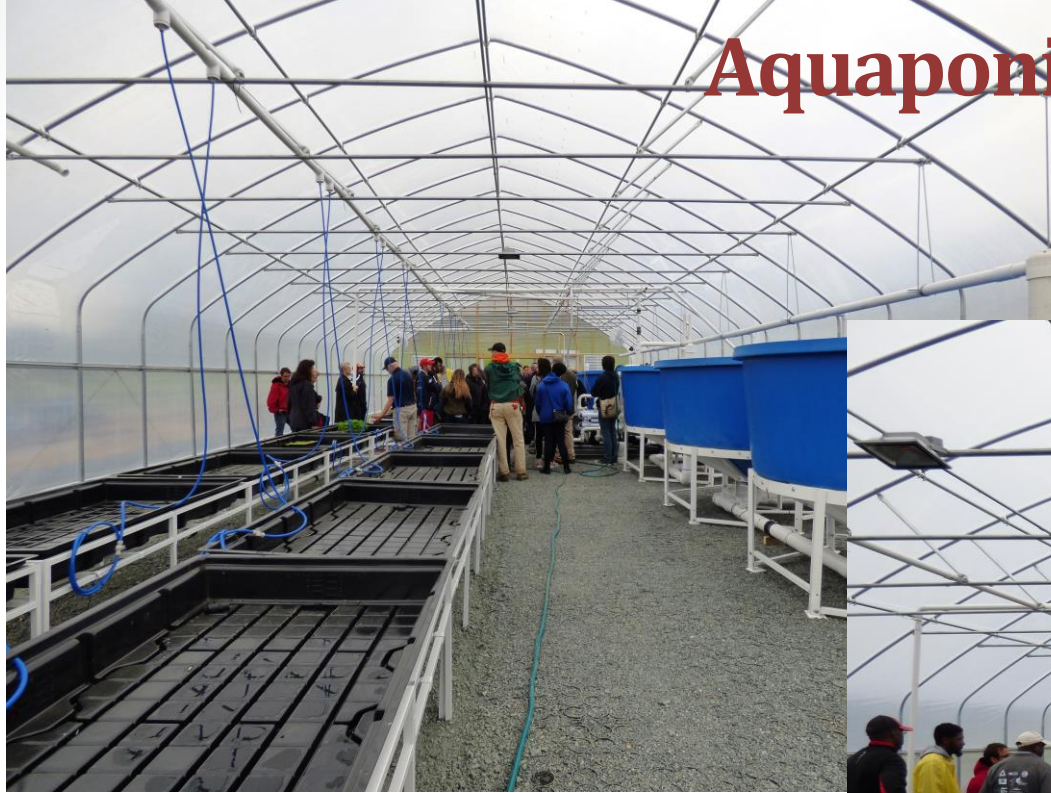
East Capitol Urban Farm



East Capitol Urban Farm (5901 East Capitol Street SE, WDC)



Aquaponics



Aquaponics



UDC CAUSES

URBAN FOOD HUBS

UNIVERSITY OF
DISTRICT OF
COLUMBIA
1871

EPRI | ELECTRIC POWER
RESEARCH INSTITUTE

pepco.
An Edison Company

AN INNOVATIVE CONTAINER FOOD PRODUCTION SYSTEM (AG. POD)

UDC – PEPCO

UDC - Ag. Po

Introduction

- PEPCO and install an [In Production Pod](#) at the Site.
- Using advanced Pod, we can food in a co short time.
- This type of operate 365 will help us problem.



Farmshelf Units



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Dean

Thank You ABFE!!



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