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NC STATE

Integrating Agriculture and Food Systems Climate Resilience Planning

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CEFS Director &

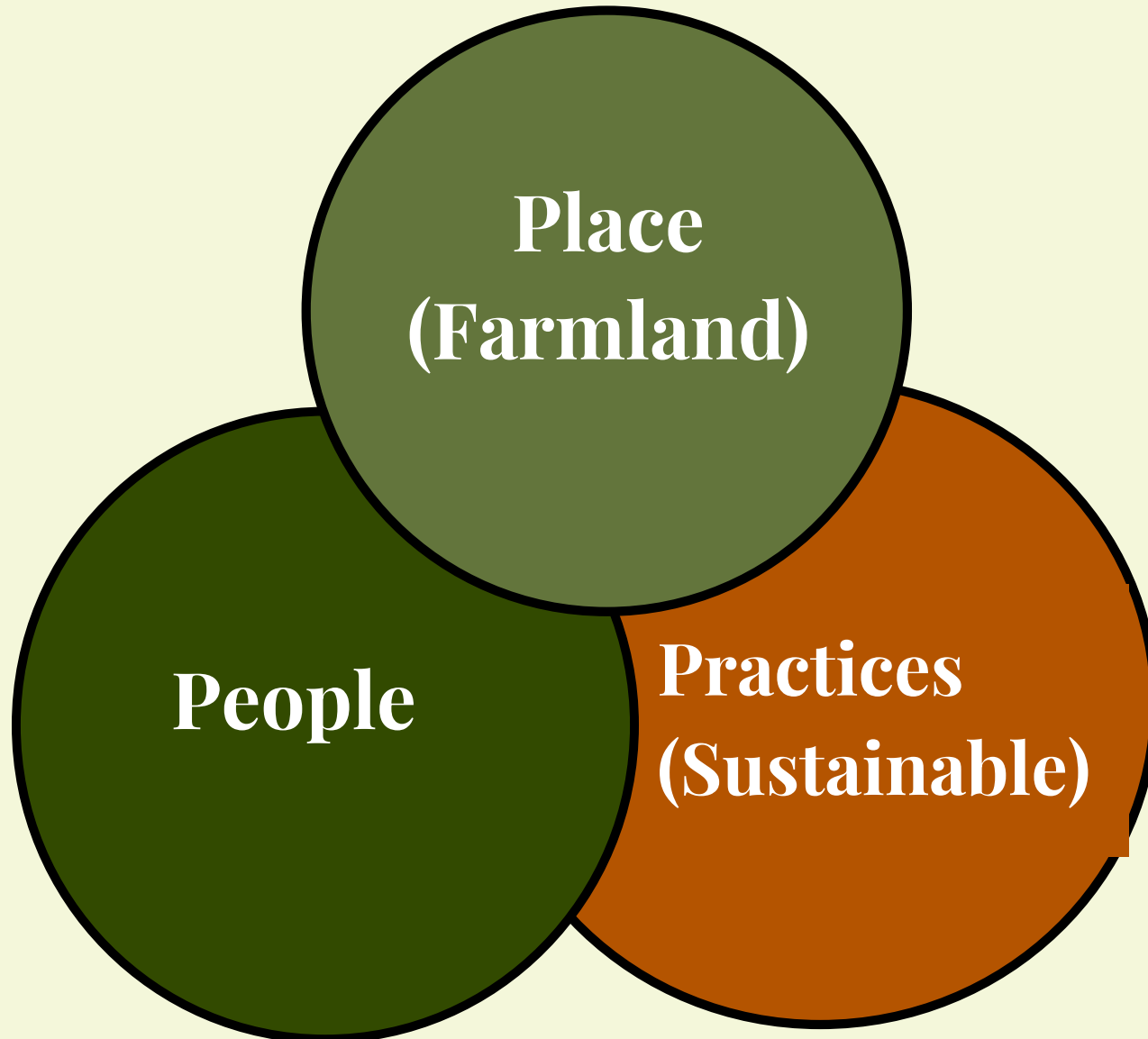
W.K. Kellogg Endowed Distinguished Chair in Sustainable
Community-Based Food Systems, NC State

Outline



1. **Chatham county agriculture and food system assets**
 - **NC Ag and Food Profiles**
1. **Agricultural farmland benefits**
 - **Considerations for planning**
1. **Local food systems support community resilience**
1. **Supporting farmers in sustainable/climate smart agriculture practices**
1. **Resources**

Climate Planning that Considers the 3 Ps



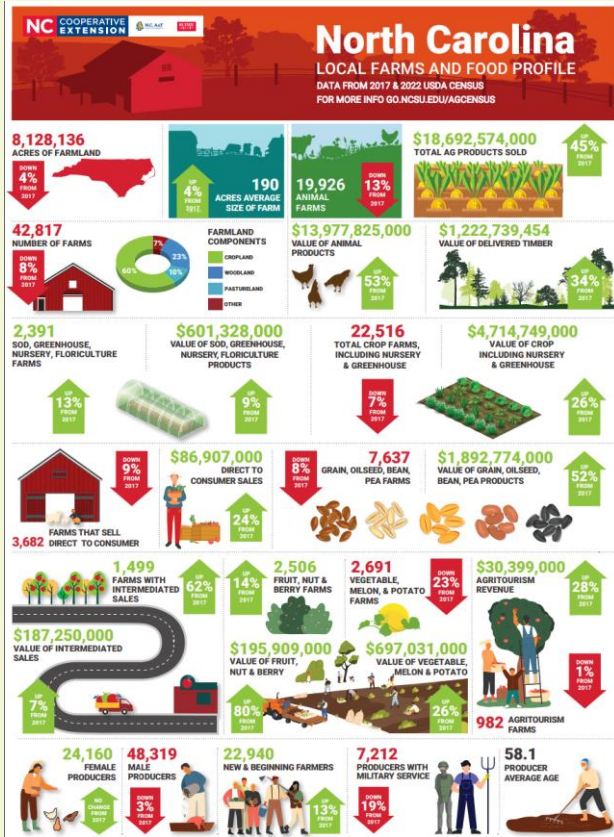


01. Chatham County Agriculture and Food Systems Assets

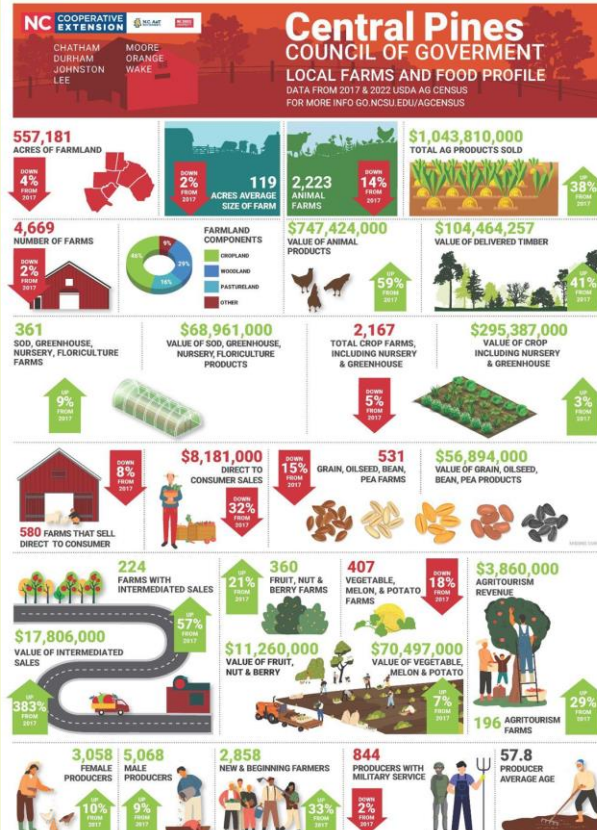
Chatham County Agriculture and Food Systems Assets



NC Local Farm + Food Profiles



NC



COG



Chatham

Chatham County

LOCAL FARMS AND FOOD PROFILE

DATA FROM 2017 & 2022 USDA AG CENSUS
FOR MORE INFO GO.NCSU.EDU/AGCENSUS

114,051

ACRES OF FARMLAND

**106**
ACRES AVERAGE
SIZE OF FARM**663**
ANIMAL
FARMS**\$339,566,000**

TOTAL AG PRODUCTS SOLD

**1,076**

NUMBER OF FARMS

FARMLAND
COMPONENTS**\$322,685,000**VALUE OF ANIMAL
PRODUCTS**\$21,047,702**

VALUE OF DELIVERED TIMBER

**44**SOD, GREENHOUSE,
NURSERY, FLORICULTURE
FARMS**\$2,773,000**VALUE OF SOD, GREENHOUSE,
NURSERY, FLORICULTURE
PRODUCTS**365**TOTAL CROP FARMS,
INCLUDING NURSERY
& GREENHOUSE**\$16,881,000**VALUE OF CROP
INCLUDING NURSERY
& GREENHOUSE**106** FARMS THAT SELL
DIRECT TO CONSUMER**\$1,217,000**
DIRECT TO
CONSUMER SALES**36**
GRAIN, OILSEED, BEAN,
PEA FARMS**\$4,703,000**
VALUE OF GRAIN, OILSEED,
BEAN, PEA PRODUCTS**56** FARMS WITH
INTERMEDIATED SALES**\$1,579,000**
VALUE OF INTERMEDIATED
SALES**38**
FRUIT, NUT &
BERRY FARMS**\$477,000**
VALUE OF FRUIT,
NUT & BERRY**55**
VEGETABLE,
MELON, & POTATO
FARMS**\$1,170,000**
VALUE OF VEGETABLE,
MELON & POTATO**\$325,000**
AGRITOURISM
REVENUE**24** AGRITOURISM
FARMS**725**FEMALE
PRODUCERS**1116**MALE
PRODUCERS**649**

NEW & BEGINNING FARMERS

**162**PRODUCERS WITH
MILITARY SERVICE**58.3**PRODUCER
AVERAGE AGE

Chatham Highlights

Up

Acres of Farmland- 8%

Total Ag Products sold- 98%

Value of Animal products- 102%

Direct to Consumer Sales- 9%

Farm with Intermediated Sales - 93%

Value of Intermediated Sales- 2489%

Vale of Grain, oil sd, bean- 91%

Agritourism revenue- 983%

Agritourism farms- 71%

New and Beg farmers- 32%

Down

No Farms- 4%

Sod,greenhouse,floriculture- 29%

Fruits, Nuts, & Berry farms- 34%

Crop, nursery farms- 6%

North Carolina's Agriculture Industry



\$111.1 Billion

Annual value of N.C. agriculture –
Extension connects producers with research,
tools and expertise that support their success.

**5.6x
multiplier**

**Access Your NC
Local Farm +
Food Profile**

go.ncsu.edu/agcensus



Agricultural Data Supports Local Community Planning Efforts

- Data can help drive discussions, especially now that there are three sets of profiles- What are the trends in your county and COG?
- Direct and intermediated sales are up.. Which programs and actors support a robust farm to fork economy?
- The county data shows good trend towards younger farmers. What programs can be created to support to maintain this important trend?
- **What are indicators you can monitor to examine success of policy and programs?**

02. Agricultural Farmland Benefits and Considerations for Planning

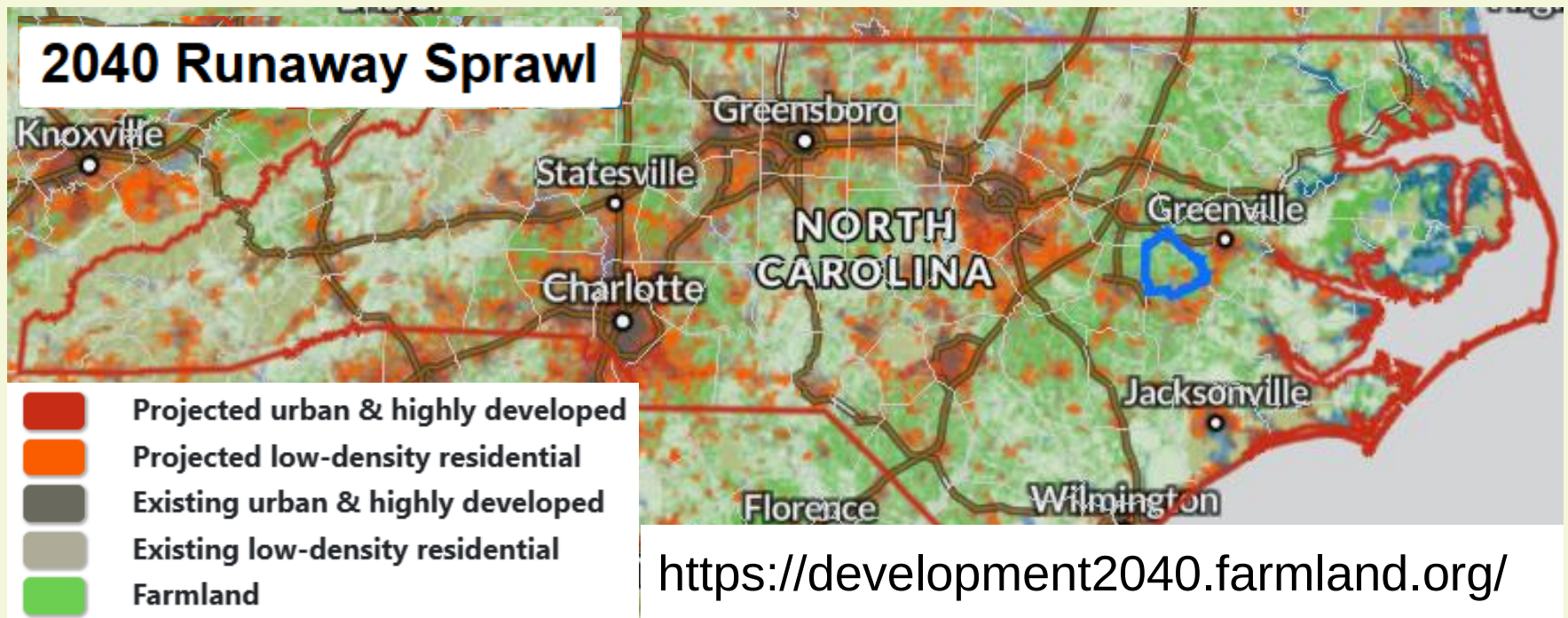
Biggest threat to agricultural land loss—**low density development & climate impacts**

- Farmland loss & fragmentation
- Reduced food production
- Environmental degradation
- Strain on infrastructure
- Increased conflict between urban and farming areas

2016 Baseline

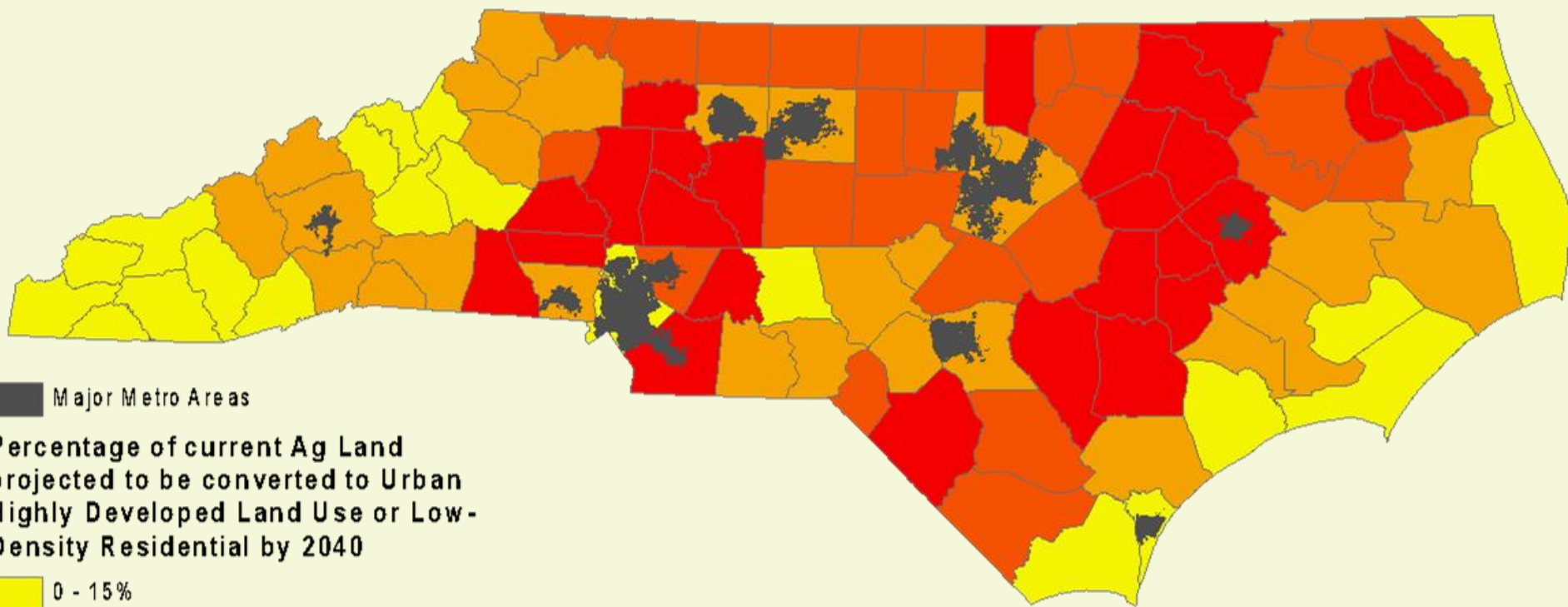


2040 Runaway Sprawl



<https://development2040.farmland.org/>

Projected Farmland Loss, 2016 - 2040

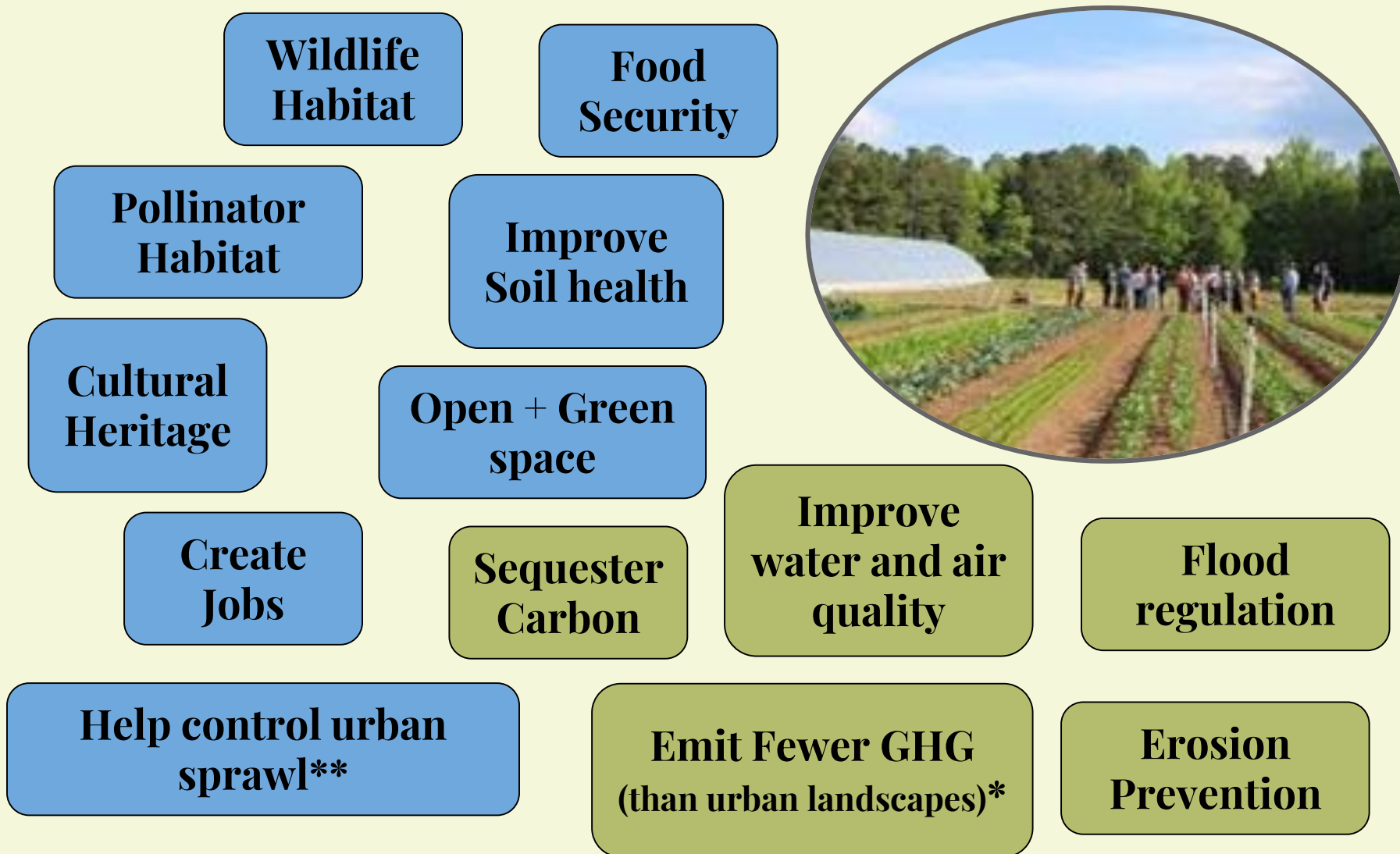


NC STATE EXTENSION

NC FarmLink

Source: American Farmland Trust: Farms Under Threat 2040 Report

Diverse Benefits from Farmland



The Biggest Bottleneck for New Farmers



**Access to
farmland &
capital**



Farmers need policies and programs to provide:

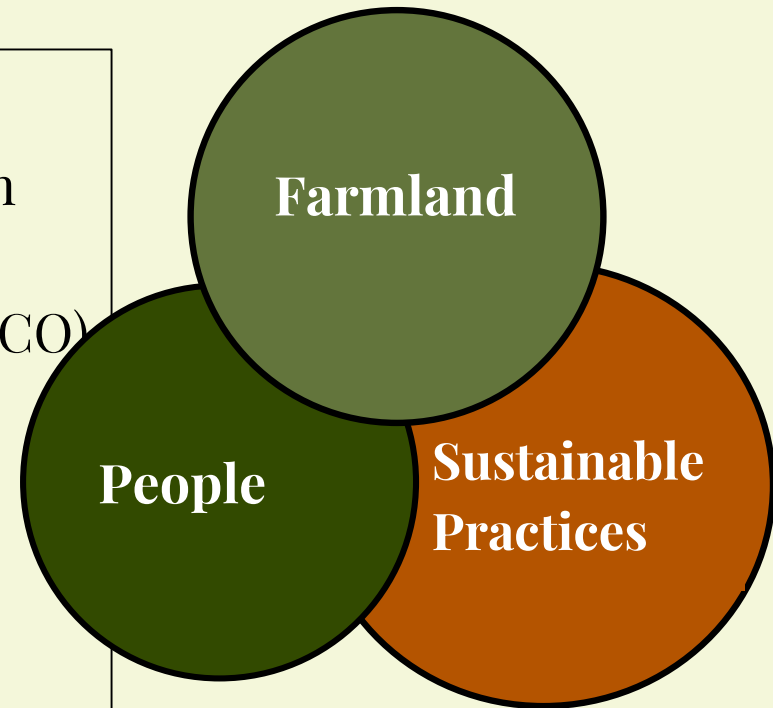
- Affordable farmland, leases, city land
- Affordable loans
- County grants, state and federal support

NC STATE EXTENSION

NC FarmLink

Agricultural Land Planning Considerations

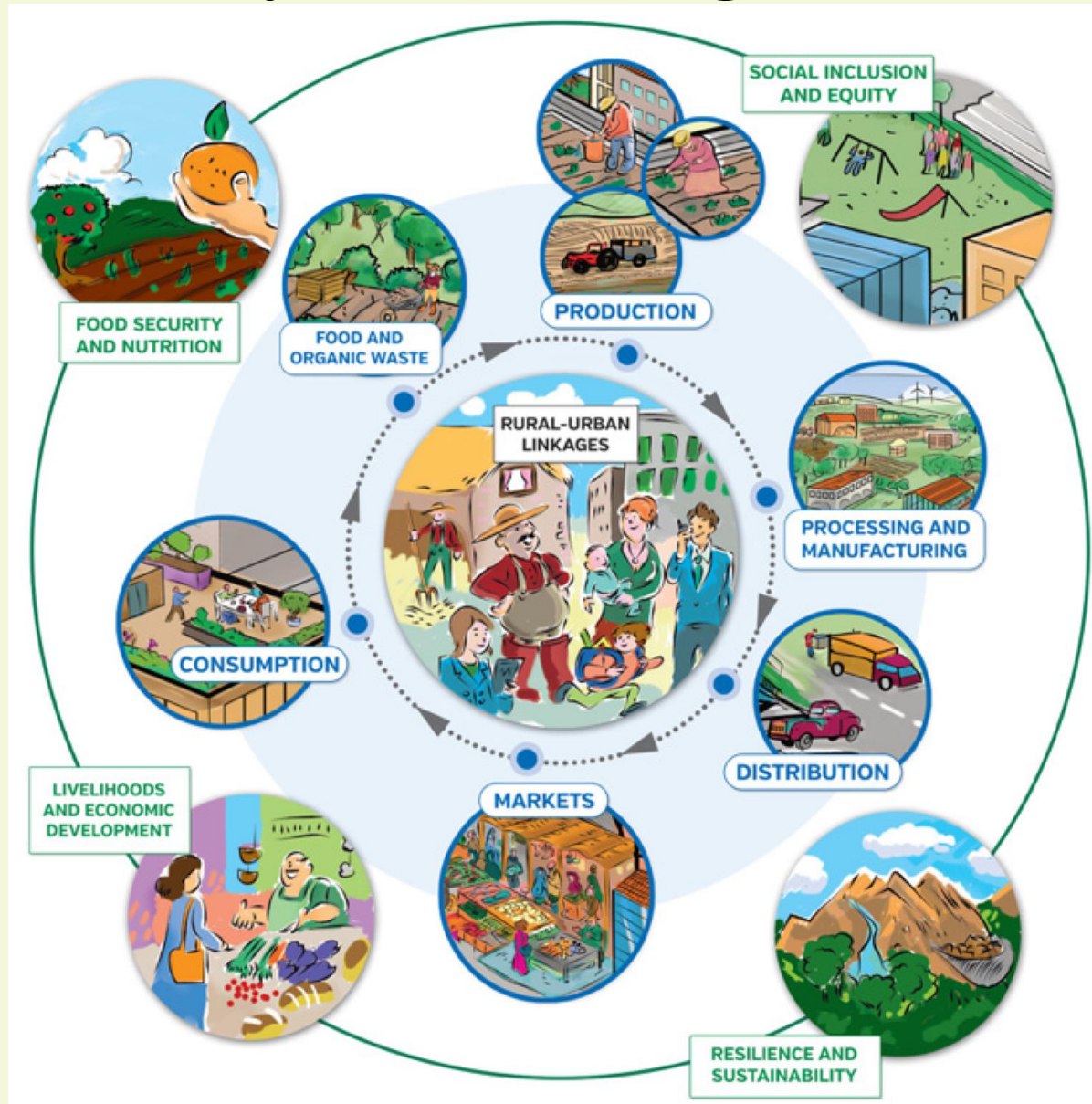
- Farmland conservation
 - Chatham Co Farmland Preservation Plan- 2025-2028
 - County owned trusts (e.g. Boulder, CO)
- Farmland access
 - Affordable, Appropriate, Secure
 - Leases vs. Purchases
 - Farm navigators & agile capital
- Farm Succession planning
- Grants for sustainable practices
- **Development that monitors farmland (similar to wetlands)**
 - Prime farmland; Nationally Significant farmland



03. Local food systems support community resilience

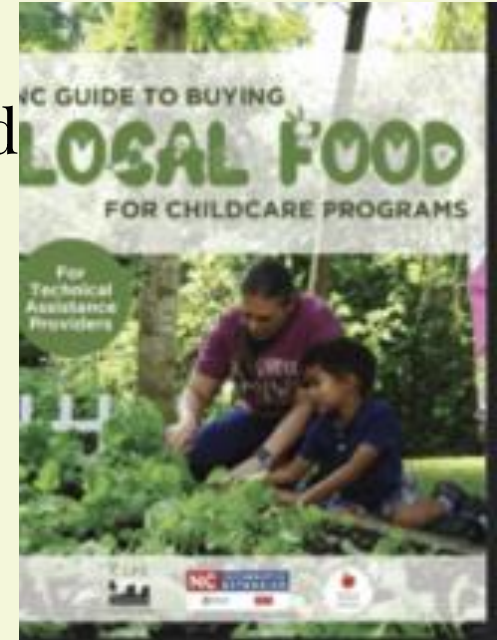


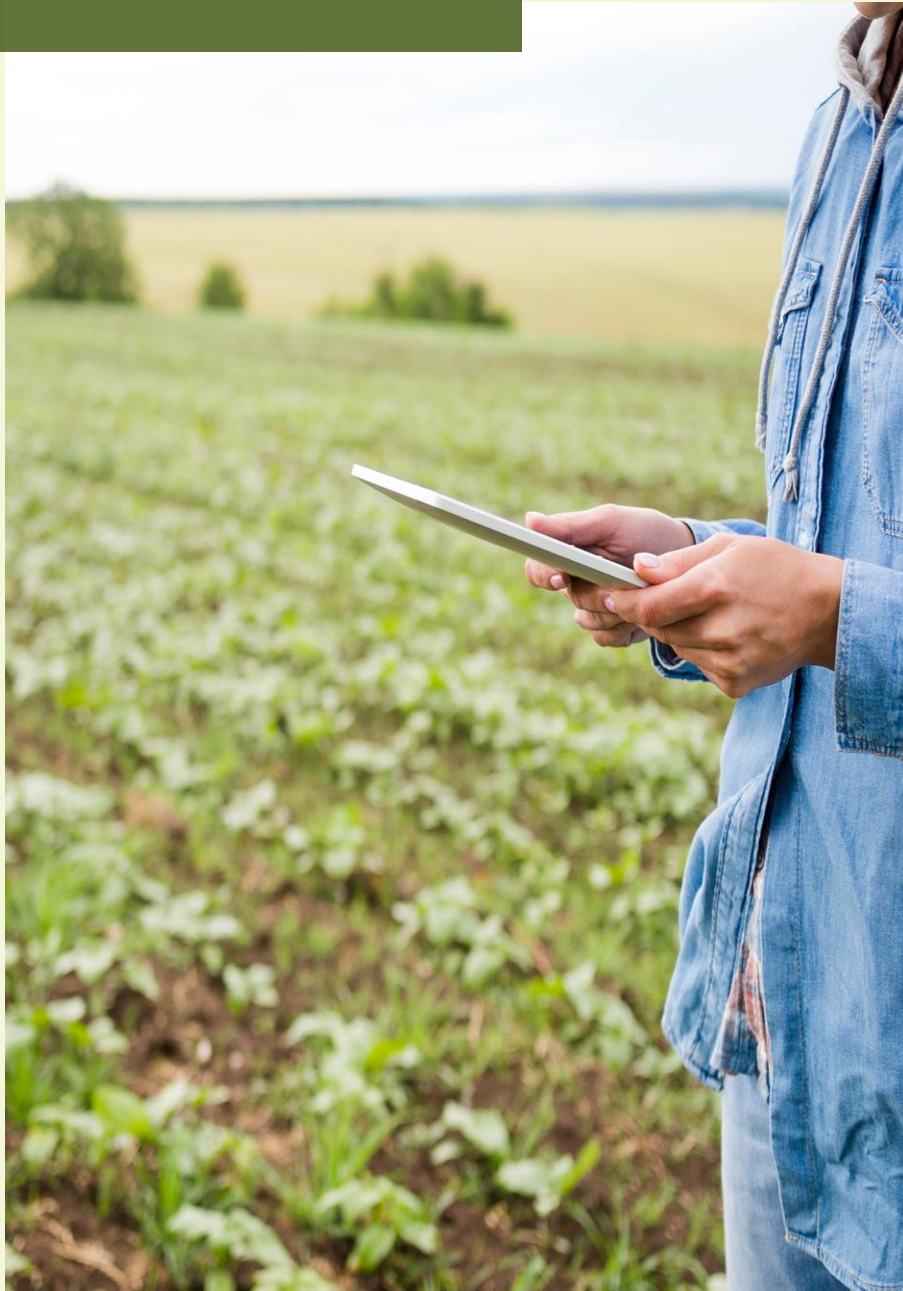
Local Food System Planning for Resilience



Local Food System Planning for Resilience

1. Increase access and availability of local food
 - Farmers markets & Institutional procurement
 - Promote Farm to school, child care and senior services local food purchases
2. Ag land conservation & education
3. Promote diverse crops and livestock
4. Invest in local food processing & distribution infrastructure
 - Local livestock processing
 - Cold storage
5. Prevent/reduce food waste
6. Include food and agriculture in disaster planning
7. Support Food Policy Councils





04. Supporting Farmers with Sustainable and Climate Smart Practices

Sustainable Agriculture Practices for Climate Resilience

Climate Smart Practices:

- Build carbon and add diversity
 - Cover crops, diverse rotations,
 - Add perennials- pasture, Agroforestry
 - Integrate livestock
- Reduce synthetic N inputs
 - Adding legumes- crops and cover crops
 - Organic inputs
- Protect crops/ extend growing season
 - Hoop houses, smaller row covers
- Cold storage on farm
- Supporting Sell & process locally



carolina farm
stewardship association

NC STATE EXTENSION
Local Food Program

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05. Resources

Resources

Data

- NC Ag & Food Profiles- go.ncsu.edu/agcensus
- NCDA Ag Statistics (yearly)-
<https://www.ncagr.gov/divisions/agricultural-statistics>
- USDA Ag Census (every 5 yrs): <https://www.nass.usda.gov/AgCensus/>
- USDA CroplandCROS- <https://croplandcros.scinet.usda.gov/>
- American Farmland Trust (Farms under Threat; Nationally Sig Farmland): <https://csp-fut.appspot.com/>
 - AMT -Farm Land Info- <https://farmlandinfo.org/>

Support:

- NC Farm Link- <https://ncfarmlink.ces.ncsu.edu/>
- S Sustainable Ag Research & Education: <https://southern.sare.org/>
- Counties with Climate Action Plans with Agriculture:
 - Orange County, NC
 - Ventura, CA- <https://egeneralplan.venturacounty.gov/>

Thank you! Questions?

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