

The Southeastern Pecan Industry Past, Present, and Future



C. Bock



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GUSS (Global Unmanned Spray System)

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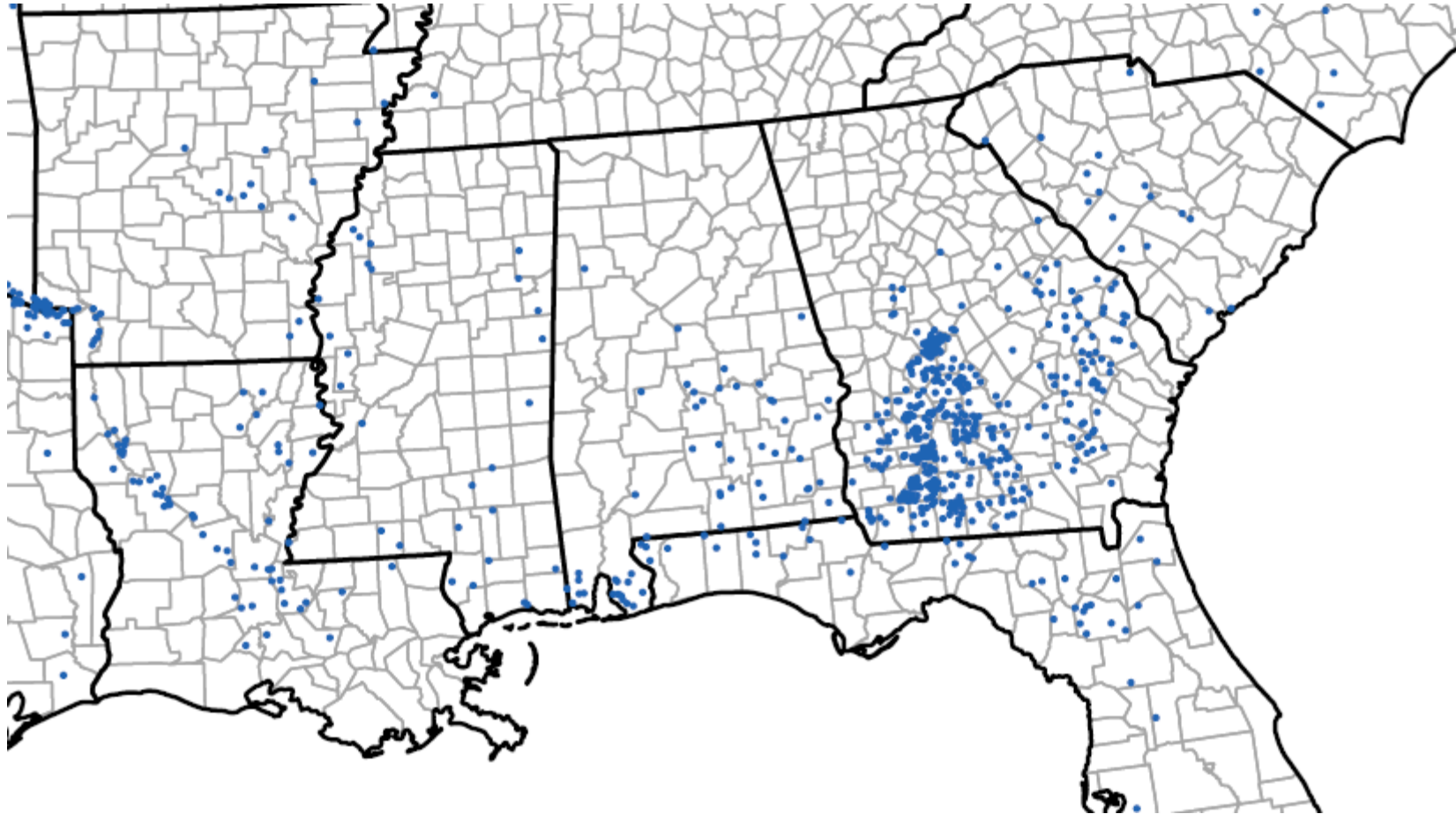
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Past, Present, Future

- *Past* – Briefly mention some things we have learned, to avoid mistakes now and in the future.
- *Present* – Focus on Southeastern production status and best management practices for today.
- *Future* – Where are we going? Dream about what can be for the industry, and briefly mention game-changing technology, research and promotion efforts.

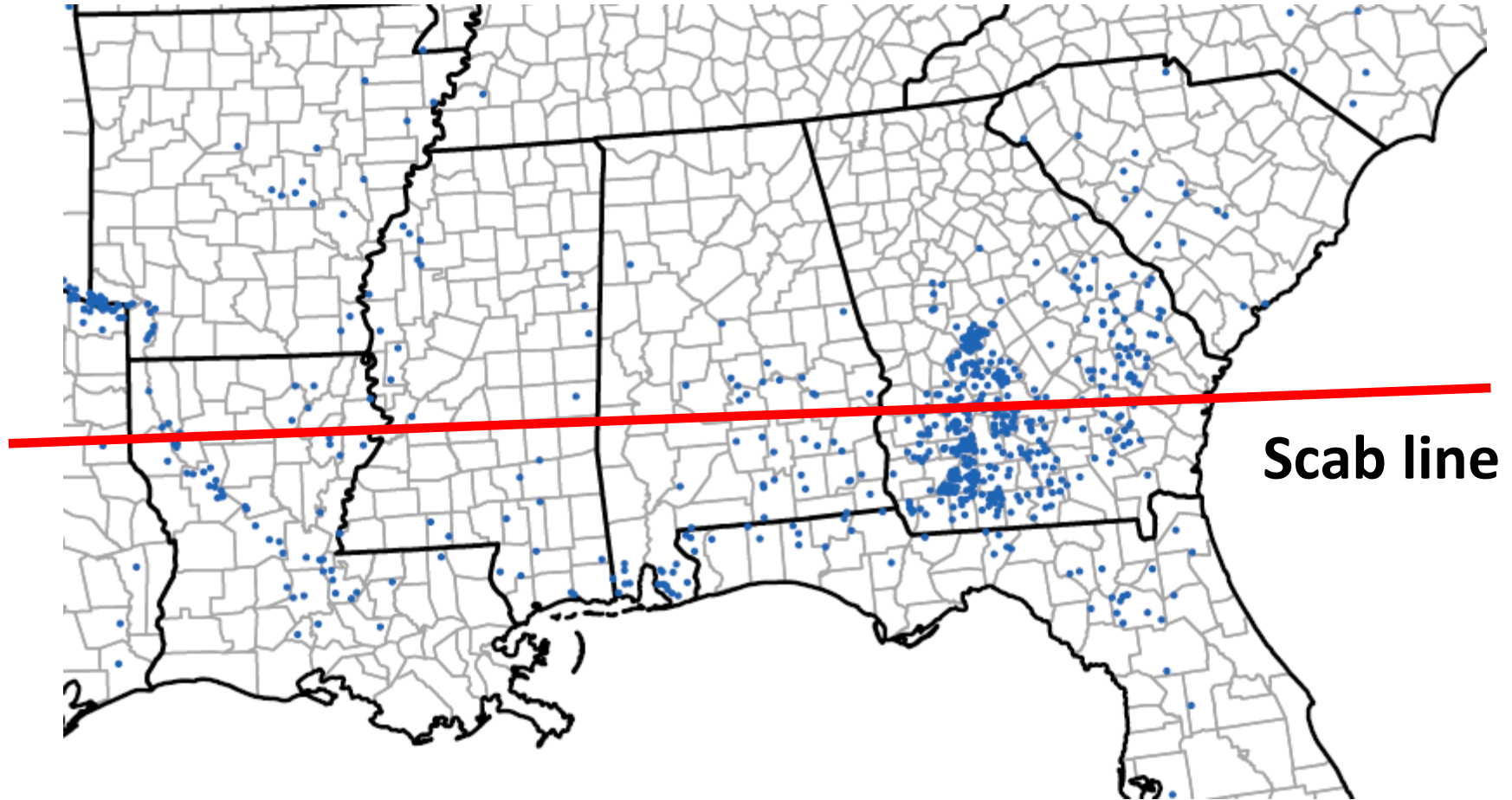
Acres of Pecans in the Southeast



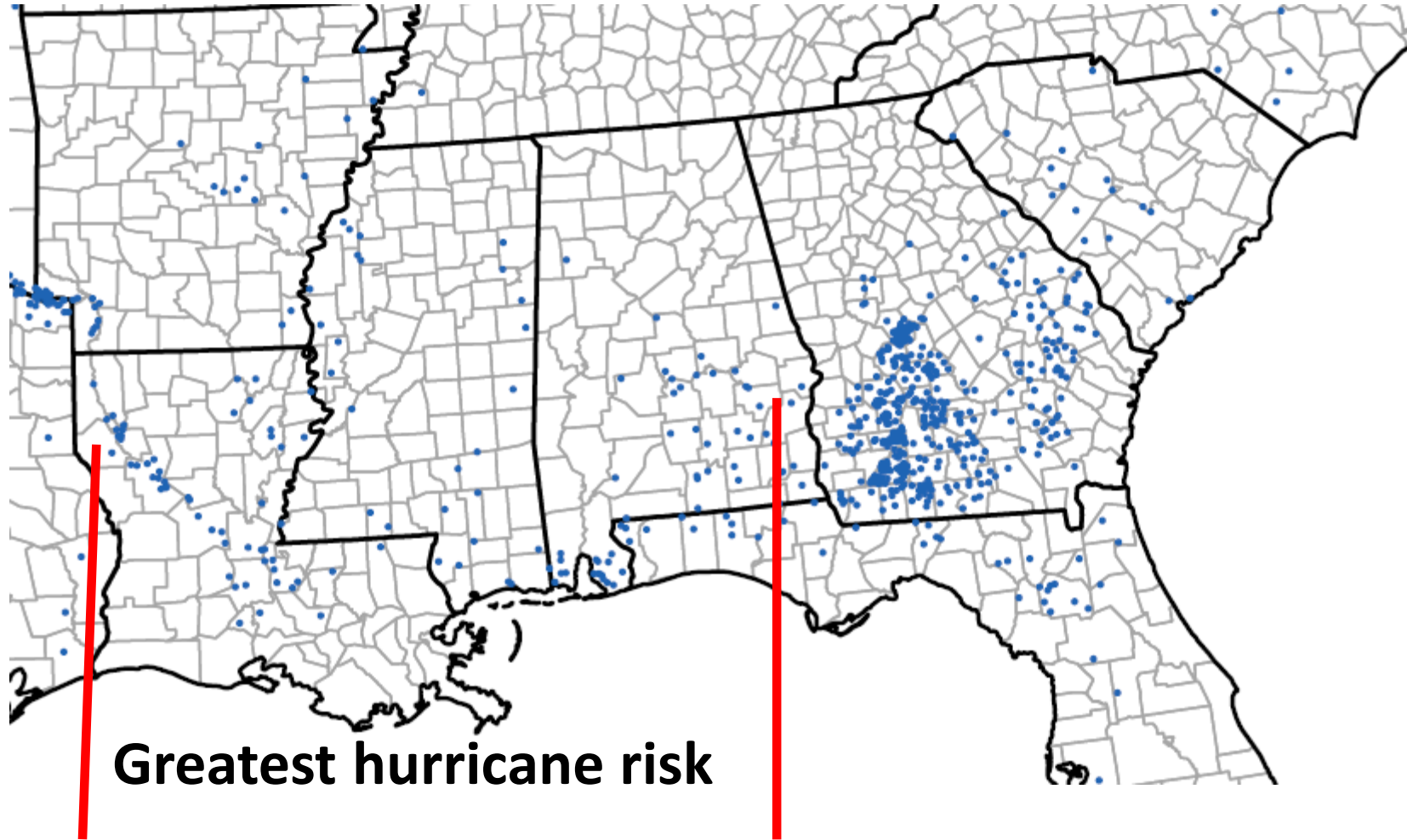
1 dot = 300 acres

Source: 2012 Census of Agriculture

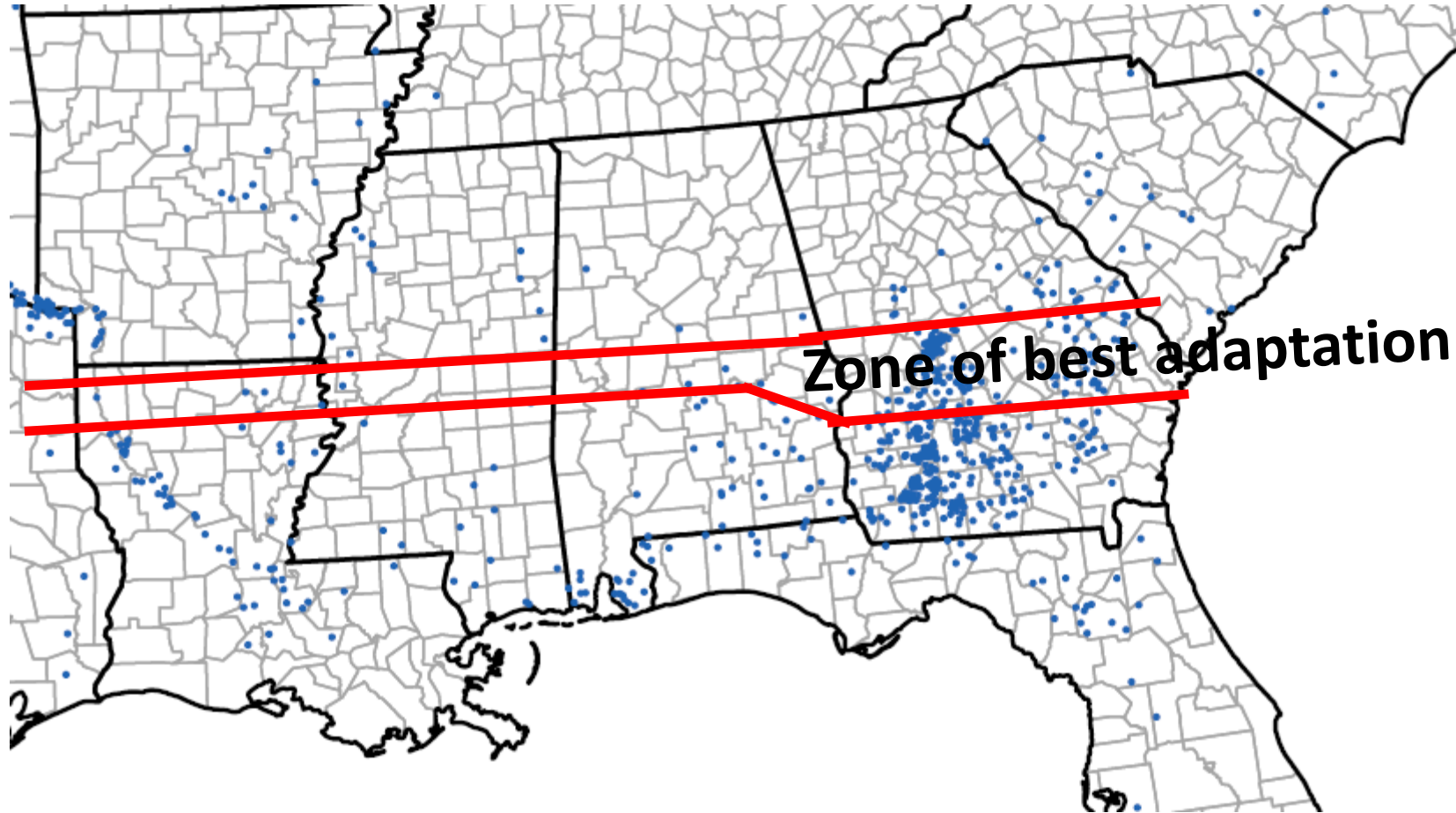
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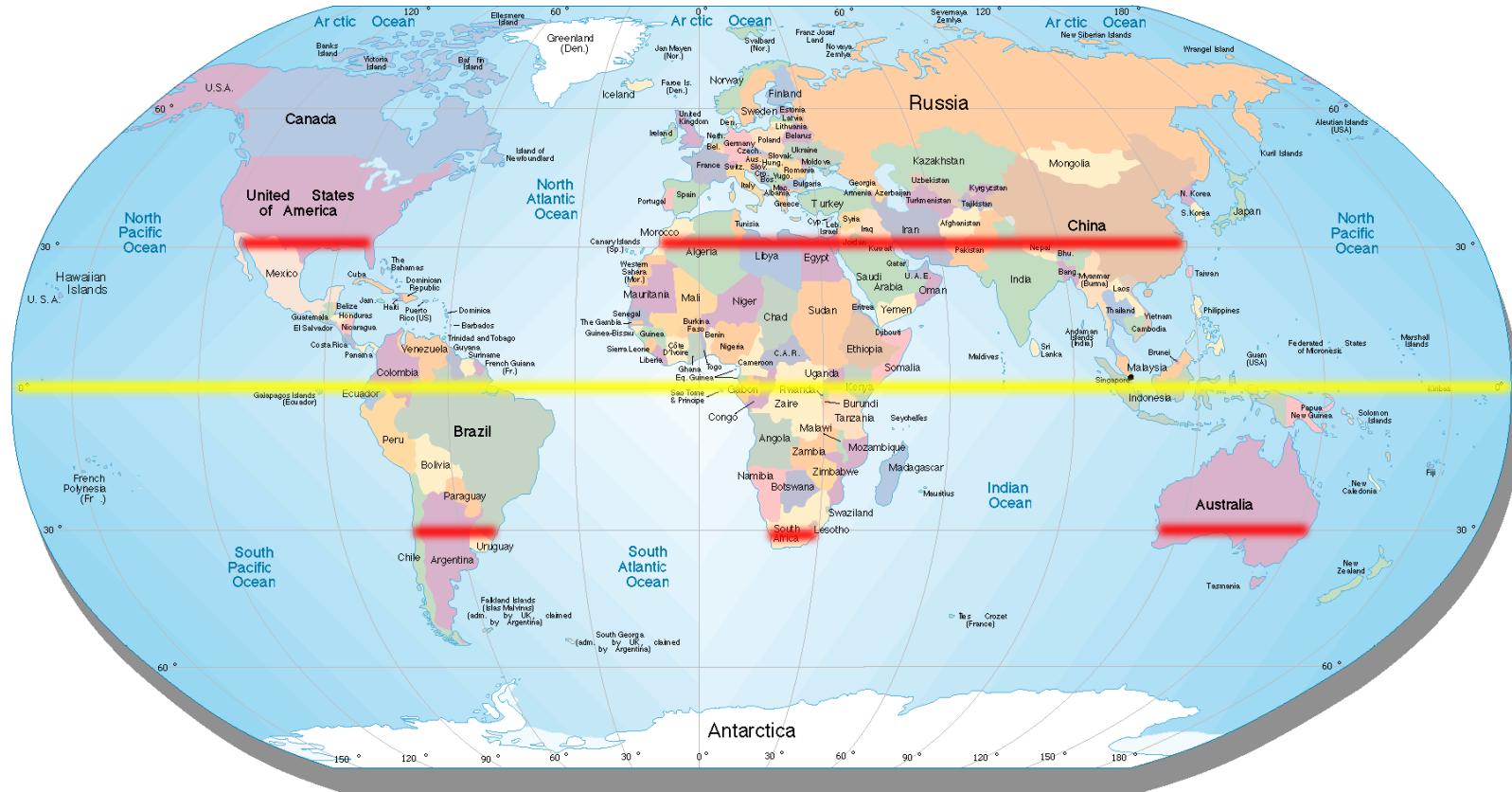
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Acres of Pecans in the Southeast

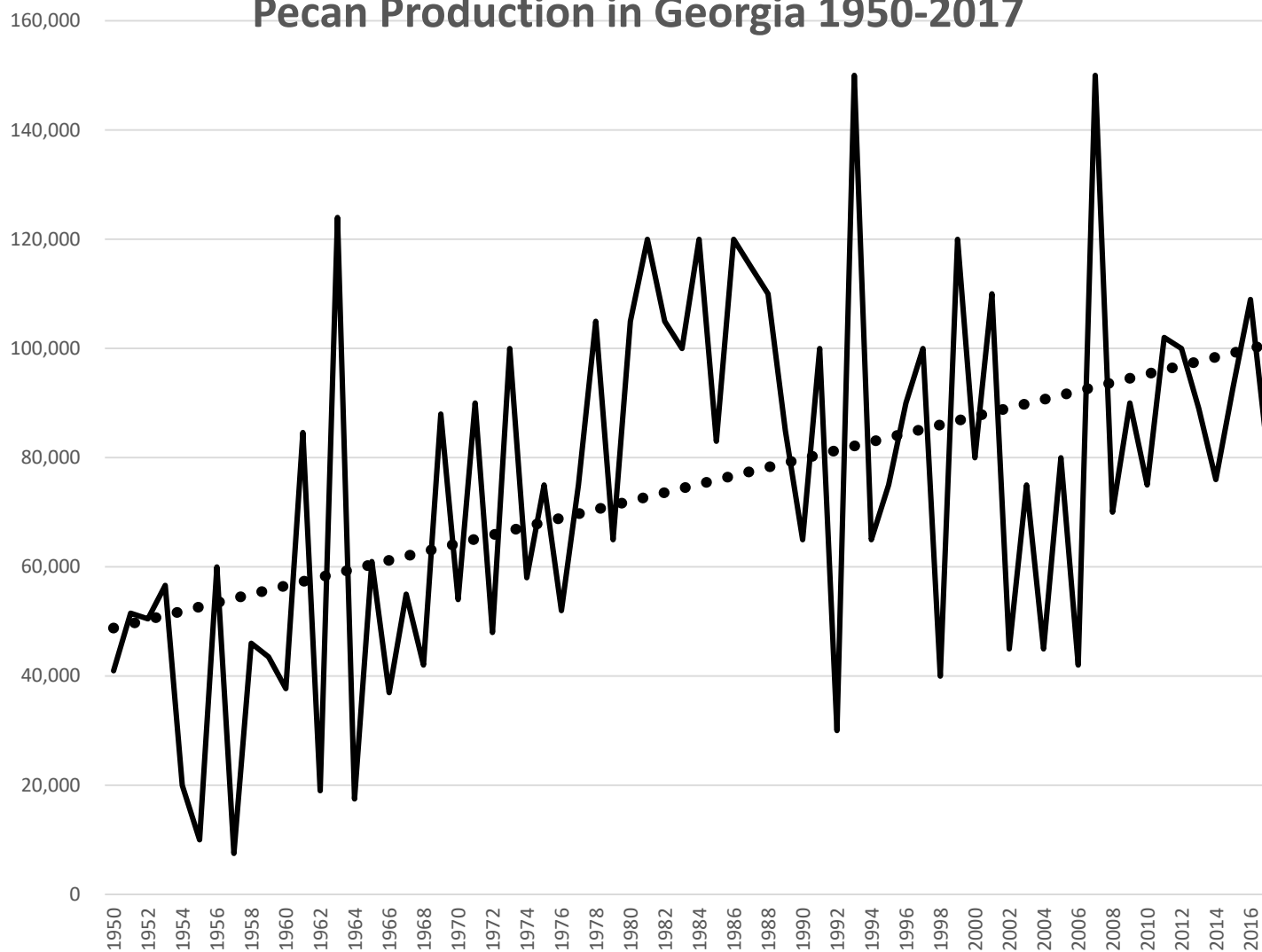


30-32° North and South of the equator



Adapted from J. Walworth

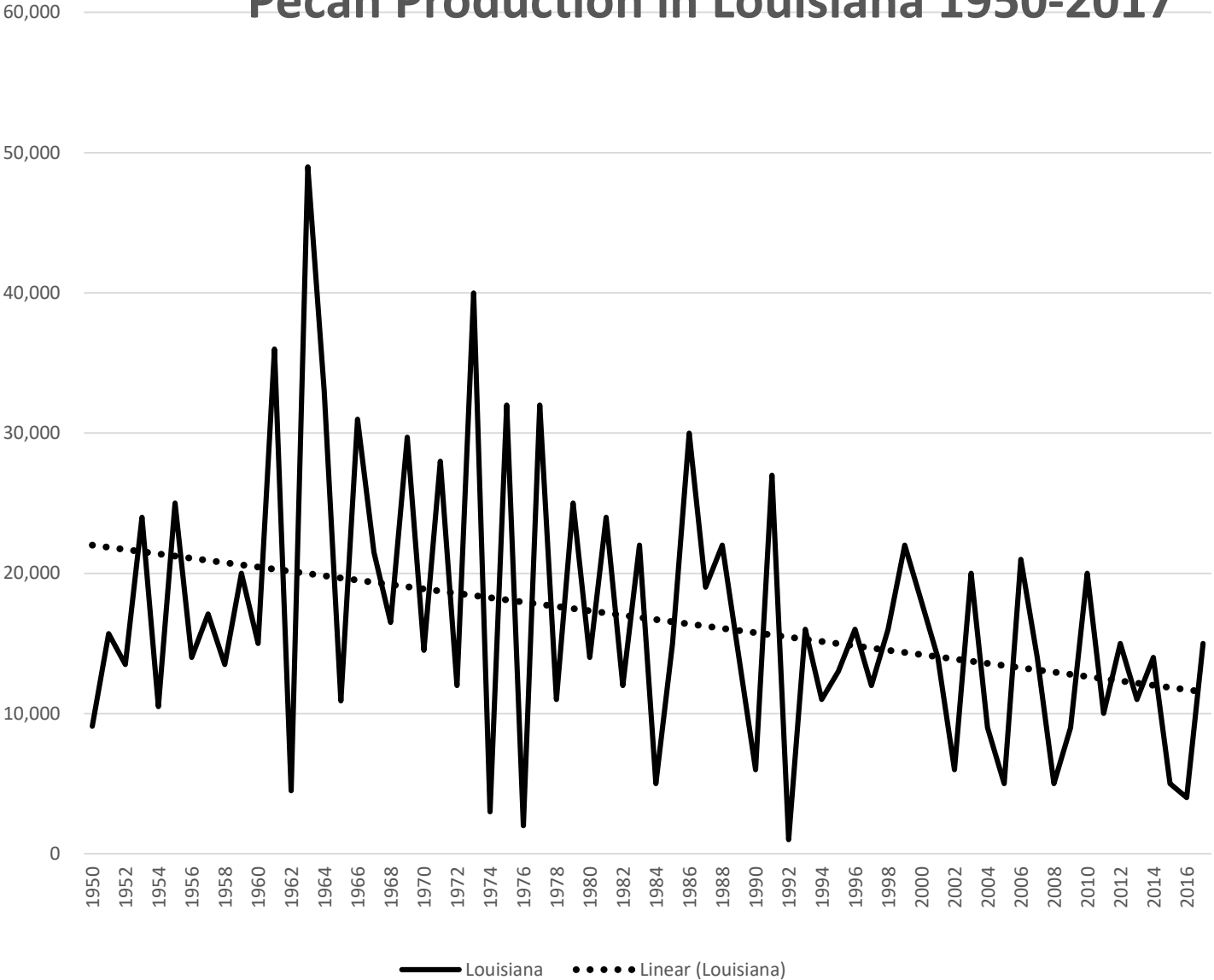
Pecan Production in Georgia 1950-2017



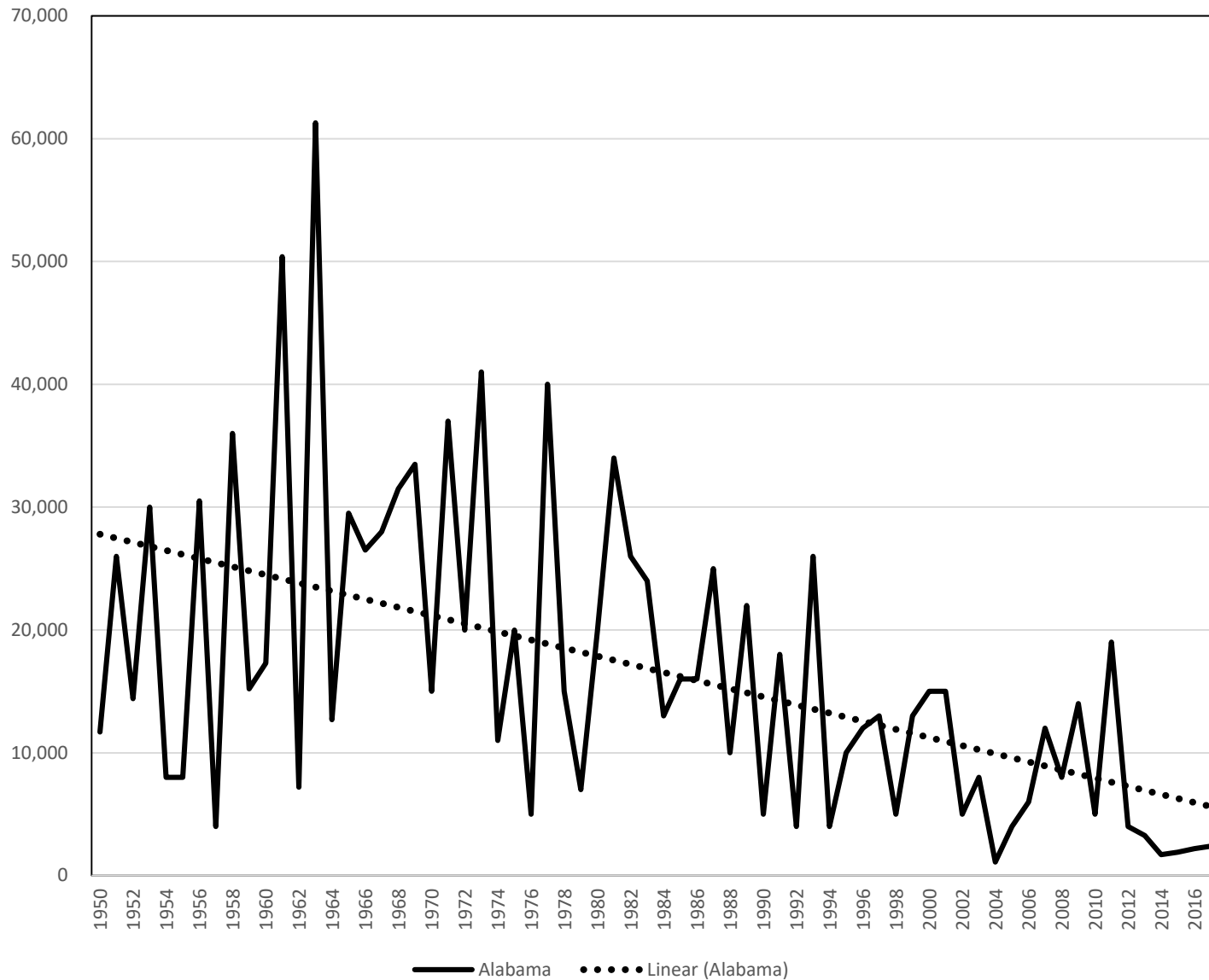
— Georgia •••• Linear (Georgia)

USDA - NASS

Pecan Production in Louisiana 1950-2017



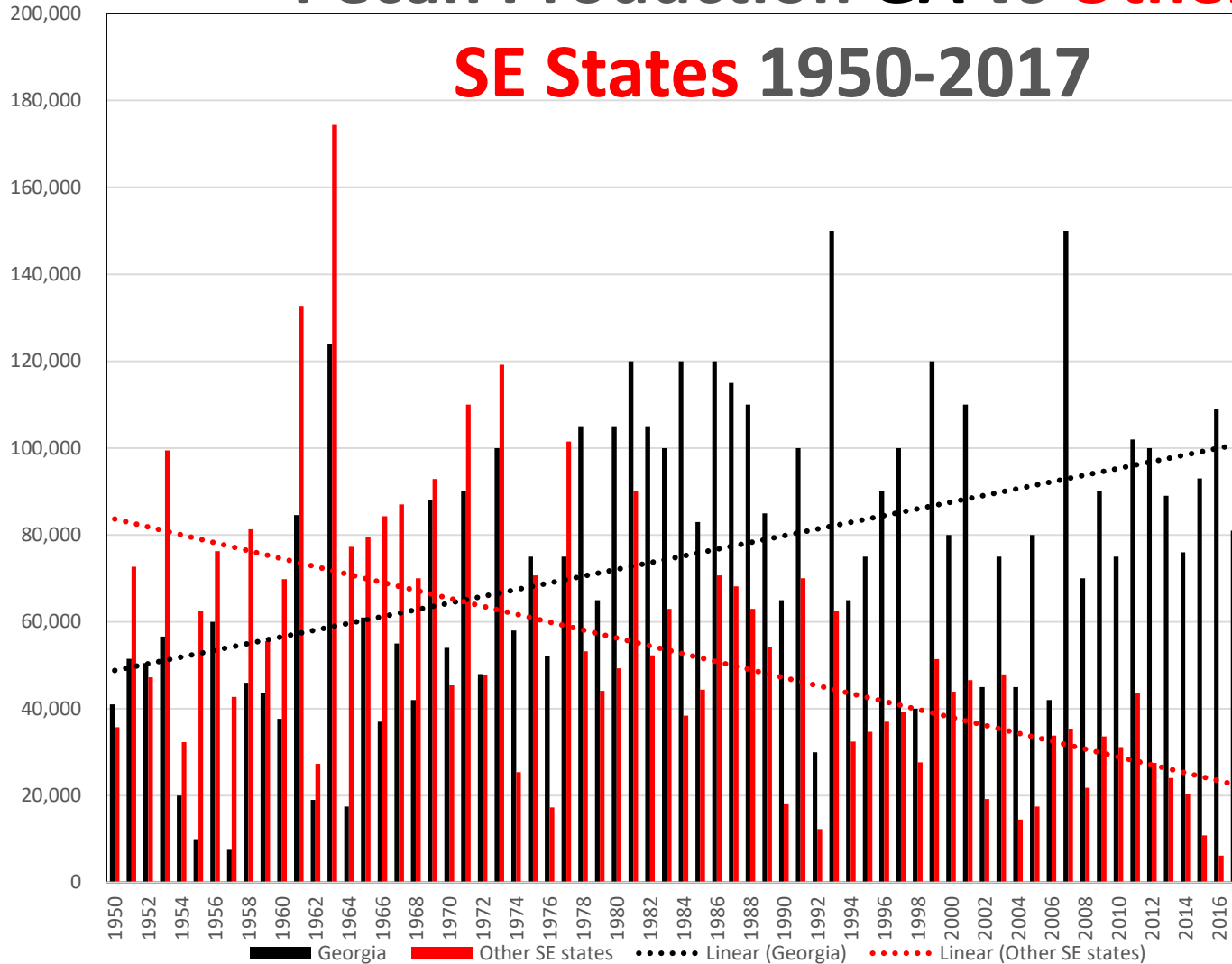
Pecan Production in Alabama 1950-2017



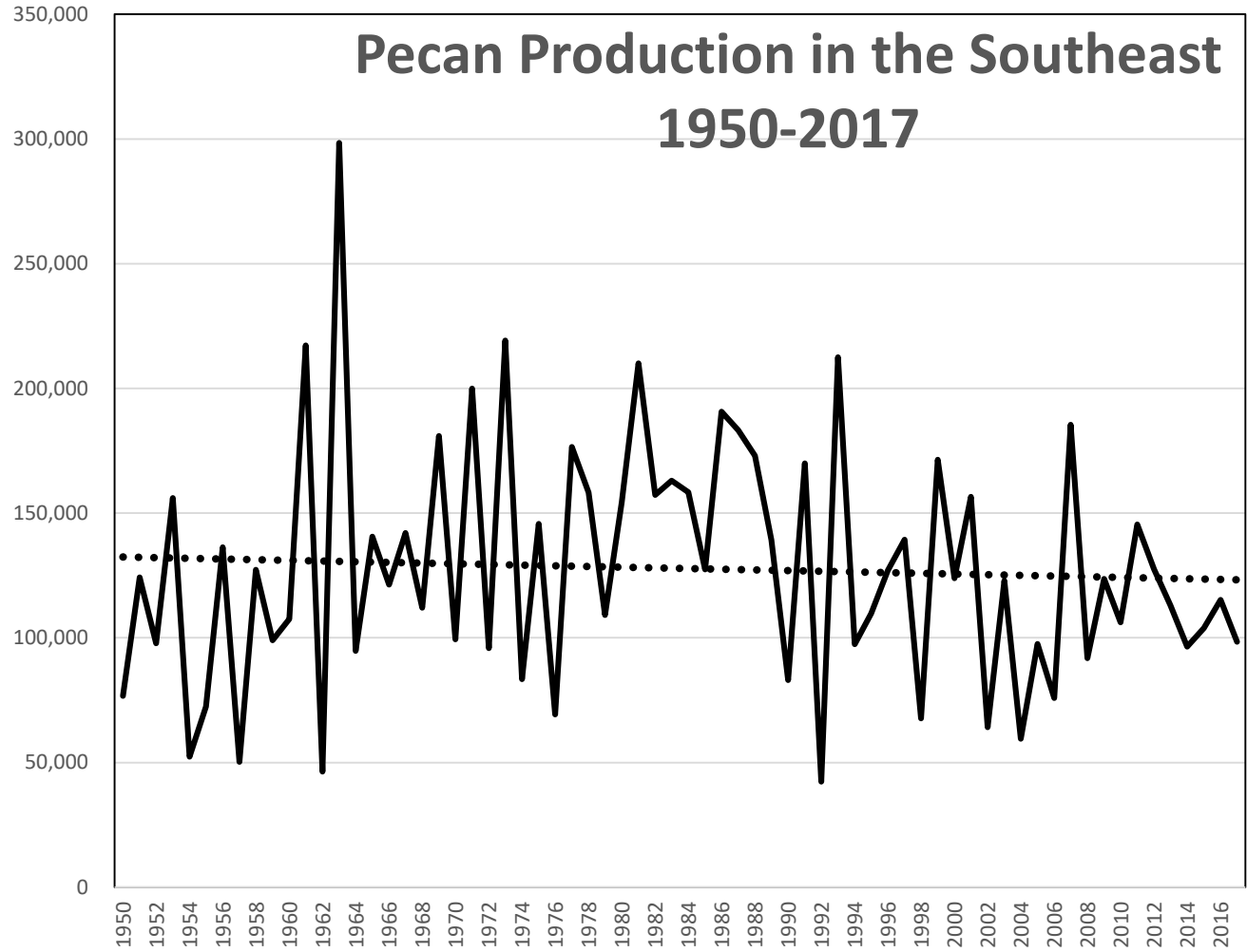
USDA - NASS

Pecan Production GA vs Other

SE States 1950-2017



Pecan Production in the Southeast 1950-2017



— SE region** ••••• Linear (SE region**)

What should you realistically expect in yield and income?

- Average yield per acre for Georgia improved pecans 2007-2016: **835 pounds per acre**
- Average price received per pound for Georgia improved pecans 2007-2016: **\$2.07 per pound**
- Average gross income for Georgia improved pecans 2007-2016: **\$1728 per acre**
- Variable cost of \$1628 per acre (Wells, 2016) for a **profit of \$100 per acre above variable cost.**
- If you have to pay fixed costs for land or recapturing establishment cost, **you will lose money growing pecans with these assumptions.**

Older trees, like older people, are subject to many chronic ailments.

- Crown gall
- Increased susceptibility to scab and other diseases as strains of scab become more virulent on same varieties over many decades
- Mistletoe
- Rots, resulting from limb breakage, lightning damage, trunk damage from shakers
- Overcrowding
- Inability to spray tops of large trees







Outlook For Southeastern Pecan Production

- Substantial new acreage is being planted, mostly in Georgia, and many older orchards are being renovated and interplanted to young trees. This will increase production.
- Offsetting this is about an equal decline in production, in many older orchards in GA and in all other SE states.
- New plantings will eventually overtake the decline, but increase will only be gradual over many years since offsetting declines will temper the rise.

Most older SE pecan orchards are overcrowded

If trees were cows...

- Cull your “herd” by taking out the worst cows, not by taking out every other cow.

80% of the value comes from 20% of the trees!

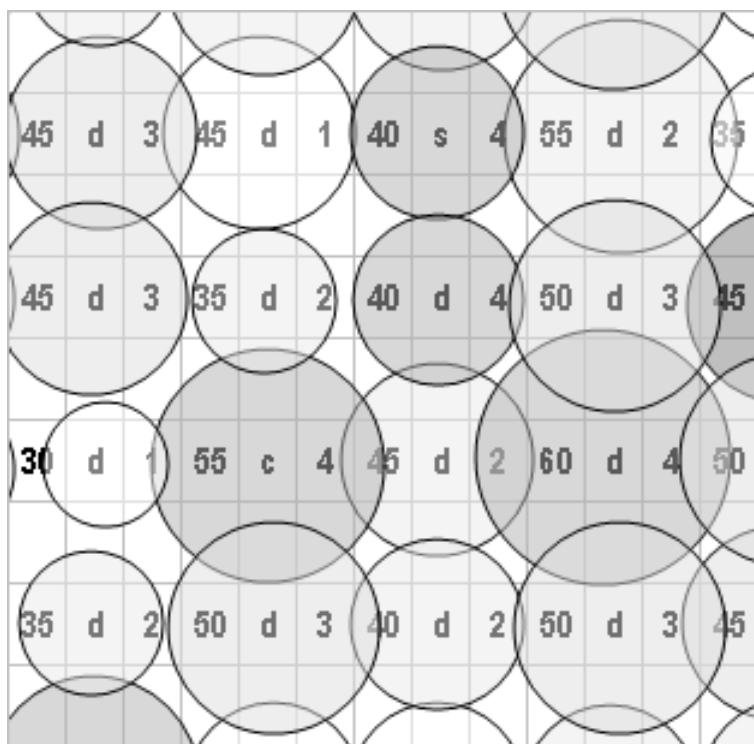
- These were results in a native stand in Oklahoma evaluated by Dean McCraw over several years.

Trees within grafted orchards vary greatly also

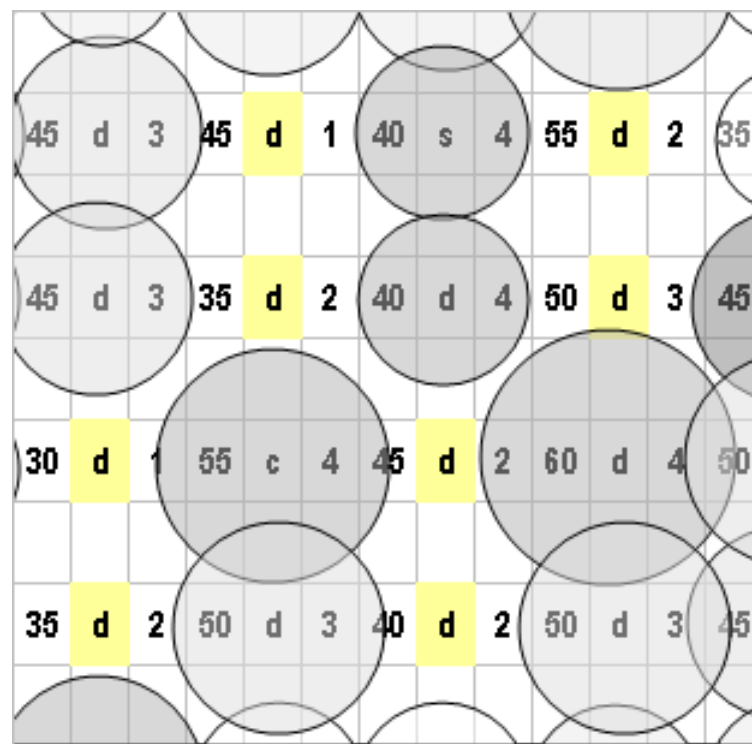
- **Wood (1989) selected 21 'Stuart' trees about 80-years-old at random from a Georgia orchard and kept up with yields of individual trees for 6 years.**
- **The best tree averaged 328 lbs. per year, the worst tree averaged 26 lbs., a 12-fold difference.**
- **12 of the 21 trees were "superior", that is they were above average both in yield and regularity of bearing.**

Trees to take out

- Those that have no pecans or low yields
- Bad cultivars – scab, overbearing, poor quality
- Crown gall trees
- Those with poor quality nuts
- Those with rots, dead limbs, off-color, zinc deficiency
- Off variety that is incompatible with main variety



Before thinning



After thinning

Some effects of hedging

- Hedging ***reduces yield*** substantially on trees you hedge for a few years after hedging. This is a benefit if done prior to year of overproduction.
- Hedging ***improves quality and nut size*** on trees you hedge for a few years after hedging, especially if trees would have been overloaded without hedging
- Hedging ***reduces overcrowding*** in the orchard, and if done correctly can ***temper or eliminate alternate bearing***.
- Hedging ***is not a permanent solution by itself*** to overcrowding on closely spaced trees.
- Smaller hedged trees ***can be sprayed more effectively, and are less vulnerable to wind damage***.



Year 1

Light crop
1000 lb/ac
Excellent
size and
quality
58%, 76 ct
(Western)



Year 2

Moderate
crop
2000 lb/ac



Year 3

Heavy crop
3000/ac



Year 4

Excessive crop
3800 lb/ac
Smaller size,
lower % kernel,
more sticktights
56%, 84 ct

Credit: J. Walworth

NMSU researcher develops method for cloning pecan rootstock

Date: 04/05/2016

Writer: **Kristie Garcia**, 575-646-4211, kmgarcia@nmsu.edu



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A newly developed method for cloning pecan rootstock may result in more successful yields for growers in the future.

Jennifer Randall, a research associate professor in the New Mexico State University Department of Entomology, Plant Pathology and Weed Science, is thrilled with this breakthrough, as pecan can be challenging.

“Pecan can be difficult to work with, and before I started, I was told that pecan cloning was impossible,” Randall said. “I’m excited, especially with the potential that it can mean to the industry and for research.”

Pecan trees grown in commercial orchards have



NMSU Research Associate Professor Jennifer Randall and her team have cloned nearly 300 different genotypes of pecan. (NMSU courtesy photo)

Coordinated development of genetic tools for pecan.



\$4,496,616



Genetic Tools

- Identify **genetic markers** associated with specific traits. Will reduce time for new varieties.
- Tree architecture: Size Control
- Nutritional acquisition
- Disease Resistance

You can't overemphasize the significance to the long term success of the pecan industry of this research. Pecan growers should support it in any way they can!

History was written for the pecan industry on
Aug. 5, 2016



FEDERAL REGISTER

The Daily Journal of the United States Government

® Rule

Pecans Grown in the States of Alabama, Arkansas, Arizona, California, Florida, Georgia, Kansas, Louisiana, Missouri, Mississippi, North Carolina, New Mexico, Oklahoma, South Carolina, and Texas; Order Regulating Handling

A Rule by the [Agricultural Marketing Service](#) on 08/04/2016



The American Pecan Council

U.S. Pecan Growers Council



Meet The Team

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- *The outlook is bright.*
- *But there is much work yet to be done.*