

Quality Deer Management – Past, Present and Future



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How Did We Get Here?

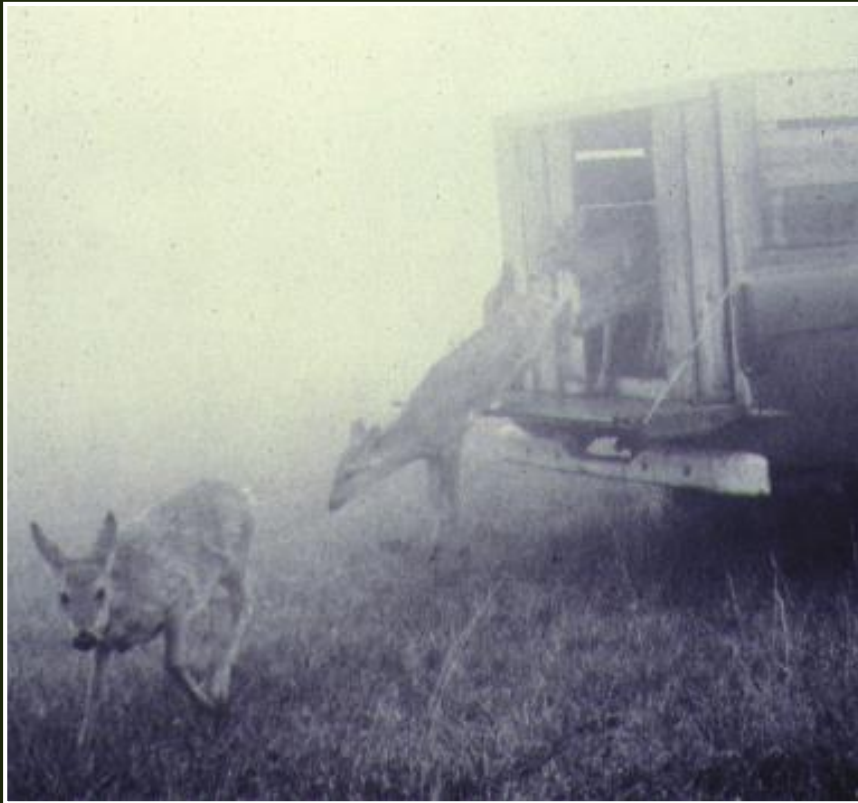


The Dark Period (1850-1910)



Market & subsistence hunting and
habitat destruction

Whitetail Restocking & Recovery (1920s - 1970s)



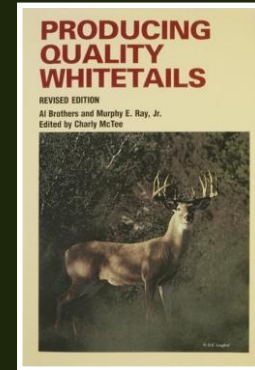
Washington was one of very few states that did not use outside sources to recover its whitetail population

Rise of Traditional Management and the “Buck pole Generation” (1940s - 1970s)



Rise of the QDM Philosophy (1970s -1980s)

1975 - Al Brothers and Murphy Ray published their landmark book, *Producing Quality Whitetails*.



Al Brothers – QDM Pioneer

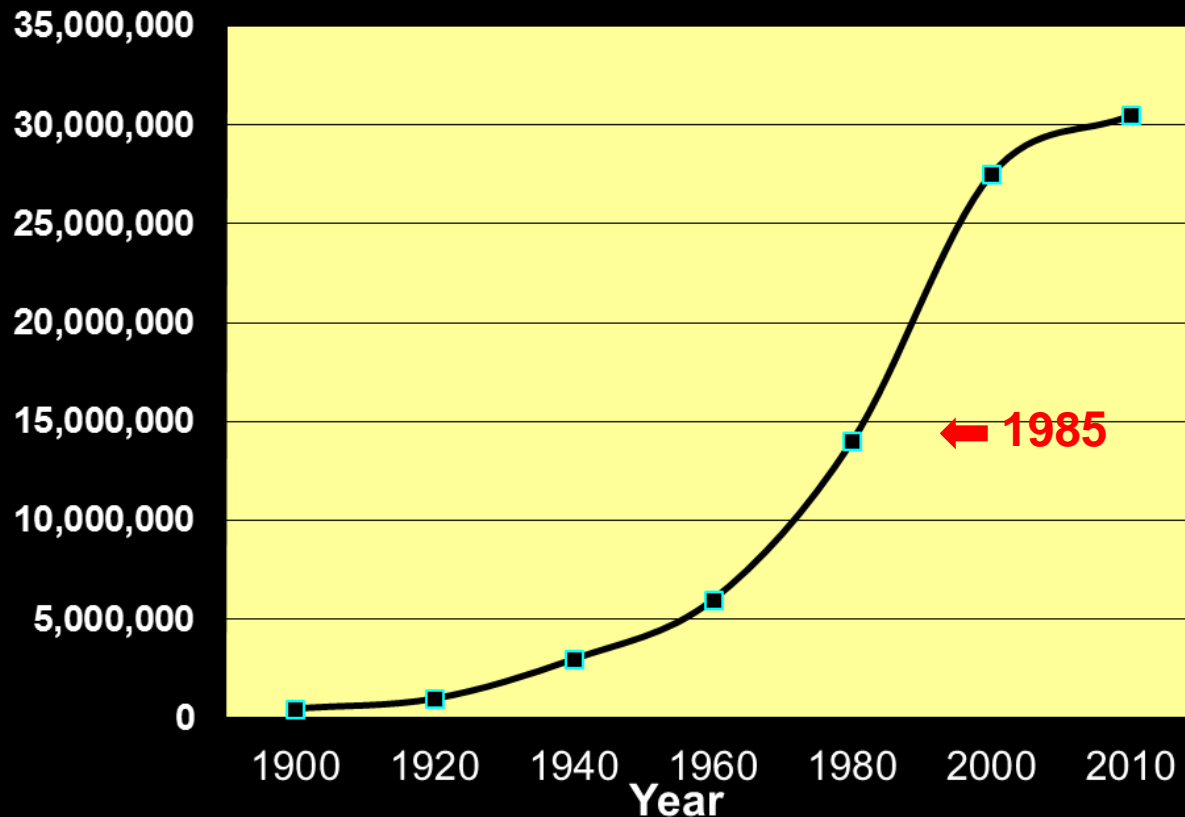
Quality Management is...

The approach under which young bucks are protected from harvest combined with an adequate harvest of female deer to produce healthy deer herds in balance with existing habitat conditions.



U.S. Whitetail Population – 1980s

Since 1985, the U.S. whitetail population has doubled from 15 to 30+ million

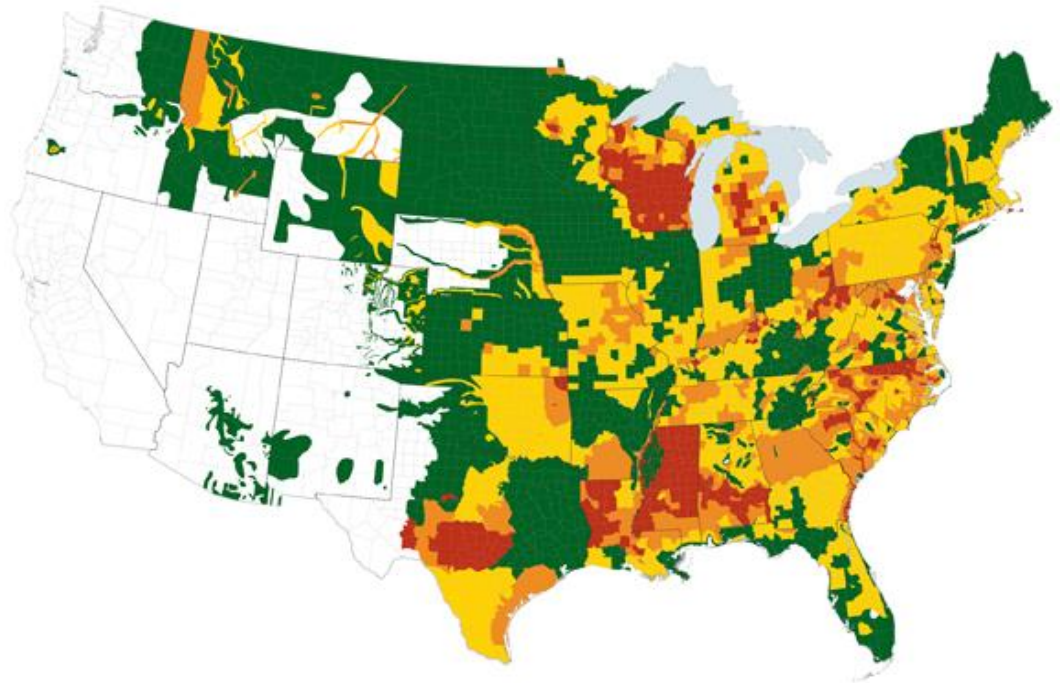


Rapidly increasing whitetail populations, combined with heavy buck harvests, resulted in heavily skewed sex ratios and young buck age structures.

This set the stage for a new paradigm in deer management.

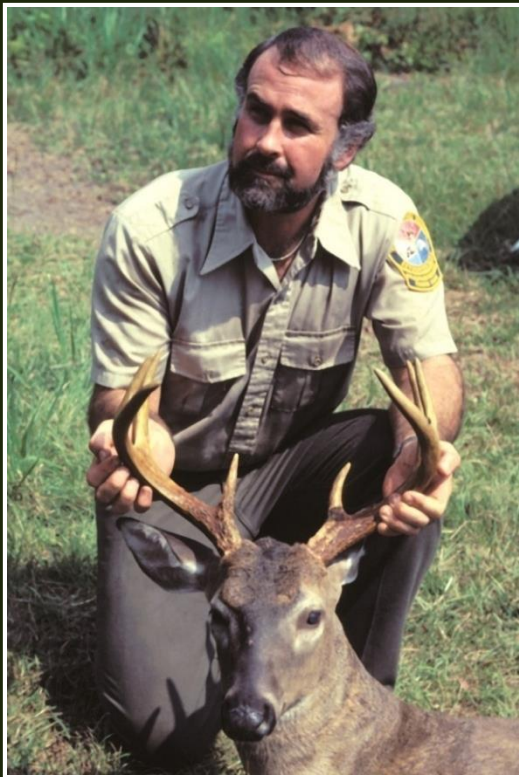


Deer Density (Number Per Square Mile)



Rise of the Quality Deer Management Association

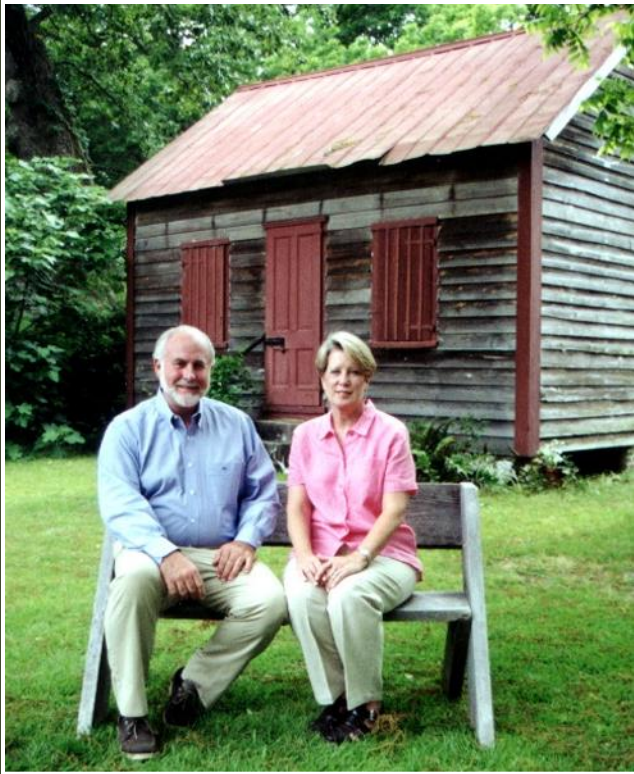
Late 1970s - Al's book inspired SC wildlife biologist Joe Hamilton



Mid 1980s – Joe visited Australia and was inspired by the Australian Deer Association



1988 – The QDMA is Born



Joe & Donna Hamilton in front of the QDMA “National Headquarters” from 1994-1997

Joe married the principles of QDM from Texas with the organizational structure from Australia and established the South Carolina Quality Deer Management Association



About the QDMA

- 28-year-old 501(C)-3 nonprofit conservation organization with nearly 60,000 members in all 50 states, Canada and several countries
- 170 Branches in 35 states and Canada



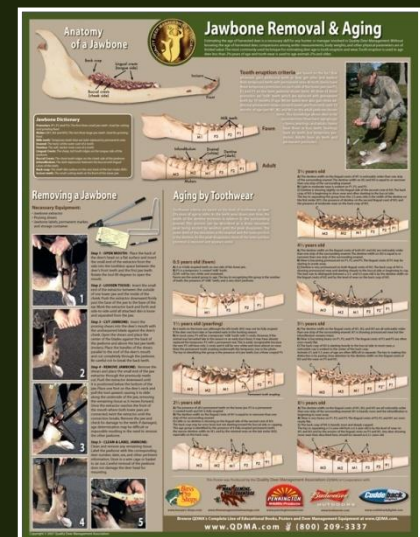
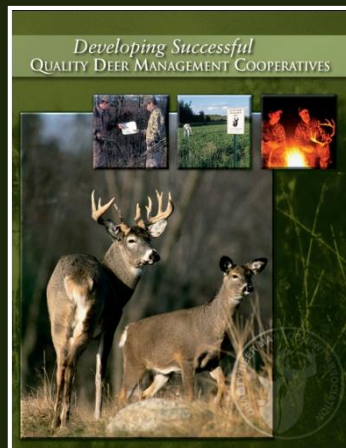
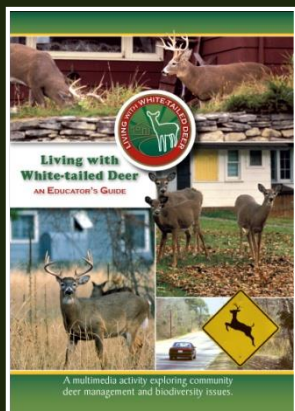
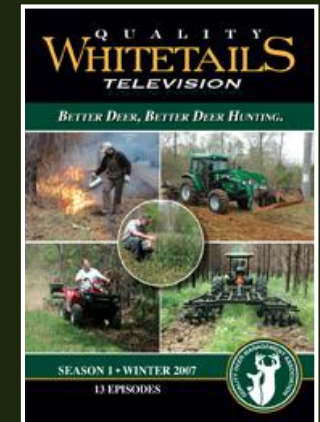
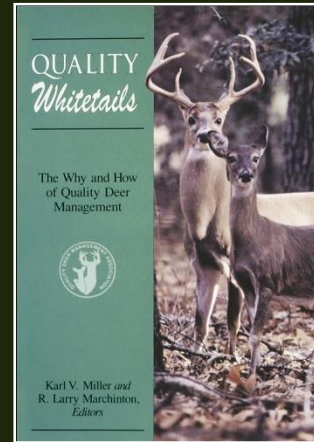
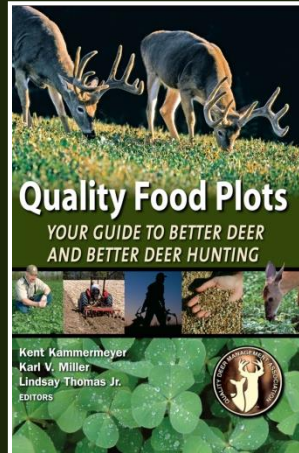
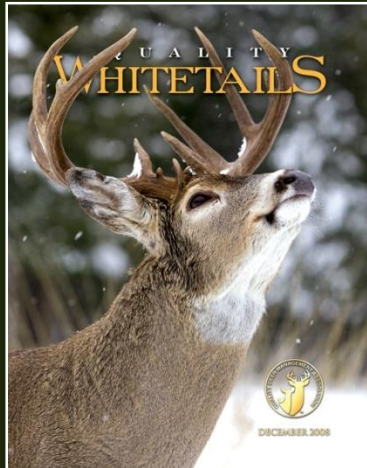
National Headquarters &
Education Center
Athens, Georgia

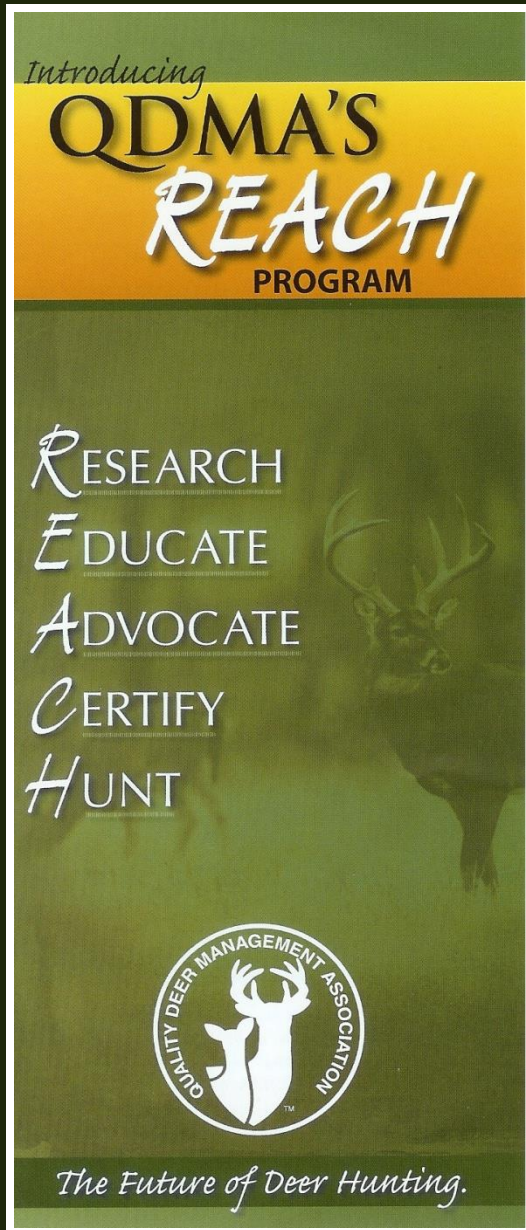
QDMA's Mission

*“To ensure the future of white-tailed deer,
wildlife habitat and our hunting heritage.”*

Better Deer and Better Deer Hunting!

QDMA's Educational Resources

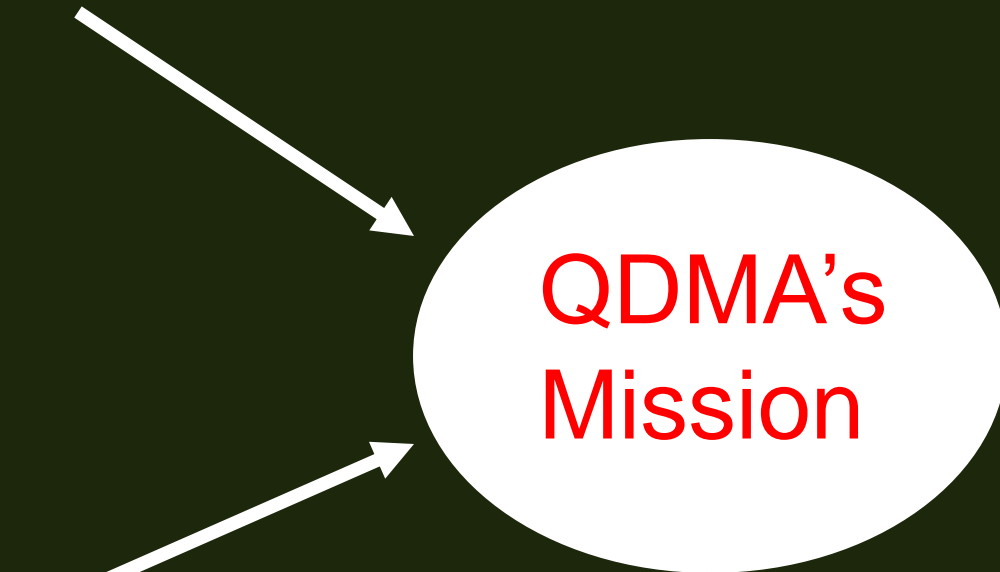




2006



QDMA's Landmark REACH Program was Launched

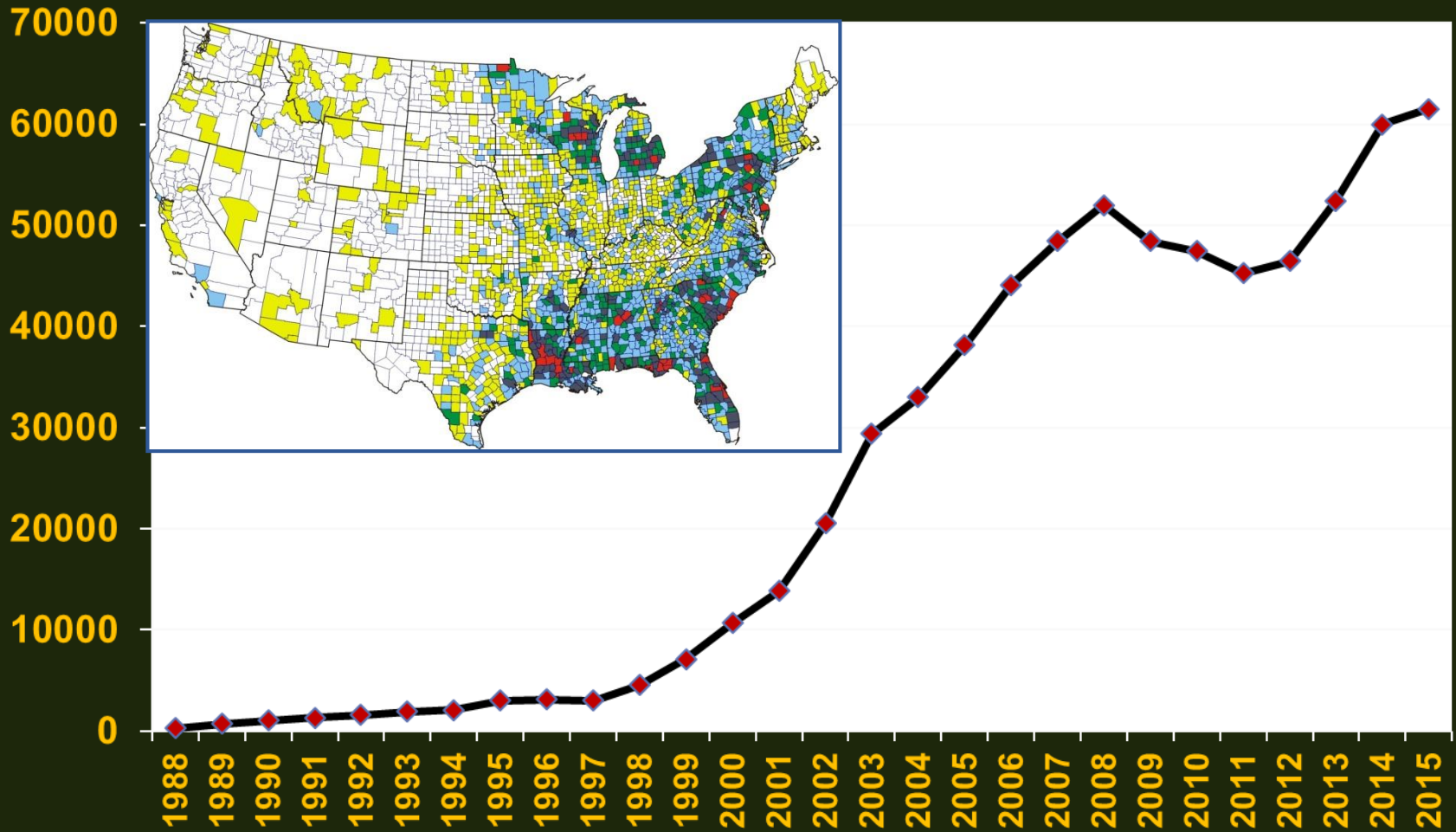


QDMA's Mission

QDMA's REACH in Action Since 2006

- Research – \$500,000 for projects in 22 states
- Educate – 1,800+ educational events in 36 states and several provinces
- Advocate – 500+ policy or management issues in 30+ states and several provinces
- Certify – Nearly 2,000 Deer Steward graduates, and growing involvement in QDMA's Land Certification program
- Hunt – Rack Pack Program, Share Your Hunt Program

QDMA Membership 1988-2015



Impact of QDMA on Deer Hunting and Management in the U.S



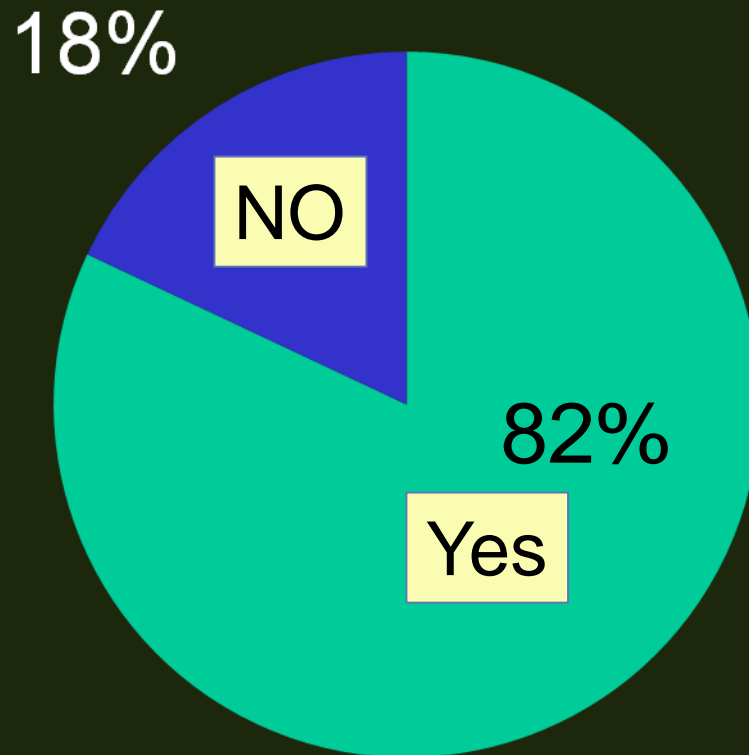
Rise of the “Modern” Deer Hunter (1990s to present)

- More knowledgeable about deer hunting & management
- More likely to embrace QDM
- More engaged in land management and wildlife conservation
- More concerned about the future than previous generations



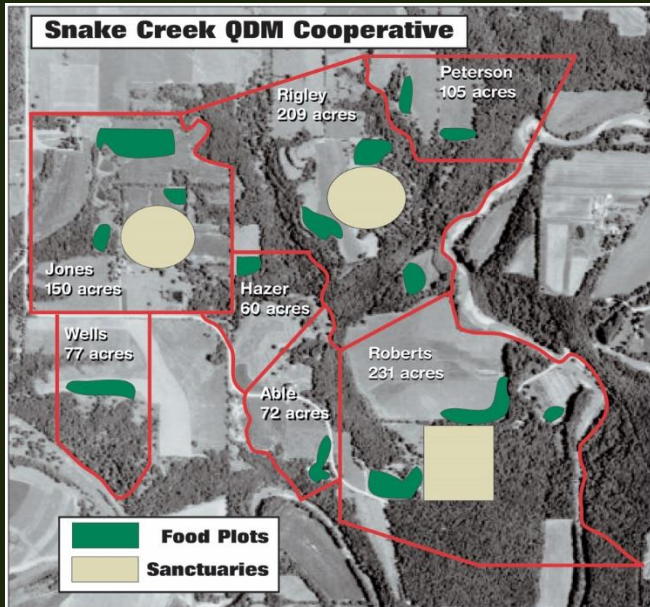
Increasing Support for Quality Deer Management

Do you follow the principles of QDM when hunting deer?
(all respondents)



Source: Bass Pro Survey 2013

Increasing Involvement in QDM Cooperatives



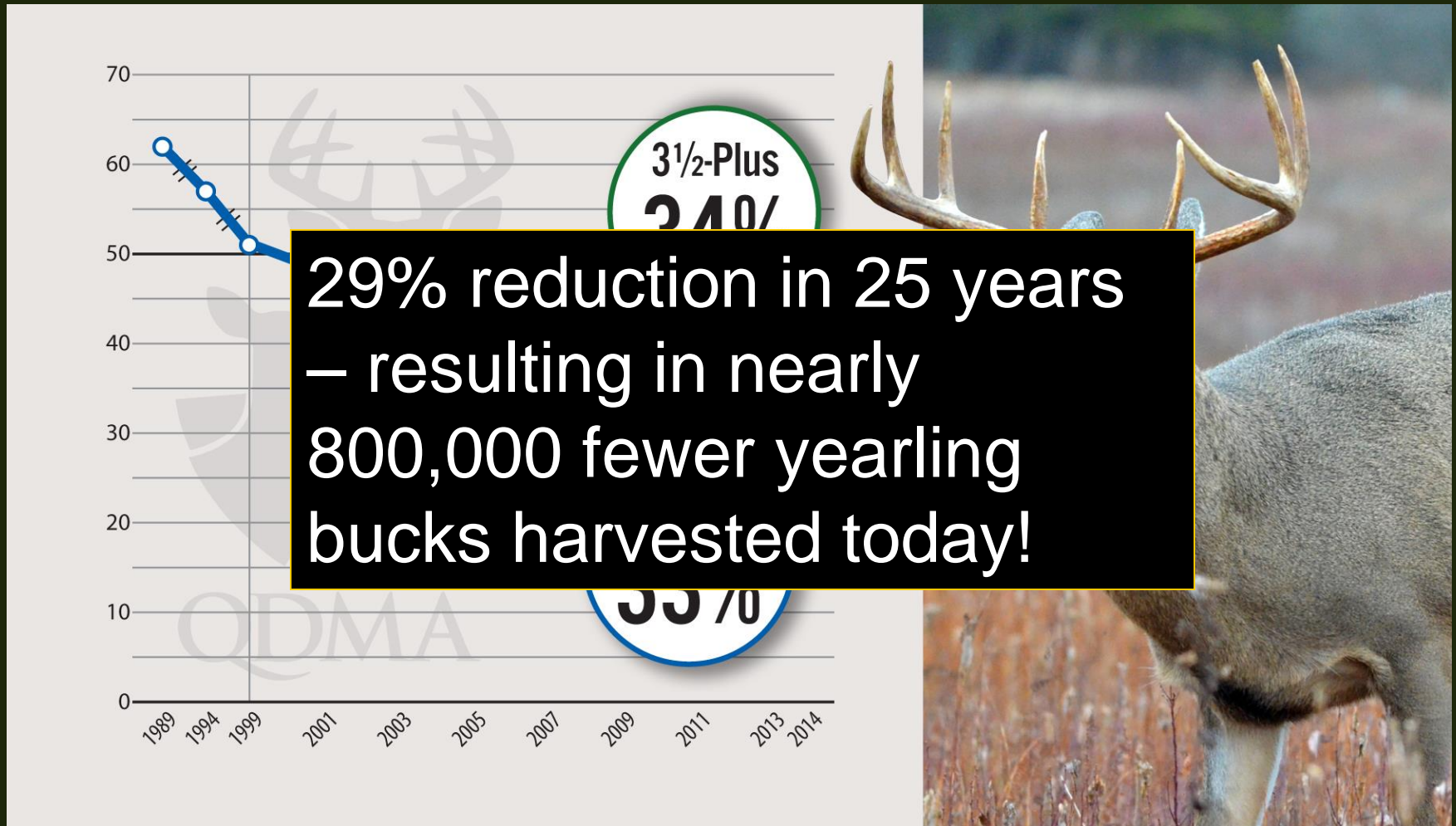
Increasing Willingness to Harvest Antlerless Deer

1999 was first year that more antlerless deer were harvested nationwide than antlered bucks

By 2005, 65% of all states were harvesting more antlerless deer than antlered bucks



Increasing Willingness to Protect Yearling Bucks



Percentage of Yearling and Adult Bucks in the Nationwide Harvest (1989-2014)

**Top-5 States
With Lowest Percentage of
Yearling Bucks in Buck Harvest**

State	2014 Percentage
Arkansas	8
Mississippi	13
Missouri (APR counties)	15
Kansas	16
Louisiana	17

**Highest Percentage
of Yearling Bucks in
Buck Harvest**

State	2014 Percentage
New York	48
Wisconsin	48
Maine	47
Maryland	47
New Hampshire	46
New Jersey	46

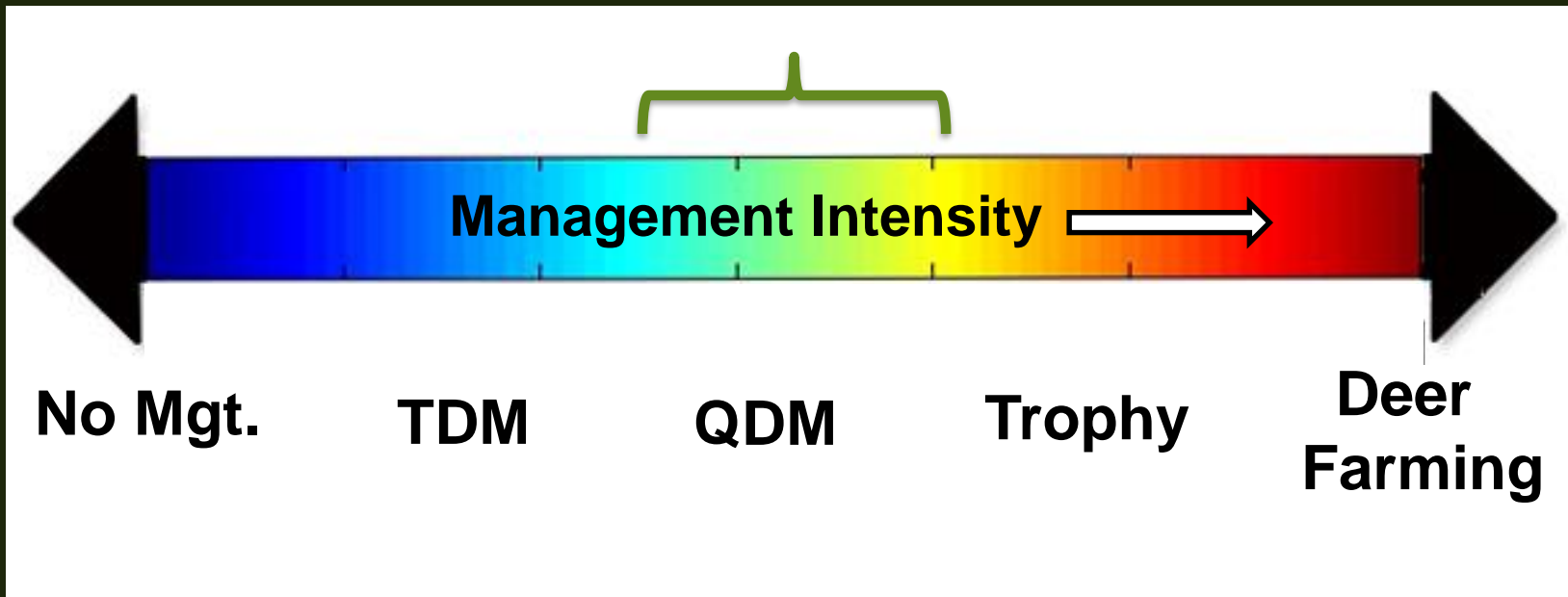
**Top-5 States
With Highest Percentage of
3½-Plus Bucks in Buck Harvest**

State	2014 Percentage
Mississippi	74
Arkansas	67
Louisiana	67
Texas	62
Oklahoma	60

**Lowest Percentage
of 3½-Plus Bucks
in Buck Harvest**

State	2014 Percentage
New Jersey	9
New York	18
Tennessee	19
Ohio	20
Wisconsin	21

Deer Management Strategies



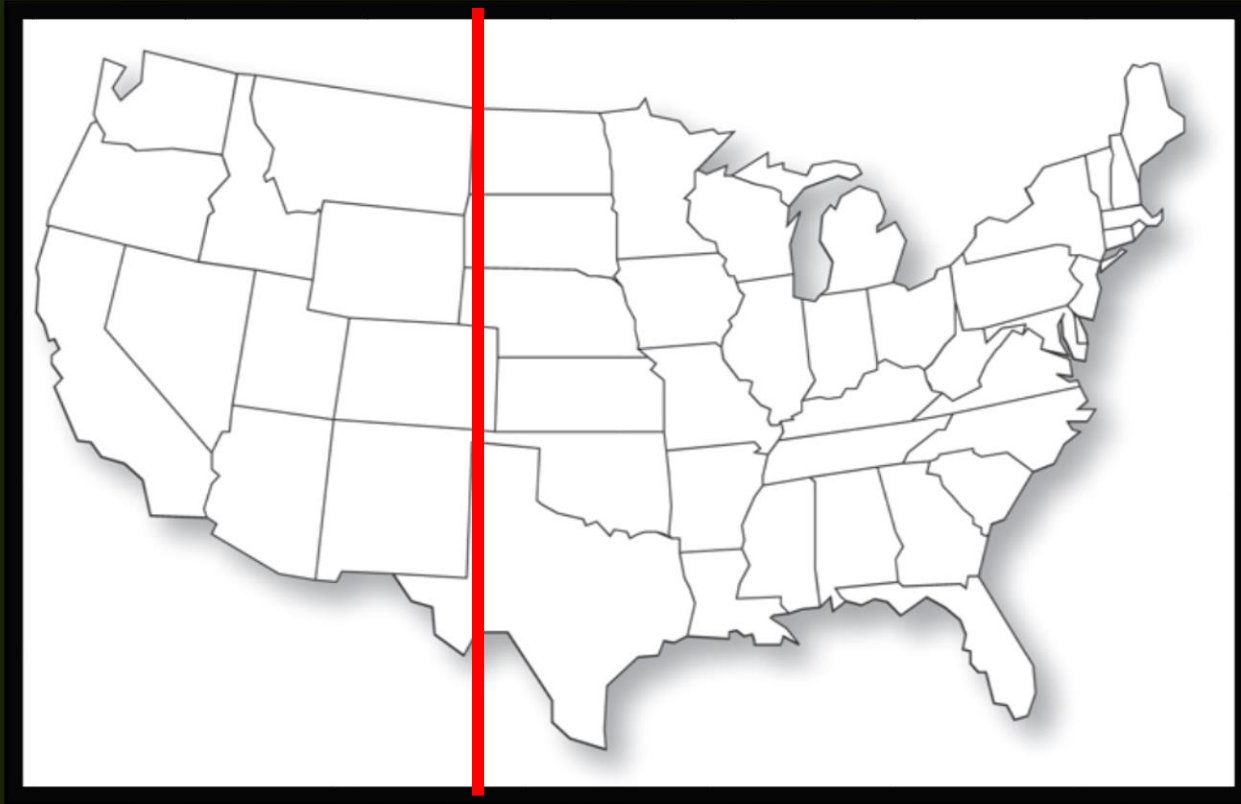
Typical “Pros” of QDM

- Improved balance between deer herds and their habitat
- Improved hunter knowledge and engagement with deer herd and habitat management
- Improved habitat for other wildlife
- Improved adult sex ratios and older buck age structures
- Improved deer health (body weight, antler growth, lactation, survival, etc.)
- Improved opportunity to hunt mature bucks / and utilize associated hunting tactics
- Improved hunter satisfaction

Potential “Cons” of QDM

- Can reduce enjoyment for some due to increased rules/policies
- Can create conflicts between hunters (pro vs. anti-QDM’ers)
- Can be expensive and time-consuming
- Can limit/prohibit access for some hunters
- Can increase property access fees for hunters
- Can reduce or result in a redistribution of buck harvest
- Can increase non-harvest mortality on mature bucks
- Can reduce success of new or first-time hunters if they are not exempted from buck harvest restrictions

Whitetail Hunting – East vs. West



Approximately 85% of whitetail hunting in the eastern half of the U.S. occurs on private land

Private Land

Top-5 States Highest % Private Land

Kansas	98
Alabama	97
Iowa	97
Nebraska	97
Texas	97



Public Land

Top States

**Acreage of State-Owned Land
Open to Deer Hunting**

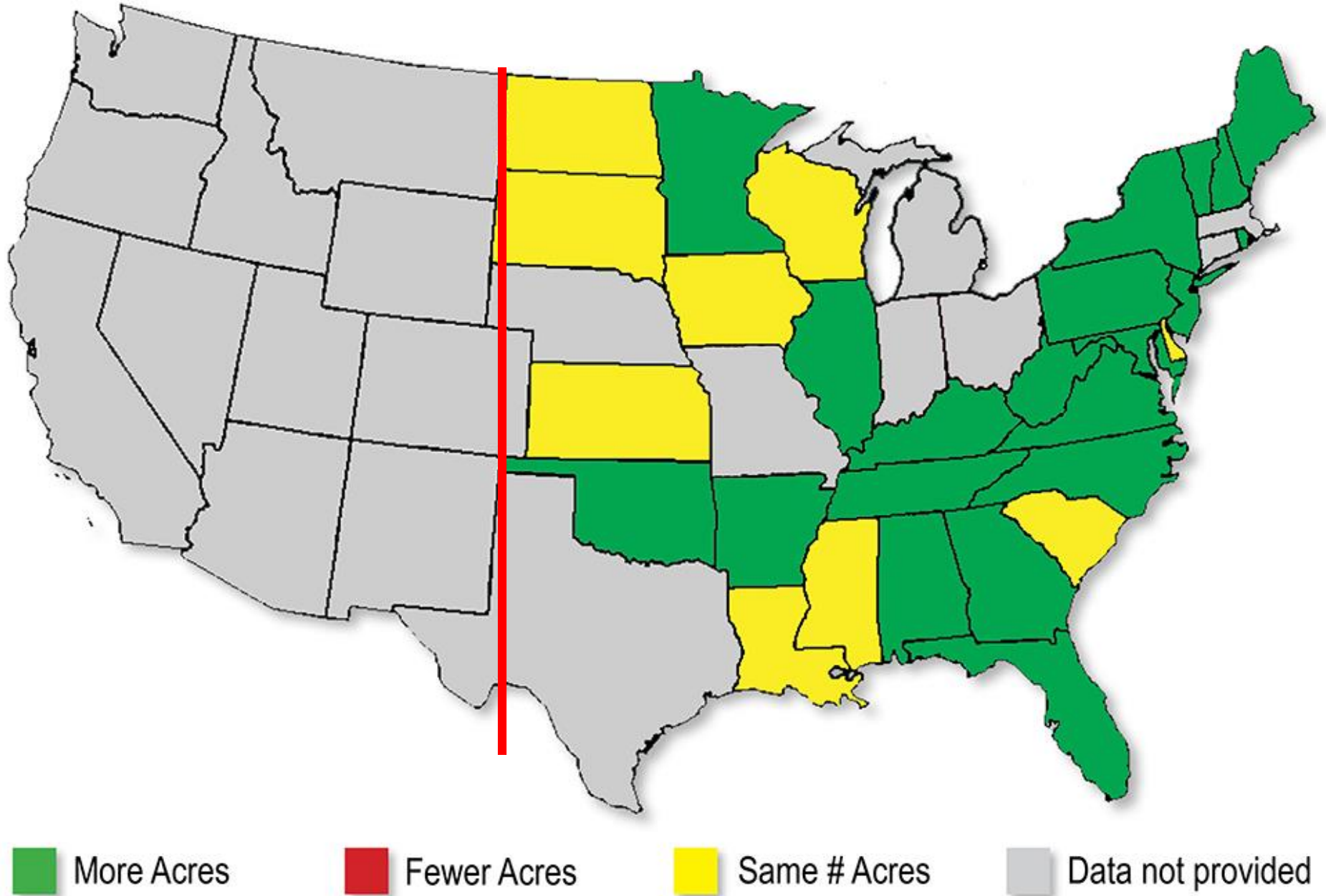
State	Total Acres
Wisconsin	7 million
Florida	5.9 million
Michigan	>4 million
Minnesota	4 million
New York	4 million
Pennsylvania	4 million

Top-5 States

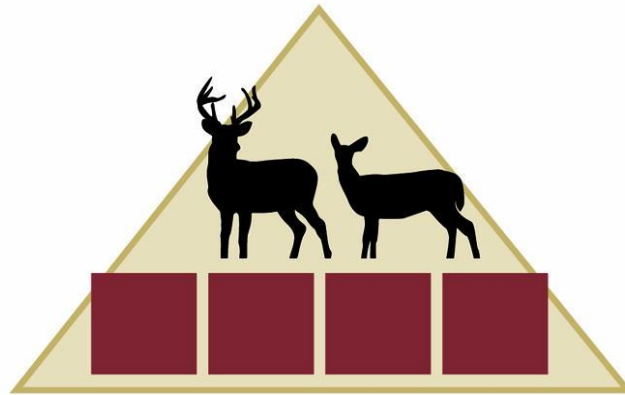
**Percentage of State Area
That is State-Owned and
Open to Deer Hunting**

State	Percentage
Wisconsin	20
Florida	17
New Jersey	14
Pennsylvania	14
New York	13

CHANGE IN ACREAGE OF STATE-OWNED LANDS OPEN TO DEER HUNTING, 2005 TO 2015



Four Cornerstones of QDM



HERD MANAGEMENT



HABITAT MANAGEMENT

HUNTER MANAGEMENT

HERD MONITORING

Antlered Buck Management



There are many ways to save bucks – and each has advantages and disadvantages!

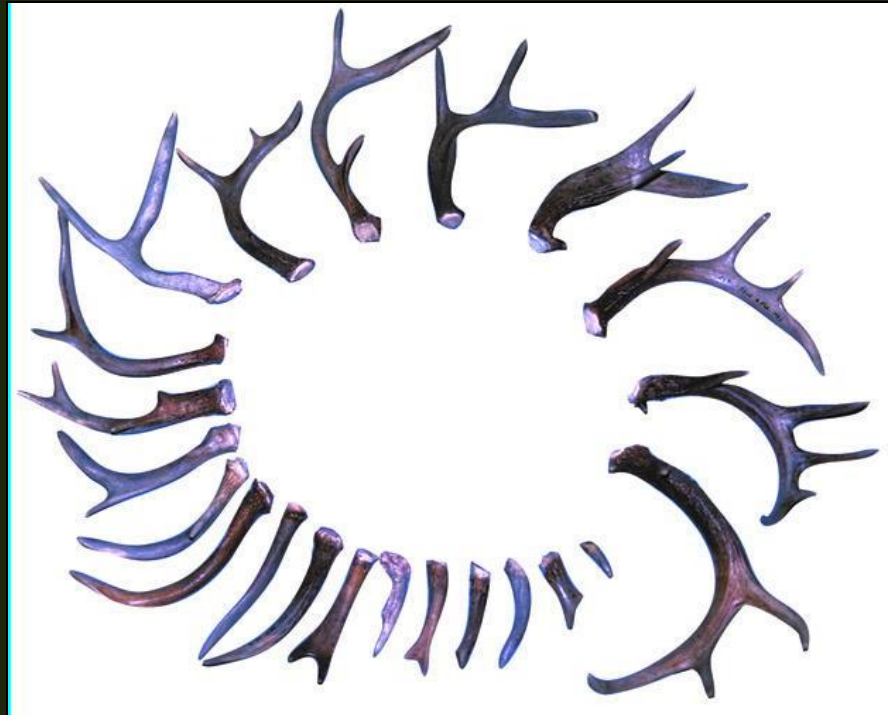
Common Buck Harvest Restriction Methods

- Antler point restrictions
 - Antler spread restrictions
 - Bag limits / quotas / draws
 - Weapons / season restrictions
-

Options typically available to state wildlife agencies

- Age - body characteristics
- Gross Boone and Crockett score
- You shoot it, you mount it!

Antler Point Restrictions



Establishes a minimum number of points a buck must have to be eligible for harvest

Antler Point Restrictions

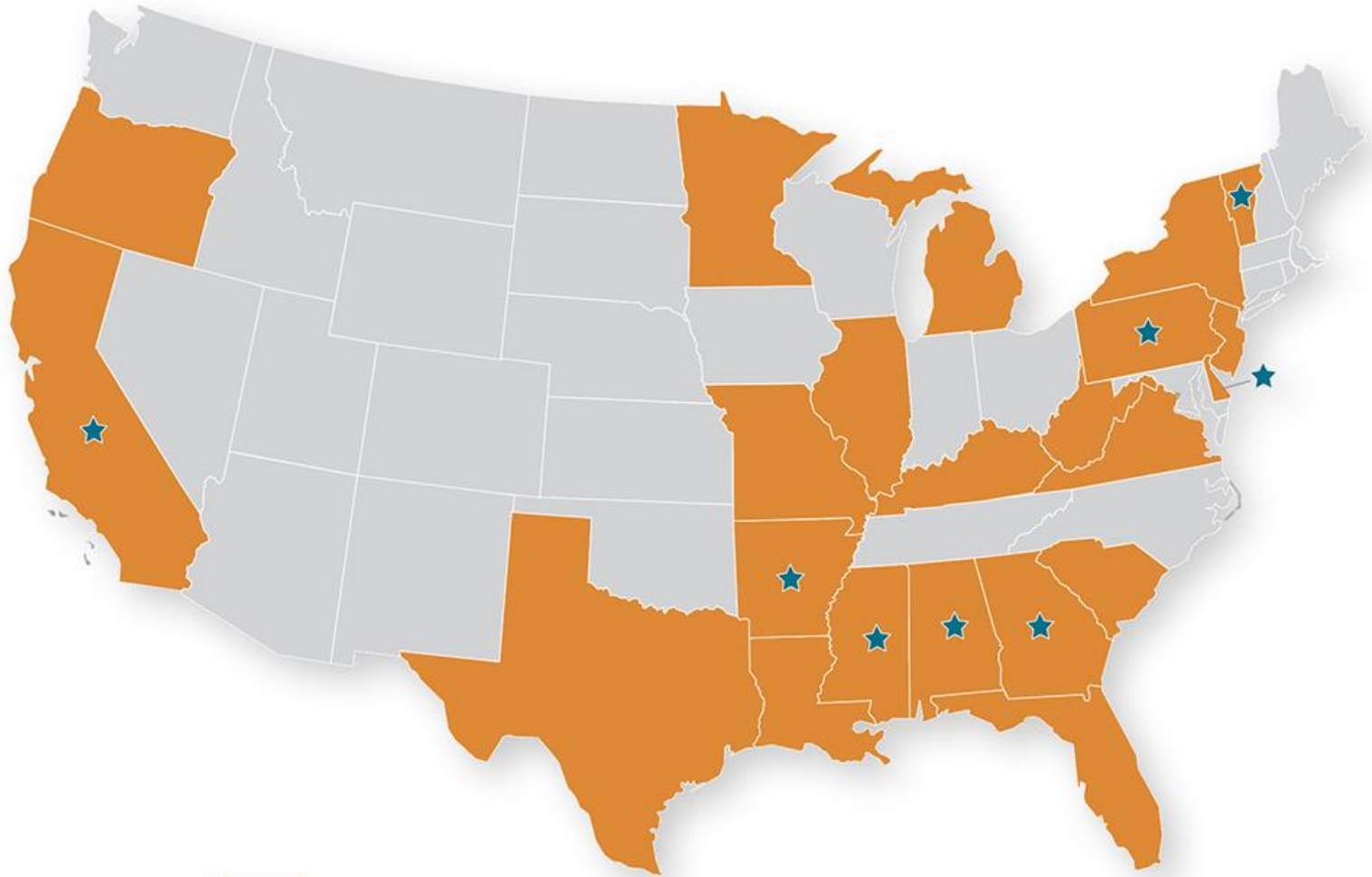
Advantages:




- Simple
- Easy to enforce

Disadvantages:

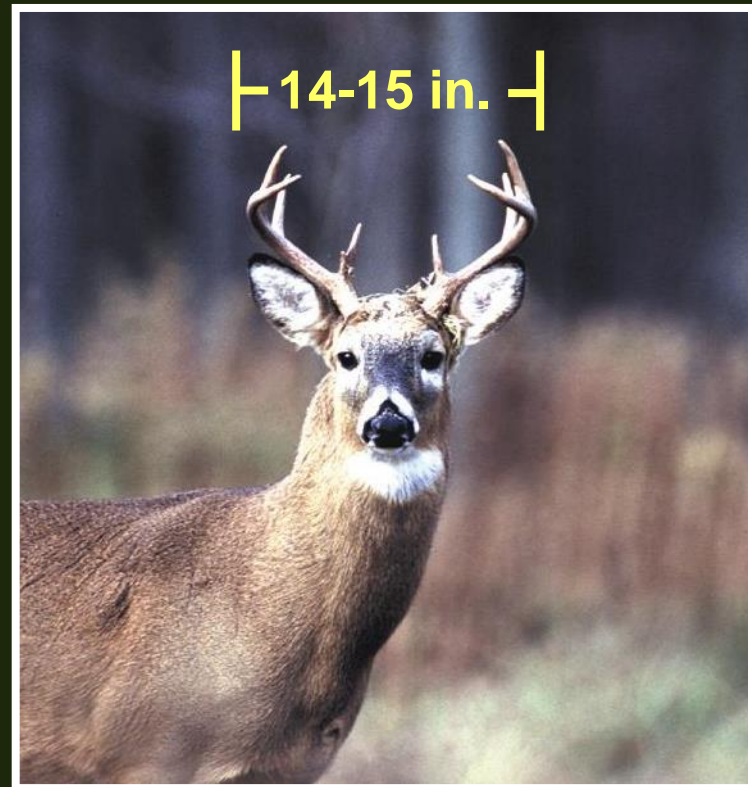
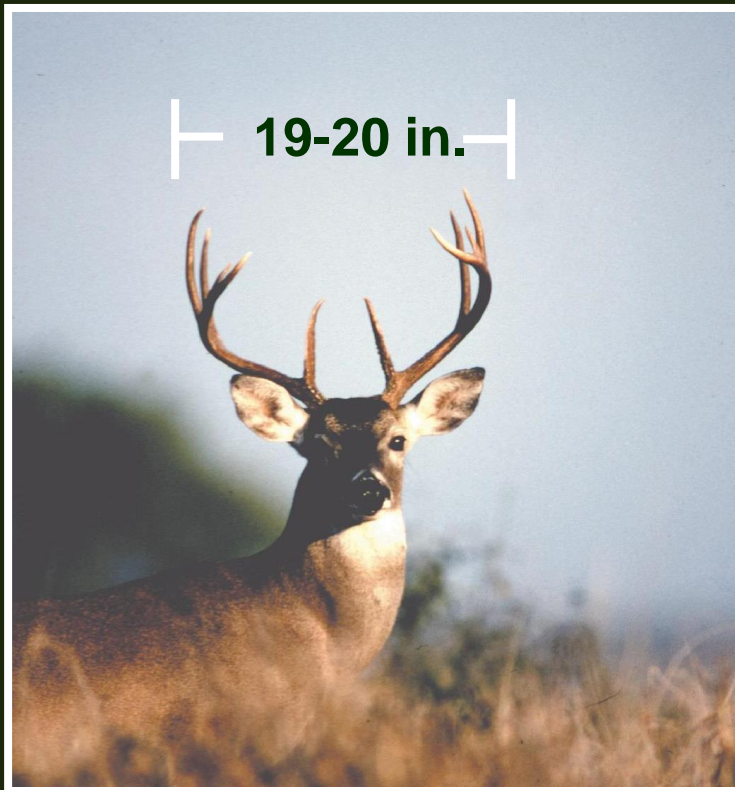
- Poor predictor of age in high quality habitats
(yearlings can have spikes to 10+ points)
- Difficult to protect yearlings and still make other age classes available for harvest
- May unintentionally focus pressure on yearlings with larger racks

ANTLER RESTRICTIONS ACROSS THE UNITED STATES



-  States with an Antler Restriction
-  States with No Antler Restrictions
-  Antler Restriction is Statewide

Antler Spread Restrictions



Establishes a minimum antler spread a buck must have to be eligible for harvest

Antler Spread Restrictions

Advantages:

- Better predictor of yearling vs. 2½+ year-olds
- More biologically sound than point restrictions

Disadvantages:

- More difficult than point restrictions to estimate in wild
- More difficult to enforce
- Will protect some mature bucks with narrow racks



This 5 ½-year-old buck had a 14 ½-inch outside spread

Bag Limits / Quotas / Draws

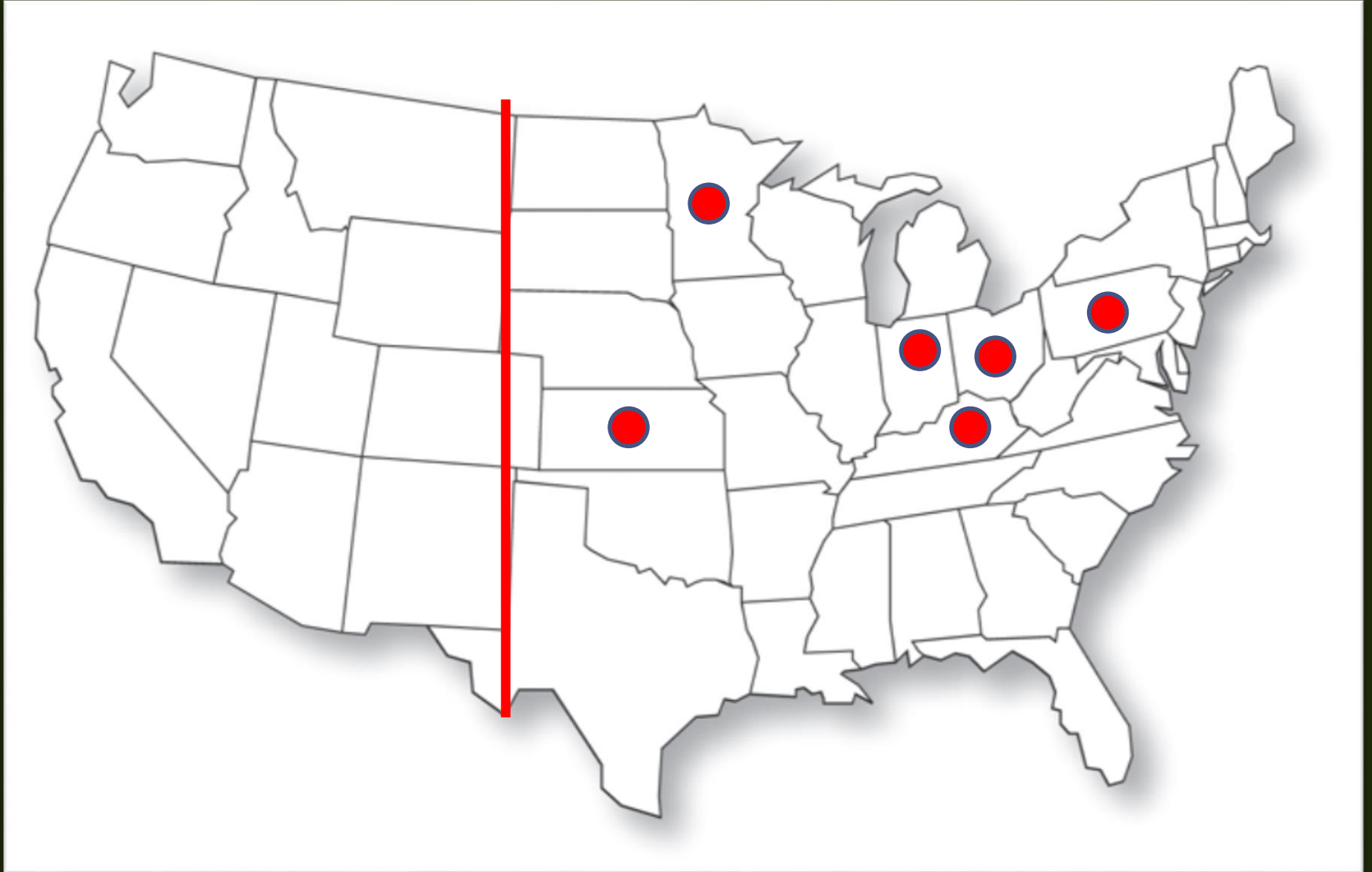
Advantages:

- Can limit buck harvest to a desired level, but not guaranteed (e.g., PA and MN have 1-buck limit)
- Can help achieve site-specific management goals
- Can help improve buck age structure

Disadvantages:

- Can limit hunter opportunity
- Can be unpopular with hunters
- Often requires additional administration

States with a One Buck Limit



Weapons / Season Restrictions

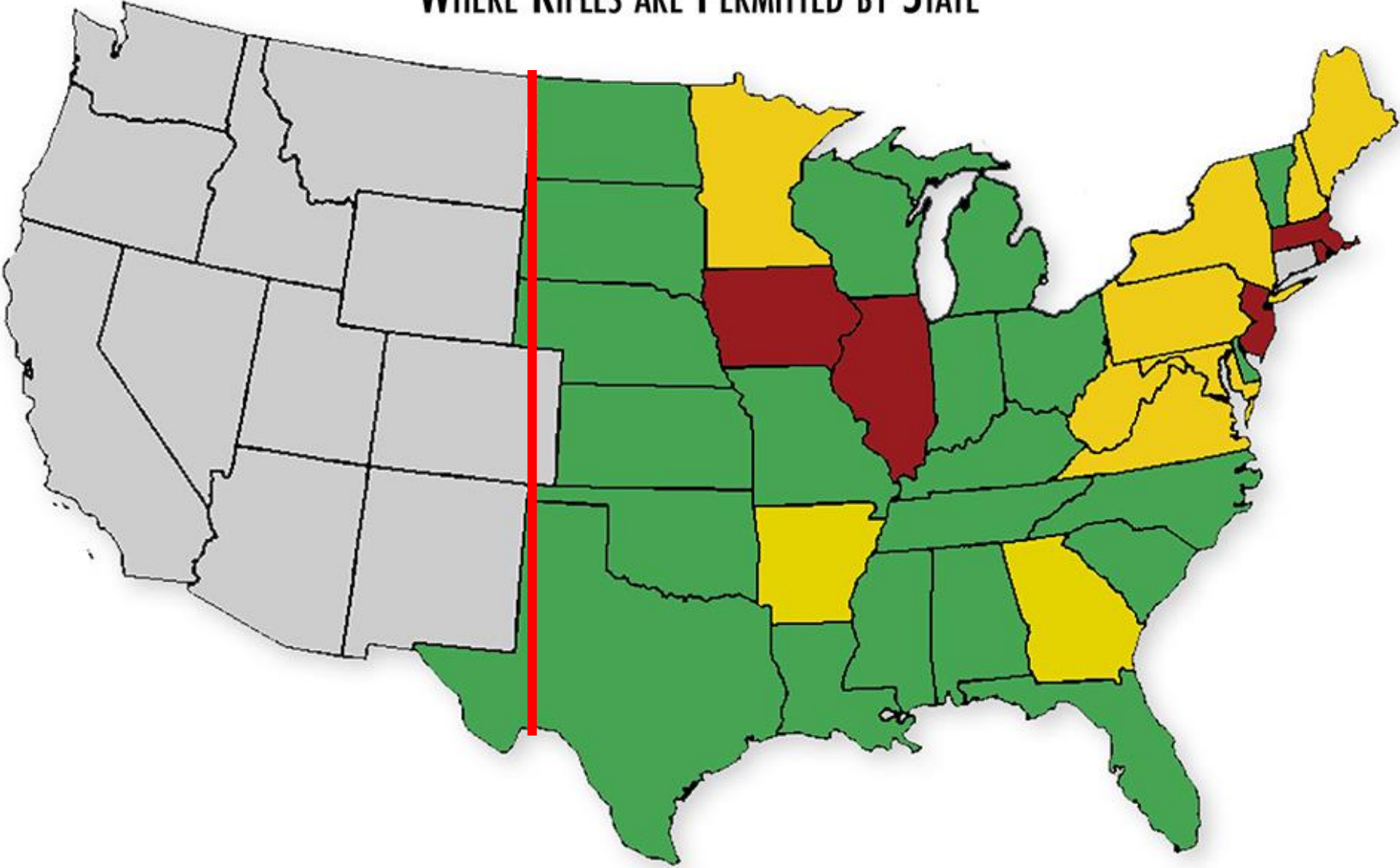
Advantages:


- Can limit buck harvest to a desired level
- Can help improve buck age structure


Disadvantages:


- Can limit hunter opportunity
- Can impact resource allocation
- Can be unpopular with hunters
- Often requires additional administration

WHERE RIFLES ARE PERMITTED BY STATE



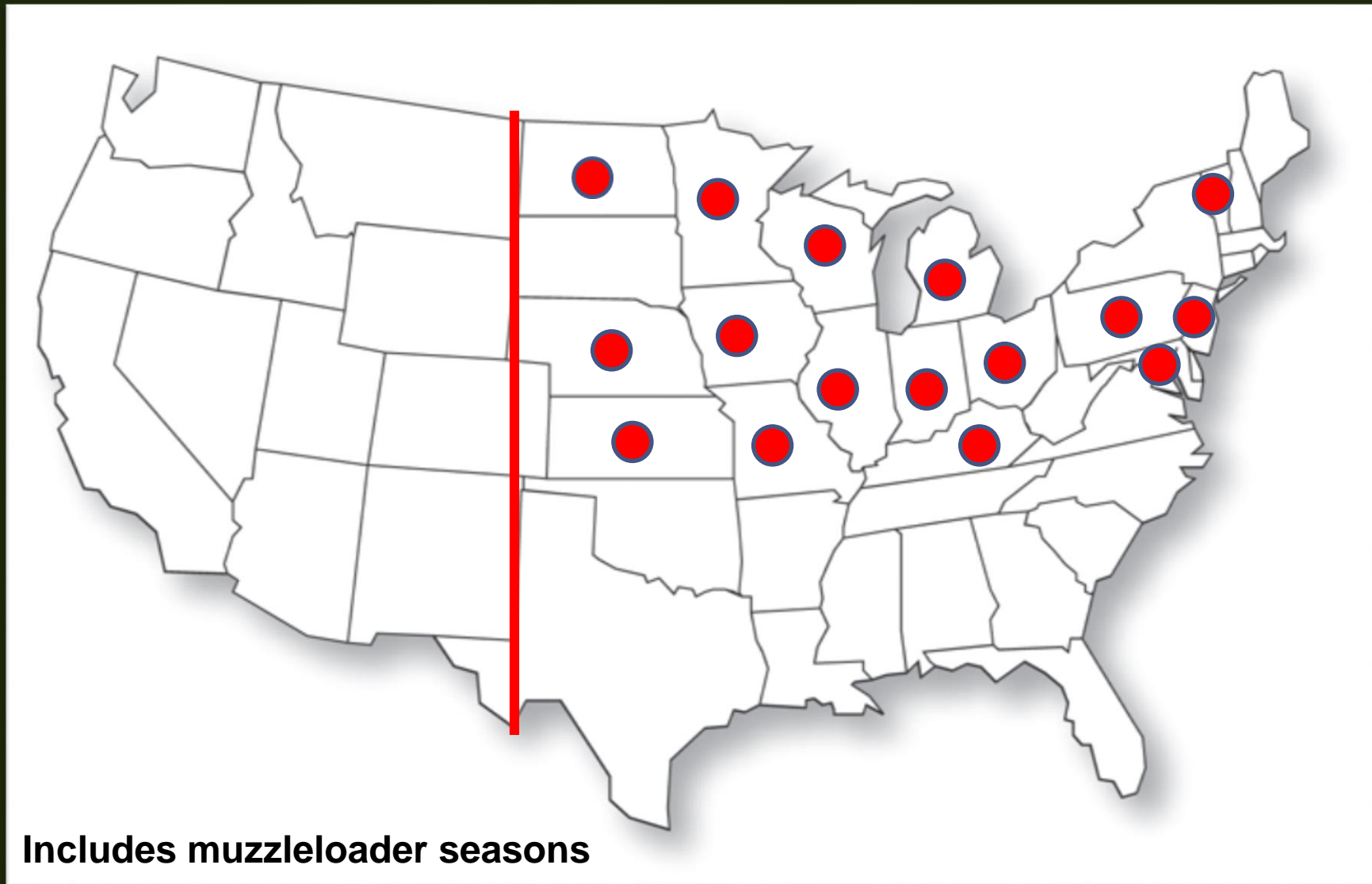
 All of the State

 Part of the State

 None of the State

 Data not available/provided

States with Firearms Seasons 17 Days or Less



Top-5 States Percentage of Harvest by **Bow**

State	2014 Percentage
New Jersey	57
Connecticut	48
Ohio	46
Massachusetts	43
Illinois	39

Top-5 States Percentage of Harvest by **Rifle/Shotgun**

State	2014 Percentage
South Carolina	89
Texas	89
Alabama	86
Maine	86
South Dakota	85

Top-5 States Percentage of Harvest by **Muzzleloader**

State	2014 Percentage
Rhode Island	42
Tennessee	27
Virginia	25
New Hampshire	23
Indiana / Massachusetts / Vermont	20



Which Strategy is Best?

From a *biological standpoint*, age restrictions are typically best because they are the most precise and flexible way to achieve management goals.

Since this approach is not available to state agencies, other approaches must be considered. Regardless, education is the key!

Age Structure of the Oklahoma Buck Harvest

Year	1½ Years Old	2½ Years Old	3½ Years Old & Older
2010	23%	26%	51%
2011	25%	24%	51%
2012	15%	19%	66%

Antlerless Deer Management



Why Harvest Does?

To control population growth and density



To balance the sex ratio



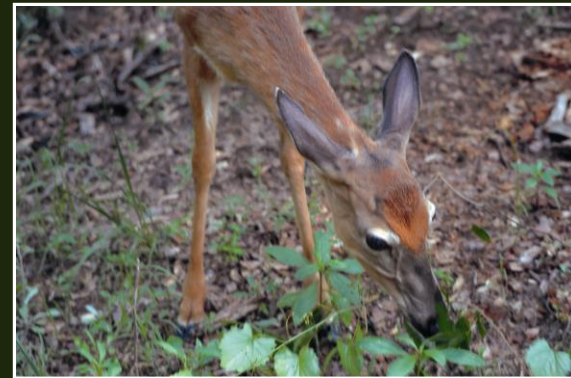


Why Harvest Early in Hunting Season?

To reduce the harvest of buck fawns

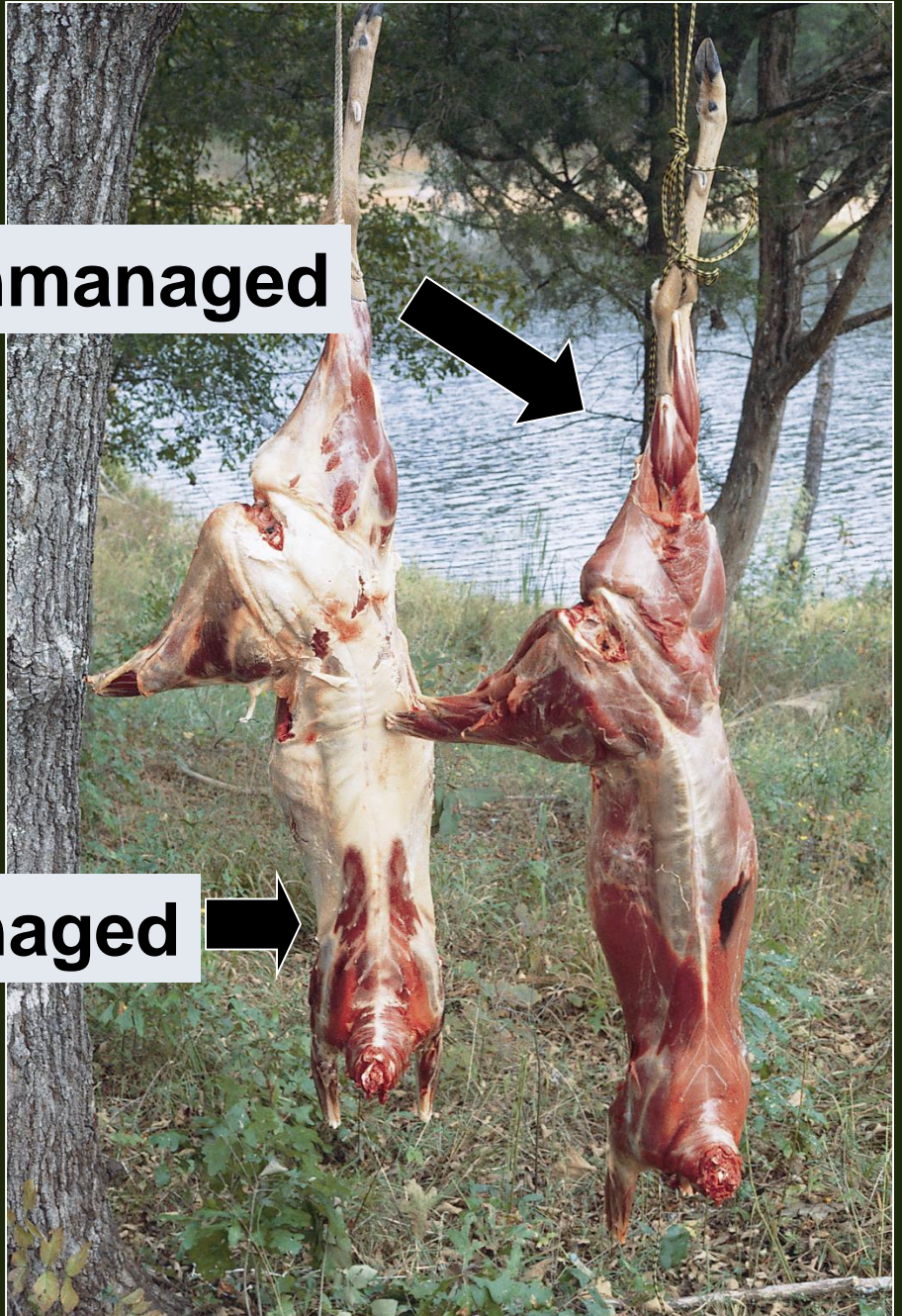


To increase nutrition available to other deer





Unmanaged



Managed



Why Focus Harvest on Adult Does?

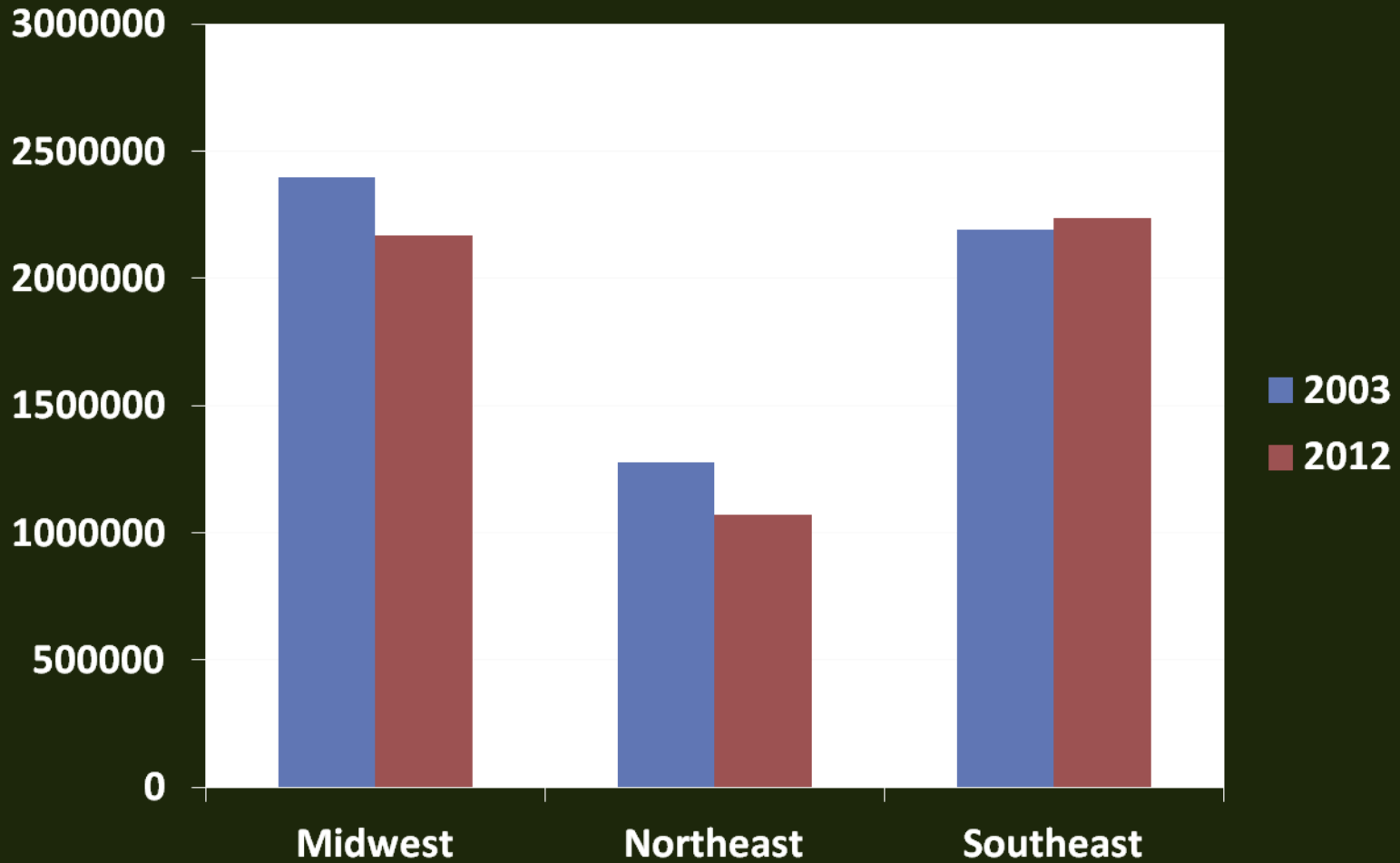
They are the most reproductive segment of the herd



It reduces the chances of harvesting button bucks

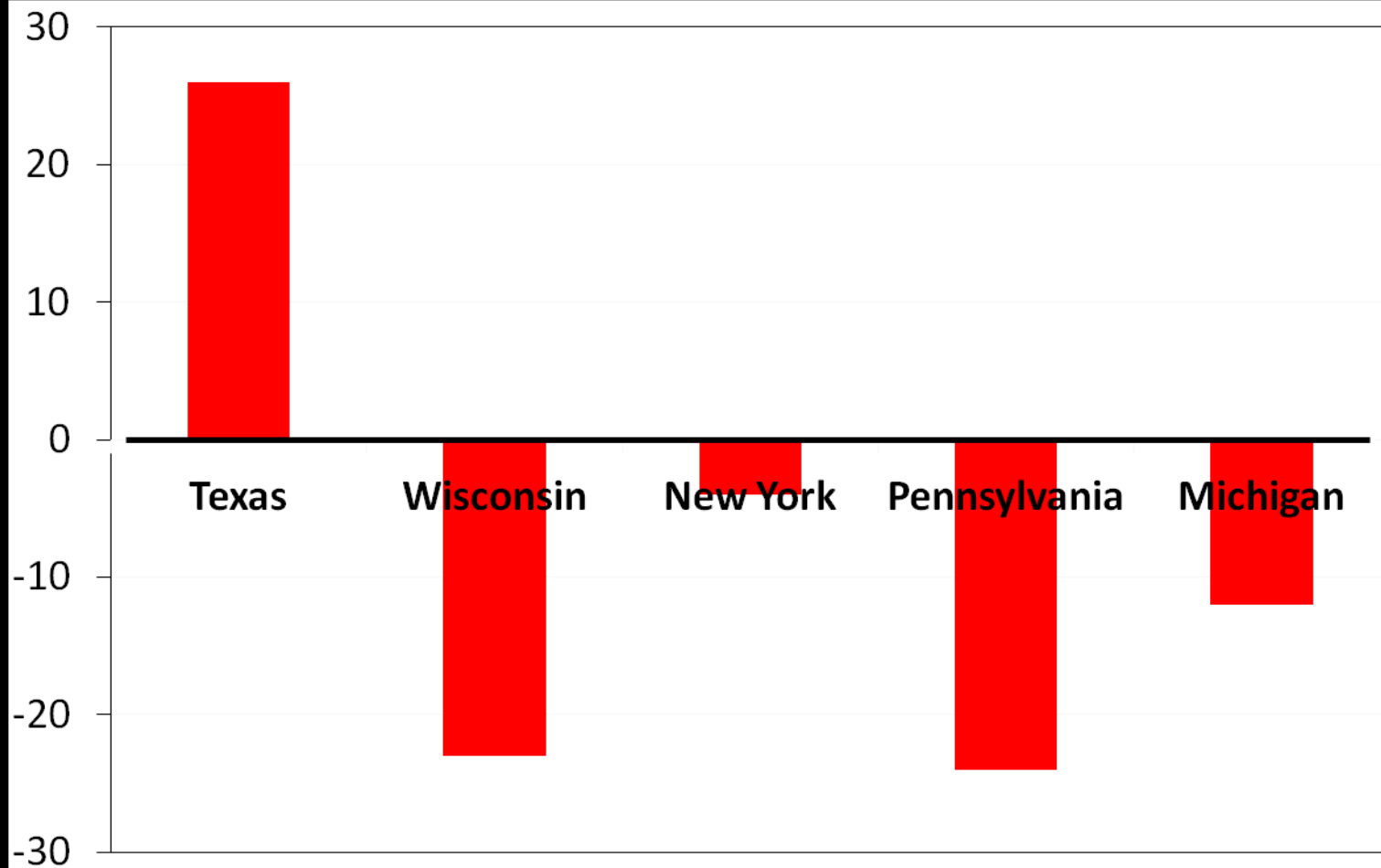


Changes in Total Whitetail Harvest 2003 vs. 2012



Top 5 States - # Deer Hunters

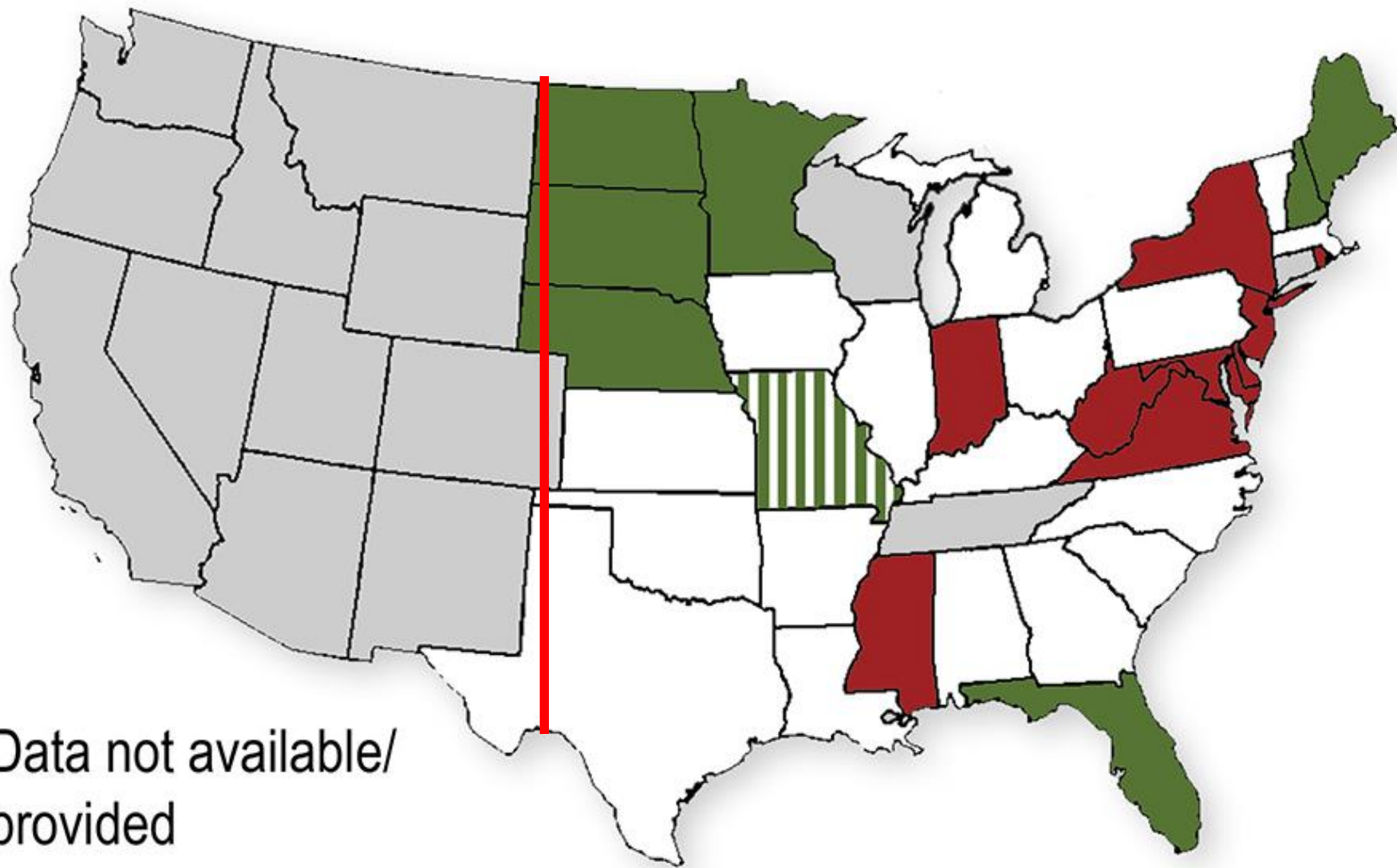
% change in total harvest from 2003 to 2012



Factors Causing Deer Population Declines

1. Hemorrhagic Disease
2. Predators / Declining Fawn Recruitment Rates
3. Abnormally High Winter Mortality
4. Habitat Loss – Especially in CRP Acres
5. Intentional & Unintentional Herd Reductions

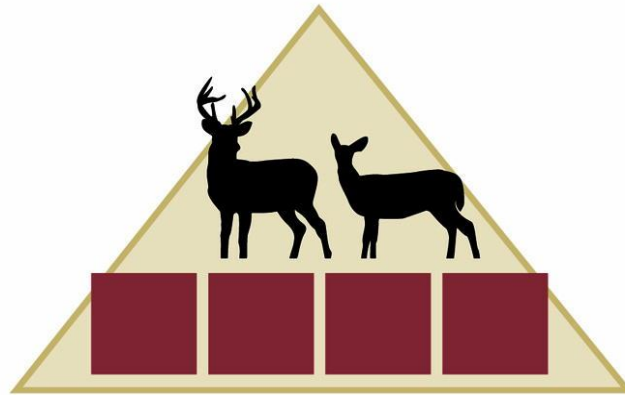
CURRENT DEER HERD MANAGEMENT STRATEGIES BY STATE



■ Data not available/
provided

■ Decrease □ Stabilize ■ Increase ■ Stabilize & Increase

Four Cornerstones of QDM



HERD MANAGEMENT
HABITAT MANAGEMENT
HUNTER MANAGEMENT
HERD MONITORING

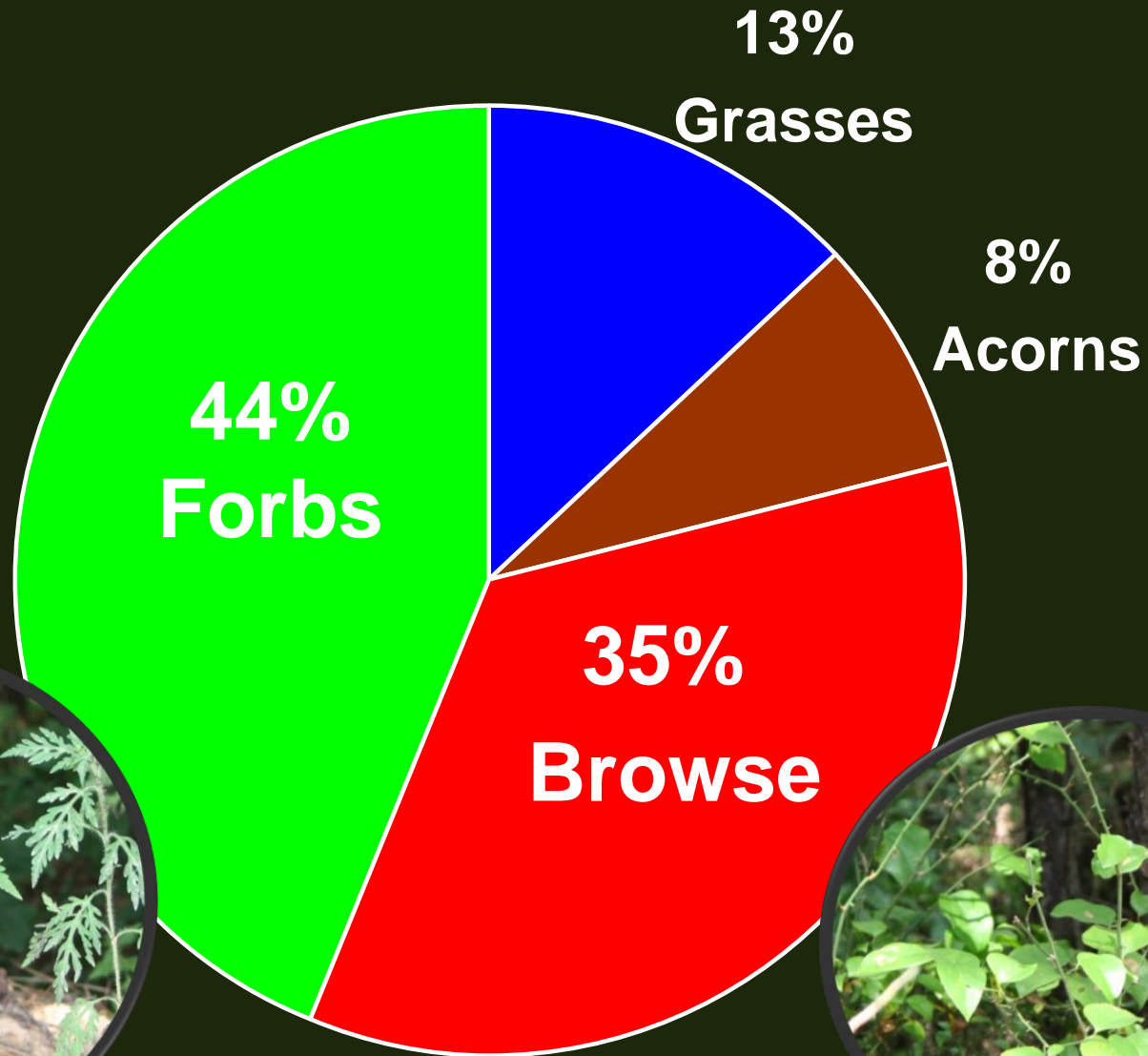


Habitat Management



**Food Plots, Natural Vegetation Management and
Supplemental Feeding**

Annual Food Habits



Food Plots



Size – Generally $\frac{1}{4}$ - 5 acres

Total Acreage – 1%-5% of total area

Natural Vegetation Management



Reasons to Manage Natural Vegetation

- Majority of deer's diet
- More economical
- Easier to maintain
- Plants better suited
- Most already established
- Provides cover as well



Greenbrier



Pokeweed

Supplemental Feeding

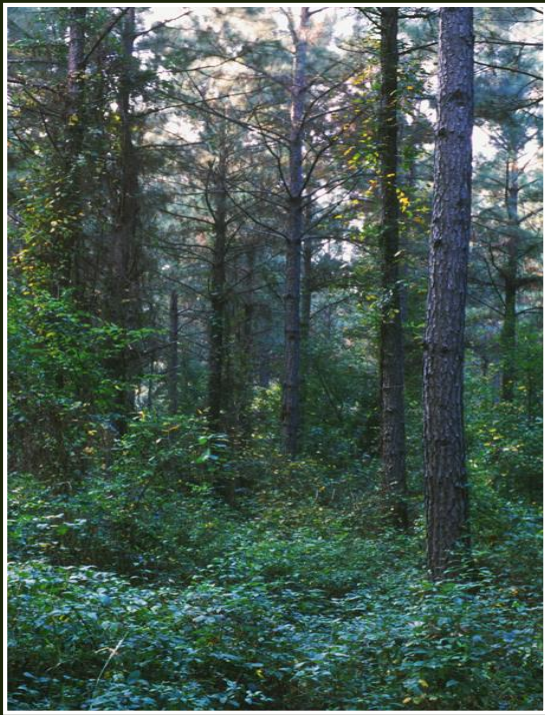


**Controversial practice among
biologists, hunters and nonhunters**

Nutritional Carrying Capacity

Number of days 1 deer can be supported on 1 acre





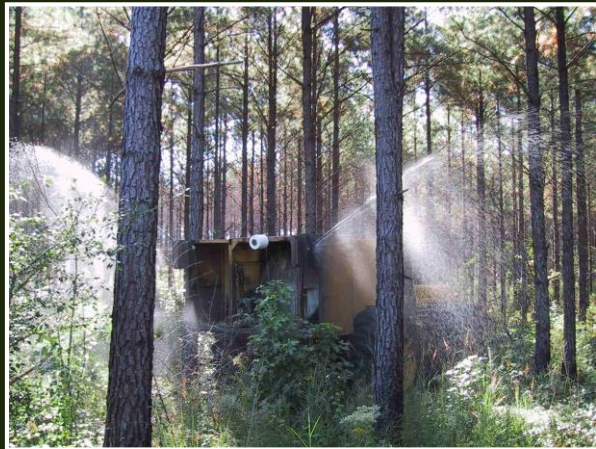
Control



Fire and
Herbicide



Herbicide only



Fire only

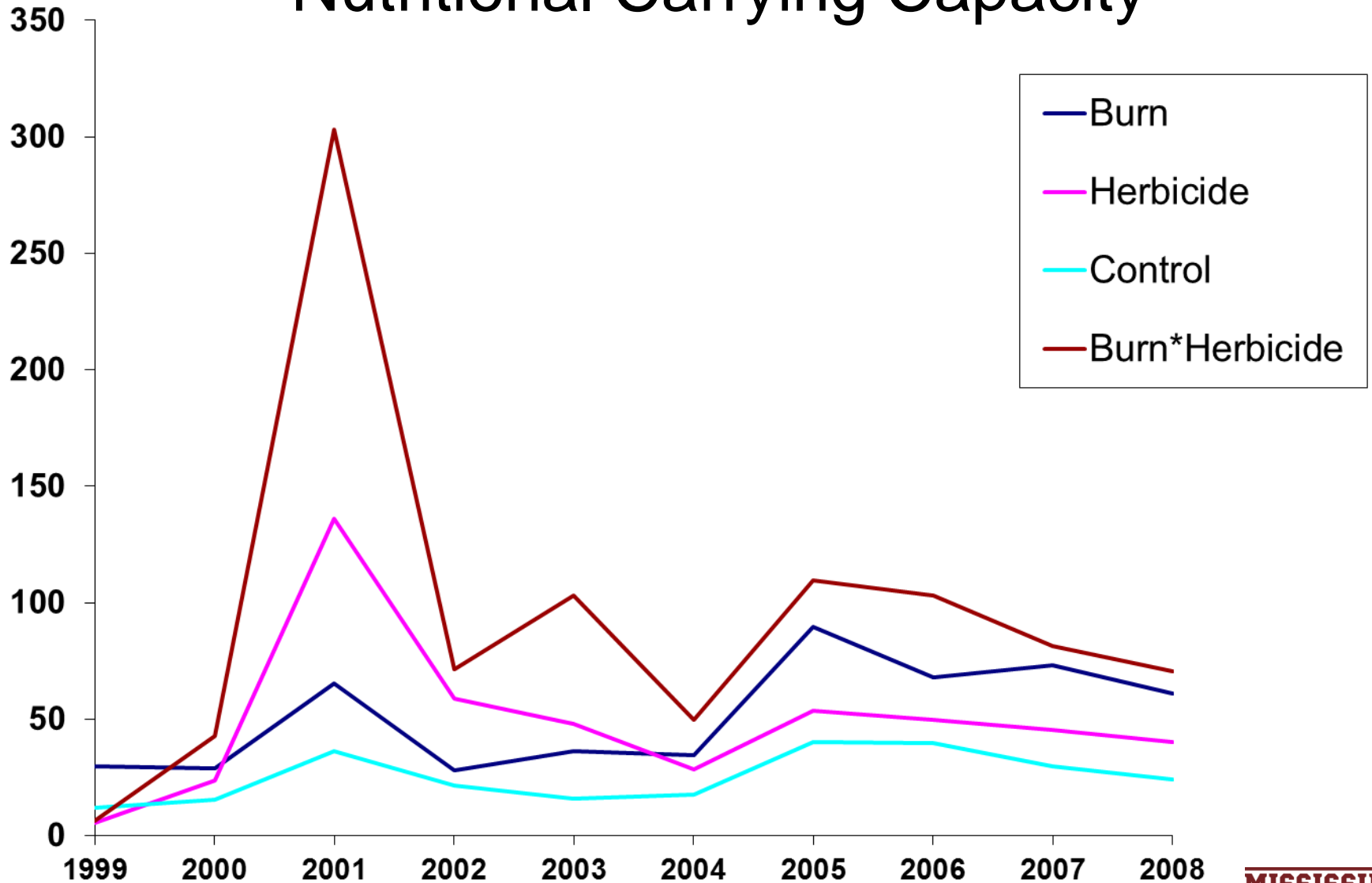


MISSISSIPPI
STATE



Weyerhaeuser

Nutritional Carrying Capacity



MISSISSIPPI
STATE

 Weyerhaeuser

What's the Bottom Line?



While not a panacea, QDM is a biologically sound and flexible management approach that improves deer herd quality and increases satisfaction for a growing number of hunters. Those practicing QDM recognize the tangible and intangible benefits and understand the intimate relationship it establishes between the hunter, the hunted and the land. These are key reasons why QDM has become the most popular deer management approach of our time.

Questions?

