

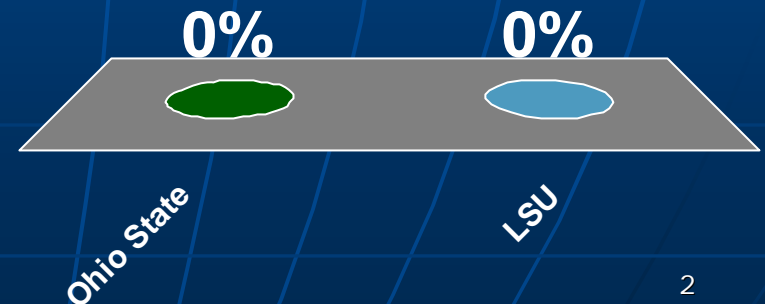
Cattle Market Outlook & Economics **of Enhanced Cow-Calf Traceability**

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Michigan State University

Cow-Calf Management & Technology Seminar
December 10-12, 2007

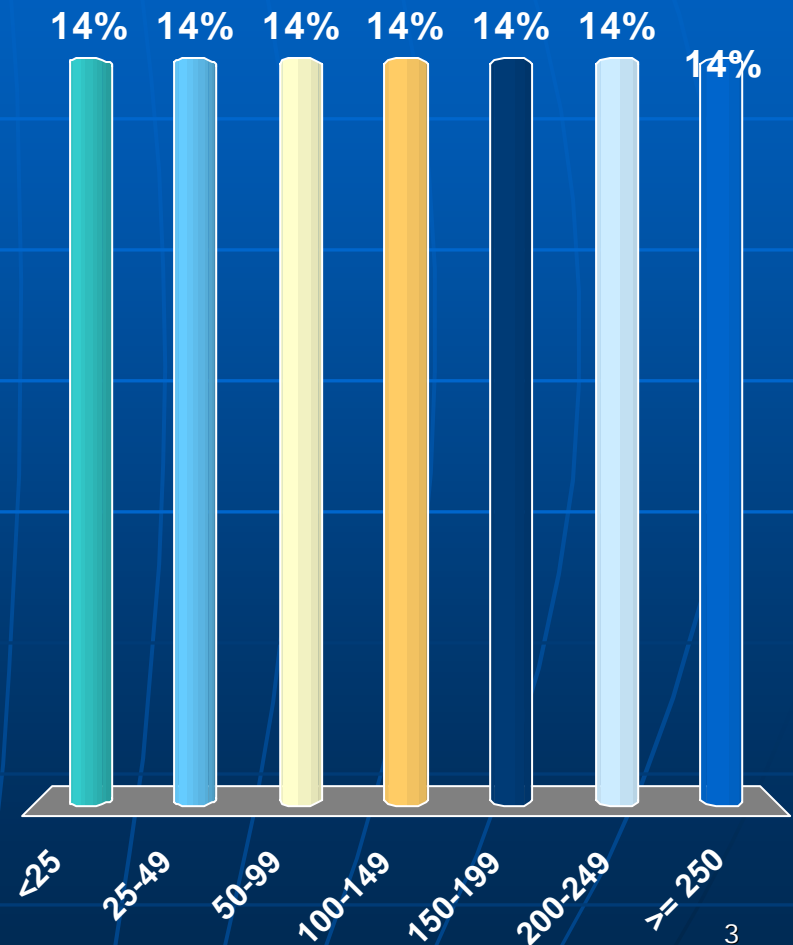
Which team is going to win the BCS title game?

1. Ohio State
2. LSU



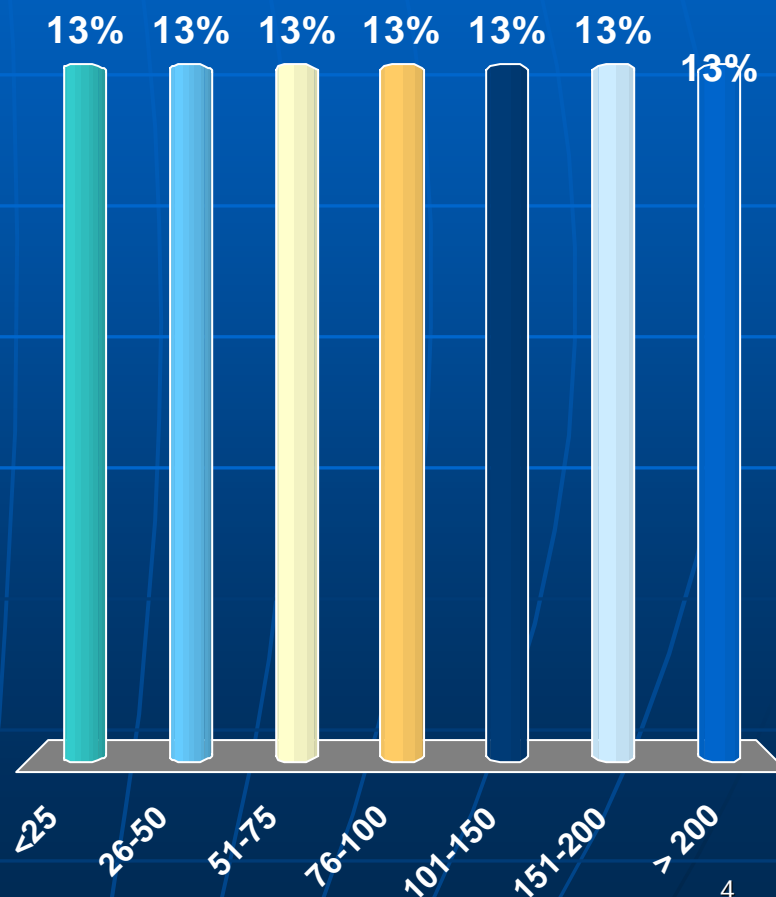
How many cows do you currently have in your cow-calf operation?

1. < 25
2. 25 - 49
3. 50 - 99
4. 100 - 149
5. 150 - 199
6. 200 - 249
7. ≥ 250



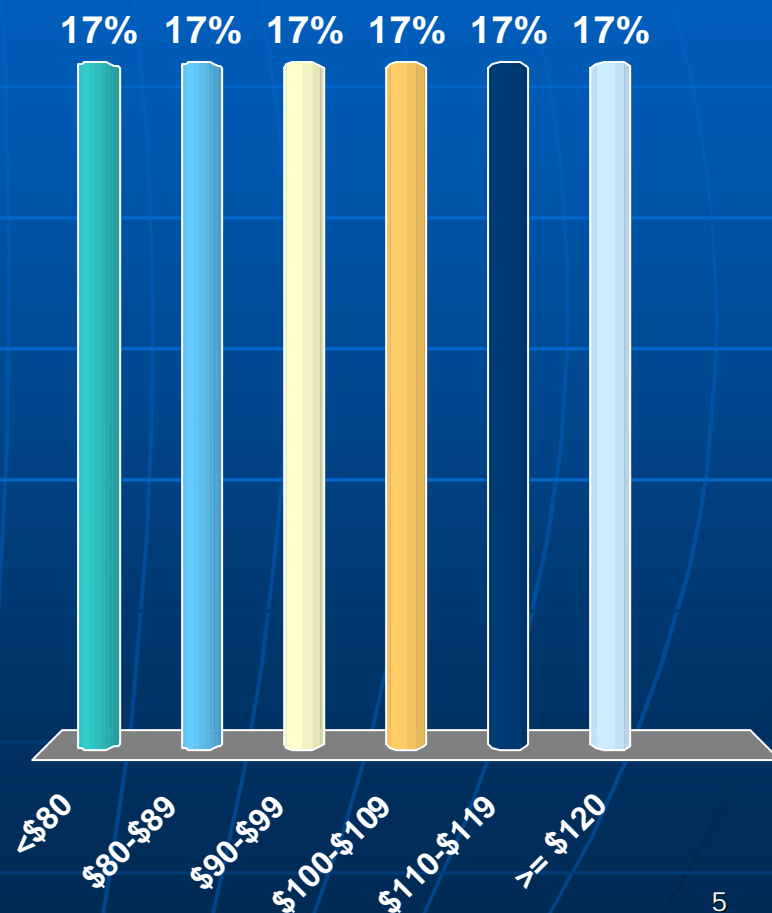
How far did you travel to attend this meeting?

1. < 25 miles
2. 26 – 50 miles
3. 51 – 75 miles
4. 76 – 100 miles
5. 101 – 150 miles
6. 151 – 200 miles
7. > 200 miles



What do you expect the national average hay price to be in 2008?

1. Less than \$80/ton
2. \$80-\$89/ton
3. \$90-\$99/ton
4. \$100-\$109/ton
5. \$110-\$119/ton
6. \$120/ton or more

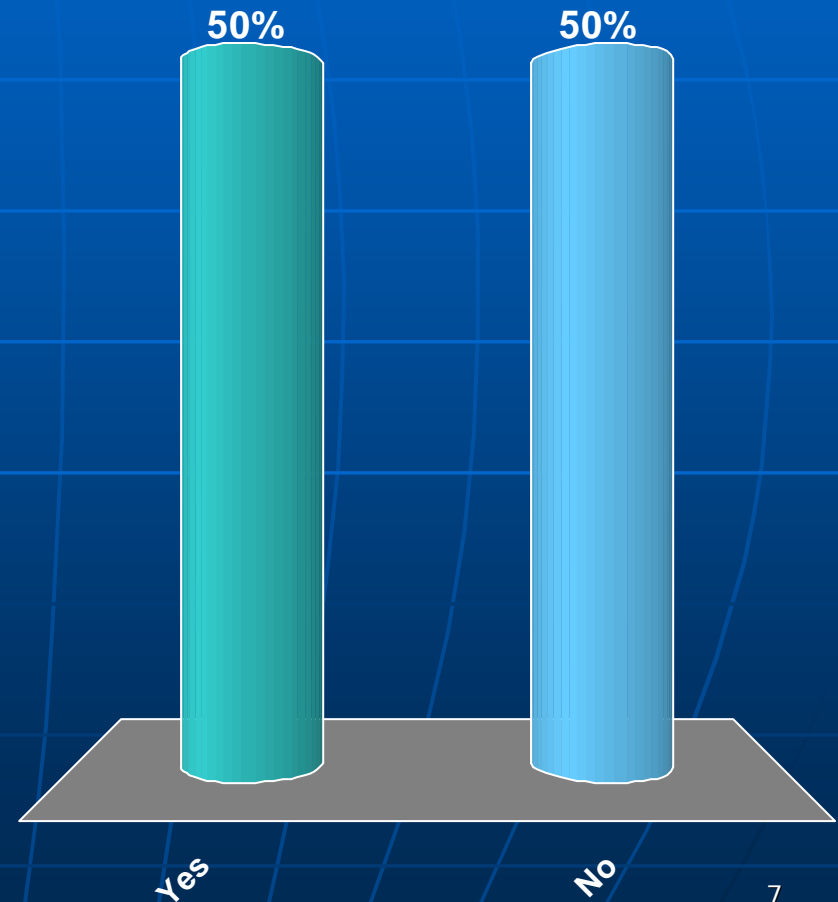


Implications of Ethanol &/or Drought on Cowherds:

- Increased Feed Costs:
 - Record hay prices
 - LMIC national average hay price forecast of \$130/ton (07/08);
 - \$110/ton (06/07) was prior record
 - May 1, 2007 US hay stocks were smallest since 1960 (15 million tons)
 - Likely same situation on May 1, 2008 (15.4 million tons)

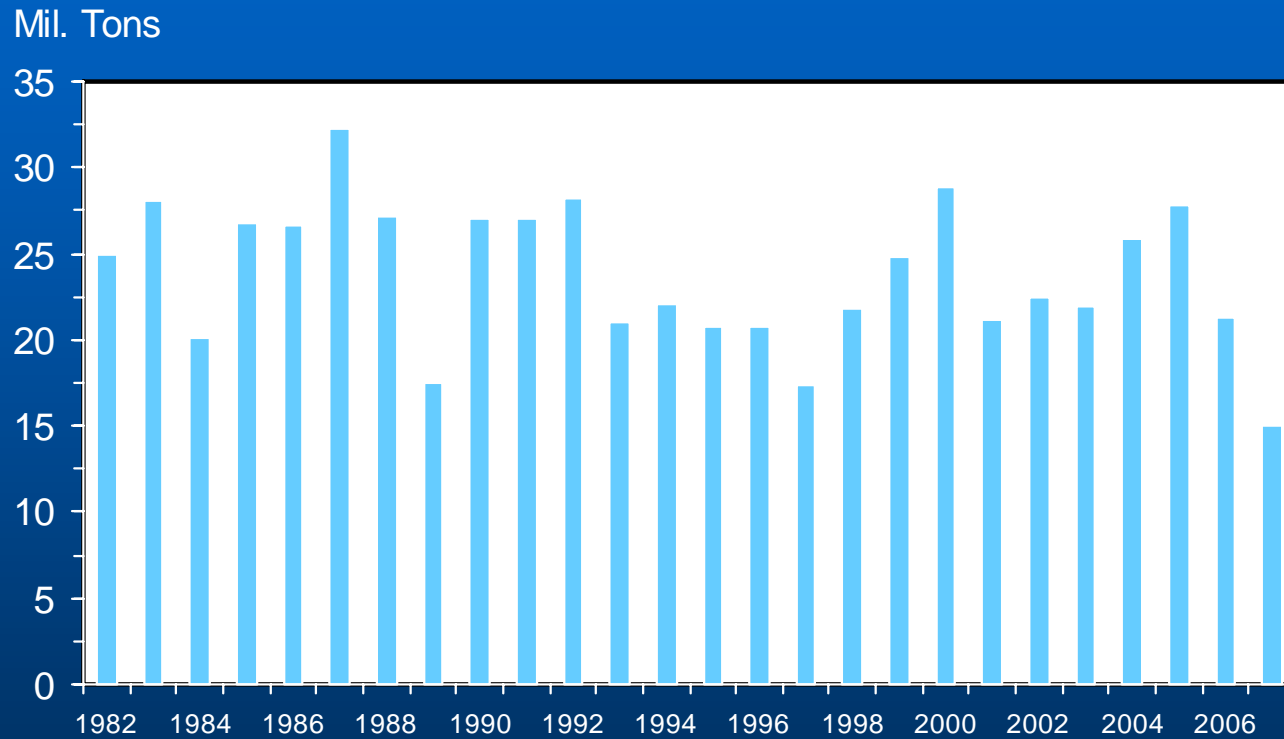
Did you produce more hay this past year than you could feed?

1. Yes
2. No



U S ALL HAY STOCKS

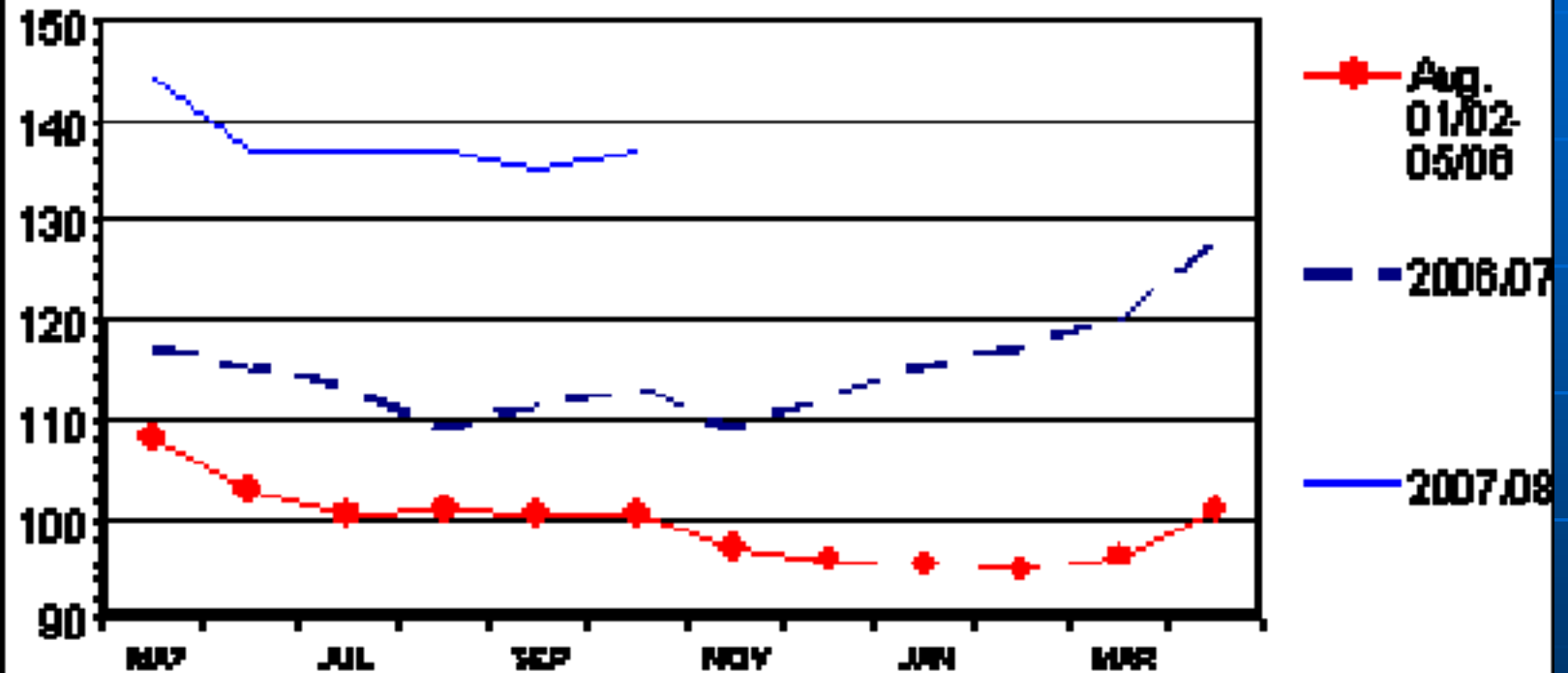
May 1 (Beginning of Crop Year)



ALFALFA HAY - MONTHLY AVERAGE

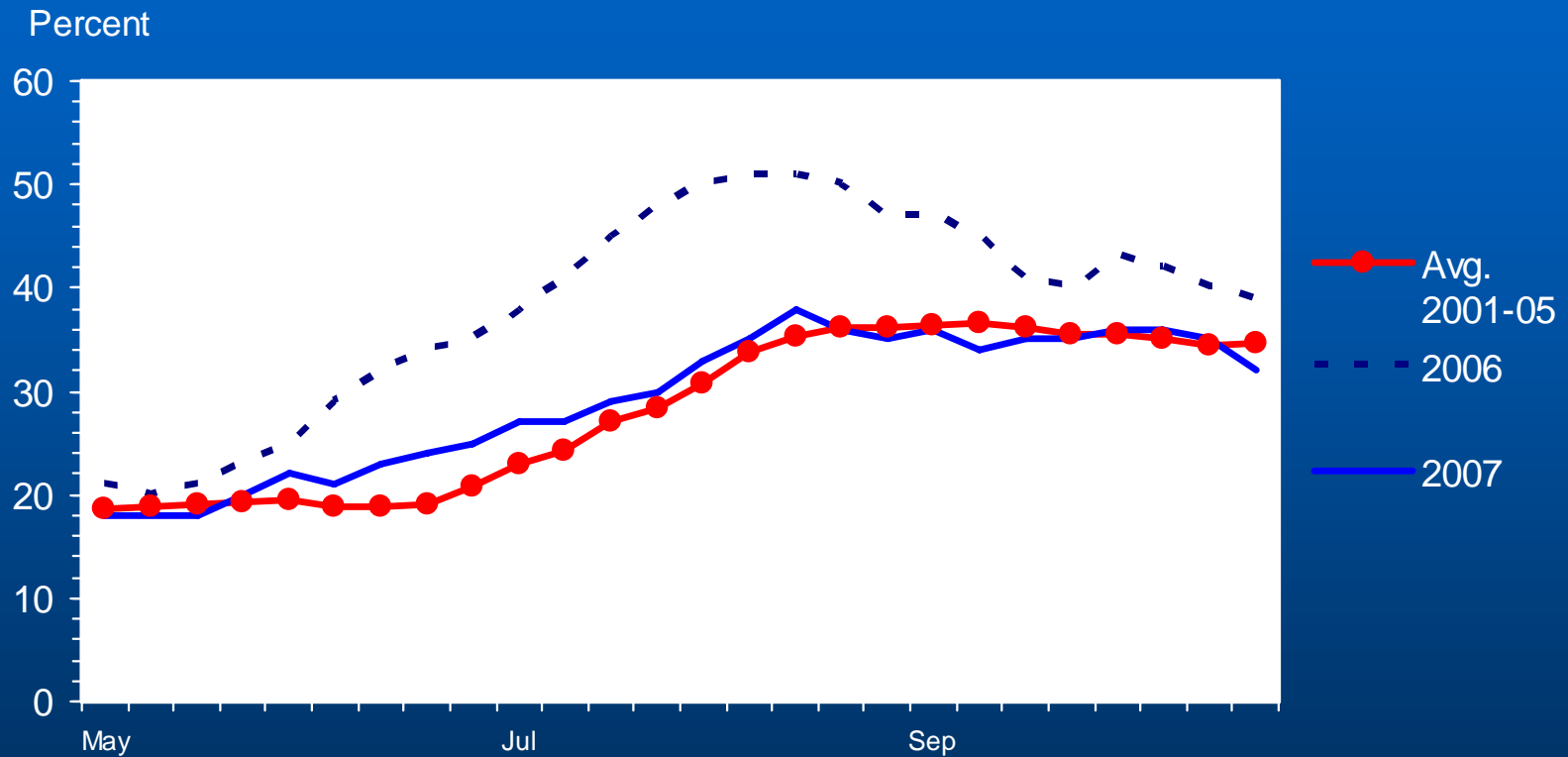
Received by Farmers, U.S., Crop Year

\$ Per Ton



US RANGE AND PASTURE CONDITION

Percent Poor and Very Poor, Weekly

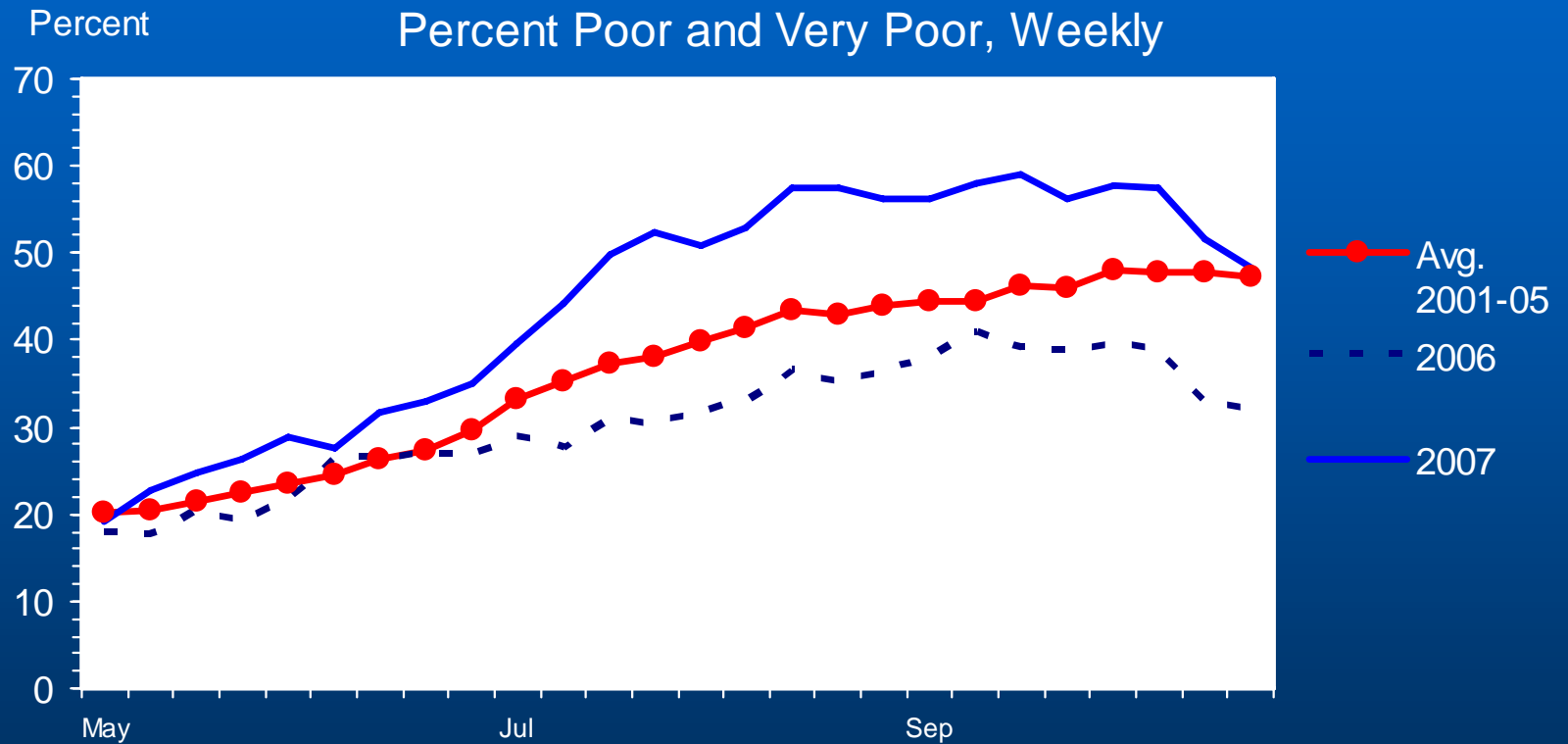


Livestock Marketing Information Center

Data Source: USDA/NASS

G-NP-30
10/29/07

WESTERN REGION RANGE AND PASTURE CONDITION

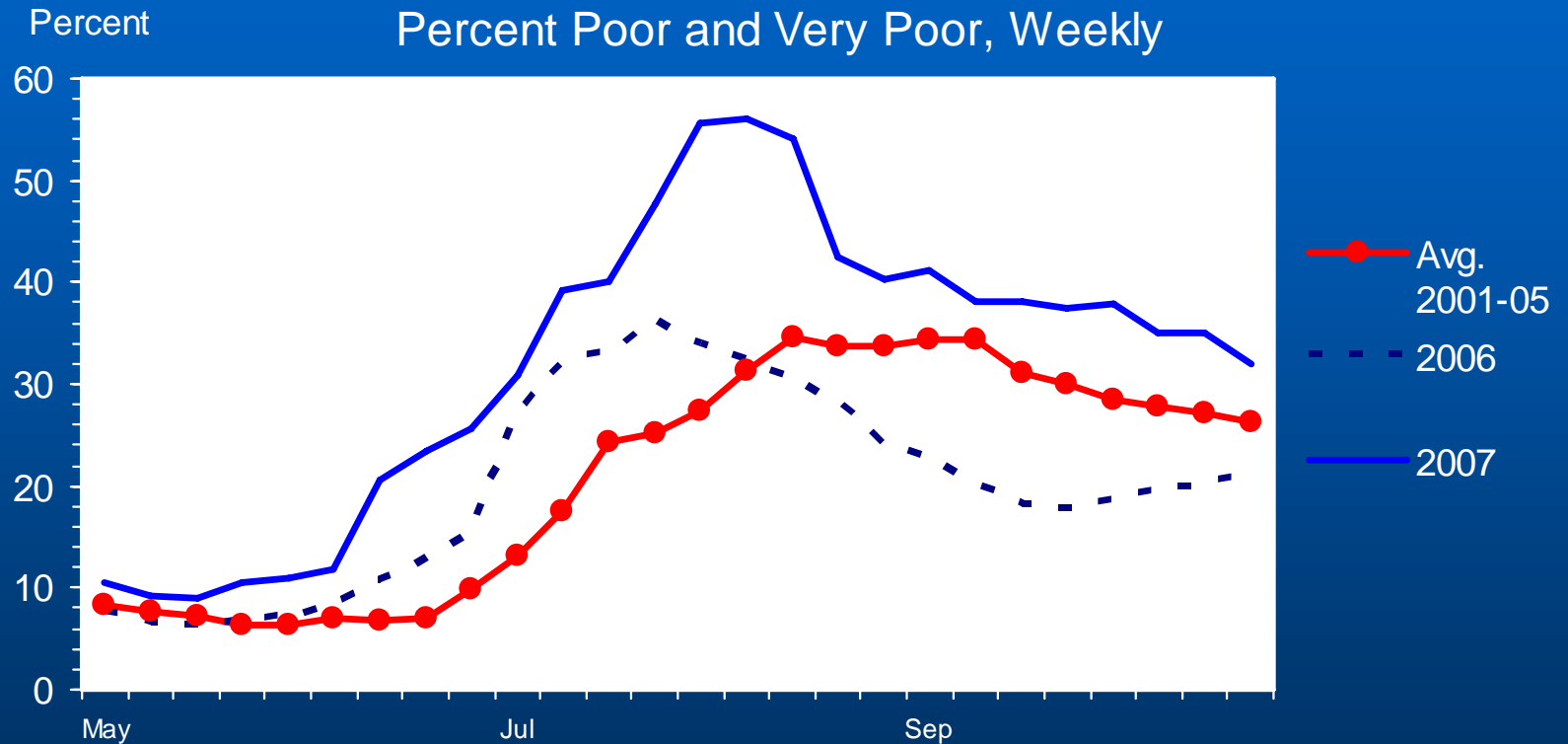


Livestock Marketing Information Center

Data Source: USDA/NASS

G-NP-31
10/29/07

CORNBELT REGION RANGE AND PASTURE CONDITION

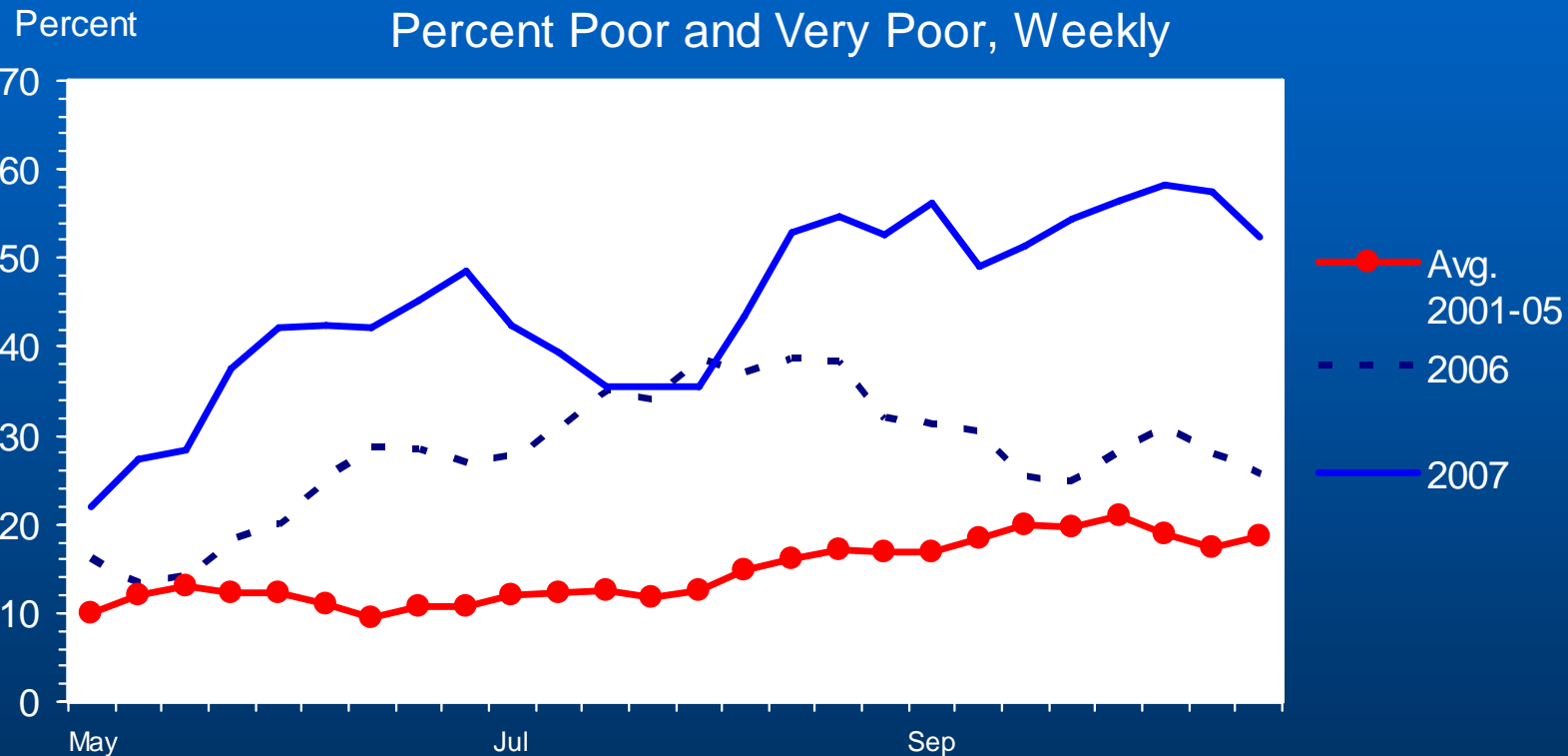


Livestock Marketing Information Center

Data Source: USDA/NASS

G-NP-34
10/29/07

SOUTHEAST REGION RANGE AND PASTURE CONDITION



Livestock Marketing Information Center

Data Source: USDA/NASS

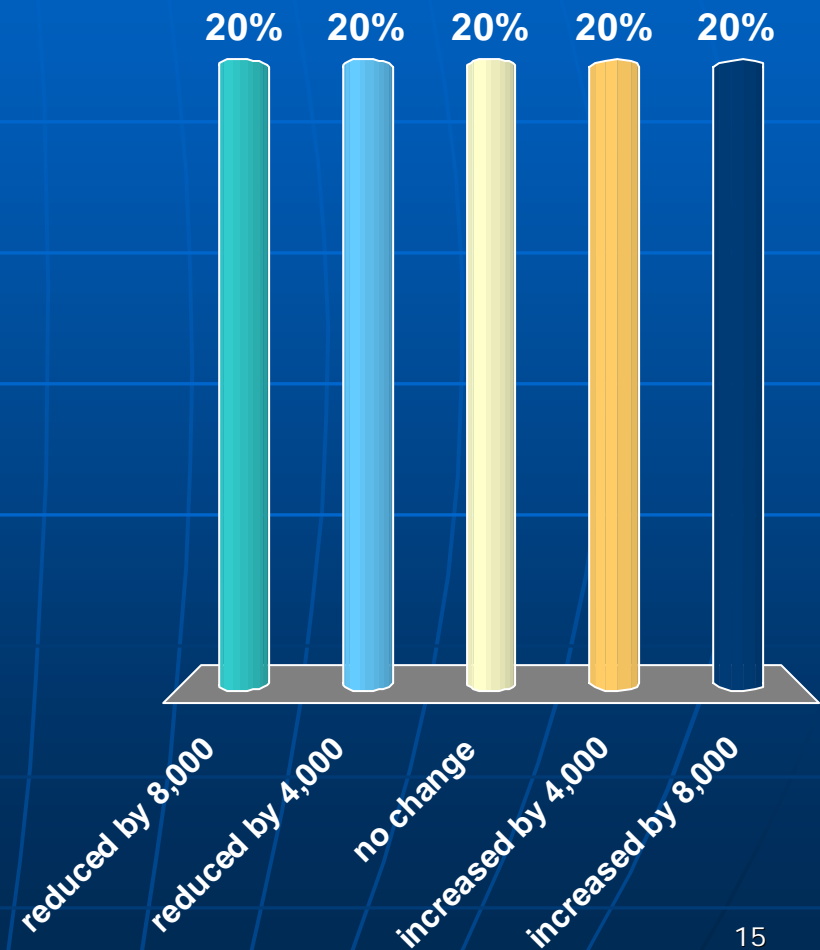
G-NP-36
10/29/07

Implications of Ethanol &/or Drought on Cowherds:

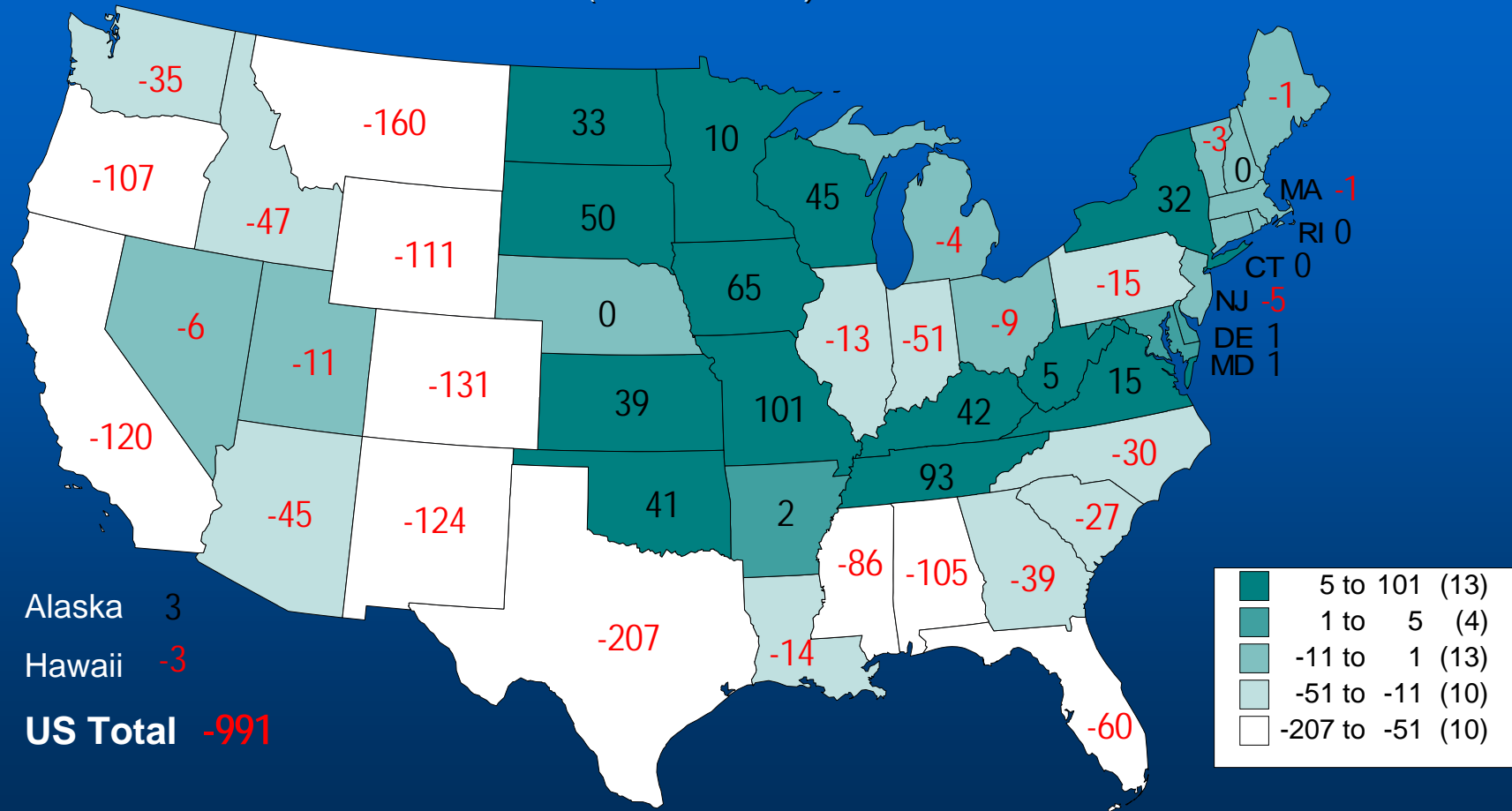
- Increased Feed Costs
 - Land competition
 - Heavier feeders are being demanded
 - All else equal, cheaper feeders
- Reduction in herd size in some crop states / +/-0 expansion in US

What was the change in MI's beef cow inventory between January 1998 and January 2007 ?

1. Reduced by 8,000
2. Reduced by 4,000
3. Changed by less than 4,000
4. Increased by 4,000
5. Increased by 8,000



CHANGE IN BEEF COW NUMBERS JANUARY 1, 1998 TO JANUARY 1, 2007 (1000 Head)

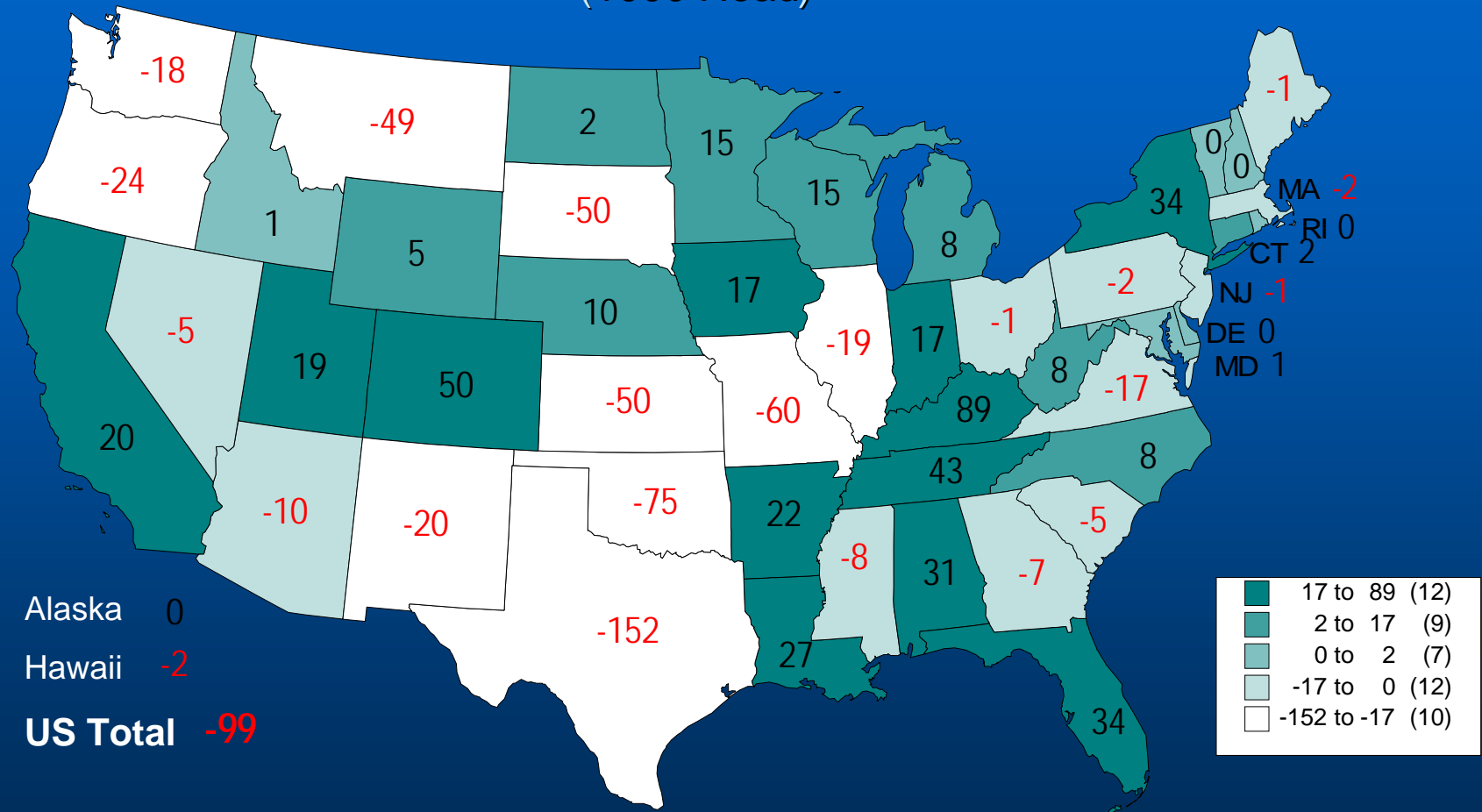


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Data Source: USDA/NASS

C-N-29
02/02/07

CHANGE IN BEEF COW NUMBERS JANUARY 1, 2006 TO JANUARY 1, 2007 (1000 Head)



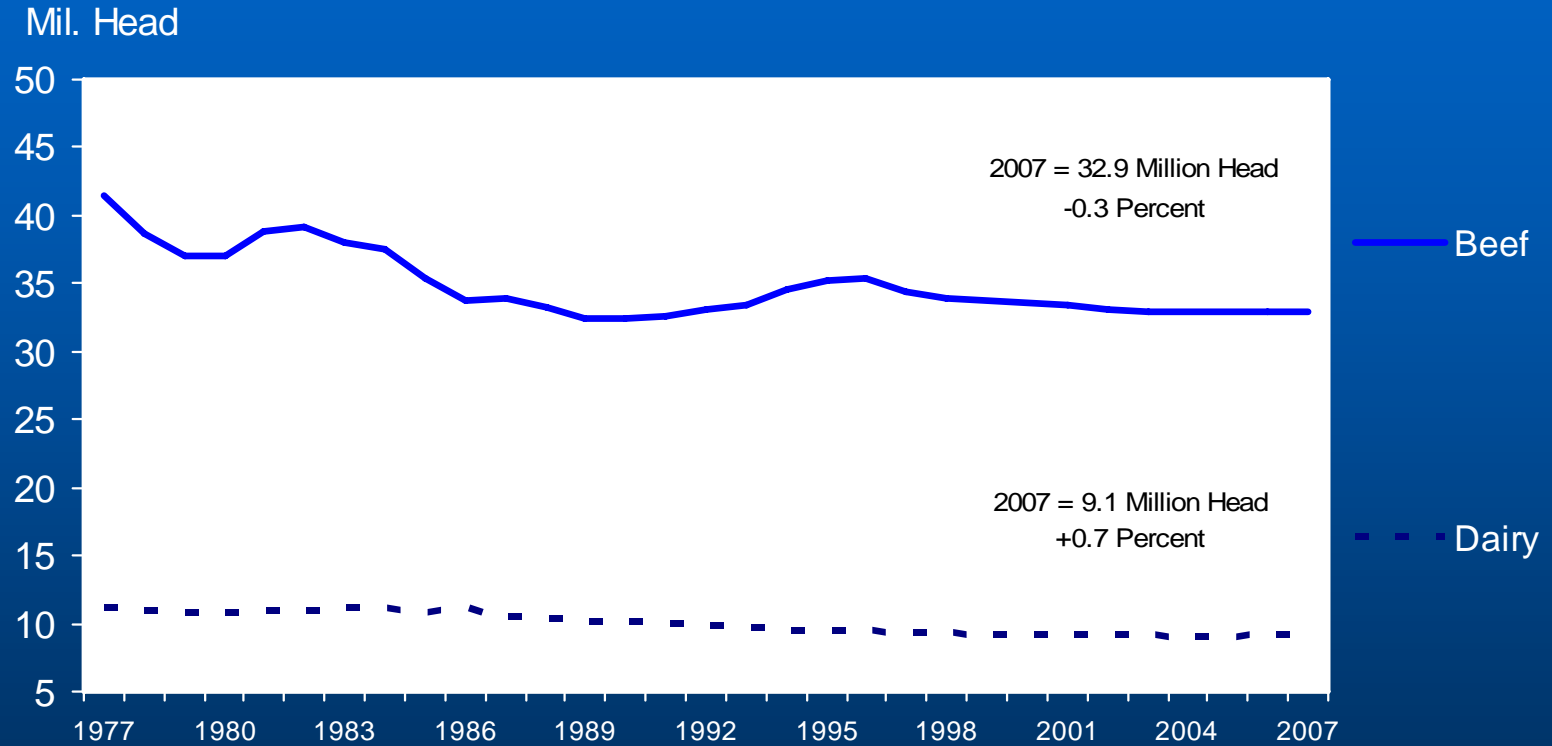
Livestock Marketing Information Center

Data Source: USDA/NASS

C-N-28
02/02/07

JANUARY 1 COW INVENTORY

U.S., Annual



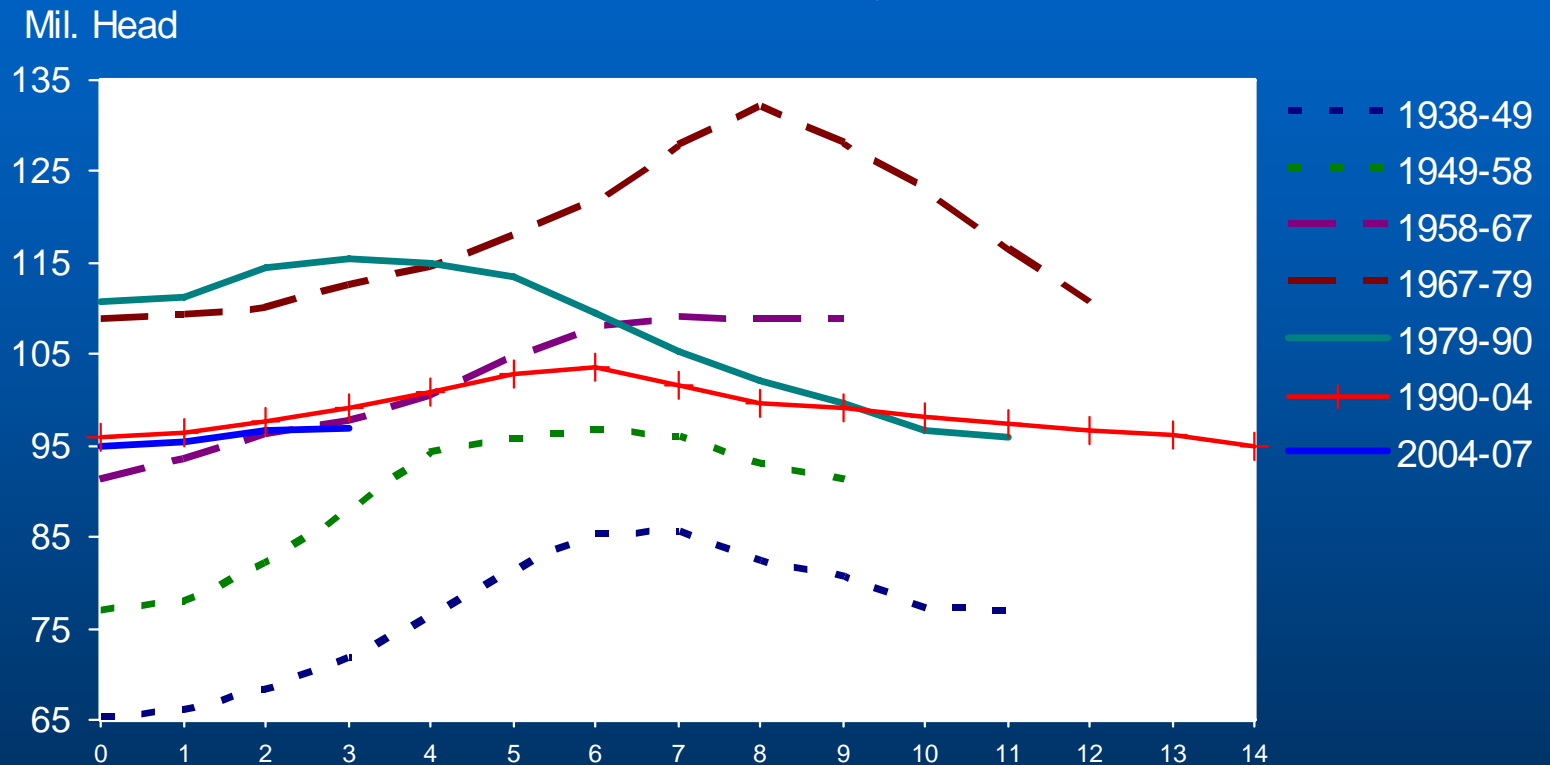
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Data Source: USDA/NASS

C-N-02
07/20/07

TOTAL CATTLE INVENTORY BY CYCLE

U.S., January 1



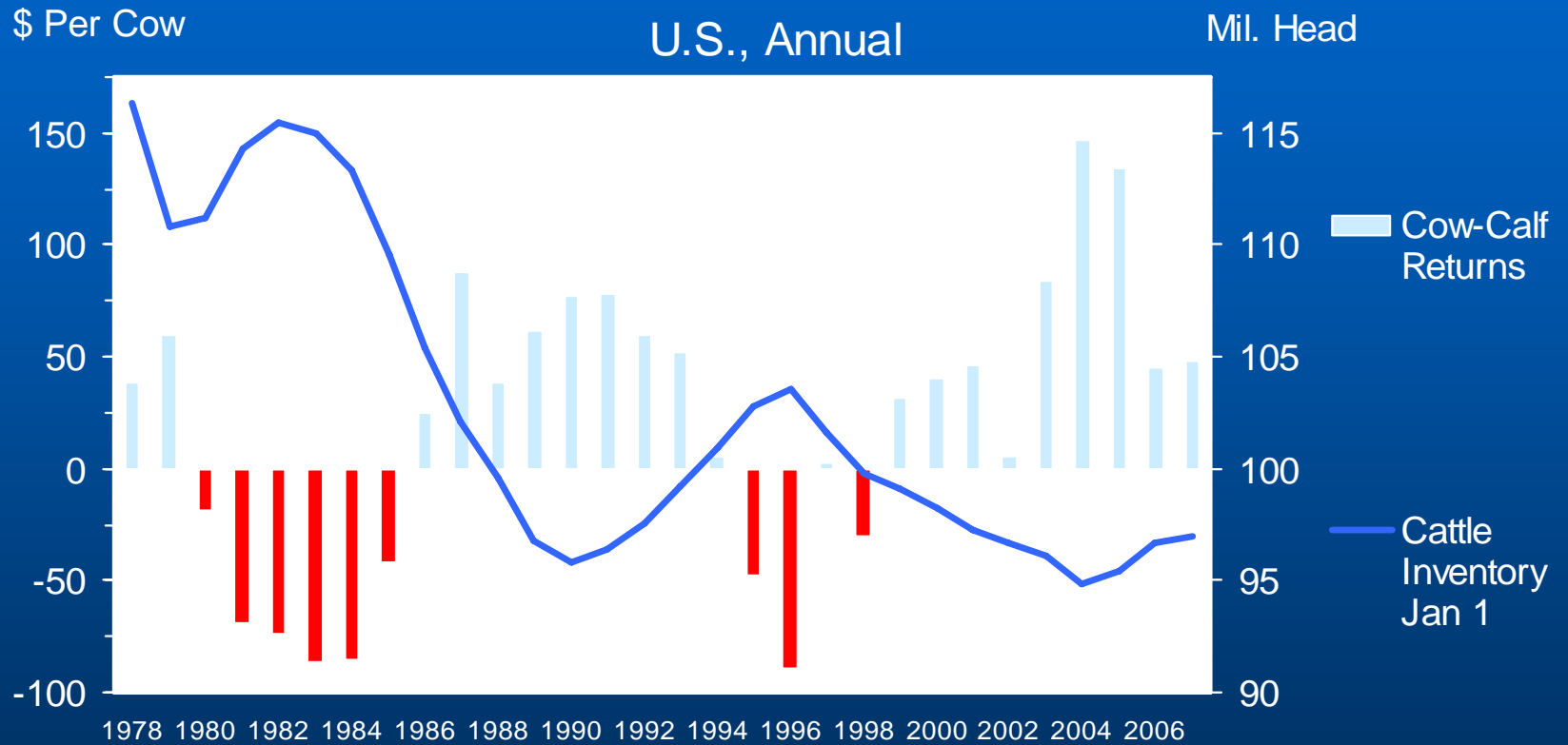
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Data Source: USDA/NASS

C-N-40

07/20/07

COW-CALF RETURNS AND CATTLE INVENTORY



Jan 2008 Feeder Cattle

Futures Variability

Probability that the realized price at maturity will be less than this price	Price
10%	104.3
20%	106.38
30%	107.91
40%	109.23
50%	110.46
60%	111.75
70%	113.11
80%	114.75
90%	117.03

80% Window:
\$104.30 - \$117.03
\$12.73

Economics of Enhanced Cow-Calf Traceability

What is meat/animal identification/traceability?

- “Recordkeeping systems designed to track the flow of product or product attributes through the production process or supply chain.” (USDA, Golan et al.)
- “identity preservation that can be accomplished by tracking inputs used in production of food back to their origin at various levels in the supply chain” (Liddell and Bailey)

Traceability System \neq Verification System

■ Verification System:

- Process by which the company, its customers, consumers and regulators can know with a high degree of certainty that the traceability system is working properly.
- Documented, auditable procedures for collection and transfer of valued information (e.g., age & source)

■ Traceability is a required and valuable input in Verification

- Combined, significantly more information transfers in a supply chain
 - Leads to more efficient market operation

Economic incentives: Traceability &/or Verification

- Animal health (proactive and reactive)
- Food safety concerns
 - Foreign and domestic consumers
- Credence attribute verification
 - Organic, COOL, Natural, Age, GM-free,...
- Improving management
 - On-farm AND throughout supply chain
 - Competition implications across species
- Bioterrorism risk control
- Properly assign liability

Economic incentives

- Countries/firms WITH traceability/verification:
 - May access new or sustain existing markets
 - Can protect brand valuation/differentiation
 - Differentiated products often contain quality attributes (both content and process) that cannot be verified through physical inspection, and thus are virtually unknown to the consumer at the time of purchase unless they are either labeled that they contain these attributes or the information about the presence of the attributes is communicated to consumers in some other way. (Curtis, LMIC 2004)
 - Can greatly assist in reducing non-tariff trade barrier issues
 - E.g., age verification likely would increase US beef access to Japan
- Countries/firms WITHOUT traceability/verification:
 - Risk falling behind on all fronts
 - Less Information =
Reduced Likelihood of Optimal Decision Making

Alternative Verification Programs

- PVP, QSA, Independent 3rd Party, 2nd Party Verification, Self Certification, Do Nothing (most to least “effective”)
- Self- Certification:
 - signed affidavit; free-rider, bad apple problem
- 2nd or Independent 3rd party:
 - lack government credibility; likely not sufficient for export
- QSA:
 - government credibility, but not flexible = less marketing value
- PVP:
 - more expensive; most flexibility and credibility

	<u>PVP</u>	<u>QSA</u>
<i>ISO 9001:2000 elements</i>	ALL	Most
<i>Audits</i>	>=1/ year	>= 2/year
<i>Claims</i>	Flexible	Limited to age, source and non-hormone
<i>Marketing</i>	PVP shield	No shield

Process Verified Program Examples

- ABS Global, Inc.
 - Source cattle to ranch of origin & provide group age verification
- IMI Global, Inc.
 - Source, age verification
 - Data Service Provider
- Smithfield Beef Group
 - 100% Fresh, Hand Trimmed Ground Beef

USDA Beef Export Verification (BEV) Programs

- Required for beef exports
- BEVs are specific to destination:
 - Japan – age \leq 20 months
 - Hong Kong, Mexico, Canada \leq 30 mo.
 - Non-hormone treated certificate (EU)

Age Verification

- Age Regulations met in 1 of 3 ways:
 - A40 testing of carcass maturity
 - PVP age-verification
 - QSA age-verification
- PVP is preferable:
 - CSU study found all A40 cattle \leq 17 months; so A40 is extra restrictive
 - Supply of A40 tested carcasses is limited
 - A40 grading doesn't allow export of variety meats / grading occurs after removal of offal
 - QSA usually documents only age &/or source

Cow-Calf Producer Records for QSA/PVP Participation

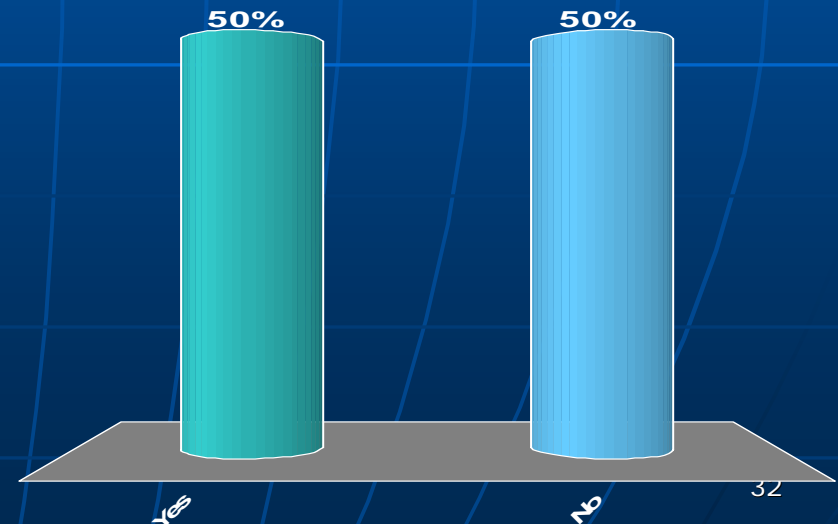
- Not standardized; specific to QSA/PVP
- Basic recommendations:
 - Tag all calves with a unique # at/near birth
 - Keep detailed calving records (e.g., IRM)
 - Calf ID, dam ID, data, sex
 - At least record date of first and last calves
 - Records of all cattle sales
 - Keep records for at least 3 years
- Extra information of potential value:
 - Vaccinations, implants, or health treatments

Do you currently:

- 1) individually tag all calves;
- 2) keep detailed calving records; and
- 3) keep records for at least 3 years?

1. Yes

2. No



Tonsor's website:

<http://www.msu.edu/user/gtonsor/>

Animal Verification Page:

[http://www.msu.edu/user/gtonsor/
AnimalVerification.html](http://www.msu.edu/user/gtonsor/AnimalVerification.html)

The quality of information provided by this evening's program was "excellent."

1. Strongly Disagree
2. Disagree
3. Somewhat disagree
4. Somewhat agree
5. Agree
6. Strongly Agree

What value do you place on this program in terms of improvements in your operation?

1. \$0
2. \$1-\$50
3. \$51-\$100
4. \$101-\$250
5. \$251-\$500
6. \$501-\$1,000
7. \$1,000 or higher

Overall, how useful was the Improving Profits by Managing the Cull Cow presentation to you and your operation?

1. Entirely Useless
2. Useless
3. Somewhat Useless
4. Somewhat Useful
5. Useful
6. Extremely Useful

Overall, how useful was the Innovative Ways to Reduce Cow Wintering Costs presentation to you and your operation?

1. Entirely Useless
2. Useless
3. Somewhat Useless
4. Somewhat Useful
5. Useful
6. Extremely Useful

Overall, how useful was the *Making Effective Pasture Renovations* presentation to you and your operation?

1. Entirely Useless
2. Useless
3. Somewhat Useless
4. Somewhat Useful
5. Useful
6. Extremely Useful

Overall, how useful was the More Pounds Across the Scale presentation to you and your operation?

1. Entirely Useless
2. Useless
3. Somewhat Useless
4. Somewhat Useful
5. Useful
6. Extremely Useful

Overall, how useful was the Cattle Market Outlook and Economics of Traceability presentation to you and your operation?

1. Entirely Useless
2. Useless
3. Somewhat Useless
4. Somewhat Useful
5. Useful
6. Extremely Useful