

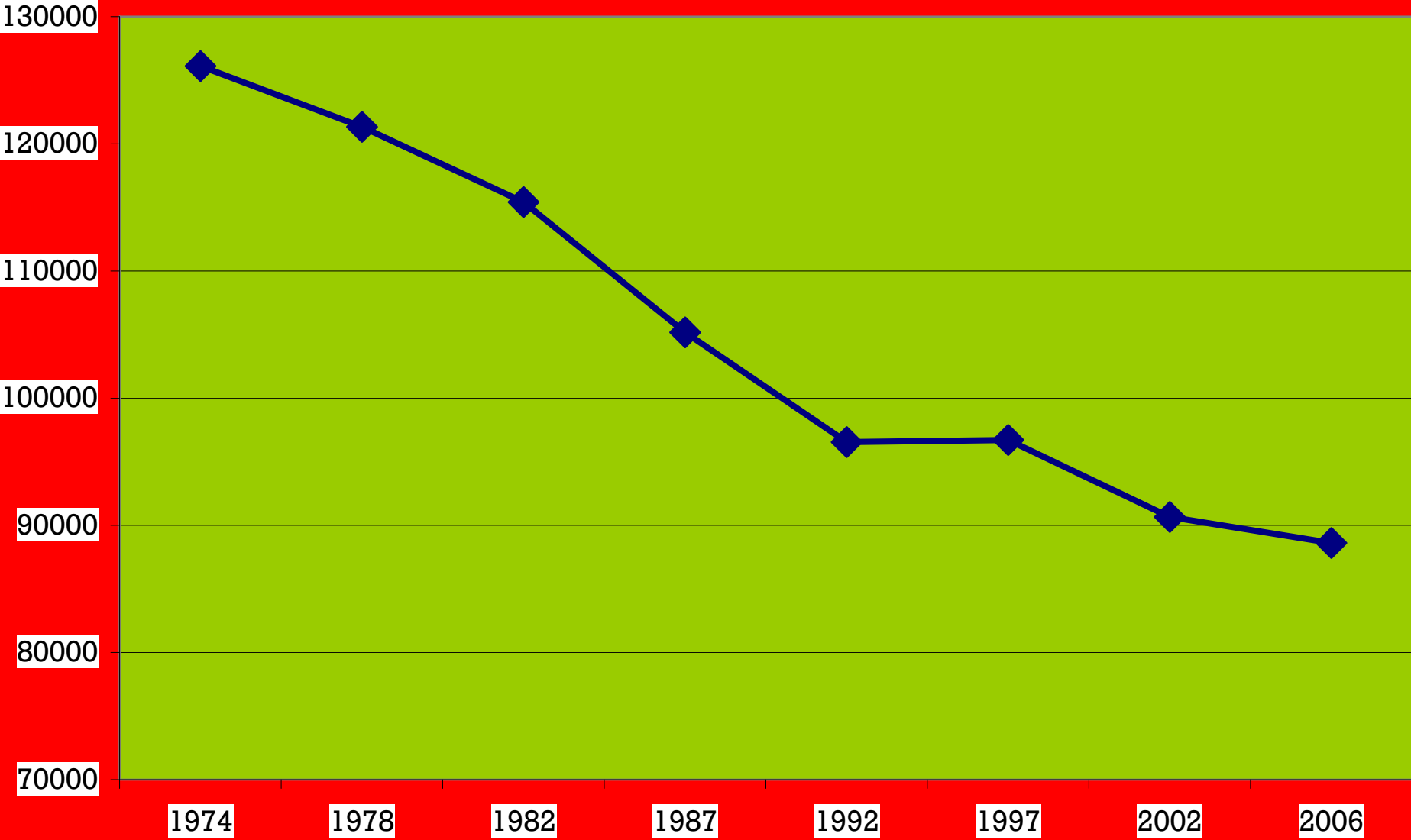
# The Bioeconomy and Farm Succession: Who Will Farm?

J. Gordon Arbuckle Jr.  
Extension Sociology

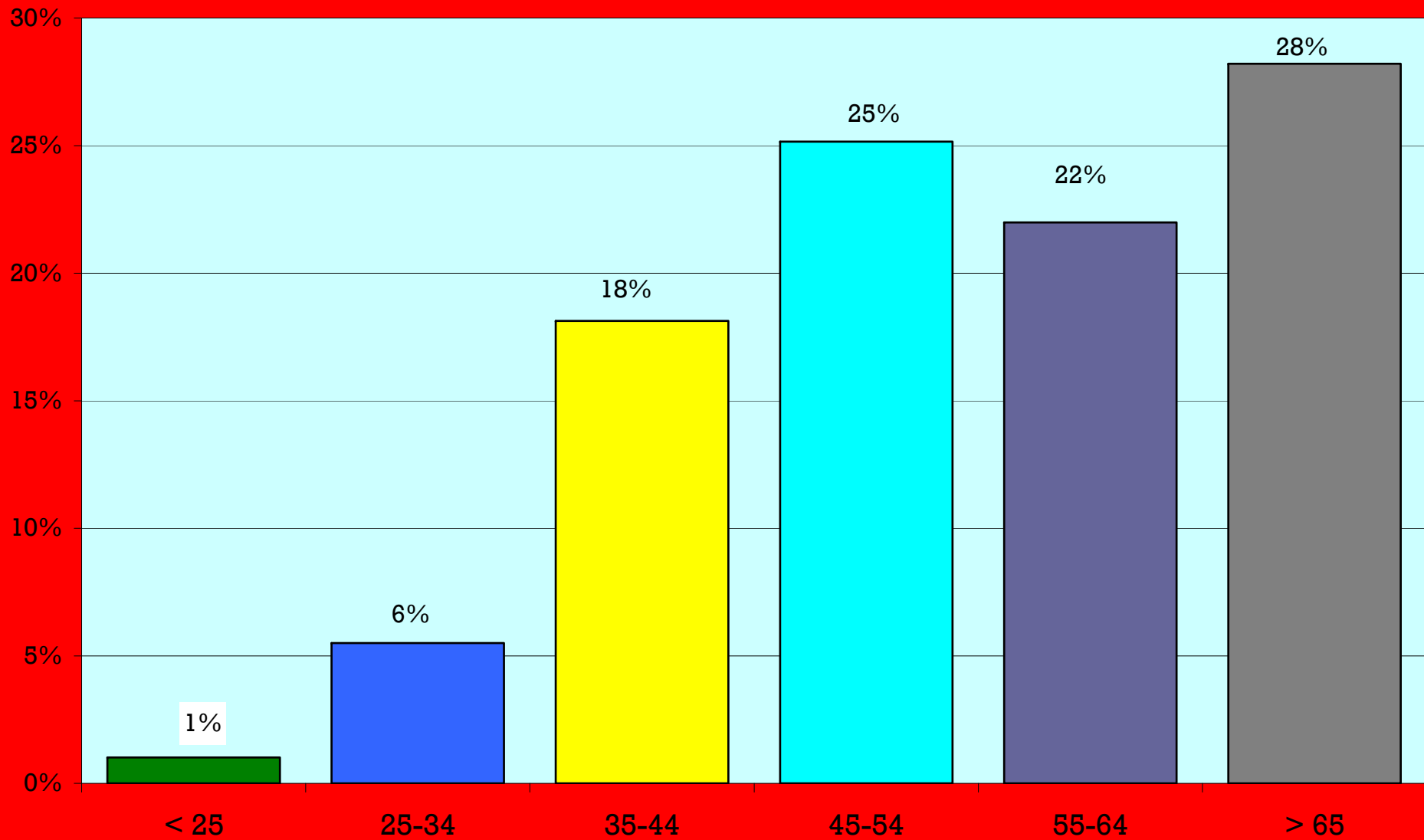
- Farming and farmers critical part of rural community vitality, character, and identity
- Iowa farmers are still getting older
- Increasingly difficult to enter farming, particularly specialized commodity farming
- Family help a critical factor in facilitating entry
- Bioeconomy seen by many as a fundamental shift in farm economy
  - what impact might ethanol and other bioeconomy developments have on intergenerational transfer of farms?



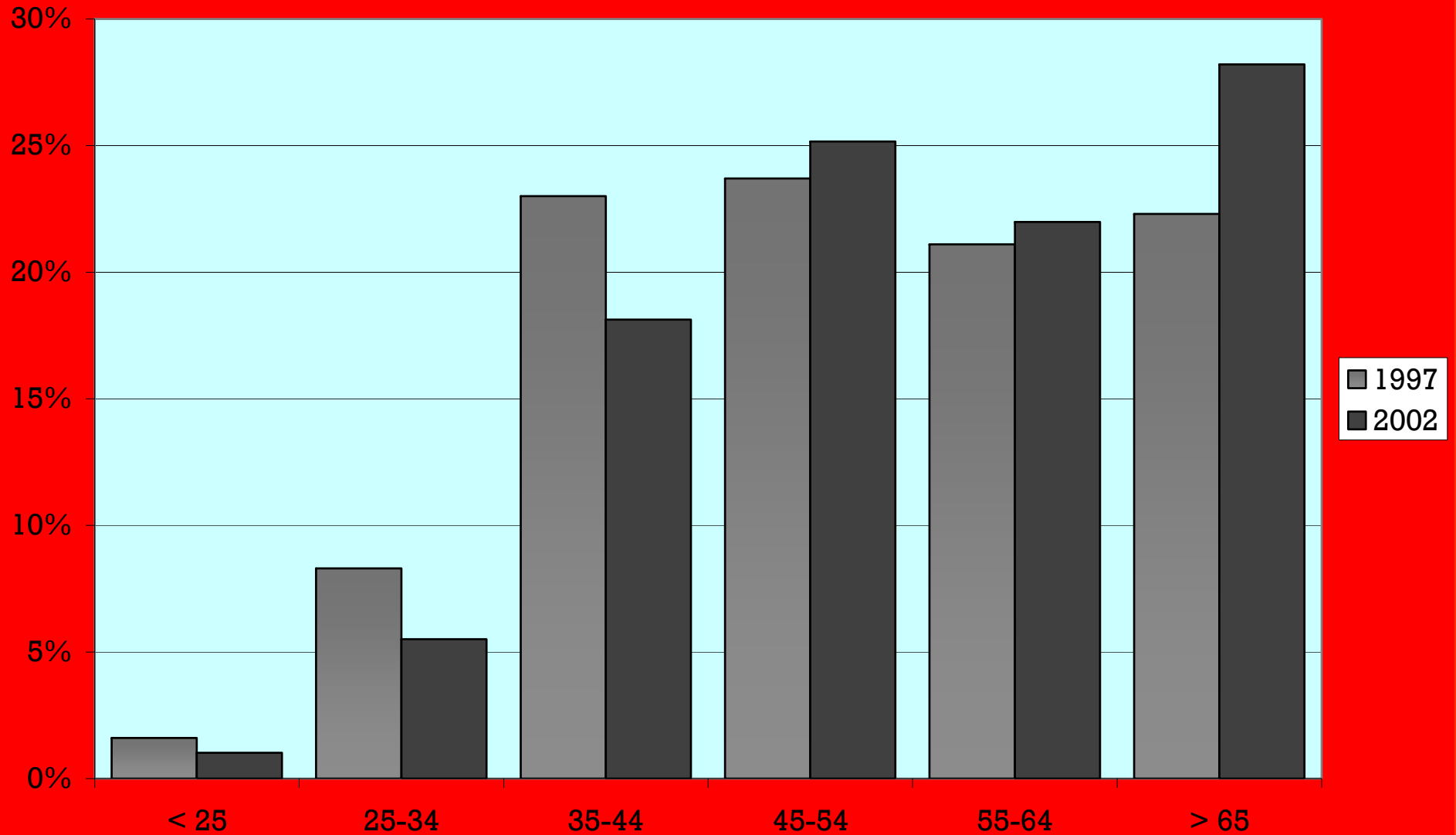
# Iowa Farm Numbers 1974-2006



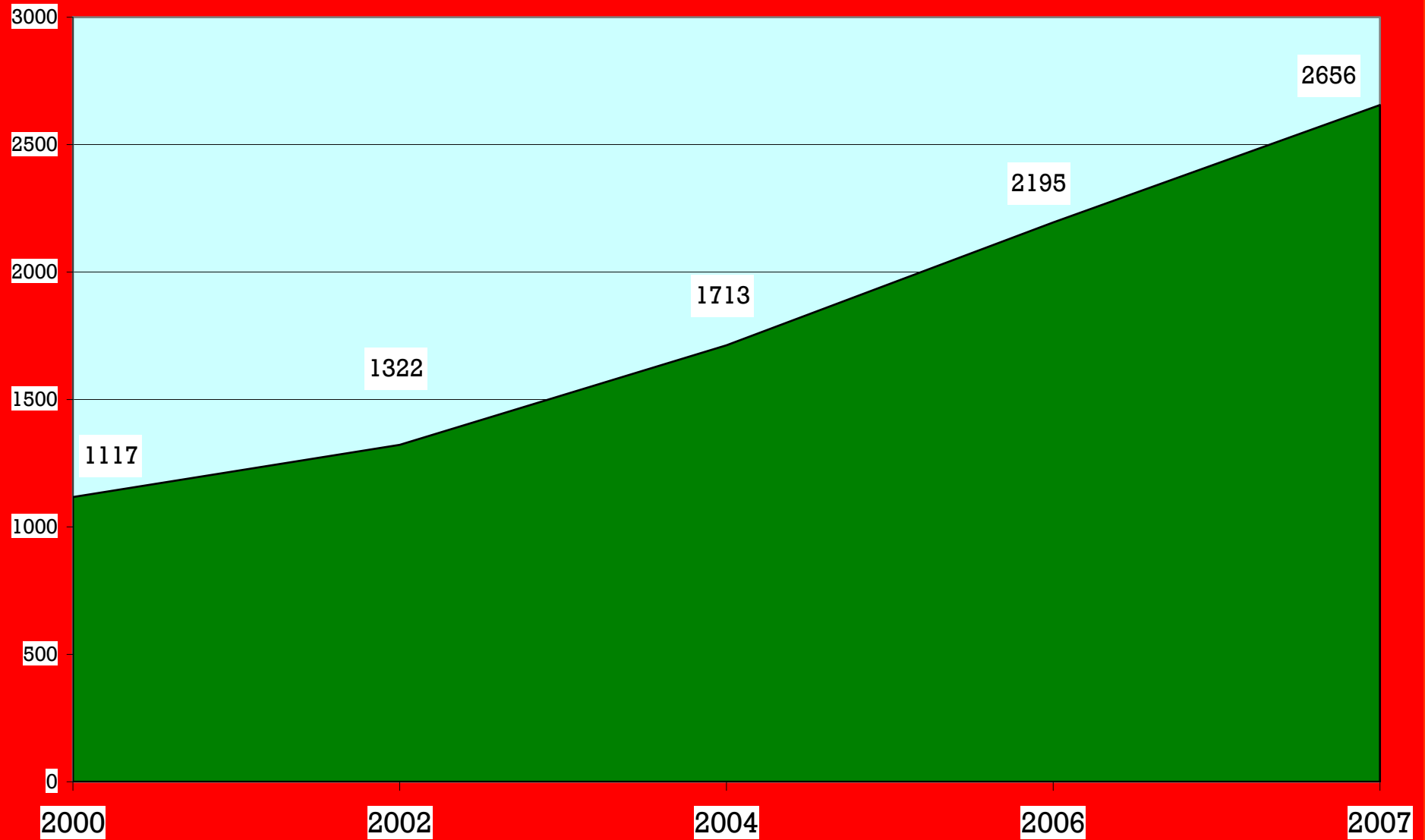
## Percentage of Farms by Age Group - Principal Occupation



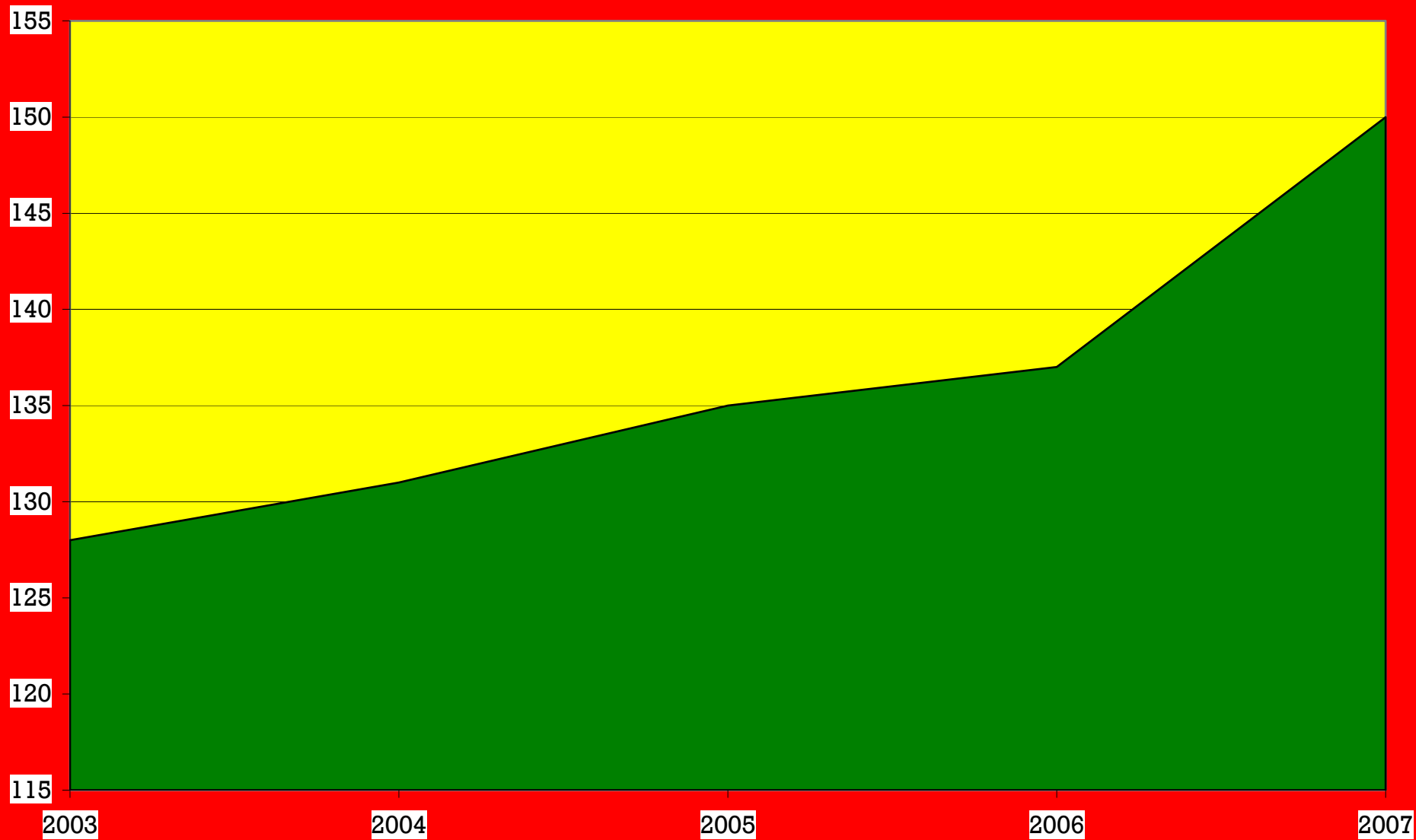
## Percentage of Iowa Farms by Age Group: 1997 and 2002



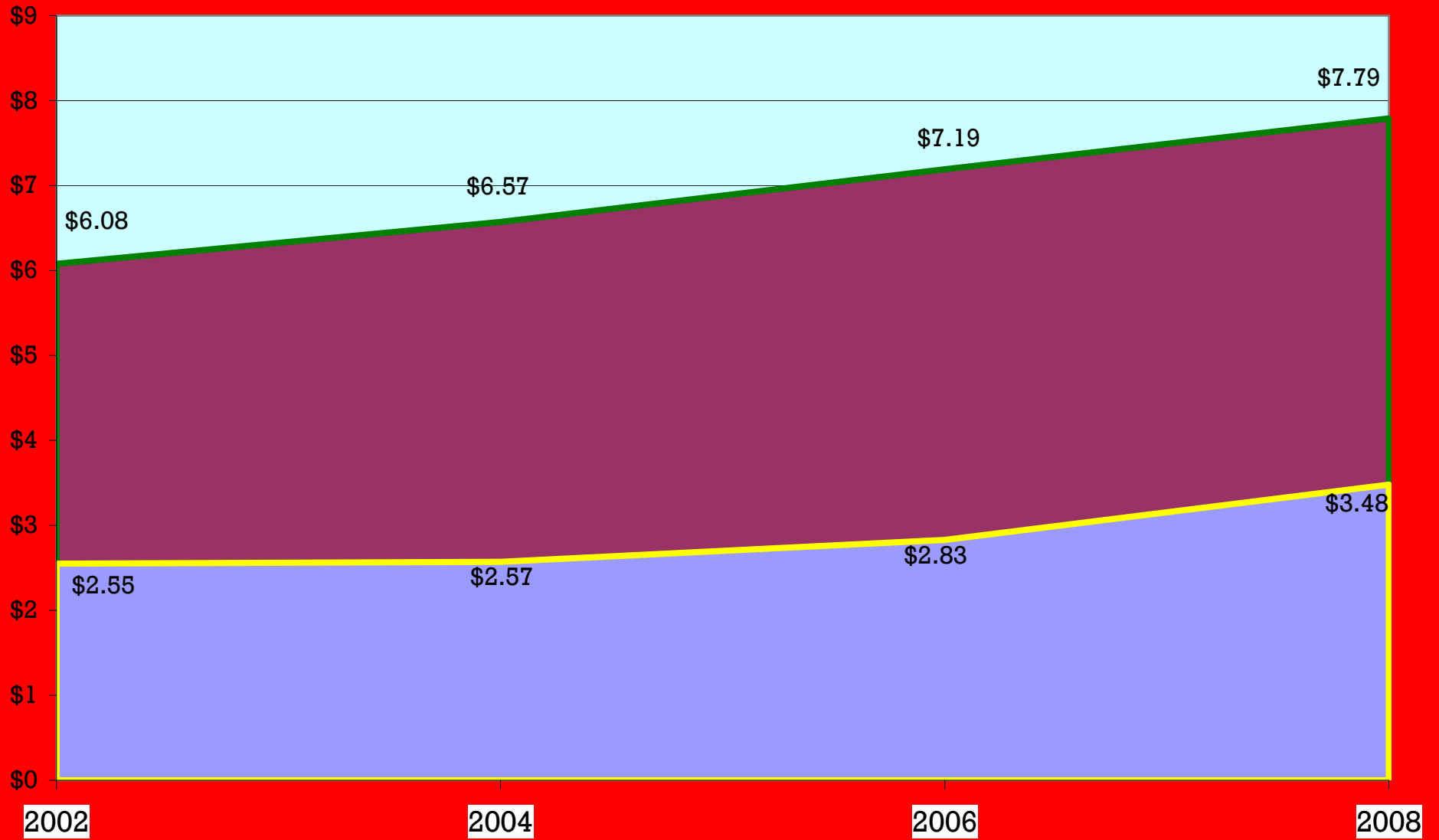
# Iowa Farmland - Price per Acre



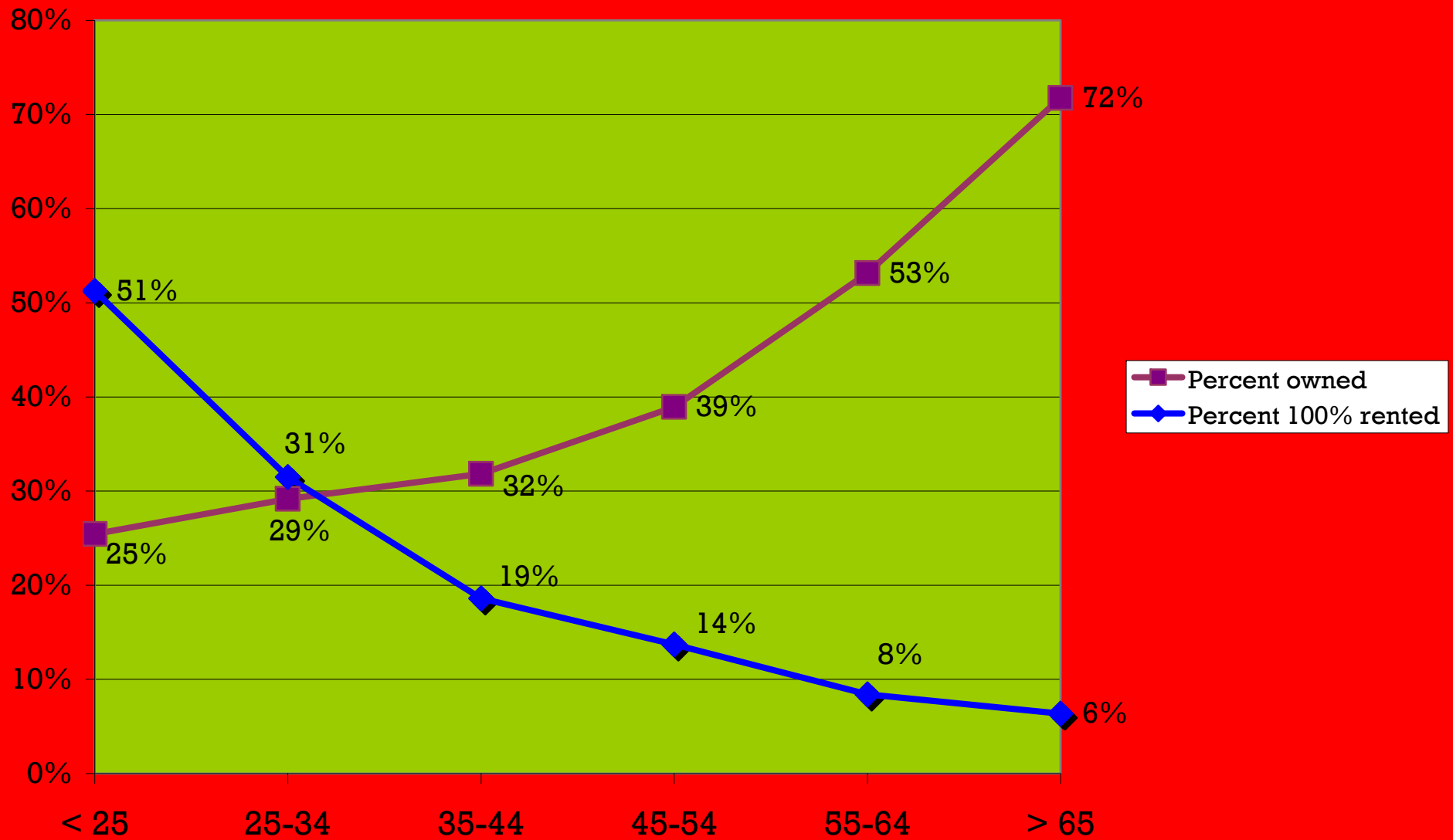
# Cash Rent per Acre - Iowa Row Cropland



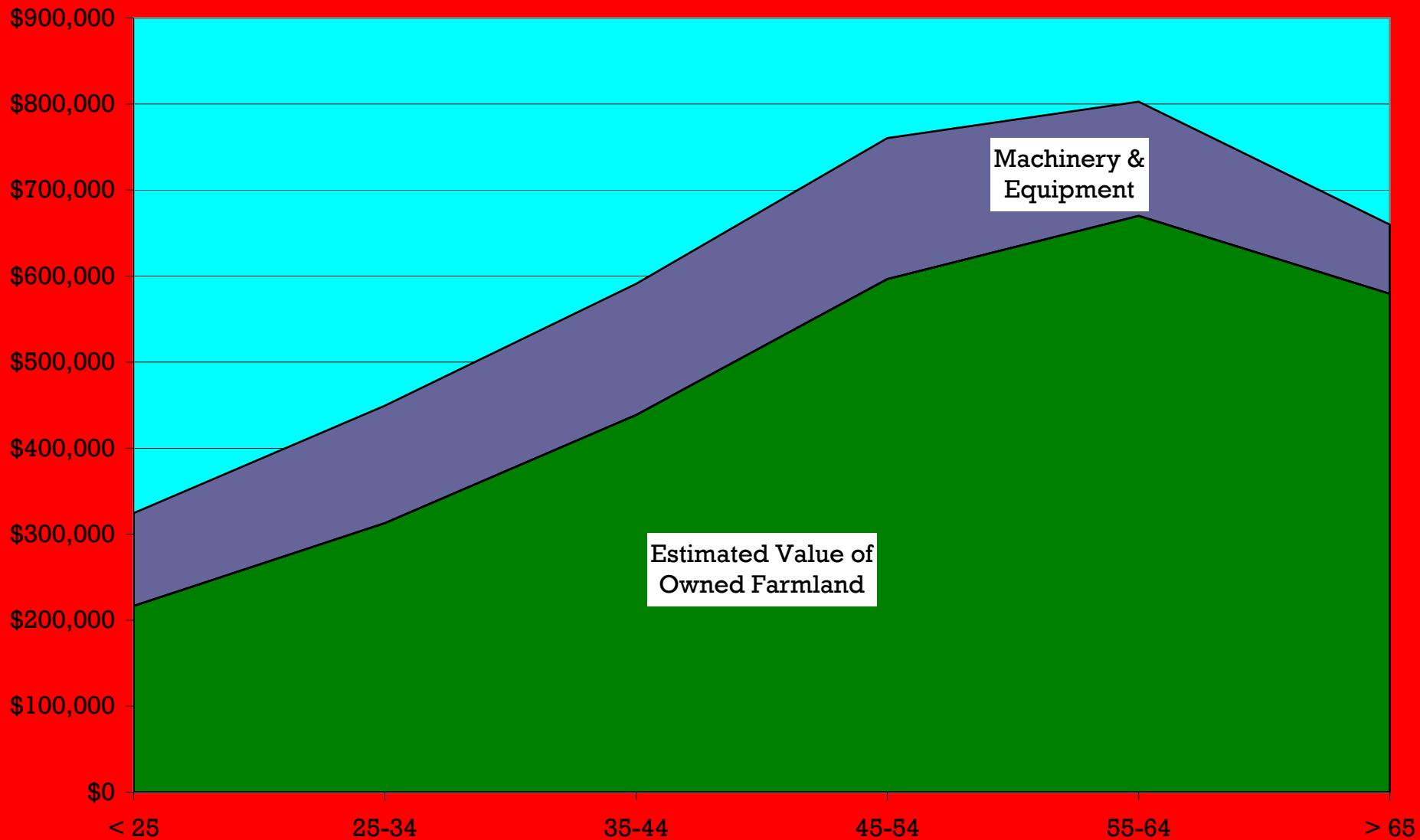
# Estimated Cost of Production Per Bushel - Corn and Soybeans



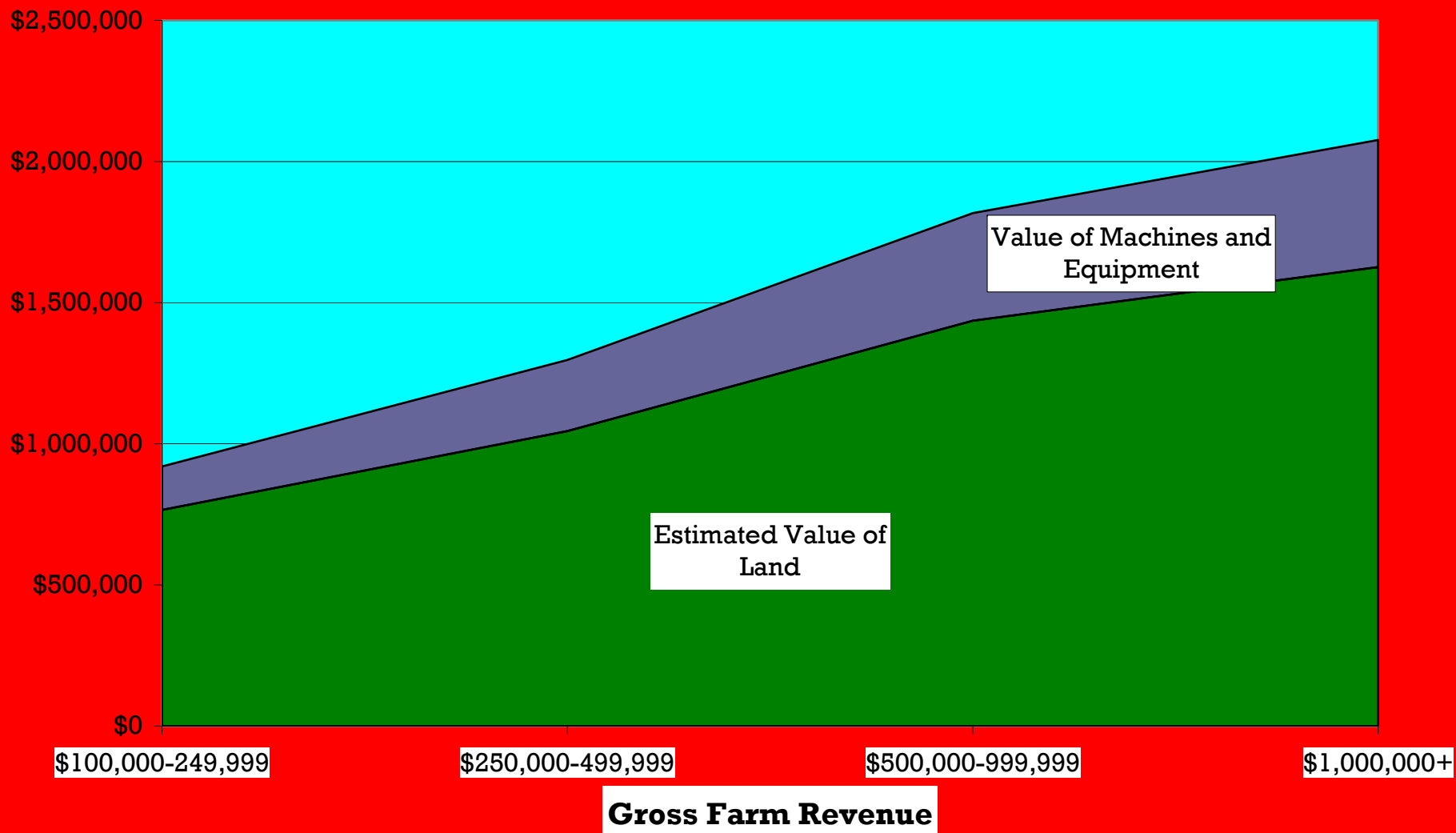
### Percentage 100% rented land (tenant); owned land by age group



# Market Value of Land and Machinery by Age Group



## Estimated Value of Land and Machinery-Top Four Revenue Categories



## 2004 Farm and Rural Life Poll: Selected Statistics

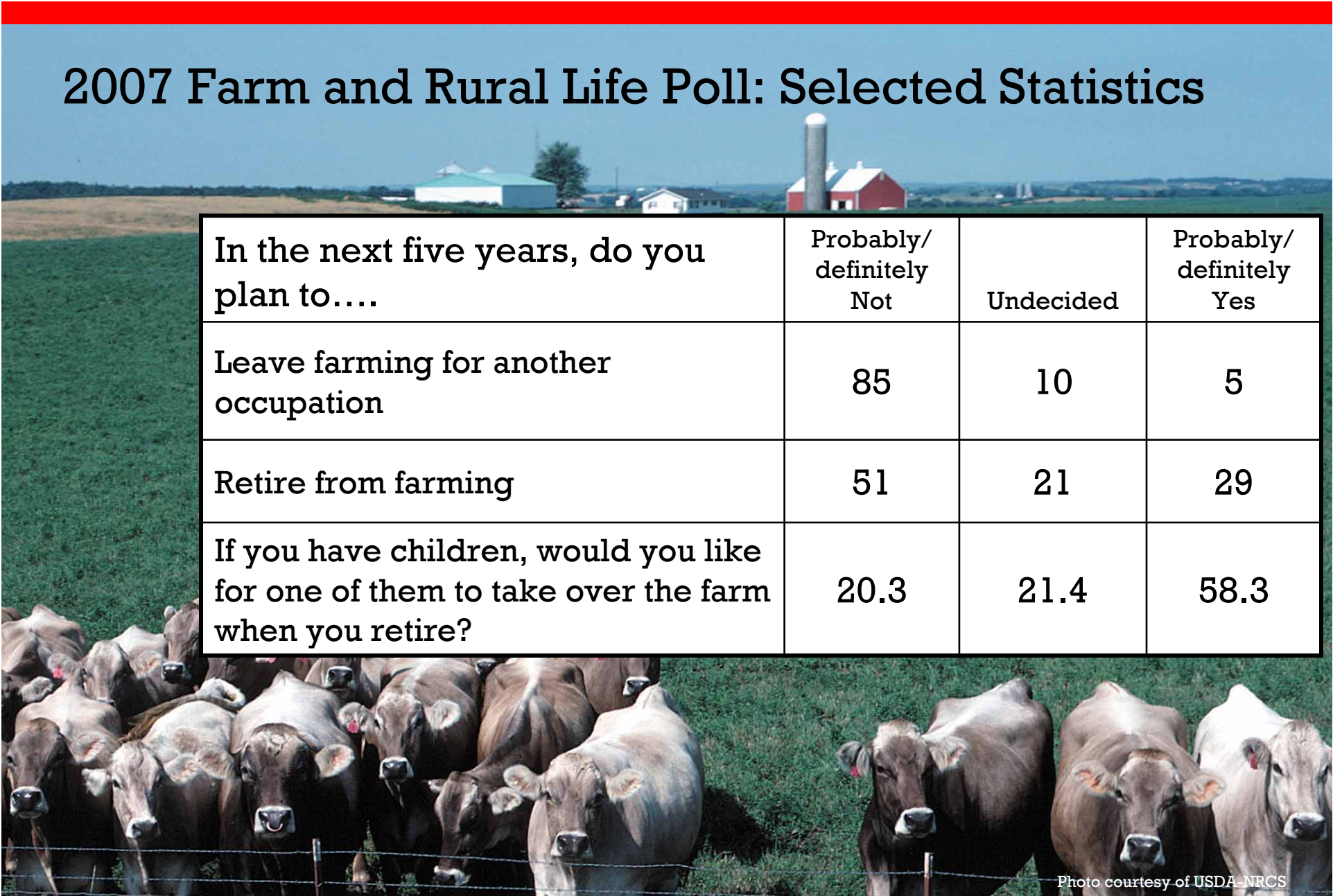
Why are so few young people entering farming? (Percent)	Not Important	Somewhat Important	Very Important
Young people not interested in living in the country	42	43	15
Farming requires too much manual work	42	40	20
Land is not available	5	30	65
Young people cannot afford to buy the necessary equip., land, etc.	2	12	87

# 2004 Farm and Rural Life Poll: Selected Statistics

	No	Yes
Will beginning farmers be limited to the sons and daughters of current farmers?	32%	68%
Will assistance from family or other farmers be <i>necessary</i> for the success of beginning farmers?	4%	96%
How much money (saved and borrowed) will a beginning farmer need to get started?	\$209,685	

Photo courtesy of  
USDA-NRCS

# 2007 Farm and Rural Life Poll: Selected Statistics



In the next five years, do you plan to....	Probably/ definitely Not	Undecided	Probably/ definitely Yes
Leave farming for another occupation	85	10	5
Retire from farming	51	21	29
If you have children, would you like for one of them to take over the farm when you retire?	20.3	21.4	58.3

Photo courtesy of USDA-NRCS

# Research question

Entry into commodity farming  
extraordinarily difficult without family  
help – inheritance, favorable terms

Which families will support farm entry  
among children?

- *What are the factors associated with  
desire to transfer the farm operation to  
the next generation?*

Photo courtesy of USDA-NRCS

# Model and Analysis

- Objective: examine role that bioeconomy-related and other economic and socio-cultural variables have on intentions to pass on farm
- Data: 2007 Farm and Rural Life Poll, n=1095
- Statistical technique: OLS regression
- Dependent variable: index measuring desire to pass farm operation on to children or other family members

# Independent Variables

- **Bioeconomy**
  - bushels delivered to ethanol plants
  - index - support for bioeconomy policy initiatives, belief in economic benefit
  - index - environmental concerns
- **Economic**
  - owned cropland (+)
  - rented cropland
  - days worked off-farm (-)
  - percent of HH income from sale of farm products (+)
  - index - satisfaction with extra-farm economy
  - index - satisfaction with economic and environmental sustainability of farm
  - index - intentions to intensify farming activities next 5 years (+)
  - index - intentions to disengage from farming next 5 years (-)
- **Cultural**
  - index - beliefs that landownership should remain local, family-farm oriented (+)
  - index - cultural commitment to farming, strong family tradition of farming: cultural identity (+)
- **Demographic**
  - age, gender

# Selected OLS Results

F=28.541, .000; Adjusted R Square = .373			
	Beta	Sig.	% Variance Explained
Owned cropland	.069	.041	.5%
Days worked off farm	-.088	.018	.7%
Engagement (intensification)	.137	.000	2%
Environmental concerns	-.075	.022	.7%
Localist landownership	.297	.000	10%
Cultural commitment to farming	.494	.000	21%

# Conclusions and Implications

- Bioeconomy variables not directly significant, but land and input price increases likely to have major impact
- Cost increases expected to make family help more important for entry
- Will land prices, rents influence transfer decisions-sell/rent vs. transfer?
- Core group will pass farms on – that’s what they do – but the rest?
- Dominant model of commodity production will lead to continuing farm consolidation
- Kids of families with a strong cultural commitment to farming will likely be the farmers of the future – there just won’t be very many of them

Photo courtesy of USDA-NRCS