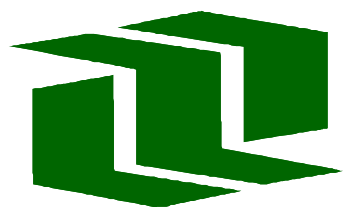


# Producer Attitudes and Intentions About GMO Issues

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Preliminary Headline Results  
February 2000

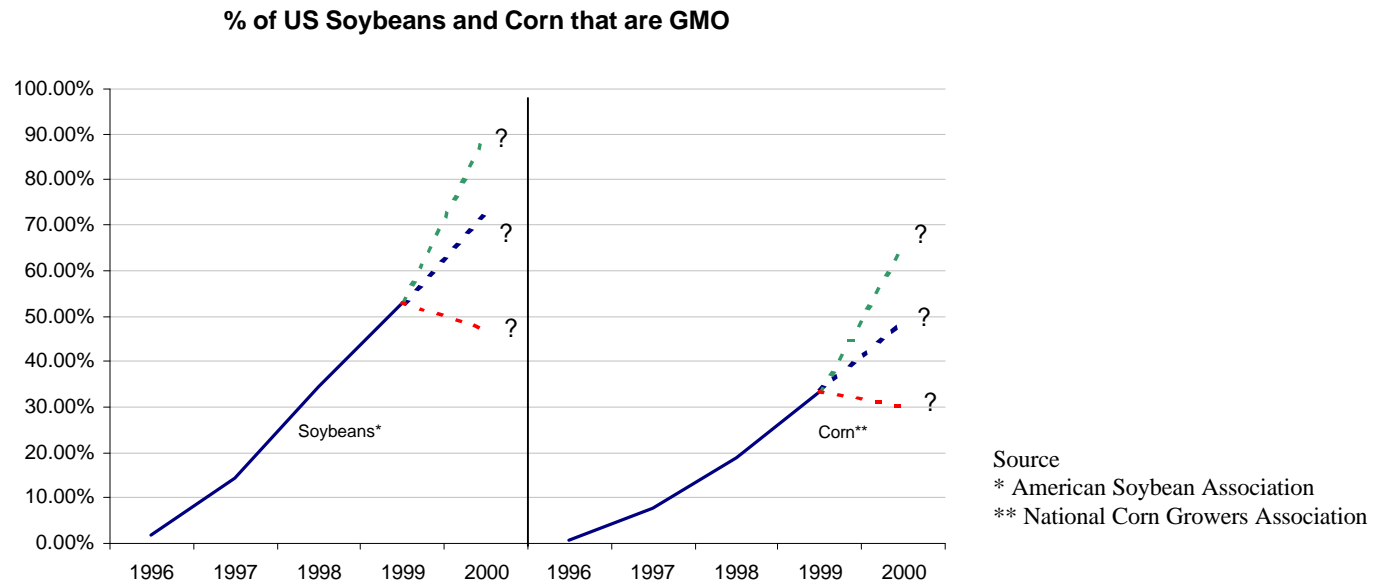


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Ag Education & Consulting, LLC

# Forward

- Current uncertainty over the market acceptance of GMO corn and soybeans is generating concern and confusion for the U.S. farmer.
- At the same time, U.S. farmers collectively hold the reins on how much GMO grain will be produced in the coming years.
- How will these uncertainties impact the future trends in the use of GMO corn and soybeans?



- The following summarizes the methodology and provides high level results of an AEC study designed to gain a better understanding of these issues.

# Headline Results

- Slight Pull back of GMO acres planned for 2000:
  - Corn: from 23.8% to 17.7% of the corn acres
  - Soybeans: from 51.3% to 48.4% of the soybean acres
- Farmers have no clear opinion on the issue of acceptance of GMO at consumer level.
- There appears to be a slight increase in confidence about marketing GMO crops between November 1999 and January 2000.
- Very few farmers intend to increase their segregation capacity, however the ones who are increasing segregation capacity tend to be the larger producers.

# Study Objectives

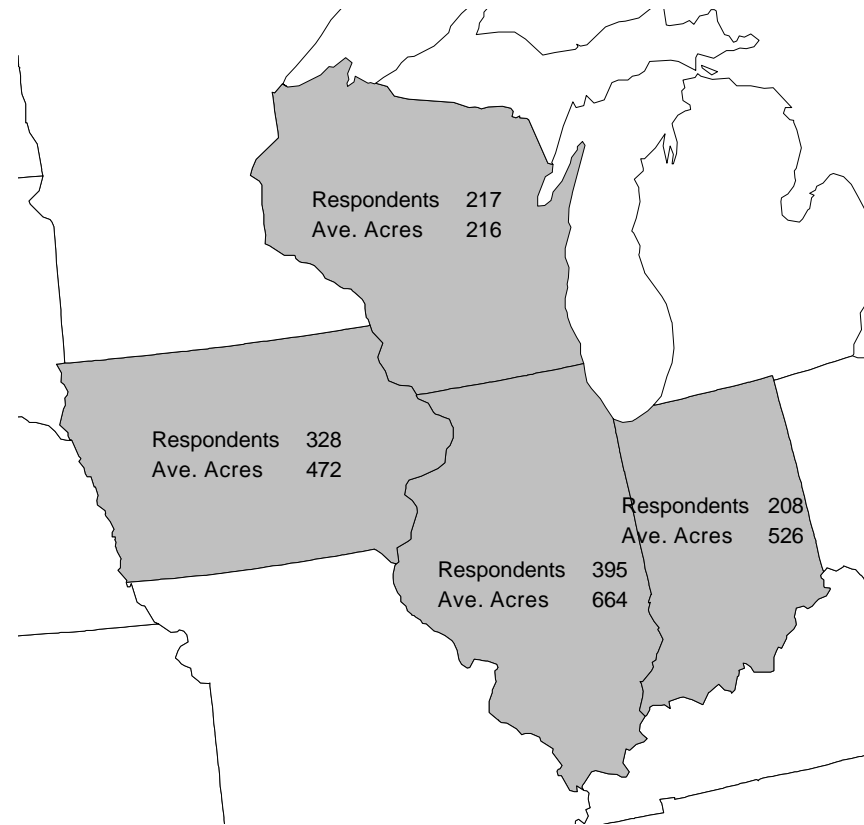
- Understanding how the producer's attitudes evolve over the period beginning at the harvest of the 1999 crop through the planting of the 2000 crop
- Identification of information sources that are influencing producer's decisions about the use of GMO seed for the 2000 crop
- Understanding what problems producers are having in marketing their 1999 crop (GMO versus non-GMO)

# Study Methodology

- Multiple survey iterations from 1999 harvest through 2000 planting
- Mailed to approximately 1,750 producers in the FRI producer panel in November 1999 and January 2000
- Evaluated in summary reports at the end of each round of surveys

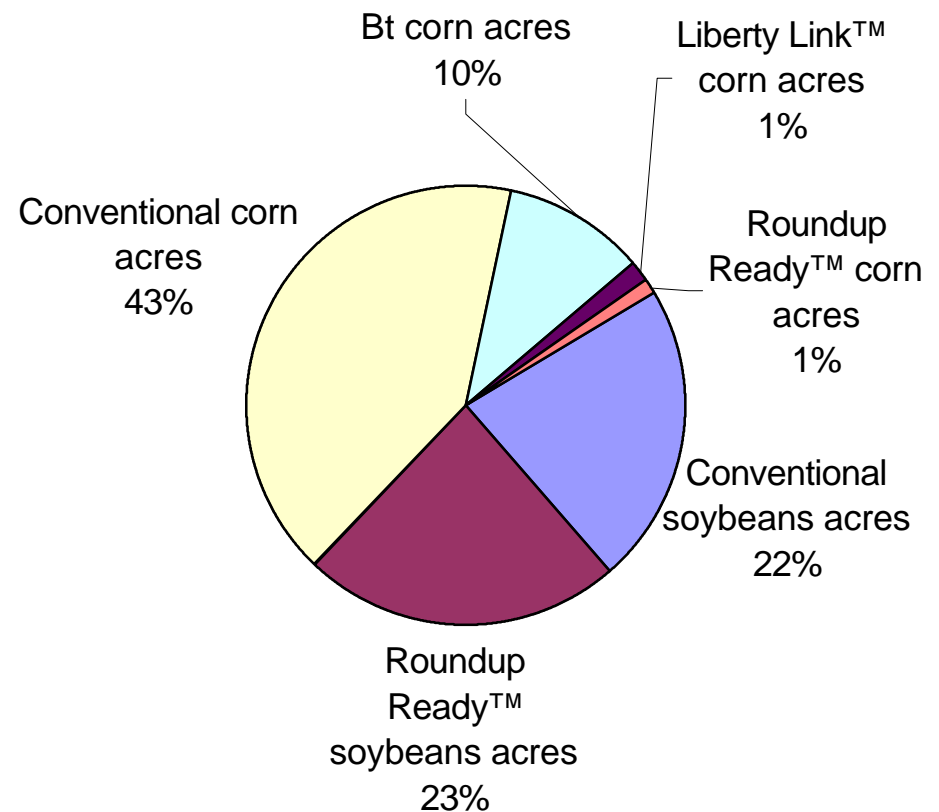
# Profile of Respondents

- 1,148 respondents from across four states responded to the mailed survey
- The average respondent had 499 acres
- Most respondents grow both corn and soybeans



# Cropping Practices of Respondents in 1999

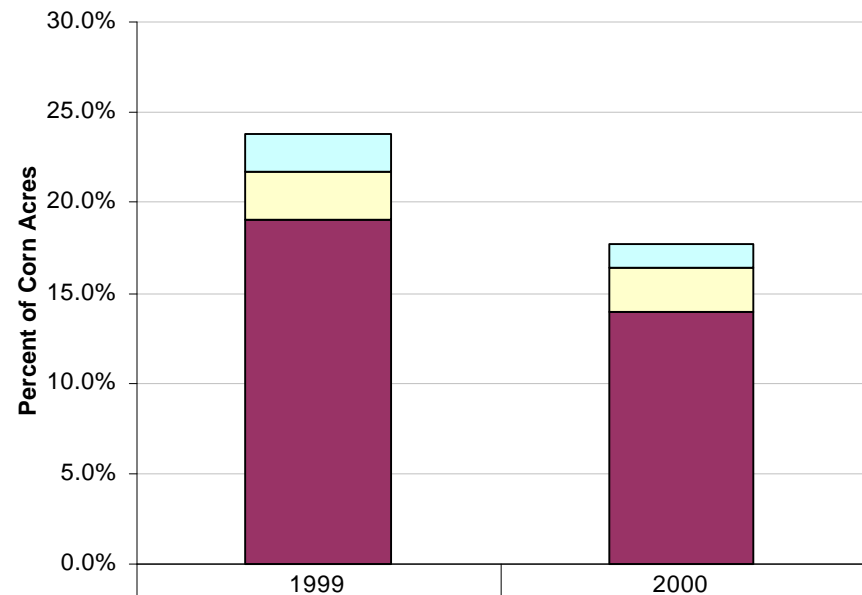
- 56% of the acres were in corn, with Bt corn being the most prominent GMO crop planted.
- 44% of the acres were in soybeans and just over half of the soybeans were Roundup Ready™.
- This profile is very consistent with other published data on the share of acres planted to these crops across the region.



# 2000 Corn Planting Intentions Compared to 1999 Actual

- General decrease in the acres planted to GMO corn
- The decline in Bt acres was a result of 279 producers who decreased their acres in Bt and 133 who increased their Bt acres.
- This represents a decrease in planting intentions of:
  - 32% for Roundup Ready™ corn
  - 25% for Bt corn
  - 8% for Liberty Link corn

Change in Planting Intentions  
Corn

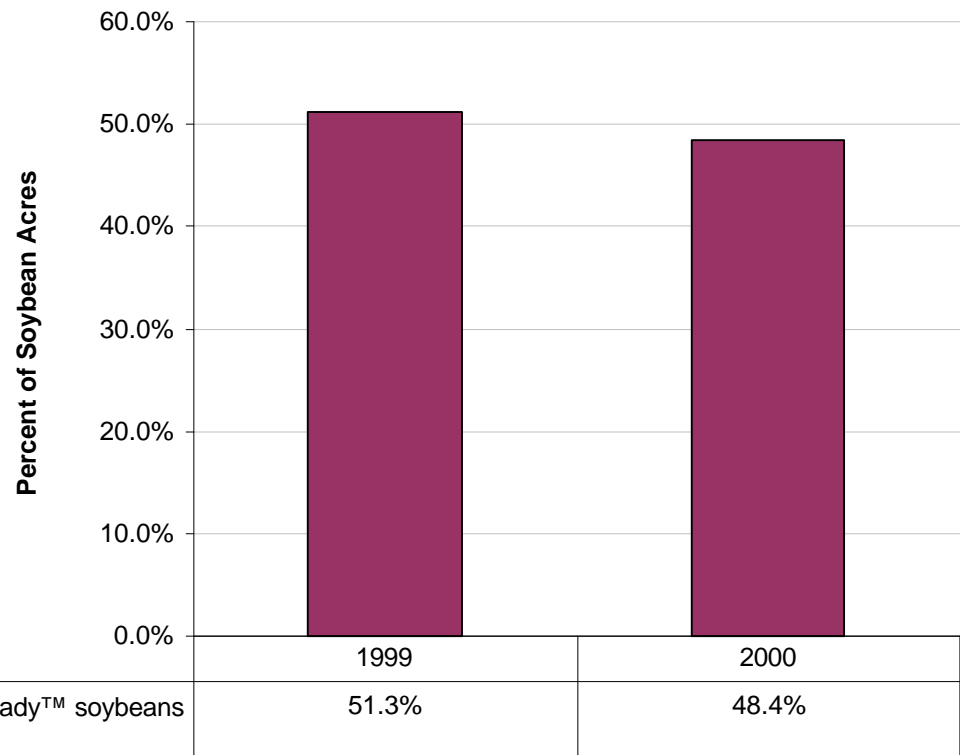


Roundup Ready™ corn acres	2.1%	1.4%
Liberty Link™ corn acres	2.7%	2.4%
Bt corn acres	19.0%	13.9%

# 2000 Soybean Planting Intentions Compared to 1999 Actual

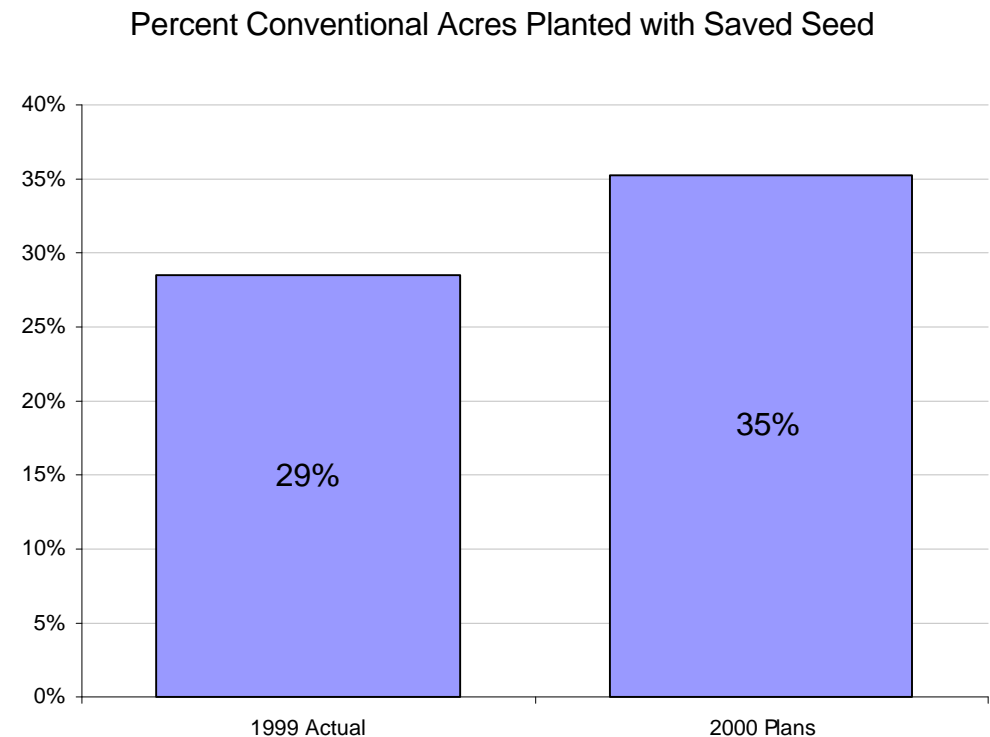
- The share of soybean acres to Roundup Ready™ soybeans declined by 5.6% as shown on graph.
- The share of acres planted to soybeans declined by 3.1%.
- Thus, the total reduction in Roundup Ready™ Soybean acres will be driven by a combination of both of these trends.

Change in Planting Intentions  
Soybeans



# Increase in Soybean Acres Planted with Saved Seed

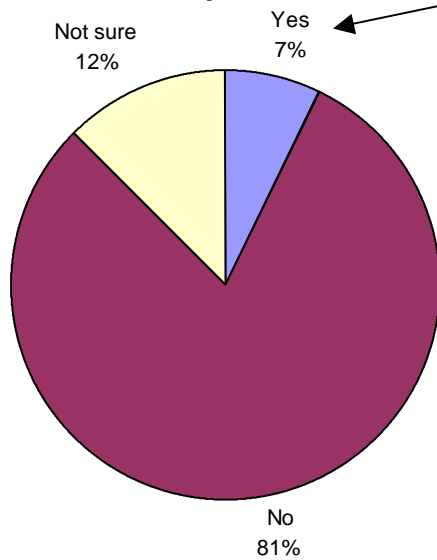
- This graph shows the percent of conventional soybeans that producers planted using saved seed in 1999 compared to their intentions for 2000. (as of January 2000)
- This represents a 23.1% increase in soybeans planted with saved seed
- What are the drivers of this? Concern over GMO, the farm economy in general, or other?



# Future Segregation Capacity

## Plans to Increase Segregation Capacity

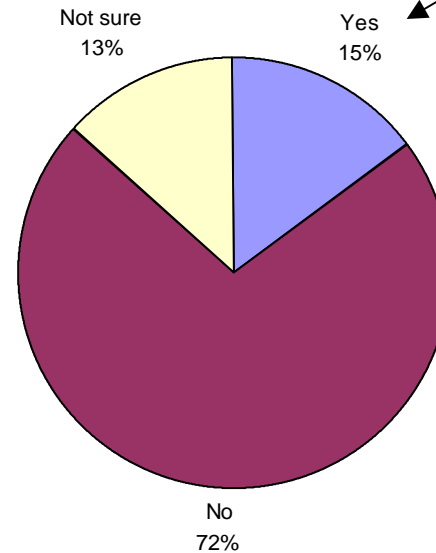
### % of Respondents



The percent of respondents answering “yes” to this question increased from 5% in November to 7% in January.

## Plans to Increase Segregation Capacity

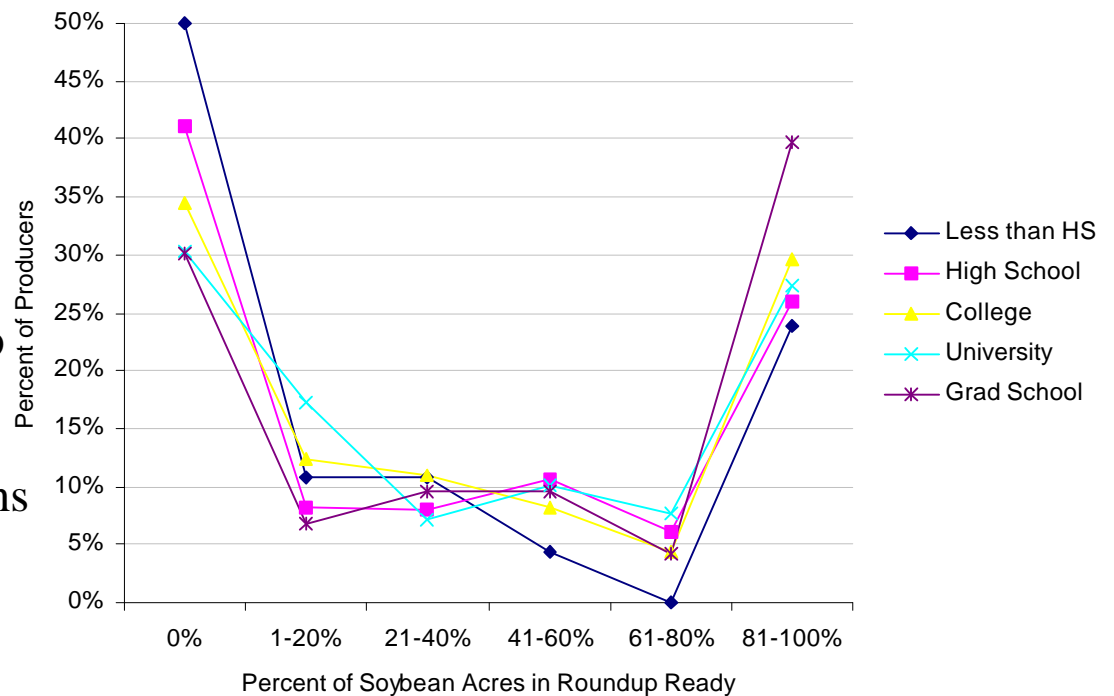
### % of Acres



The “yes” respondents controlled roughly 2 times the acres as the average of the rest of the respondents.

# Other Analysis Possible

- Because the FRI Panel database includes a broad range of information, we are able to study the responses relative to many variables like:
  - Age
  - Farm size
  - Educational background
  - Geographic location
  - Enterprise mix
  - Business type
- For example, here is an illustration of the relationship between producer education level and planting intentions to Roundup Ready™ soybeans for the 2000 crop year (from the November survey).



# Focus of First Two Surveys

- Questions were designed to discover attitudes and drivers in change of attitude over time.
- In some cases, the same questions were asked in both surveys to track changes.

# Repeat Questions: Track Attitude Trends

## **November 1999**

- Segregation practices
- Attitudes about GMO in general
- Amount of soybeans saved to be used as seed for the 2000

## **January 2000**

- Segregation practices
- Attitudes about GMO in general
- Amount of soybeans saved to be used as seed for the 2000

# Questions to Track How Opinions Impact Decisions Over Time

## November 1999

- Number of 1999 corn and soybean acres in conventional versus GMO
- Planting intentions for 2000 by company and type
- Seed purchased for the 2000 crop year by company
- GMO marketing expectations

## January 2000

- Number of 1999 corn and soybean acres in conventional versus GMO
- Planting intentions for 2000 by company and type
- GMO marketing experience/expectations

# Specific Focus Questions

## November 1999

- Roundup Ready™ soybean focus
  - Reasons for not planting Roundup Ready™ soybeans in 1999.
  - Reasons for planting Roundup Ready™ soybeans in 1999.
  - Expectations about the ability to sell Roundup Ready™ soybeans to regular buyers.
  
- Sources of information about GMO

## January 2000

- Bt corn focus
  - Benefits of Bt based on past experience
  - Plans for planting Bt in 2000

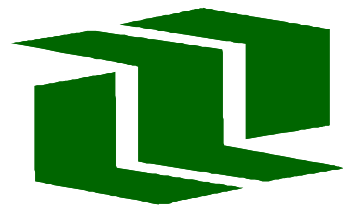
# Producer Attitudes and Intentions About GMO Issues

To access more data from this report, discuss further analysis options, or to use the power of the FRI panel for your own strategic studies call or visit our web site.

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