

Estimating 2010 Corn & Soybean Yields



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Presentation Objectives

- **Highlight Importance of the Final U.S. Corn and Soybean Yields per Harvested Acre**
- **Summarize FC Stone's Forecast for 2010 Corn & Soybean Yields**
- **Discuss NASS' Yield Survey Methods**
- **Review the Accuracy of Iowa Corn & Soybean Yield Estimates since 2005**
- **Provide Conclusions regarding the NASS Yield Survey Purpose**

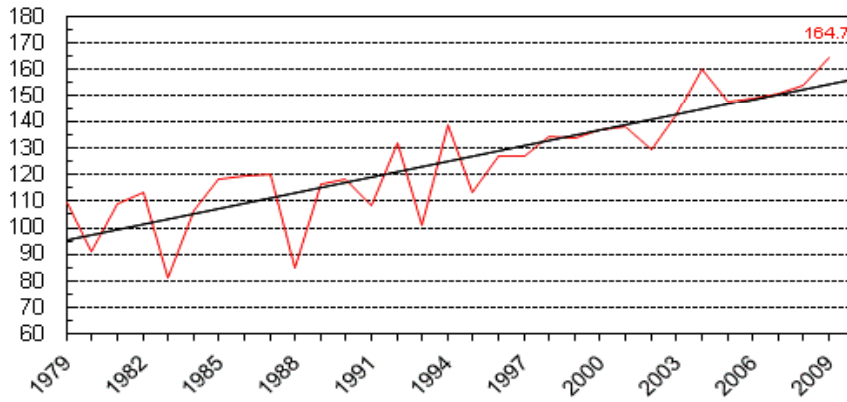
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U.S. Corn Yield



Bushels/Acre



USDA NASS
5-11-10

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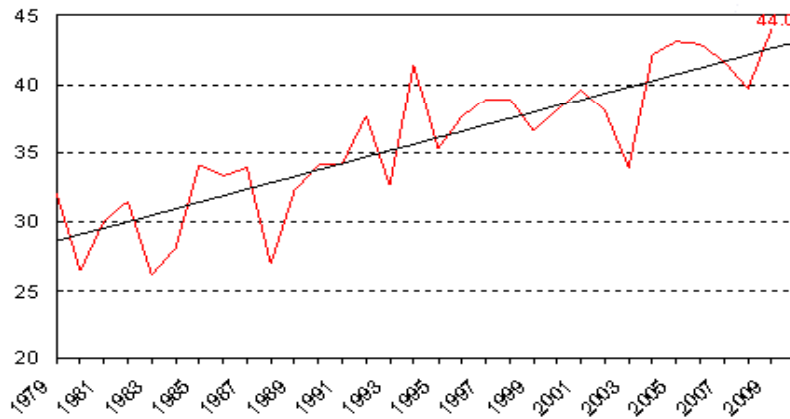
Source: www.nass.usda.gov



U.S. Soybean Yield



Bushels/Acre

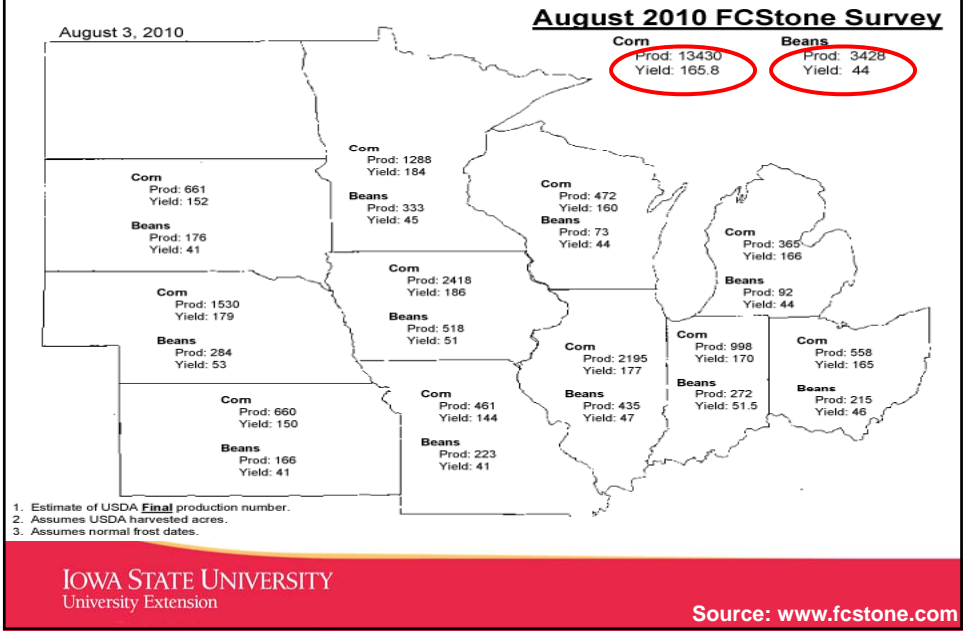


USDA NASS
01-12-10

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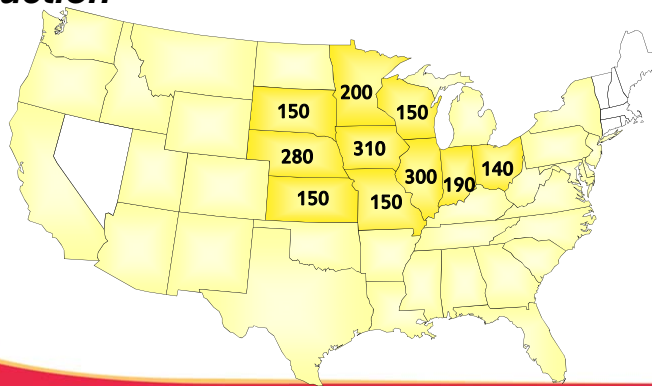
Source: www.nass.usda.gov

FC Stone 2010 Forecast



Objective Corn Yield Survey for 2010

- **CORN n = 2020** (only half completed in August)
- **10 states average ~85% of U.S. corn production**

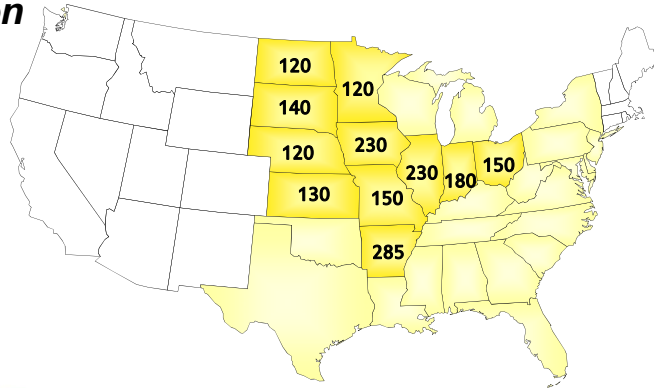


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Source: USDA NASS, Iowa Field Office, July 2010

Objective Soybean Yield Survey for 2010

- **SOYBEANS** n = 1855 (only half completed in August)
- **11 states average ~85% of U.S. soybean production**



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Source: USDA NASS, Iowa Field Office, July 2010

Determining U.S. Crop Production

<i>Harvested acres</i>	X	<i>Yield</i>
June Crops/Stocks Survey and Area Survey – updated as needed to reflect current growing conditions based on survey, satellite, and FSA acreage data	F O R E C A S T	Agricultural Yield Surveys Objective Yield Surveys
December Crops/Stocks Satellite Imagery FSA Acreage Data	F I N A L	December Crops/ Stocks Survey Obj. Yield Survey

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Source: USDA NASS, Iowa Field Office, July 2010

Two Crop Yield Surveys

- NASS conducts two surveys for yield
 - Agriculture Yield Survey
 - List frame survey conducted in all States (May – November)
 - Objective Yield Survey (Corn & Soybeans)
 - Area frame survey conducted in major States (Aug. – Dec.)

Crop Yield Surveys

- ***Agricultural Yield***
- ***Objective Yield***

Sample Selected From:

List Frame - June
Crop/Stocks Survey

- crops of interest
- rotated out reps
- exclude extreme ops
- exclude NOL

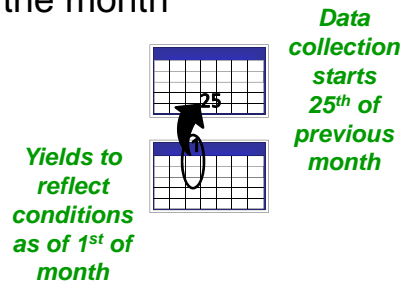
Fields recorded on the
June Area Survey

- crops of interest
- Each acre has equal chance of selection
- More than 1 sample may fall in same field

Agricultural Yield Survey

- Acres Harvested (or to be harvested)
- Expected Yield (based on farmers assessment of yield prospects until harvest)

- Reference date – 1st of the month
- Mail, phone, internet



Agricultural Yield Survey

Sample Size (approximate)

Month	U.S.	Iowa
August	28,000	800
September	13,000	400
October	15,000	400
November	11,000	400

Objective Yield Surveys

- Randomly selected fields
 - Initial interview to update/verify acreage, ask permission
- 2 Randomly located plots per field
- Objective measurements made in the fields
 - Measure Row Width
 - Count Plants (or stalks)
 - Count Fruit (pods, ears, or proxy early in season)
 - Weigh Fruit (pods, ears, or proxy early in season)
 - Gleanings (harvest loss)

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Source: USDA NASS, Iowa Field Office, July 2010

Objective Yield Survey

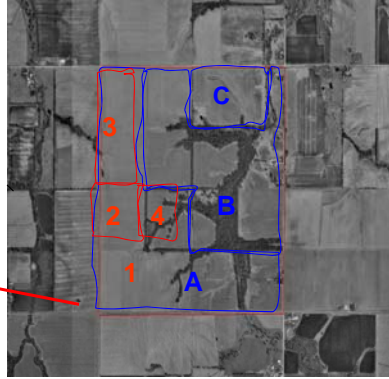
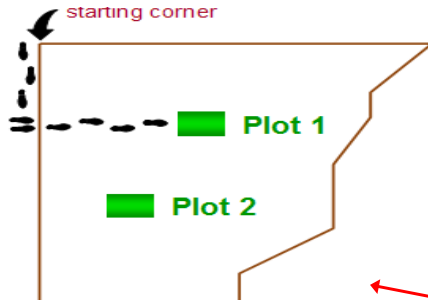
- Data collected from about 25th of previous month through the 3rd of the survey month
- Return to the same plots for several months until crop is mature or harvested
- Personal interviews and field visits



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Source: USDA NASS, Iowa Field Office, July 2010

Objective Yield Surveys

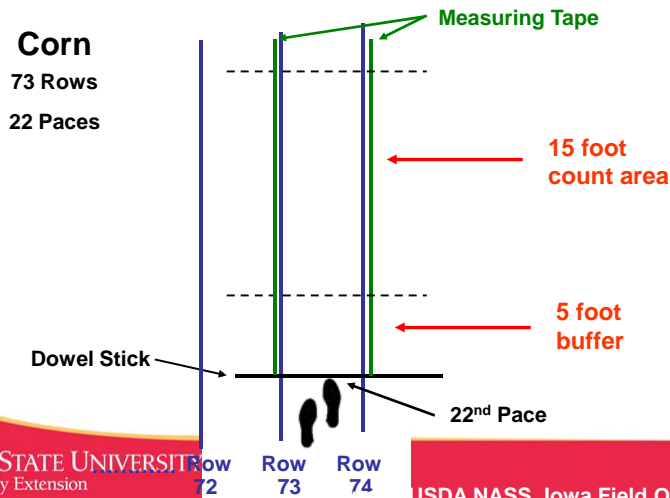


Samples consist of 2 plots randomly located within each selected field and scientifically placed within the field with predetermined locations.

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Source: USDA NASS, Iowa Field Office, July 2010

Objective Yield Sample Plot Location for Corn



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USDA NASS, Iowa Field Office, July 2010

Objective Yield Surveys

Soybeans

- Enumerators use a *frame* when laying out soybean sample plots



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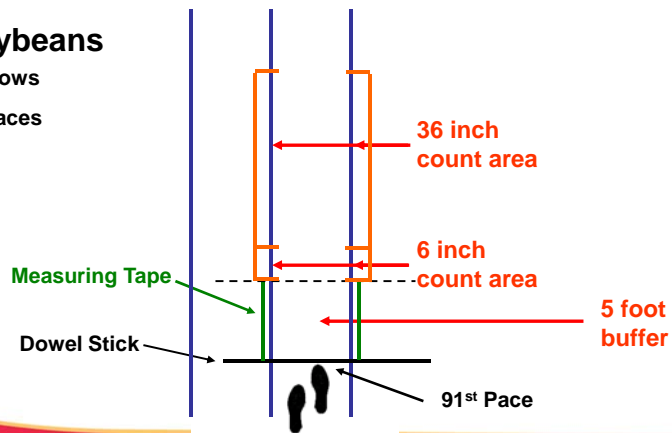
Source: USDA NASS, Iowa Field Office, July 2010

Objective Yield Sample Plot Location – Soybeans

Soybeans

27 Rows

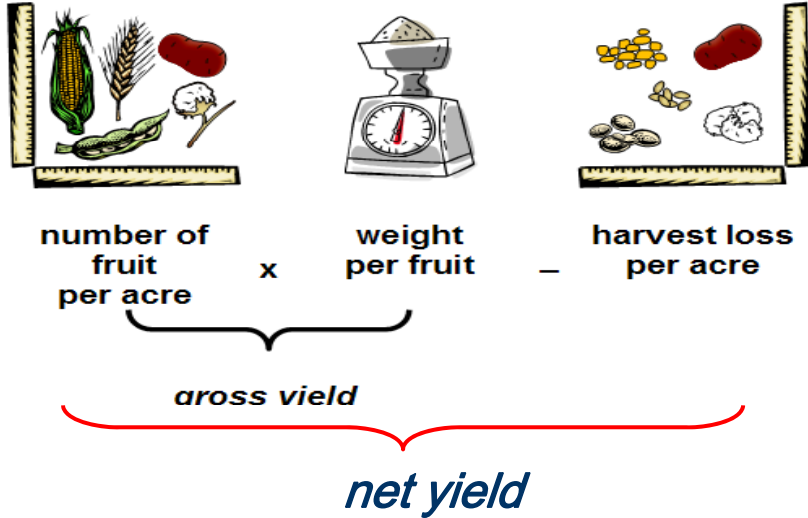
91 Paces



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Source: USDA NASS, Iowa Field Office, July 2010

Objective Yield Surveys



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Source: USDA NASS, Iowa Field Office, July 2010

Objective Yield Components & Forecast Variables

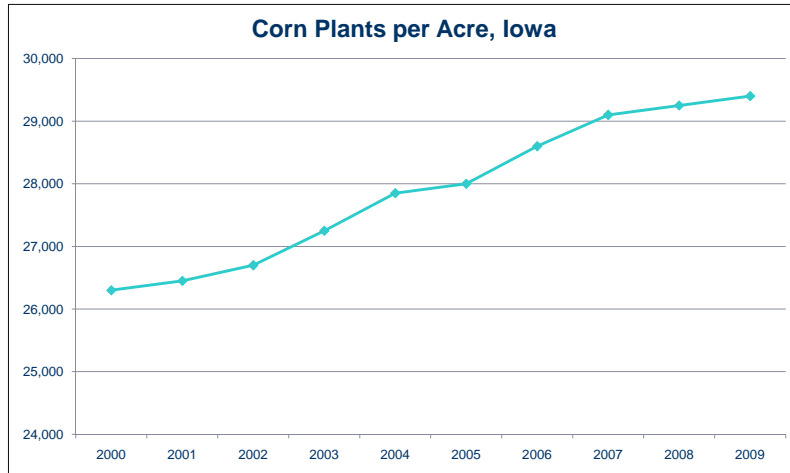
Crop	Component	Forecast Variable
Corn	Ears	- stalks - ears & ear shoots - ears with kernels
	ear weight	- historic average - length over husk - kernel row length - ear diameter
Soybeans	Plants pods per plant	- plants - main stem nodes - lateral branches - blooms, dried flowers & pods - pods with beans
	pod weight	- historical average - pods with beans

Variables used to measure the number of fruit and weight vary each month based on the stage of maturity

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Source: USDA NASS, Iowa Field Office, July 2010

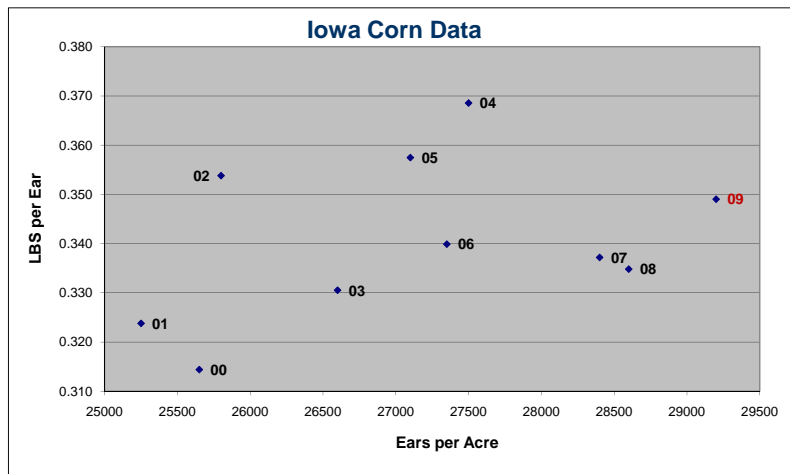
Corn Planting Population Trends



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Source: USDA NASS, Iowa Field Office, July 2010

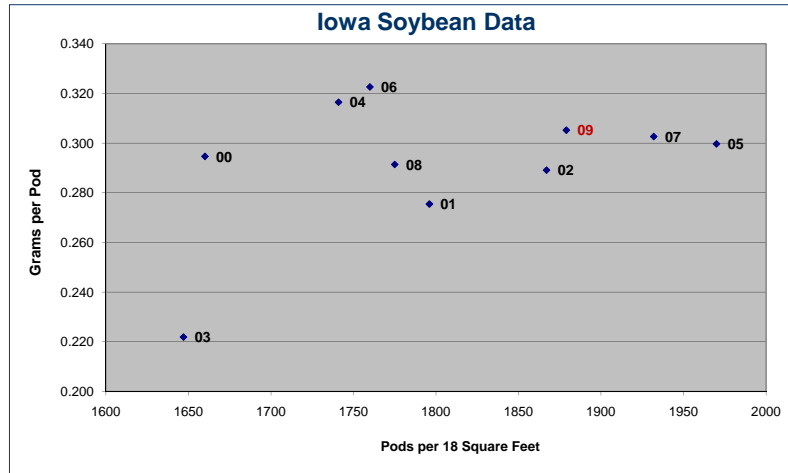
Objective Corn Yield Survey Components



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Source: USDA NASS, Iowa Field Office, July 2010

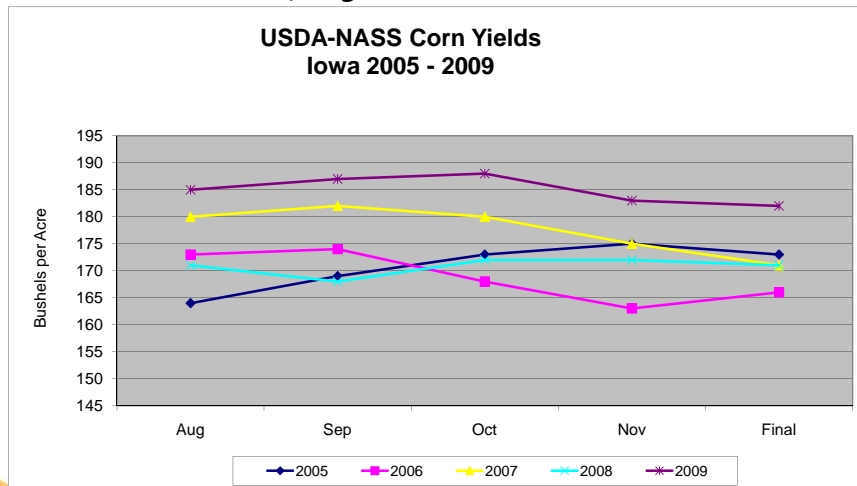
Objective Soybean Yield Survey Components



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Source: USDA NASS, Iowa Field Office, July 2010

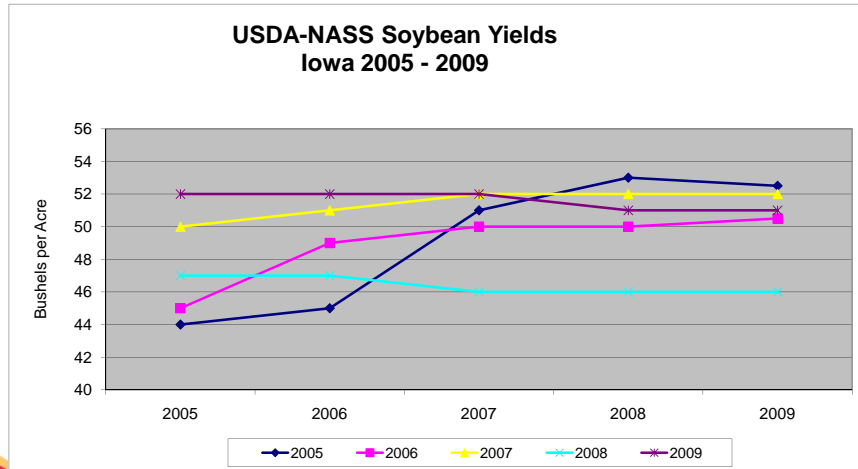
Accuracy of Iowa Corn Yield Forecasts (5-year Trend)



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Source: USDA NASS, Iowa Field Office, July 2010

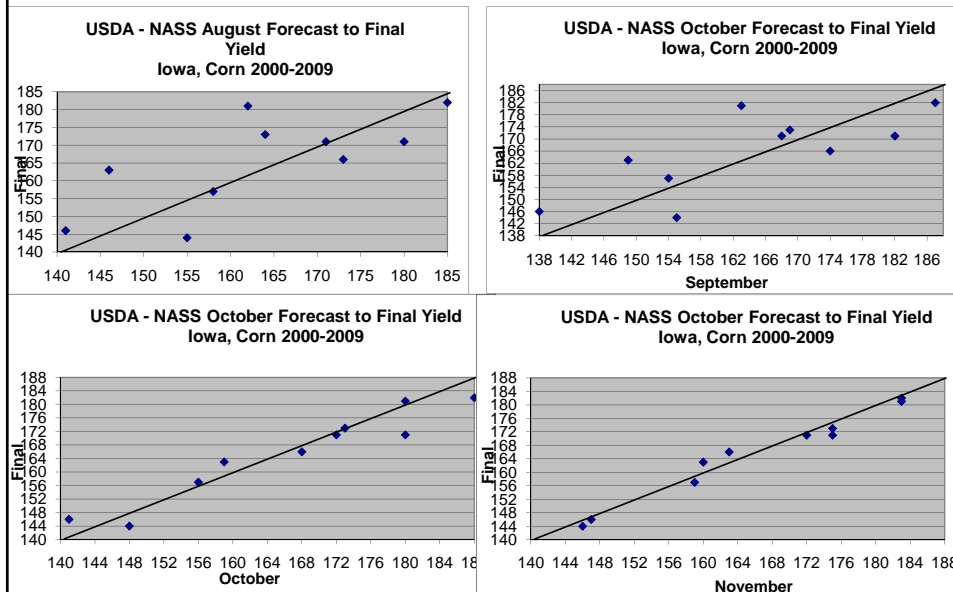
Accuracy of Iowa Soybean Yield Forecasts (5-year Trend)



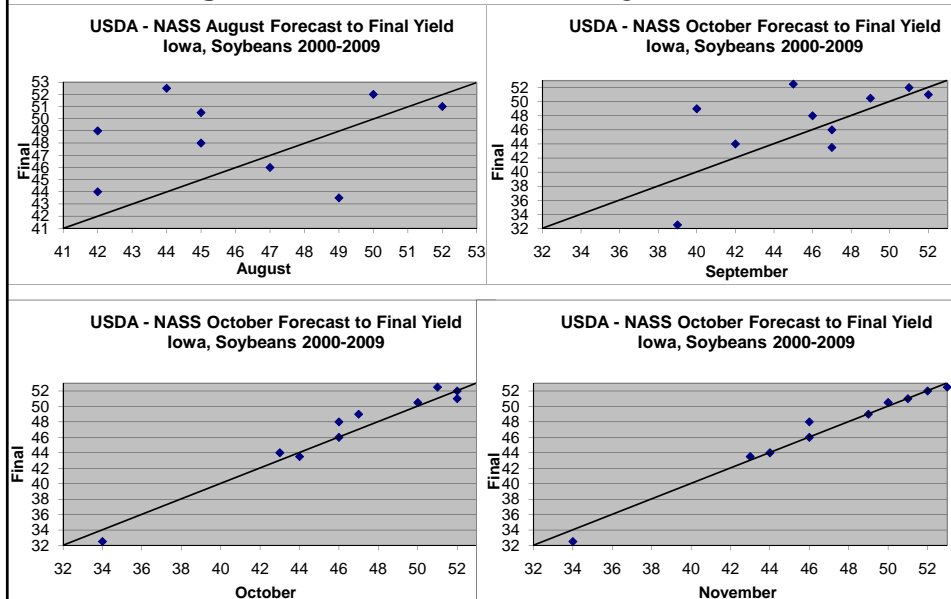
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Source: USDA NASS, Iowa Field Office, July 2010

Iowa Corn Yield Estimate Accuracy (August to November: 10-year Trend)



Iowa Soybean Yield Estimate Accuracy (August to November: 10-year Trend)



Conclusion

- Yield data collected objectively helps make for efficient markets
- NASS' estimates are based on survey data – drawn scientifically
- Confidentiality and security of information is critical
- NASS statistics are available for review
- Everyone has access to the 2010 crop yield survey results at the same time: Thursday, August 12th at 7:30 am CDT.