agri benchmark *agri benchmark* **Cash Crop Conference 2009**

from June 7th to June 12th, 2009
in Cambridge/UK - Haycock Hotel, Wansford

2008 USA FARM BILL

or it's real name

"Food, Conservation and Energy Act of 2008"

http://www.usda.gov/wps/portal/farmbill2008?navid=FARMBILL2008

http://frwebgate.access.gpo.gov/cgibin/getdoc.cgi?dbname=110_cong_public_laws&docid=f:publ246.pdf

Kelvin Leibold

Iowa State University

Ames, Iowa, USA

ISU Extension Farm Management

Field Specialist

kleibold@iastate.edu

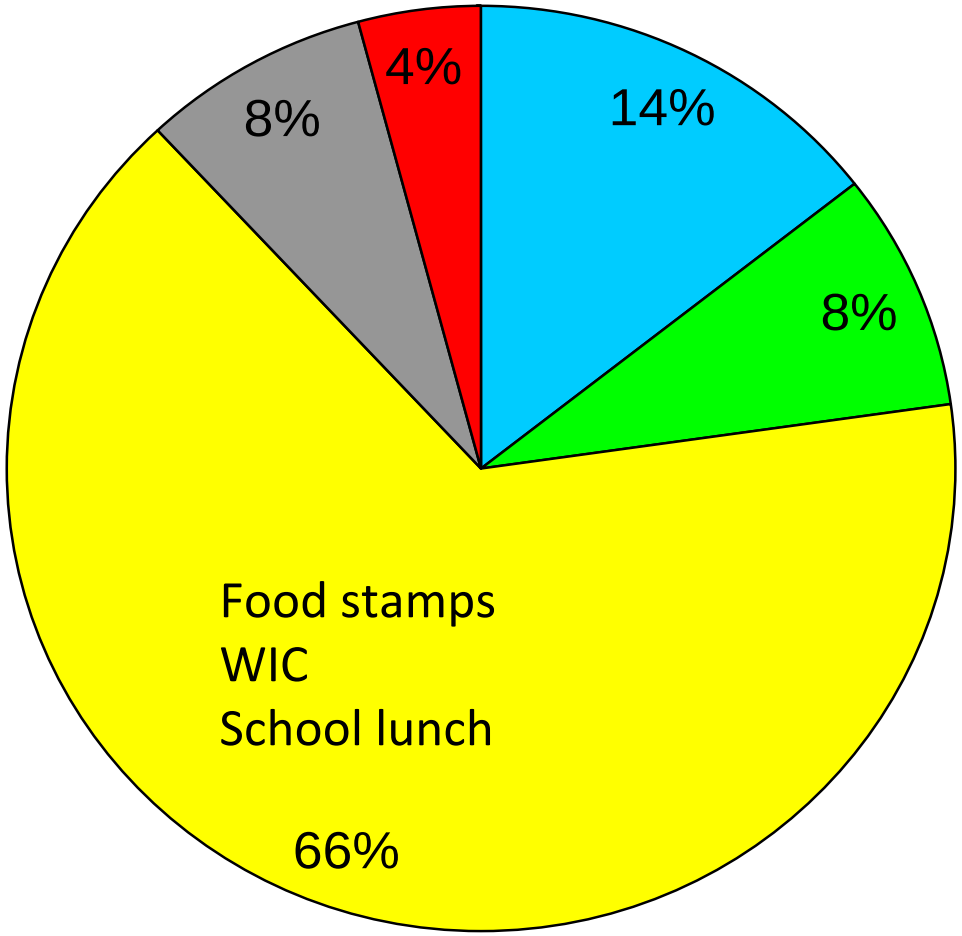
641-648-4850

Material referenced: Chad Hart,
Assistant Professor/Grain Markets Specialist
Iowa States University, Ames, Iowa, USA

Farm Bill Titles

I. Commodities
II. Conservation
III. Trade
IV. Nutrition
V. Credit
VI. Rural Development
VII. Research
VIII. Forestry
IX. Energy
X. Hort. & Organic Ag.
XI. Livestock
XII. Crop Insurance
XIII. Commodity Futures
XIV. Miscellaneous
XV. Trade & Taxes

Farm Bill Projected Spending



Projected Spending
2008-2013
$297 Billion

Commodity | Conservation | Nutrition | Crop Insurance | Other

The 2008 Farm Bill

- Continues many of the same programs we have currently
  - Direct payments
  - Price countercyclical payments (CCPs)
  - Marketing loans
  - CRP, EQIP, and other conservation programs
- Gives producers a choice on programs
  - Average Crop Revenue Election (ACRE)
- Sets up new permanent disaster program
  - Supplemental Revenue Assistance Payments Program (SURE)

Target Price Changes

Crop	Unit	2008-09	2010-12	$/tonne 2010-2012
Corn	$/bu.	2.63	2.63	$104
Soybeans	$/bu.	5.8	6	$220
Barley	$/bu.	2.24	2.63	$121
Wheat	$/bu.	3.92	4.17	$153
Oats	$/bu.	1.44	1.79	$123
Cotton	$/lb.	0.724	0.7125	$1,571
Sorghum	$/bu.	2.57	2.63	$104

Loan Rate Changes

Crop	Unit	2008-09	2010-12	$/tonne 2010-2012
Corn	$/bu.	1.95	1.95	$77
Soybeans	$/bu.	5	5	$184
Barley	$/bu.	1.85	1.95	$90
Wheat	$/bu.	2.75	2.94	$108
Oats	$/bu.	1.33	1.39	$96
Cotton	$/lb.	0.52	0.52	$1,147
Sorghum	$/bu.	1.95	1.95	$77

Direct Payment Rates

Used to calculate a fixed payment per acre

Crop	Unit	2008-12	$/tonne
Corn	$/bu.	0.28	$ 11.02
Soybeans	$/bu.	0.44	$ 16.17
Barley	$/bu.	0.24	$ 11.02
Wheat	$/bu.	0.52	$ 19.11
Oats	$/bu.	0.024	$ 1.65
Cotton	$/lb.	0.0667	$ 147.07
Sorghum	$/bu.	0.35	$13.78

Other Adjustments to Current Programs

- Payment acres = 85% of base in 2008 and 2012
- Payment acres = 83.3% of base in 2009-11
- Establishes pulse crops (dry peas, lentils, chickpeas) as program crops
- Posted county price based on 30-day moving average

Average Crop Revenue Election (ACRE)

- ACRE is a revenue-based counter-cyclical payment program
  - Based on state and farm-level yields per planted acre and national prices
- Producers choose between the current price-based counter-cyclical payment (CCP) program and ACRE
- There are still some details to be worked out about ACRE

Farmer Choice

- Starting in 2009, producers will be given the option of choosing ACRE or not
  - Can choose to start ACRE in 2009, 2010, or beyond
  - Once you're in ACRE, you stay in ACRE until the next farm bill
  - If you sign up for ACRE, you must do so for all eligible crops
  - Deadline for sign-up, June 1 of each year
- Producers choosing ACRE agree to 20% decline in direct payments and 30% decline in loan rates

What do you give up?

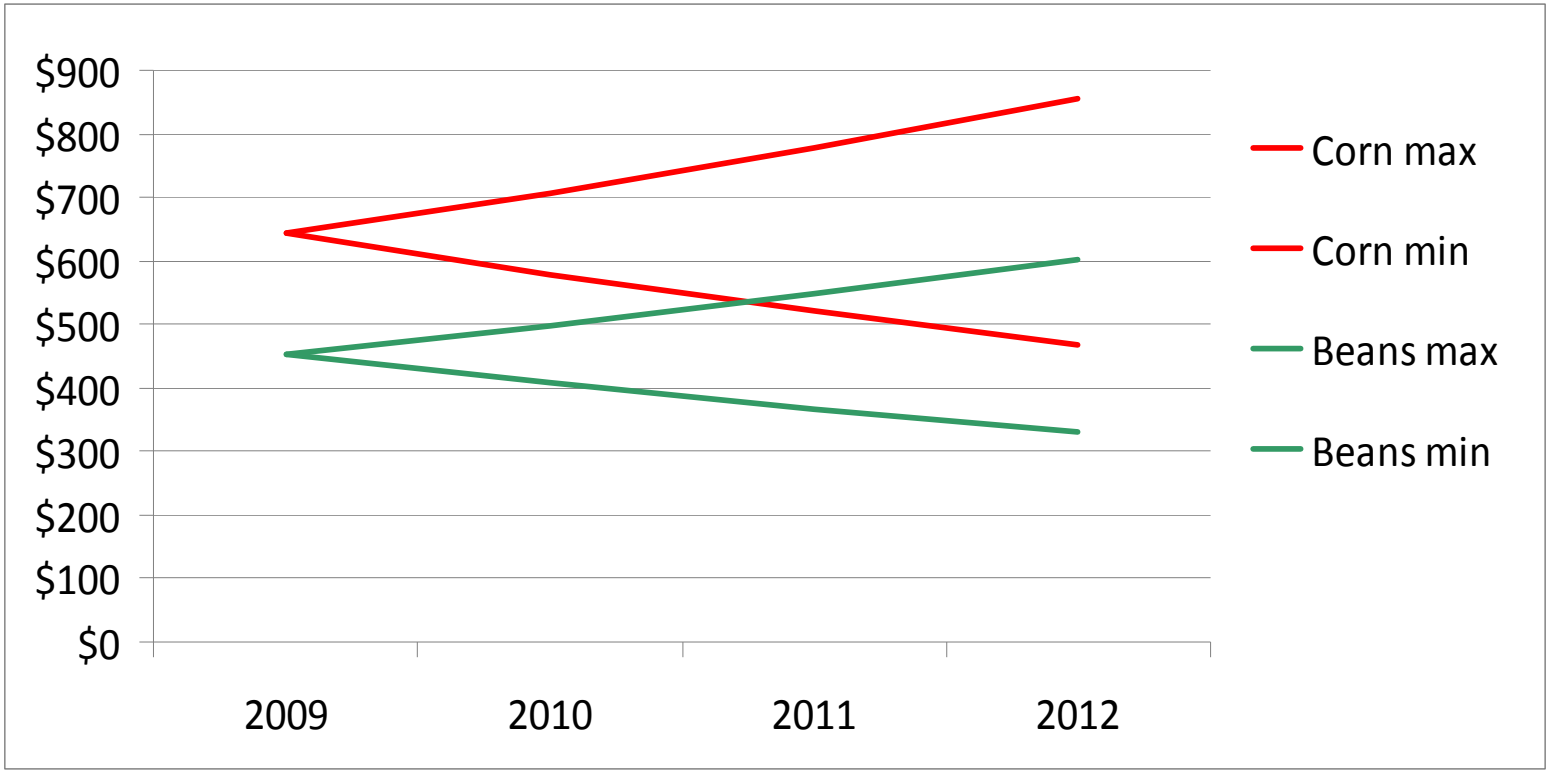
- **20 % of your current direct payments**
- **30% of your loan rate**

Crop	Current Payment	ACRE Payment	Difference
Corn	$28.67	$22.94	$5.73
Soybeans	$13.55	$10.84	$2.71

Iowa averages.

	Current Loan Rate	ACRE Loan Rate
Corn	$1.95	$1.365
Soybeans	$5.00	$3.50

State Triggers cannot change by more than 10% each year (up or down)



ACRE Settings

- ACRE is based on planted acres
- Total acres eligible for ACRE payments limited to total number of base acres on the farm
- Farmers may choose which planted acres are enrolled in ACRE when total base area is exceeded

ACRE Set-up for Iowa Corn

Year	Yield per Planted Acre (bu./acre)
2004	176.7
2005	168.9
2006	162.7
2007	167.4
2008	164.6
Olympic Average	167.0

Year	Season-average Price ($/bu.)
2007	4.20
2008	3.90 est.
Average	4.05 est.

http://www.ers.usda.gov/Data/PriceForecast/

The 2008 yield and price are USDA's February 2009 estimates.

So the expected state yield would be 167.0 bushels per acre and the ACRE price guarantee would be $4.05 per bushel.

ACRE Triggers

- ACRE revenue guarantee = 90% * ACRE price guarantee * Expected state yield
- ACRE Farm revenue trigger = Expected farm yield * ACRE price guarantee + Producer-paid crop insurance premium
- Both the state and farm triggers have to be tripped to receive an ACRE payment

ACRE Revenues to Count

- ACRE actual revenue = Max(Season-average price, Loan rate) * Actual state yield per planted acre

- ACRE actual farm revenue = Max(Season-average price, Loan rate) * Actual farm yield per planted acre

ACRE Payments

- Payment rate = Min(ACRE revenue guarantee – ACRE actual revenue, 25% * ACRE revenue guarantee)

- Payments made on 83.3% of planted/base acres in 2009-11, 85% in 2012

- ACRE payment adjustment: Payment multiplied by ratio of Expected farm yield to Expected state yield

An Example for 2009 Maize

- To start, we need the expected state and farm yields and the ACRE price guarantee

- Expected state yield 10.5 t./ha or 167 bu/acre
- Expected farm yield 11.3 t./ha or 180 bu/acre
  - 2004-08 Olympic average of yields per planted acre
- ACRE price guarantee $160/tonne $4.05/bu
  - Average of 2007 and 2008 season-average prices

- ACRE Revenue Guarantee $1,504/ha $608.72
  - 90% * $4.05/bu * 167 bu/acre
- ACRE Farm Revenue Guarantee $1,850/ha $749.00
  - $4.05 * 180 bu/acre + $20/acre

Example (continued)

- For 2009, we need the actual state yield, the actual farm yield , and the season-average price

Actual state yield	10.3 tonne / ha	165 bu/acre
Actual farm yield	12 tonne / ha	190 bu/acre
Season-Average Price	$138 / tonne	$3.50/bu
ACRE Actual Revenue	$1,427/ha	$577.50
ACRE Farm Actual Revenue	$1,642/ha	$665.00

- $3.50/bu * 165 bu/acre
- $3.50/bu * 190 bu/acre

Example (continued)

- State Trigger
  - ACRE Revenue Guarantee $1,504/ha $608.72
  - ACRE Actual Revenue $1,427/ha $577.50
- So we've met the state trigger

- Farm Trigger
  - ACRE Farm Revenue Guarantee $1,850/ha $749.00
  - ACRE Farm Actual Revenue $1,642/ha $665.00
- So we've met the farm trigger

Example (continued)

- ACRE Payment $69/ha $28.03/ acre
  - Smaller of (25%*$608.72) or ($608.72 – $577.50)
    times (180 bu/acre / 167 bu/acre)
    times 83.3%

State historical revenue is 167.0 bu. X $4.05 est. = $676

State trigger is 167 bu. x $4.05 X .90 = **$609** (corn)

Farm trigger is 180 bu. X $4.05 = $747

+ $20 crop insurance premium = $749 per acre

2009 state yield is 165 bu. or 10.3 tonne / ha

2009 farm yield is 190 bu. or 12 tonne / ha

2009 marketing year price is $3.50 or $138 / tonne

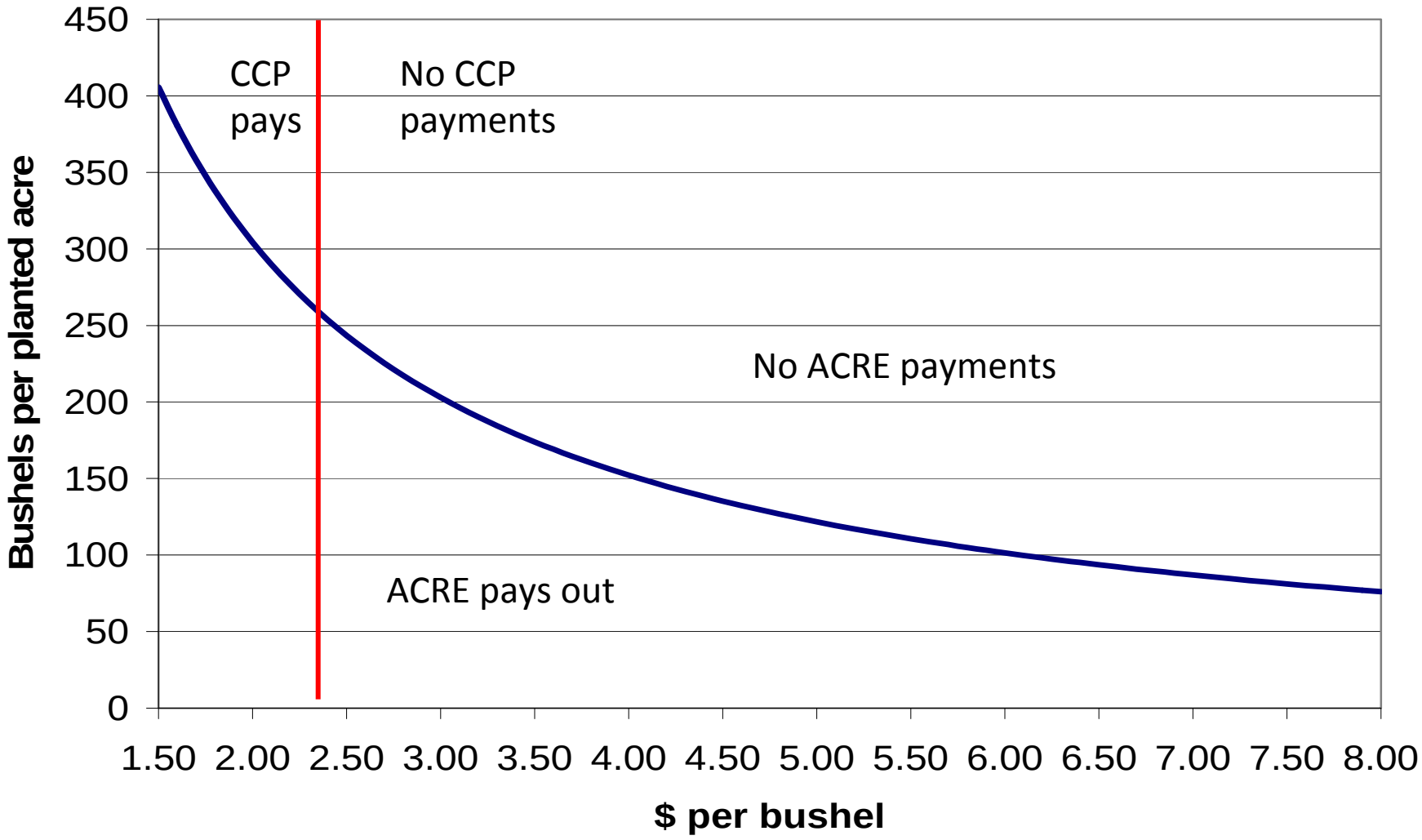
2009 state revenue is 165 bu. x $3.50 = **$578** per acre

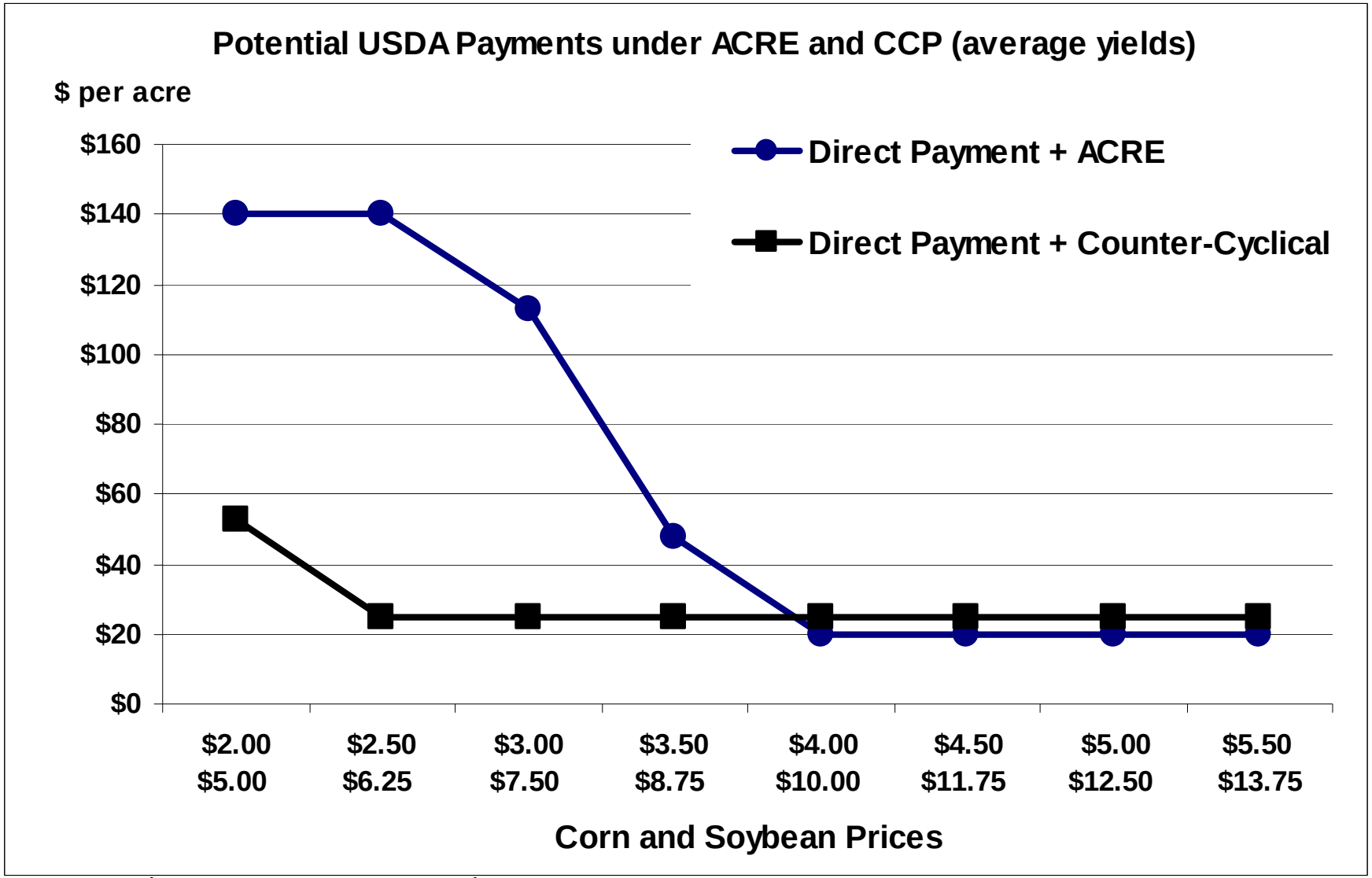
2009 farm revenue is 190 bu. x $3.50 = $665 per acre

ACRE payment = ($609 - $578) x 83.3% x

180 bu. / 167 bu. = $28 per corn acre ($69/ha) planted

ACRE vs. CCP for Maize





$3.67 for corn and $8.92 for soybeans to trigger ACRE payments

Assumes 50-50 corn/soybean cropping pattern for Iowa

Supplemental Revenue Assistance Payments Program (SURE)

- Provides payments to producers in disaster counties for crop losses
- Based on crop insurance program, non-insured crop assistance program, and disaster declarations
- Whole-farm revenue protection, not commodity-specific

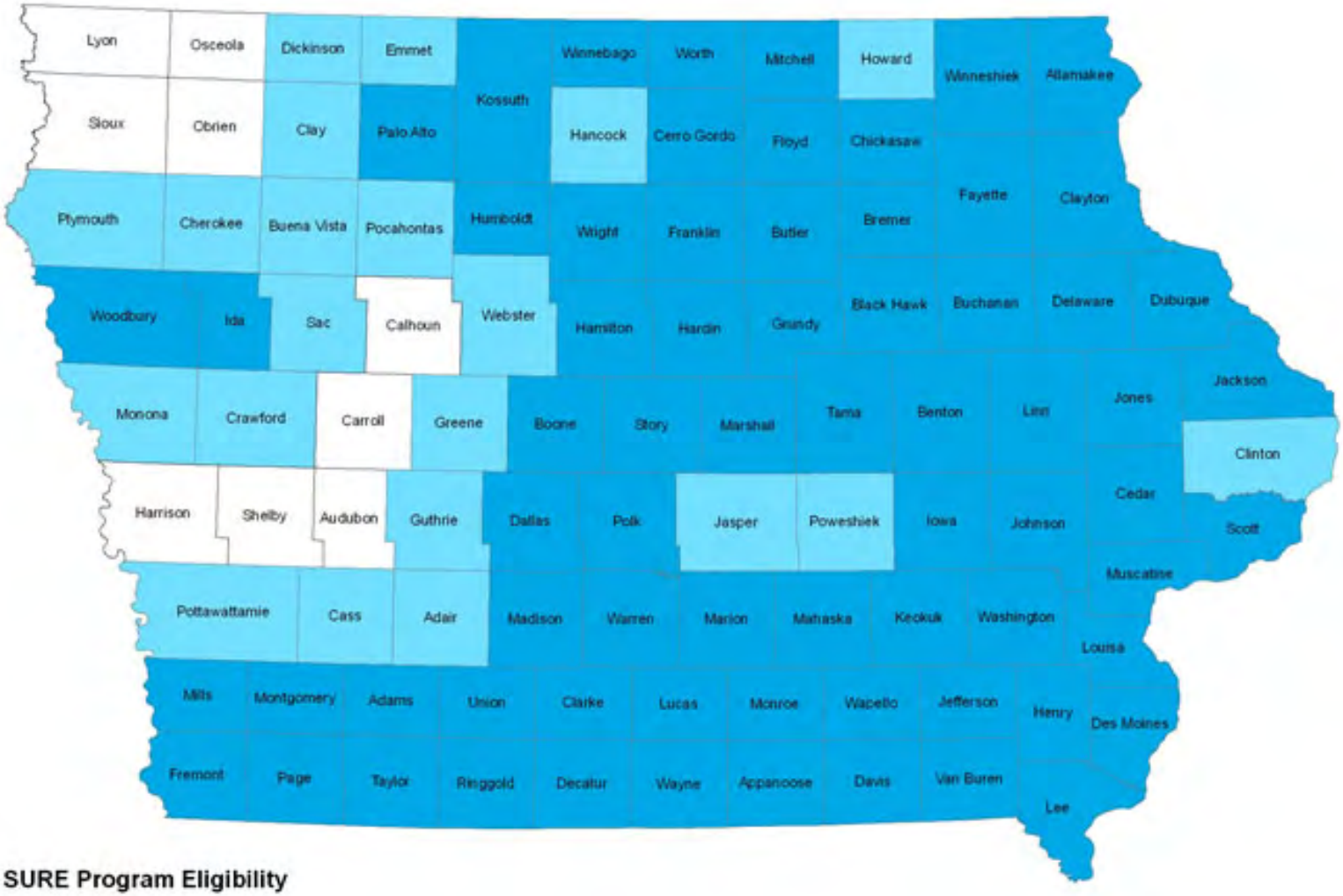
SURE also covers losses to: livestock, forage, trees, bushes, vines, honey bees, and farm-raised fish

SURE Triggers

- Declared “disaster county” by Secretary of Agriculture or contiguous to one

- Farm with losses exceeding 50% of normal production in a calendar year

"Secretarial Designated" Disaster Counties



SURE Program Eligibility

- Not Eligible
- Secretarial Disaster County
- Contiguous County

SURE Settings

- Participation and revenue guarantee tied to crop insurance
- Farm revenue, including some government payments, used to determine payment
- Payments set as 60% of the difference between guarantee and actual revenue
  - Limited to $100,000 per producer
  - Payments not known or paid until the end of the marketing year

SURE Guarantee

- Farm guarantee is the sum of
  - (115 or 120)%*Crop insurance price election*Crop insurance coverage level*Planted acres* Max(APH or CCP yield), for insurable commodities
  - (120 or 125)%*NCAP price election*Planted acres* Max(NCAP or CCP yield), for non-insurable commodities

- For an individual crop, the guarantee can not be greater than 90% of the crop's expected revenue

SURE Expected Farm Revenues

- Expected farm revenue is the sum of
  - Max(APH or CCP yield)*Planted acres*100% of the crop insurance price for insurable commodities
  - 100% of NCAP yield*100% of NCAP price*Planted acres for non-insurable commodities

SURE Actual Farm Revenues

- Actual farm revenue is the sum of
  - Harvested acres*Farm yield*National season-average price for all commodities
  - 15% of direct payments
  - All CCP or ACRE payments
  - All marketing loan benefits
  - All crop insurance or NCAP payments
  - Any other disaster assistance payments

Payment Limitations

- Direct payments: $40,000 (w/o ACRE)
  $32,000 (w/ ACRE)
- Counter-cyclical payments: $65,000
- ACRE: $73,000 ($65,000 + $8,000)
- Marketing loans: No limits
- Direct attribution of payments
- Elimination of the 3-entity rule

Income Limitation Rule

- Farm Bill established new AGI and AGFI limitations for program eligibility
  - Previous limitation= $2,500,000
  - New limitation=$500,000 non farm, $750,000 AGFI for DP's under the DCP- (calculate average AGI for 2009- use 2005, 2006, 2007 tax years)
  - Conservation program – non farm income = $1,000,000 (unless 2/3 non farm and farm AGI derived from farming, ranching and forestry operations)
  - Warning: Administration's proposed 2010 budget- "gross sales"

Government Policies for Biofuels

Ethanol

- Ad valorem tariff of 2.5%
- Import duty of $0.54 per gallon
- Volumetric Ethanol Excise Tax Credit (VEETC)
  - $0.45 per gallon starting in 2009

Biodiesel

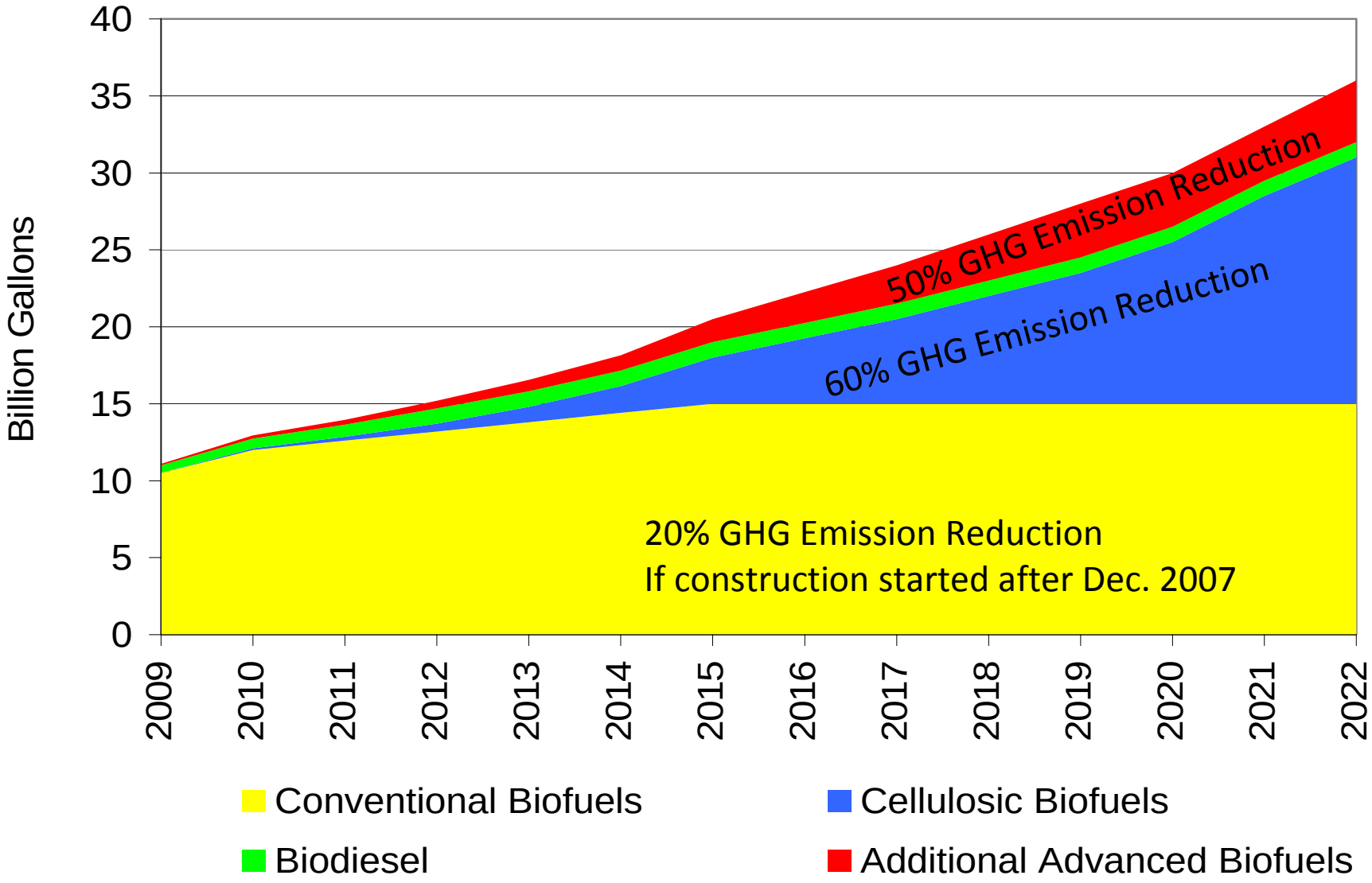
- Biodiesel Mixture Excise Tax Credit
  - $1.00/0.50 per gallon

Cellulosic

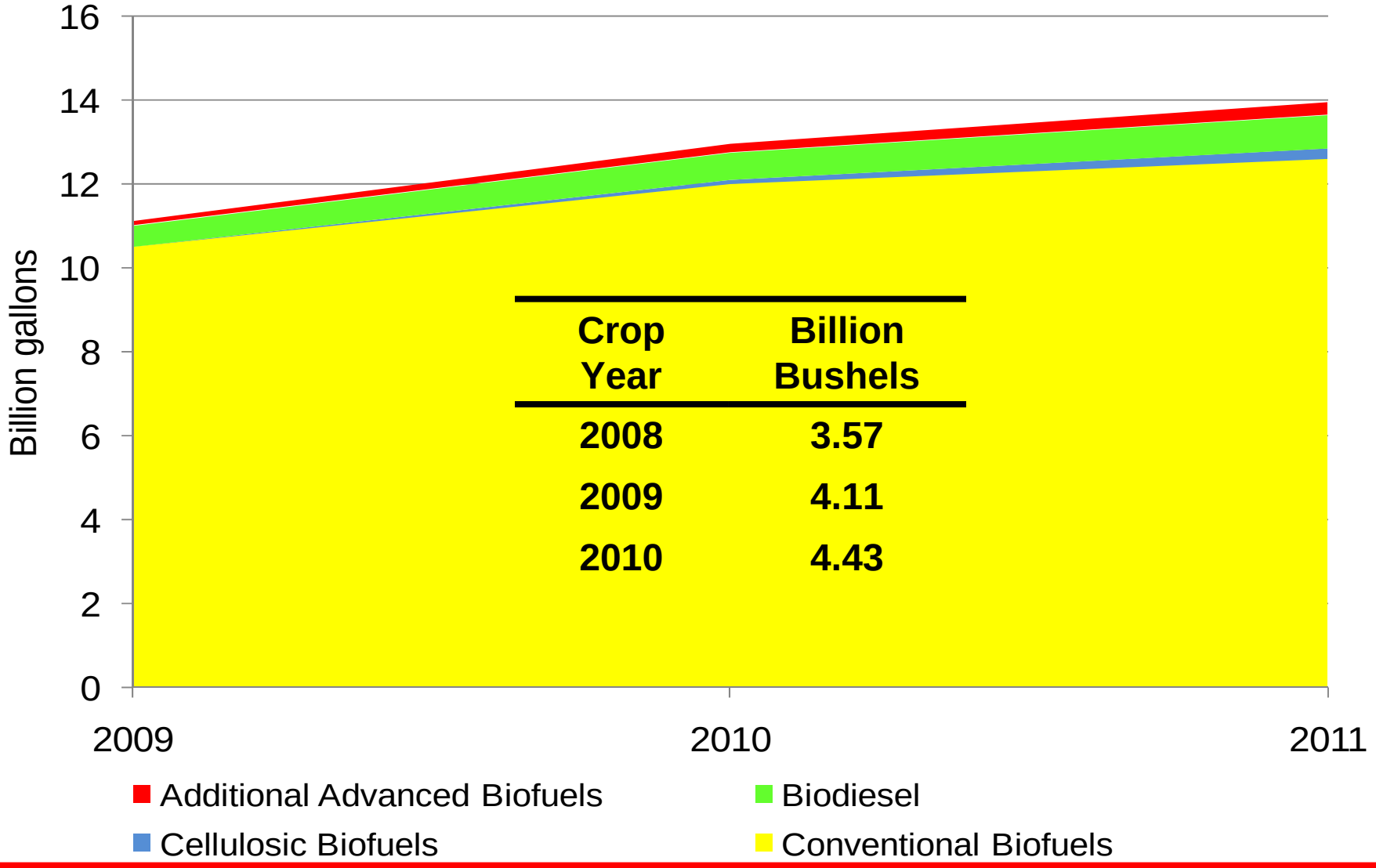
- Cellulosic Biofuel Producer Tax Credit
  - $1.01 per gallon

http://www.afdc.energy.gov/afdc/progs/view_ind_mtx.cgi?user/AFS/US/0

Renewable Fuels Standard (RFS)

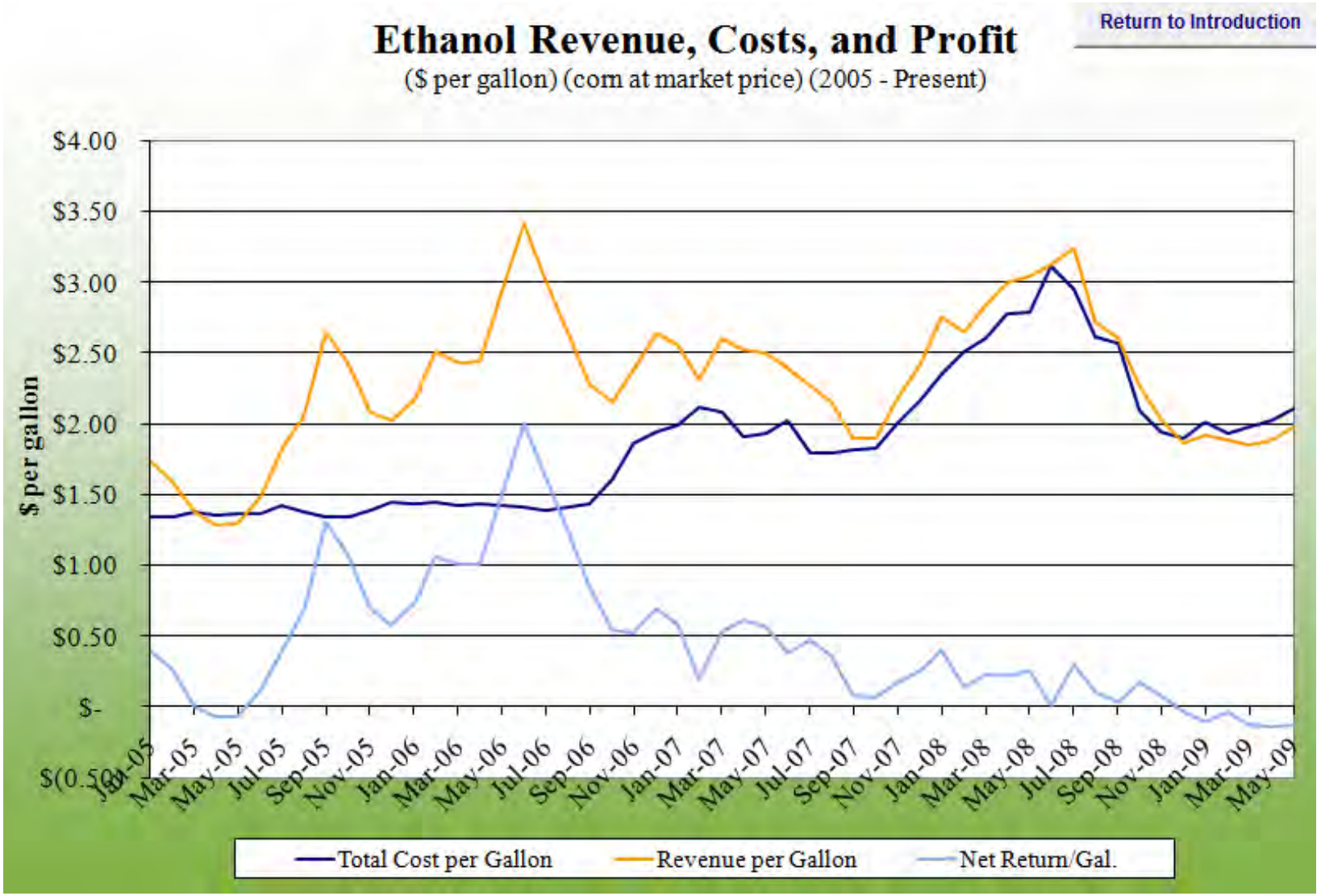


Renewable Fuels Standard (RFS)



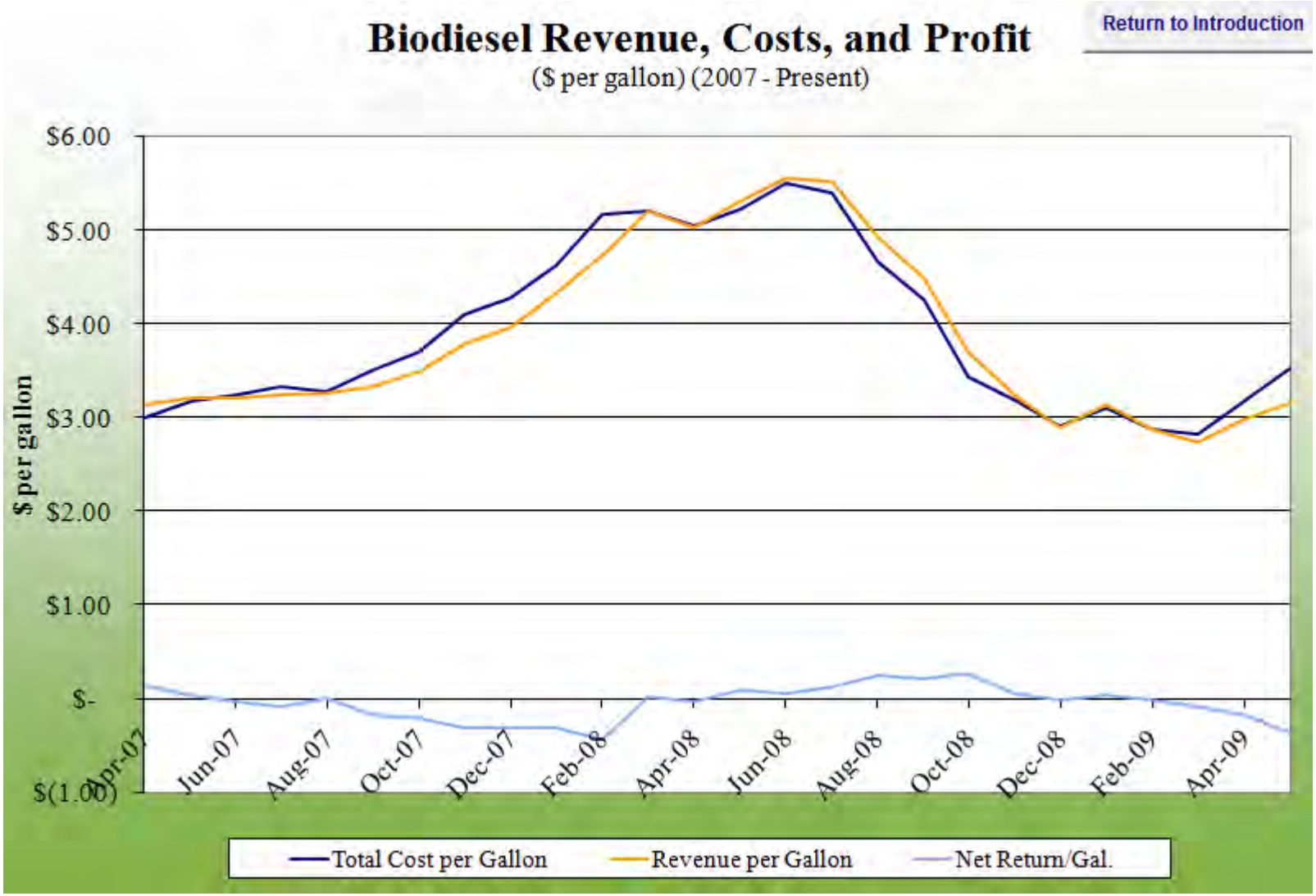
Crop Year	Billion Bushels
2008	3.57
2009	4.11
2010	4.43

Ethanol Margins



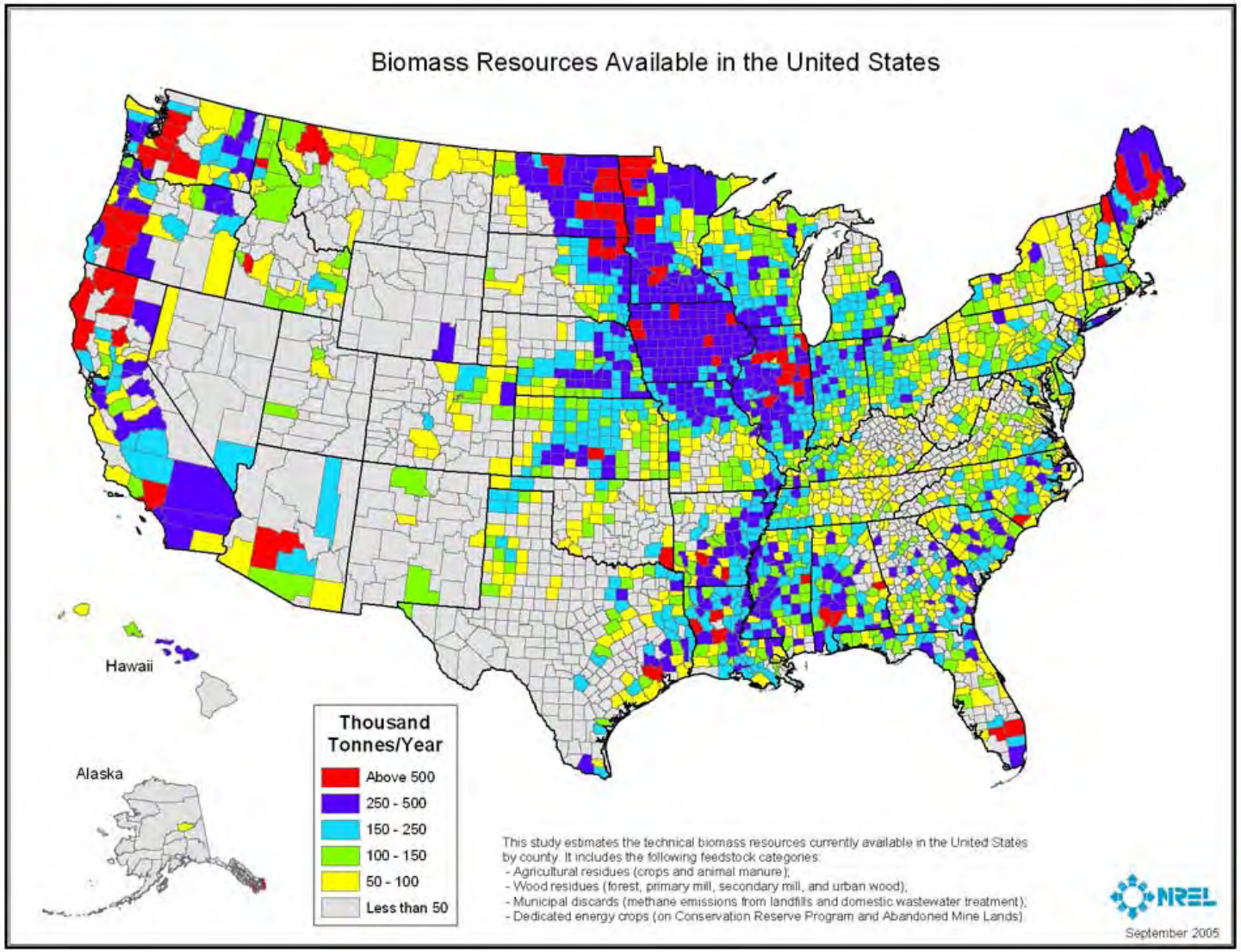
Source: ISU, CARD

Biodiesel Margins



Source: ISU, CARD

Currently Available Biomass



Source: NREL, 2005

- Grain/Sugar Ethanol
- Biodiesel
- Green Gasoline/Diesel
- Cellulosic Ethanol
- Butanol
- Pyrolysis Liquids
- Syngas Liquids

Most Mature

Least Mature

Source: NREL, 2006

Biofuel Challenges

- Production costs
  - Conversion, ag. production, etc.
- Infrastructure barriers
  - Developing supply chain for biomass
  - Continued development of biofuel distribution system
  - Growth in biofuel-compatible vehicles

Biofuel Challenges

- Investment risks
  - Higher capital costs, emerging technology
- Biomass production shifts
  - Inducing farmers to produce new crops
  - About the fuels
  - About the tradeoffs

http://www.agmrc.org/renewable_energy/
http://www.extension.iastate.edu/agdm/reethanol.html
http://www.agmrc.org/renewable_energy/agmrc_renewable_energy_newsletter.cfm/prices_profitability_and_supplydemand_85

Thank you for your time!

Any questions?

web site:
http://www.econ.iastate.edu/faculty/hart/

Iowa Farm Outlook:
http://www.econ.iastate.edu/outreach/agriculture/periodicals/ifo/

Ag Decision Maker:
http://www.extension.iastate.edu/agdm/info/farmbill.html