SHOULD SOYBEAN N CREDITS BE TAKEN IN 2005?

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Soybean growing season in 2004

- Late planting dates
- Delayed maturity
- Low grain yields
- Harvested as forage
- Residues removed after grain harvest
- Abandoned acreage

What is soybean N credit for these situations?

- Grain harvest, expected yields
- Grain harvest, low yields, < 20 bu/acre
- Grain harvest, residue removed
- Harvested as forage
- Abandoned acreage, dry matter left in field

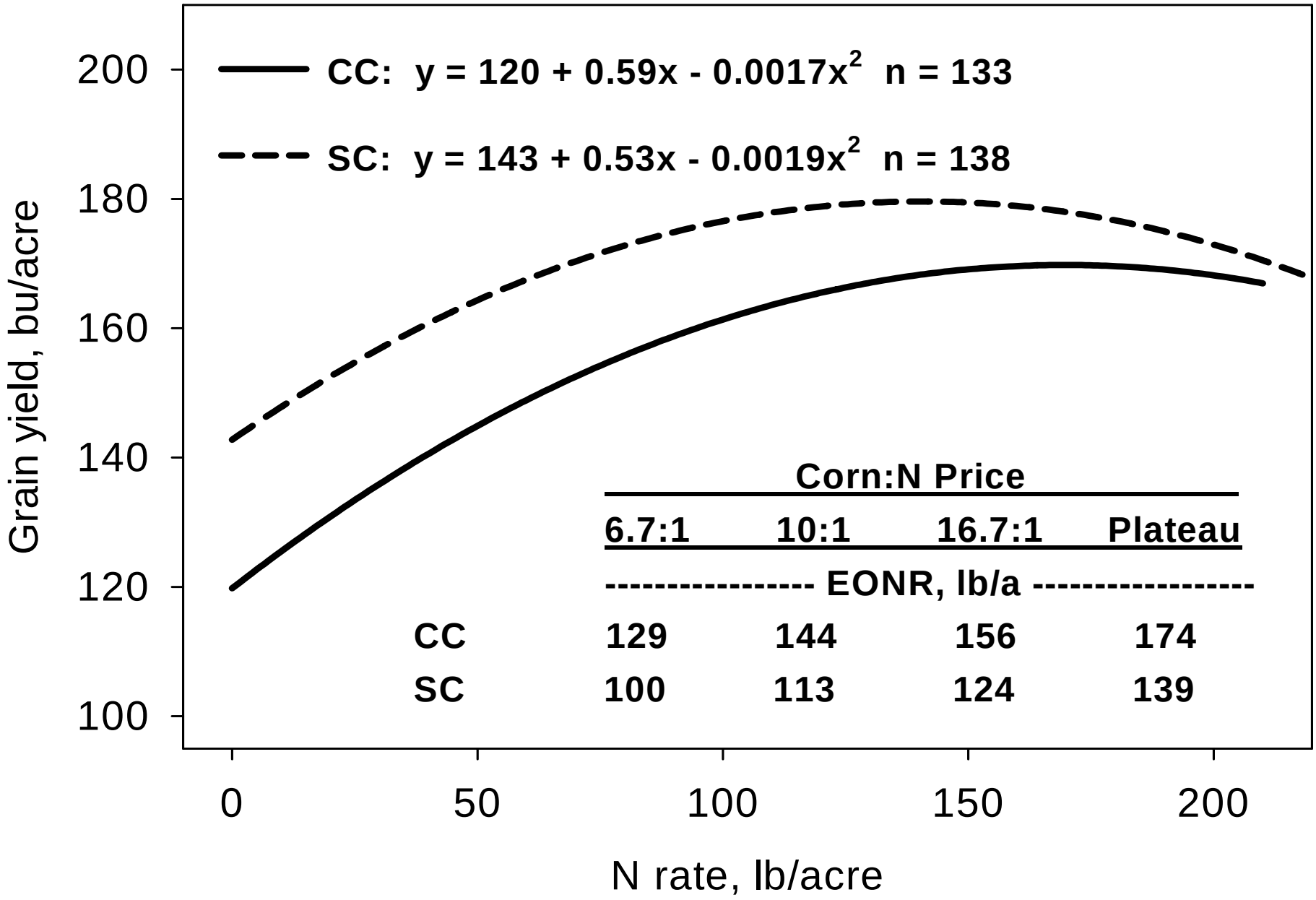
What is soybean N credit for these situations?

- Grain harvest, expected yields
- Grain harvest, low yields, < 20 bu/acre
- Grain harvest, residue removed
- Harvest [illegible]
- Abandoned [illegible] dry matter left in field

SOYBEAN NITROGEN CREDITS

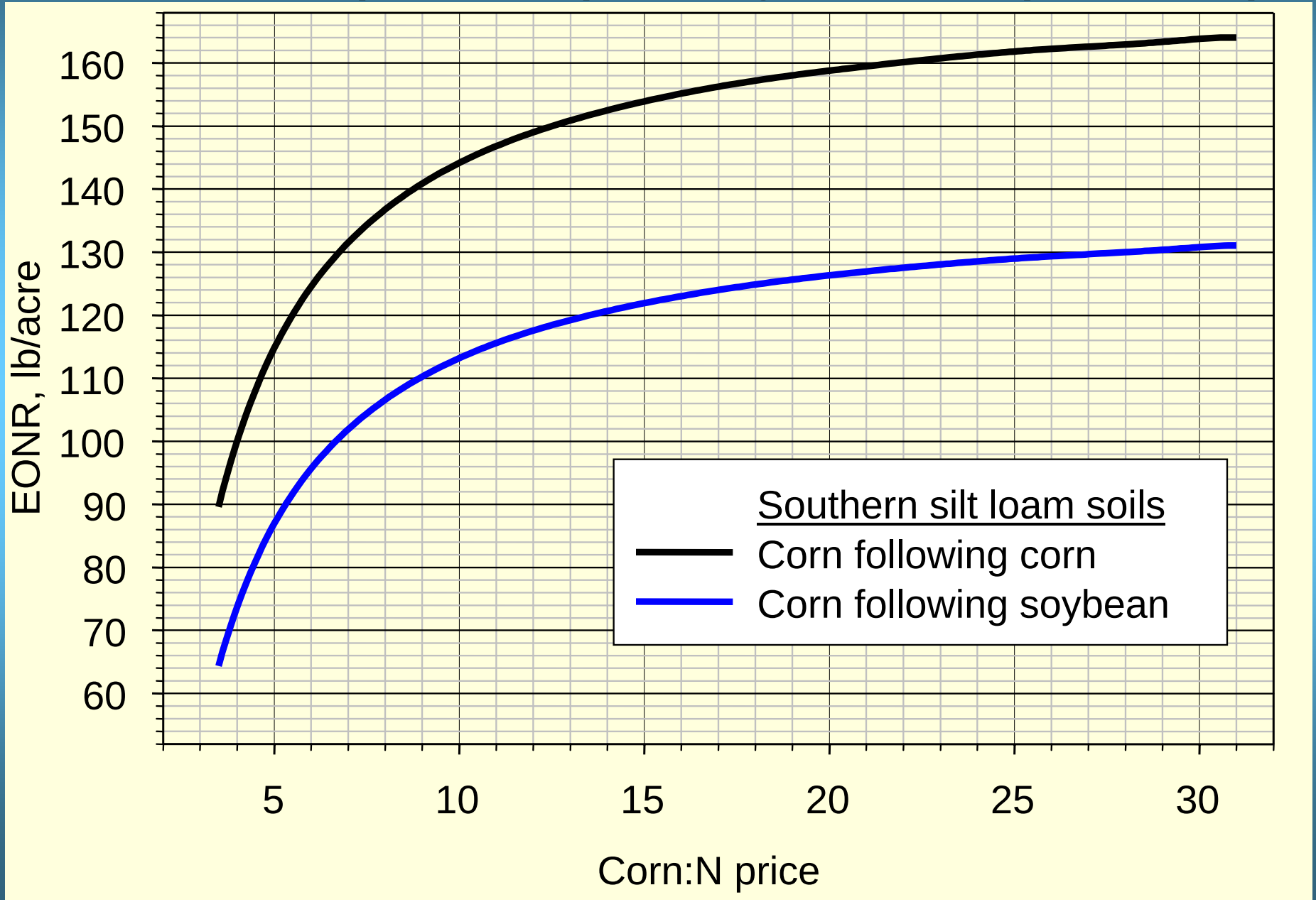
- Credit 40 lb N/acre
- Use preplant soil nitrate test to fine-tune credit
- No credit on sandy soils

Effect of corn:N price on EONR for corn following corn (1991-2003) and corn following soybean (1994 to 2003)



	Corn:N Price			
	6.7:1	10:1	16.7:1	Plateau
	---------- EONR, lb/a ----------			
CC	129	144	156	174
SC	100	113	124	139

Relationship between corn:N price and EONR for corn-corn (1991-2003) and soybean-corn (1994-2003)



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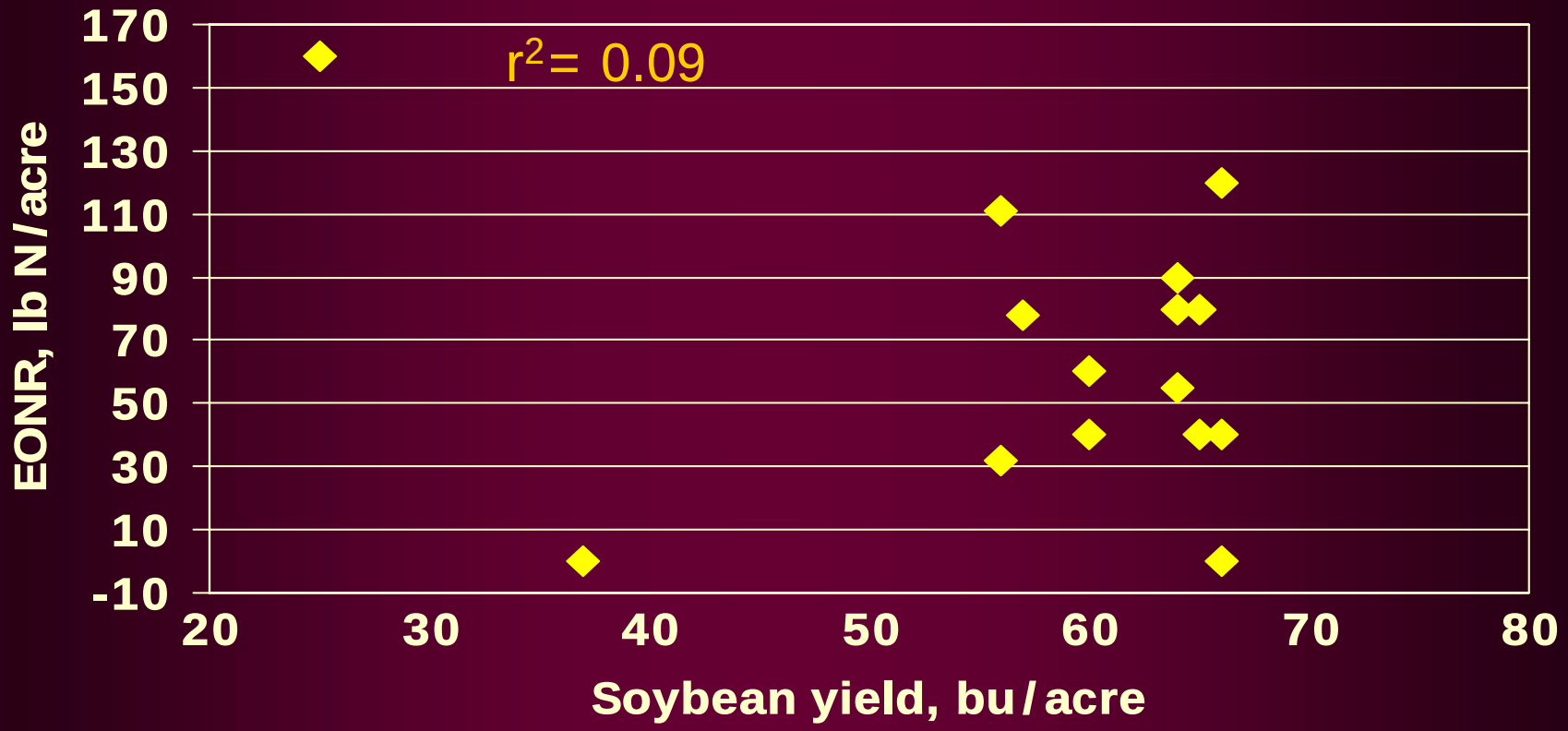
- Harvest [illegible]
- Abandoned [illegible] dry matter left in field

Relationship between EONR for corn following soybean and soybean yield in the previous year, 1994-1996.



EONR = economic optimum N rate

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- Harvest
- Abandoned dry matter left in field


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Soybean residue dry matter yields and nitrogen contents in several Wisconsin experiments

Location	Residue Yield	N conc.	N content
	lb/acre	%	lb N/acre
Arlington	4443	0.98	45
Lancaster	6088	0.60	35
Platteville	6167	0.78	47
Belmont	8380	0.90	76

Schoessow (1996)

Corn yield and response to N with soybean residue returned or removed (Schoessow, 1996)

Location	Residue Mgmt.	N rate, lb/acre	
		0	120
		-- Yield, bu/acre --	
Arlington	Returned	183	207
	Removed	180	200
Lancaster	Returned	123	201
	Removed	122	216
Belmont	Returned	175	214
	Removed	174	214

Effect of soybean residue and N fert. additions on corn yield*

Amendment	Dry Matter Rate	Dry Matter N	Corn Yield
	-------- lb/a --------		bu/a
None	-----	-----	73
Soybean	5321	51	71
Residue	10641	102	76
	15962	153	64
Ammonium	-----	20	98
Nitrate	-----	49	113
	-----	111	117

* Fribourg & Bartholomew (1956).

What is soybean N credit for these situations?

- Grain harvest, expected yields
- Grain harvest, low yields, < 20 bu/acre
- Grain harvest, residue removed
- Harvested as forage
- Abandoned, 1 ton dry matter left in field

Corn yield and response to N with soybean residue returned or harvested as forage (Schoessow, 1996)

Location	Residue Mgmt.	N rate, lb/acre	
		0	120
		-- Yield, bu/acre --	
Arlington	Returned	183	207
	Forage	191	199
Lancaster	Returned	123	201
	Forage	130	213
Belmont	Returned	175	214
	Forage	194	208

What is soybean N credit for these situations?

- Grain harvest, expected yields
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- Grain harvest, residue removed
- Harvest [illegible]
- Abandoned acreage, dry matter left in field

Soybean N credit for abandoned acreage

- Credit 40 lb N/acre
- Add additional N for un-harvested grain
- N content of 15 bu grain = 47 lb N
- Conservative addition = 20-25 lb (total credit = 60-65 lb N/acre)

SUMMARY

- Soybean N credit important for 2005.
- The standard 40 lb N/acre credit is appropriate for most 2004 soybean production situations
- Increase credit –abandoned ac.