



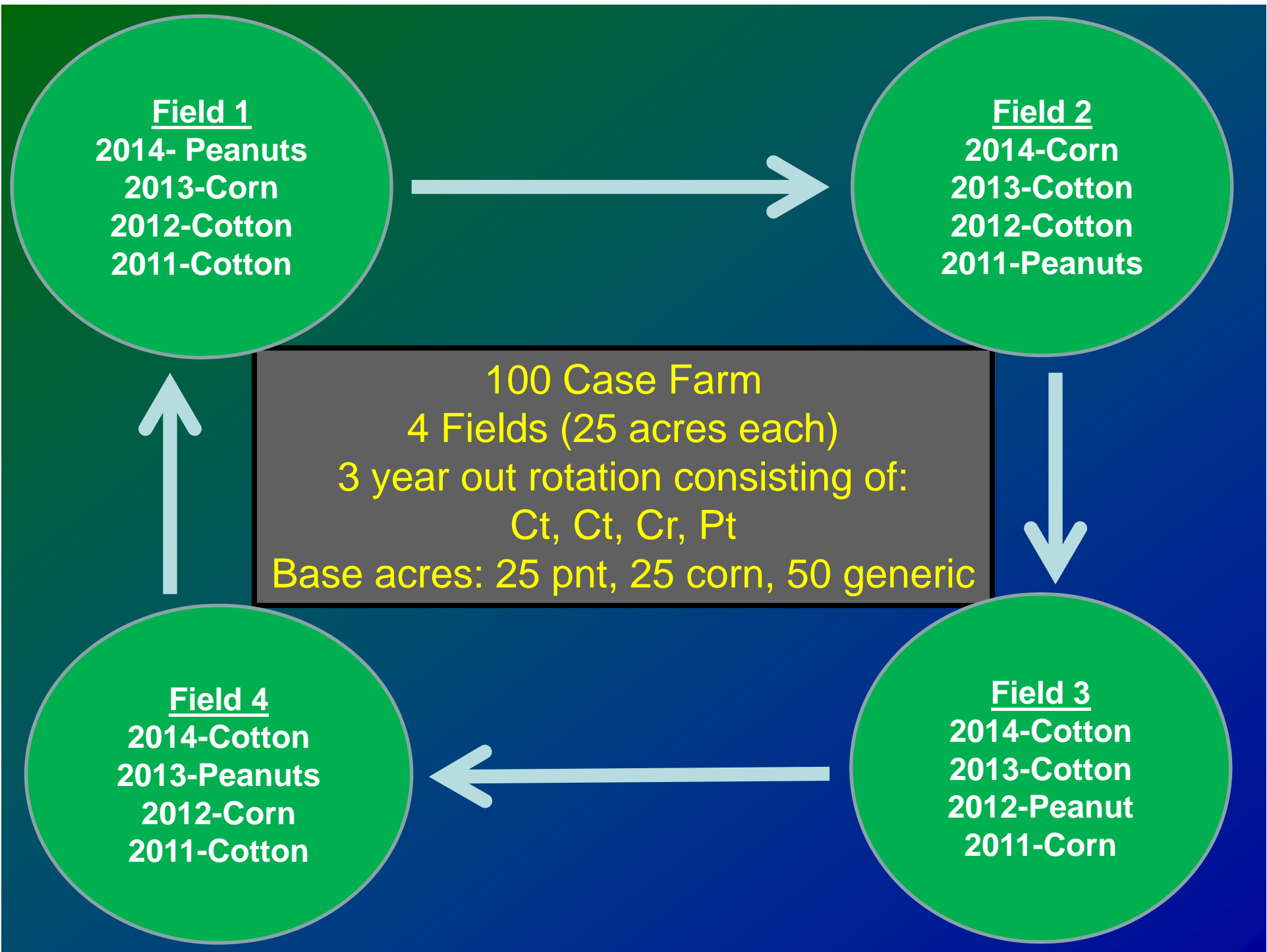
Rotation Analysis in 2014 and beyond

Before we get started on rotations....

- **The rules and regulations for the new farm bill are forthcoming and evolving. Until we get the final regulations, we can only speculate on what might happen**
- **Also, crop prices can and will change over time which can change the results of the crop rotation analysis**
- **So today is mainly focused on the cost/benefits of changing rotation sequences within the generalities of the farm bill**
- **The discussions today must be taken with these points in mind and without doubt the results will change as we learn more about the regulations**

Peanut Rotations Vary

- **Peanuts are most often rotated with cotton and corn although other crops are sometimes included**
- **Peanut rotations vary with respect to length out of peanuts. Typical rotations are 2 to 3 years out of peanuts**
- **From a yield standpoint, a minimum 3 year out rotation is recommended**
- **Economics can, and often do, alter rotations. Shortening rotations is a short term decision with long term consequences**
- **But, you can't make it to long term if you don't survive the short term.**



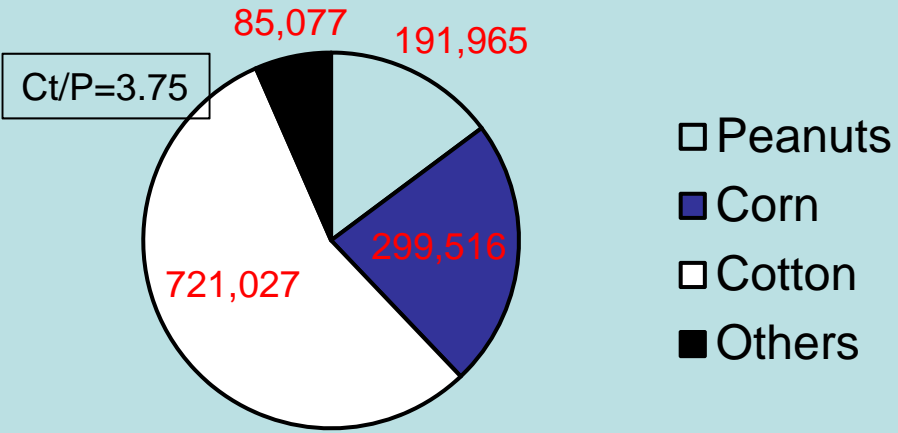
Case farm assumptions

- **Prices (\$425 peanuts, \$0.80 cotton, \$5.00 corn). I assumed that the farmer received price was equal to the MYA price.**
- **Peanut rotation data from NPRL research is included**
- **Base acreage at 85% and FSA program yield. Both of these will effect the results.**
- **“Loose” provisions about generic acres are included and payments estimated.**

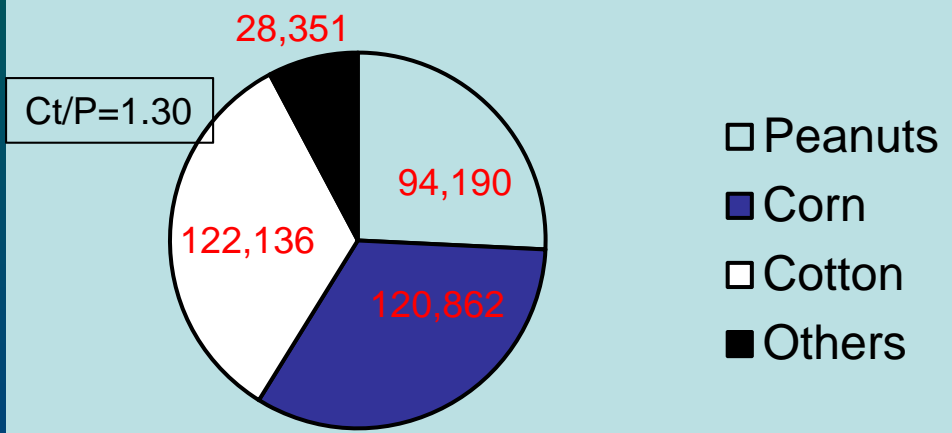


2002 Bases

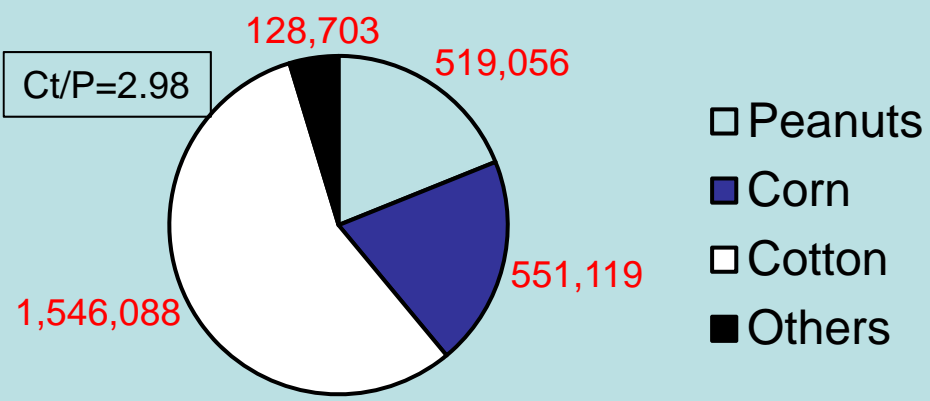
Alabama



Florida



Georgia

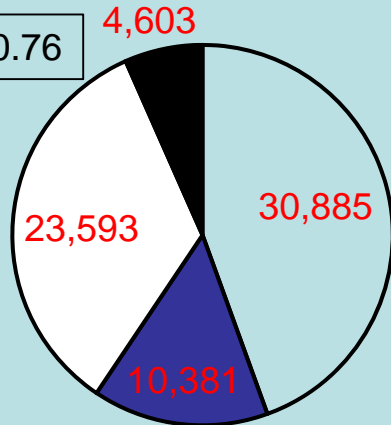




2002 Bases

Henry County, AL

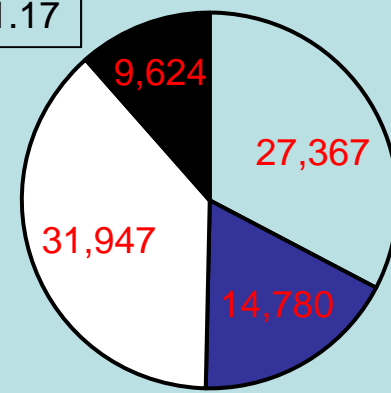
Ct/P=0.76



- Peanuts
- Corn
- Cotton
- Others

Jackson County, FL

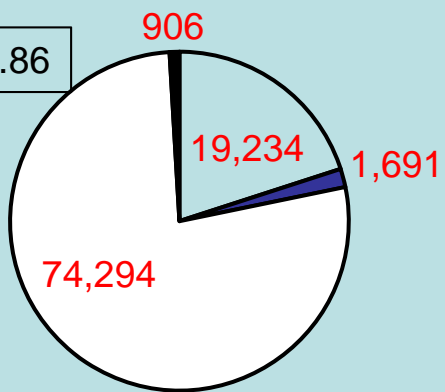
Ct/P=1.17



- Peanuts
- Corn
- Cotton
- Others

Dooly County, GA

Ct/P=3.86

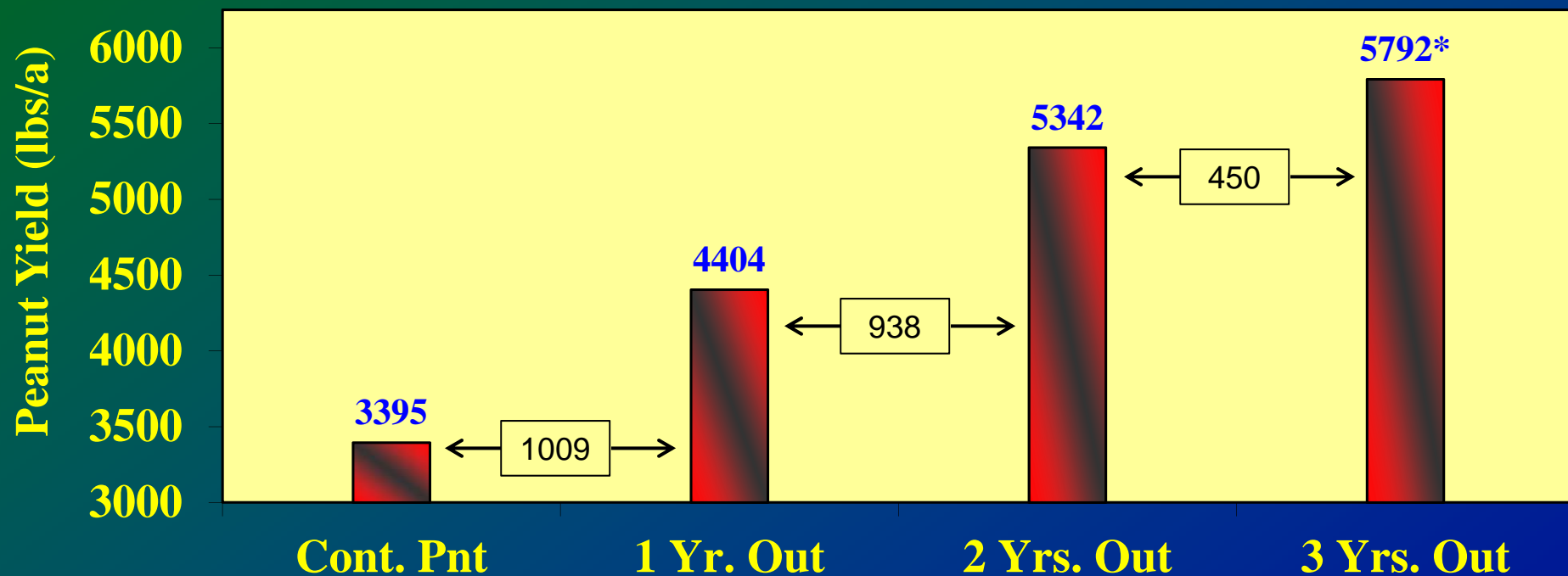


- Peanuts
- Corn
- Cotton
- Others

The point is that these decisions will come down to a farm level basis.

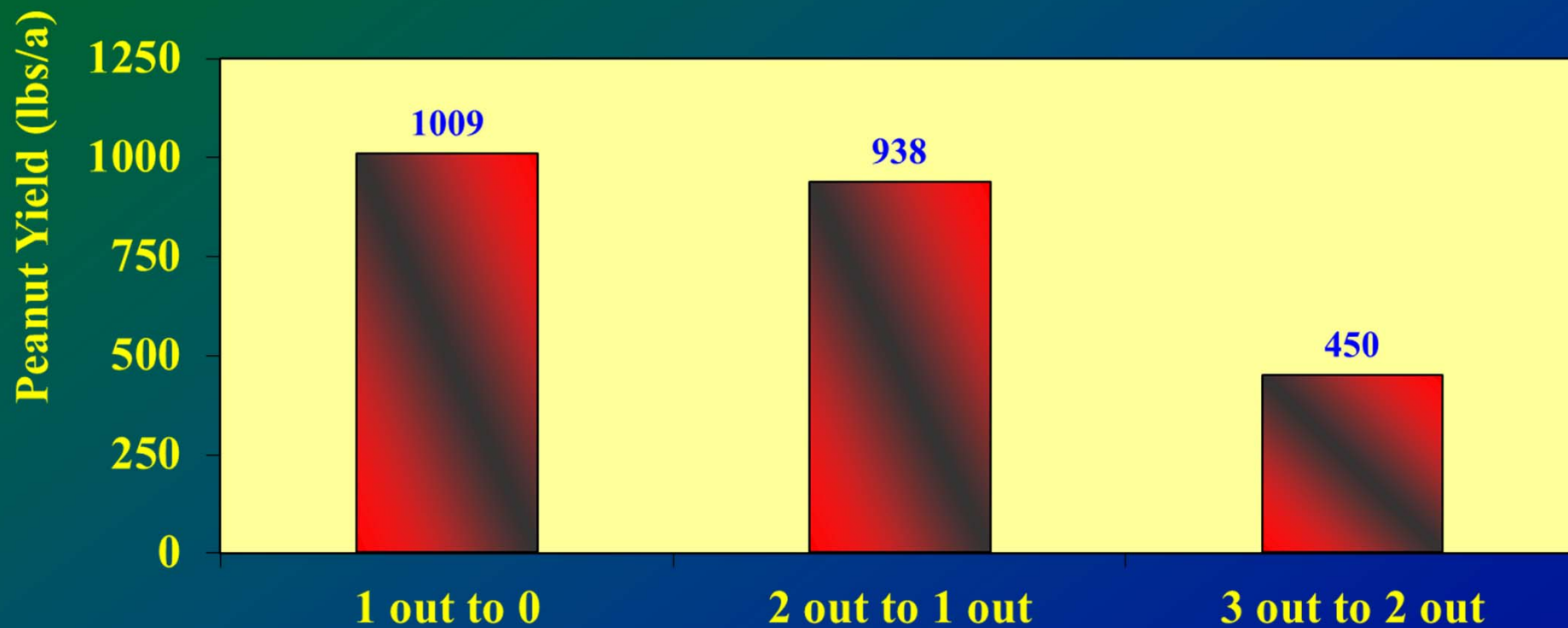


Irrigated Peanut Rotation



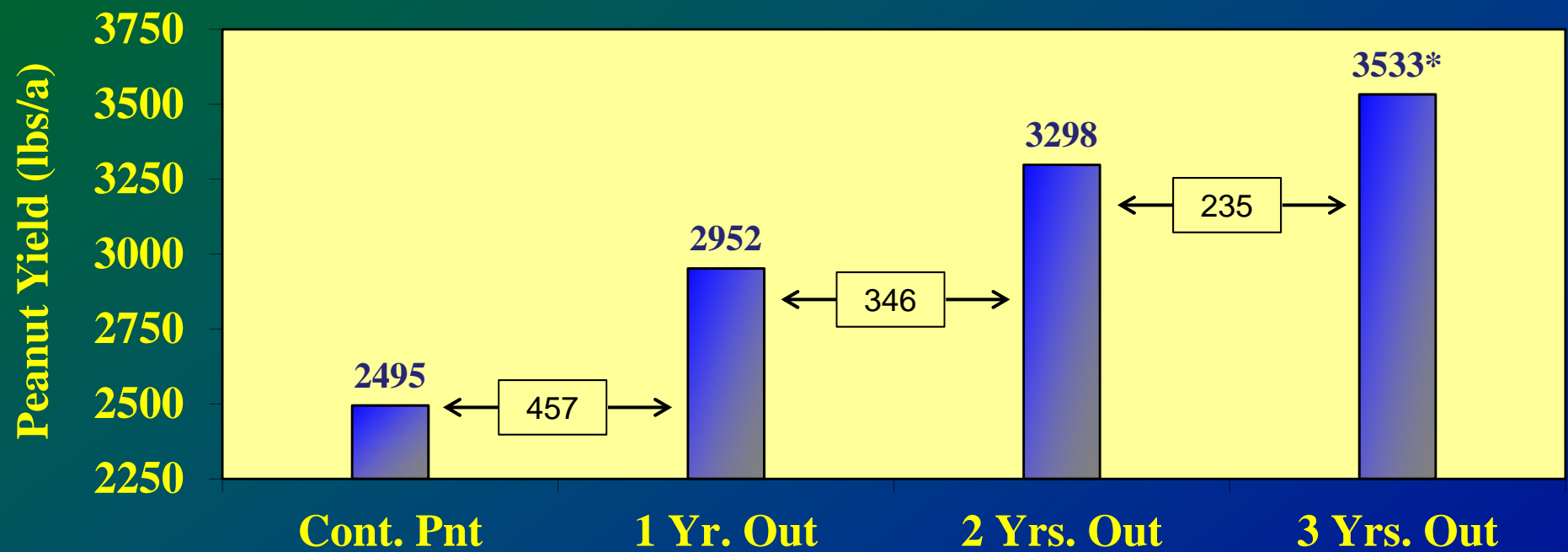
Irrigated Peanut Rotation

Yield Reduction vs Rotation Reduction





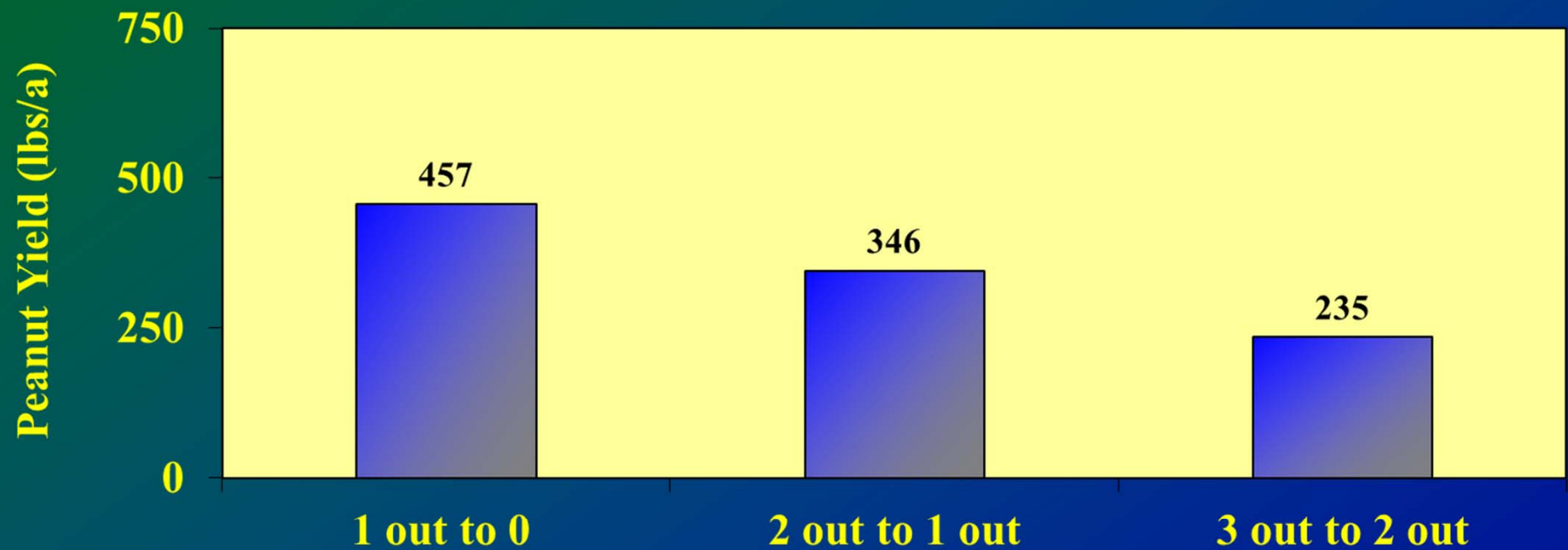
Non-Irrigated Peanut Rotation





Non-Irrigated Peanut Rotation

Yield Reduction vs Rotation Reduction





The Economics of Crop Rotation

- **Target Prices (2008) and Reference Prices (2014):**

Commodity	CCP Target Price (2008)	Reference Price (2014)	Current Price (assumed MYA)	Payment (Y/N)
Wheat	\$4.17	\$5.50	\$7.00	N
Corn	\$2.63	\$3.70	\$5.00	N
Soybeans	\$6.00	\$8.40	\$11.86	N
Peanut	\$495	\$535	~\$425	Y (\$110 / ton)
Cotton	\$0.7125	N/A		N/A



Case Farm Rotation History (4 year rotation)

	Years			
Fields	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014 (Planned)</u>
1	Cotton	Cotton	Corn	Peanut
2	Peanut	Cotton	Cotton	Corn
3	Corn	Peanut	Cotton	Cotton
4	Cotton	Corn	Peanut	Cotton



Case Farm Rotation Future IF same Rotation Sequence is followed

	Years					
Fields	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
1	Cotton	Cotton	Corn	Peanut	Cotton	Cotton
2	Peanut	Cotton	Cotton	Corn	Peanut	Cotton
3	Corn	Peanut	Cotton	Cotton	Corn	Peanut
4	Cotton	Corn	Peanut	Cotton	Cotton	Corn



Case Farm Rotation Future IF Peanut Acreage Increases

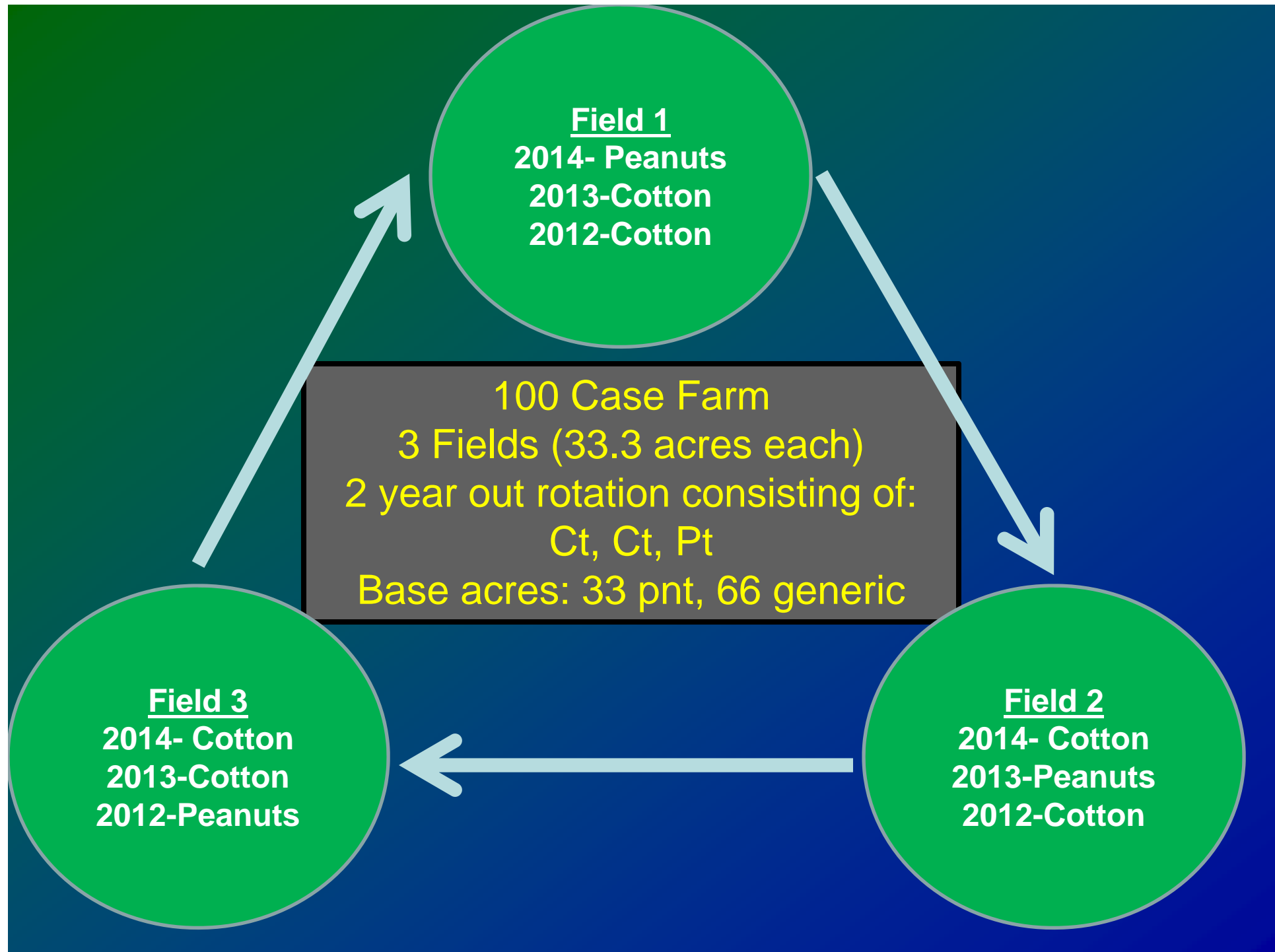
	Years					
Fields	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
1	Cotton	Cotton	Corn	Peanut (3 yr out)	(No peanuts)	(1 yr out)
2	Peanut	Cotton	Cotton	Peanut (2 yr out)	(No peanuts)	(1 yr out)
3	Corn	Peanut	Cotton	Cotton	Peanut (2 yr out)	(No peanuts)
4	Cotton	Corn	Peanut	Cotton	Peanut (1 yr out)	(No peanuts)

A 1 yr out rotation would result within 2 years and significant yield reduction that would place revenues from production below cost of production



Changes in Income (Return > VC) for case farm given different scenario's and over time.

Year	Scenario	Return > VC
2014	No change peanut acreage (25 acres) or crop rotation (3 yr out rotation/same crop mix). 50 acres pnt base (25 historic & 25 generic).	\$24,123
2014	Increased peanut acreage (50 acres) and change in rotation (3 yr out and 2 yr out). Peanut base increased (25 historic & 50 generic).	\$26,748 (10.9 % increase)
2015	Increased peanut acreage (50 acres) and change in rotation (2 yr out and 1 yr out). Peanut base increased (25 historic & 50 generic).	\$21,139 (12.3% decrease)
2016	Increased peanut acreage (50 acres) and change in rotation (1 yr out and 1 yr out). Peanut base increased (25 historic & 50 generic).	\$18,546 (23.1% decrease)



Case Farm Rotation History (3 yr rotation)

Fields	Years			
	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
1	Peanut	Cotton	Cotton	Peanut
2	Cotton	Peanut	Cotton	Cotton
3	Cotton	Cotton	Peanut	Cotton



Case Farm Rotation Future IF same Rotation Sequence is followed (3 year rotation)

	Years					
Fields	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
1	Peanut	Cotton	Cotton	Peanut	Cotton	Cotton
2	Cotton	Peanut	Cotton	Cotton	Peanut	Cotton
3	Cotton	Cotton	Peanut	Cotton	Cotton	Peanut



Case Farm Rotation Future IF Peanut Acreage Increases (3 year rotation)

Fields	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>	<u>2015</u>	<u>2016</u>
1	Peanut	Cotton	Cotton	Peanut (2 yr out)	Peanut (No rotation)	Cotton
2	Cotton	Peanut	Cotton	Peanut (1 yr out)	Cotton	Peanuts (1 yr out)
3	Cotton	Cotton	Peanut	Cotton	Peanut (1 yr out)	Peanut (No rotation)



Changes in Income (Return > VC) for case farm given different scenario's and over time.

Year	Scenario	Return > VC
2014	No change peanut acreage (33 acres) or crop rotation (2 yr out rotation/same crop mix). 66 acres pnt base (33 historic & 33 generic).	\$23,401
2014	Increased peanut acreage (66 acres) and change in rotation (2 yr out and 1 yr out). Peanut base increased (33 historic & 66 generic).	\$20,485 (12.5 % decrease)
2015	Increased peanut acreage (66 acres) and change in rotation (1 yr out and 0 yr out). Peanut base increased (33 historic & 66 generic).	\$14,261 (56.1% decrease)
2016	Increased peanut acreage (66 acres) and change in rotation (1 yr out and 0 yr out). Peanut base increased (33 historic & 66 generic).	\$14,261 (56.1% decrease)

Preliminary Conclusions

- **Similar results in non-irrigated (just that the Returns $>$ VC are lower and the payments are lower due to lower payment yields. However, same trends.**
- **Crop prices for peanuts and rotational crops will definitely enter into the equation. But, prices for corn and cotton are fairly decent. At cotton prices at \$0.825 per pound, farm income be would equal to the 1st year benefits of shortening rotations but with no negative long term consequences.**
- **These decisions will be made at the farm level and will depend a lot of factors.**

Preliminary Conclusions

- The shortening of peanut rotation sequences could provide limited short term benefits but will have larger negative long term consequences and years to fix.
- Our recently observed increases in peanut yield are due to a lot of factors and rotation is one of them.
- Under current market conditions, now is not the time to shorten peanut rotations. The conditions might develop in future years but you won't be able to take advantage of this if you shorten peanut rotations now.