

2016 Cotton Flow Meeting

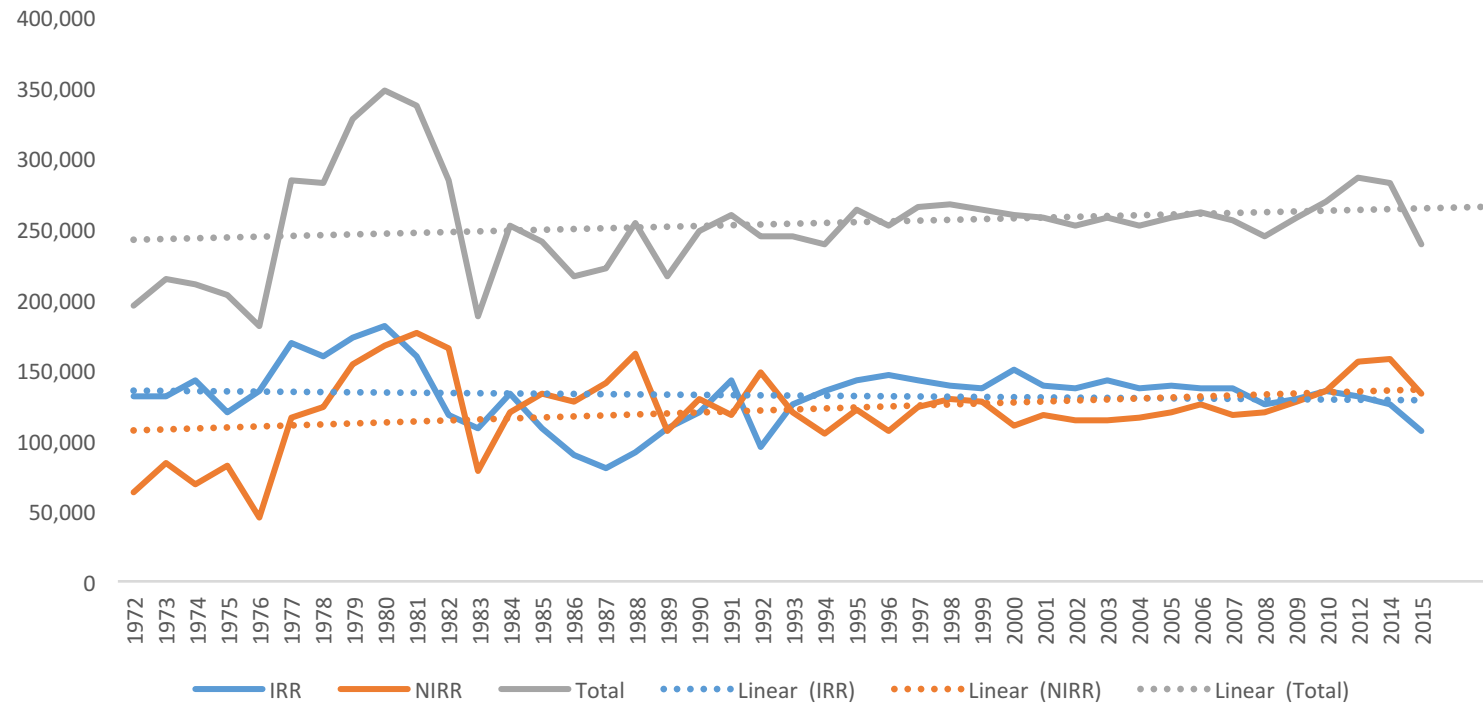
Darren Hudson

Combest Endowed Chair

Texas Tech University

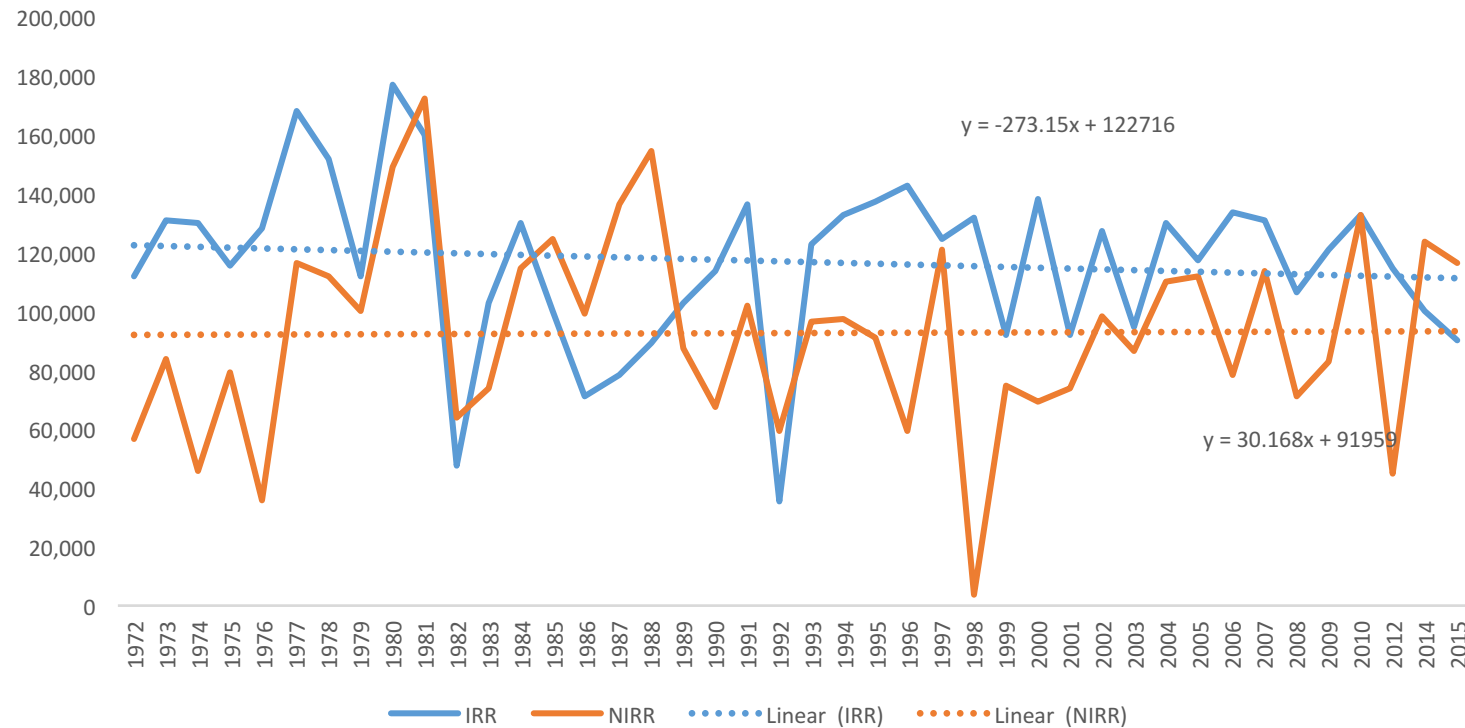
September 16, 2016

Changes in Planted Acreage Over Time



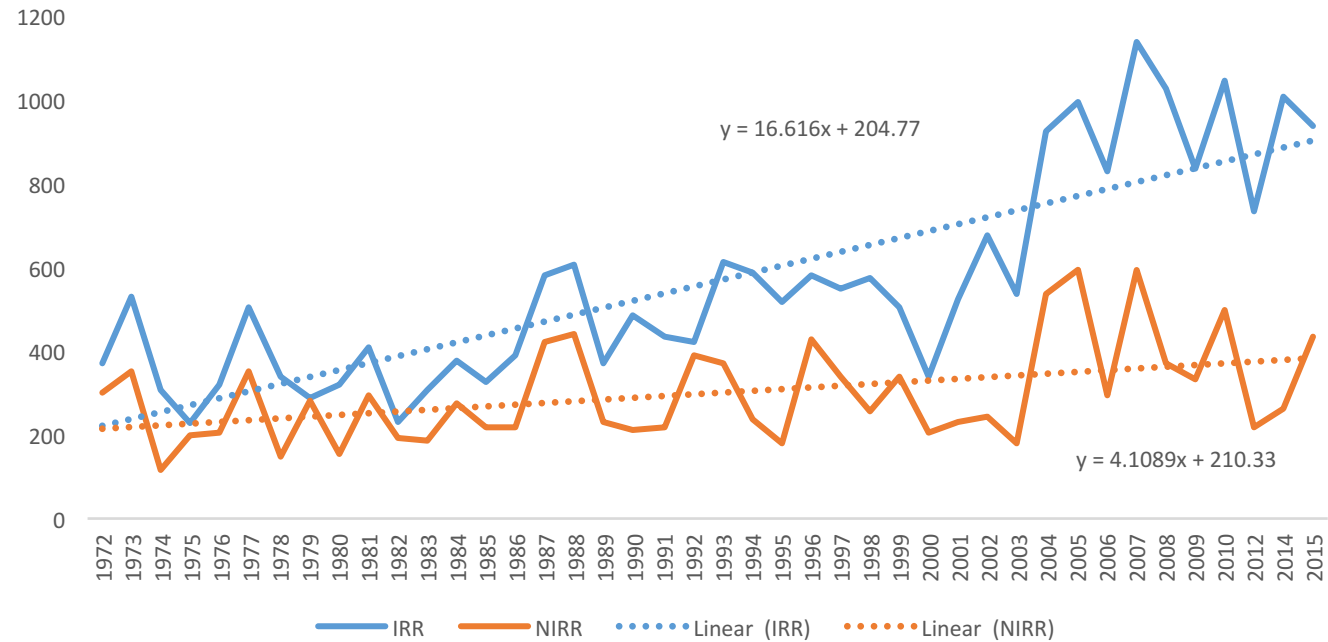
- Total acreage has been on slight increasing trend
- Irrigated acres are declining
- Dryland acres are increasing

Changes in Harvested Acreage Over Time



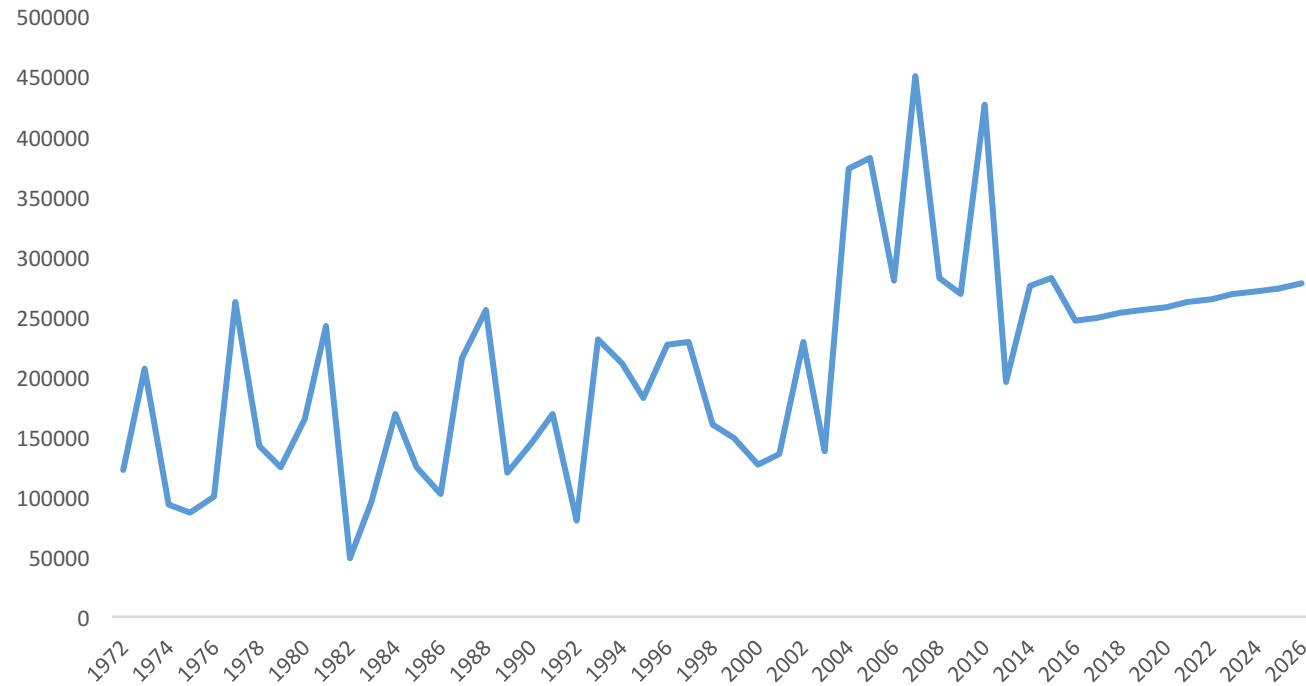
- Dryland acreage has been holding essentially steady
- Irrigated acreage is declining

Changes in Yield Over Time



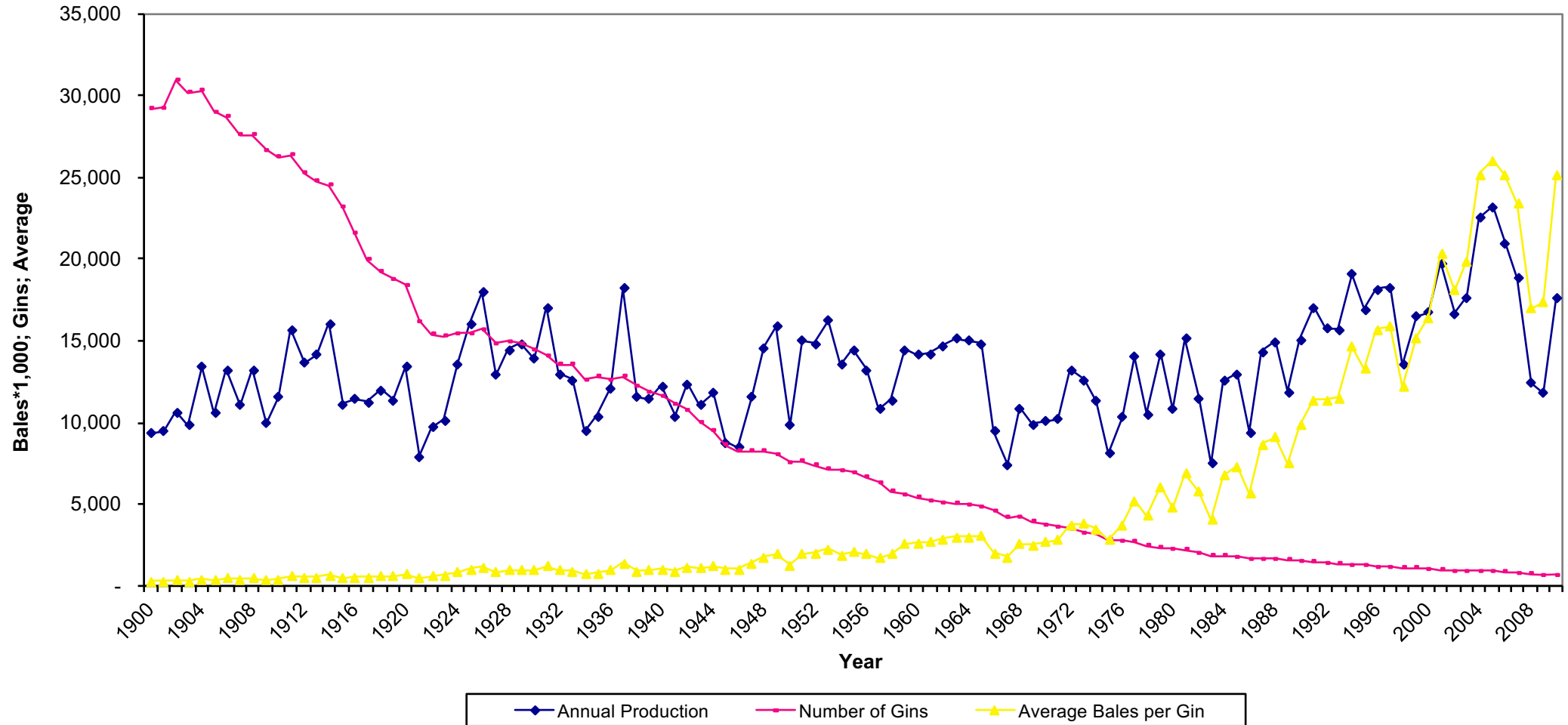
- Irrigated yields have increased at an average annual rate of 16.6 pounds per acre/per year
- Dryland yields have increased, but only at an average annual rate of 4.1 pounds per acre/per year

Trend Production

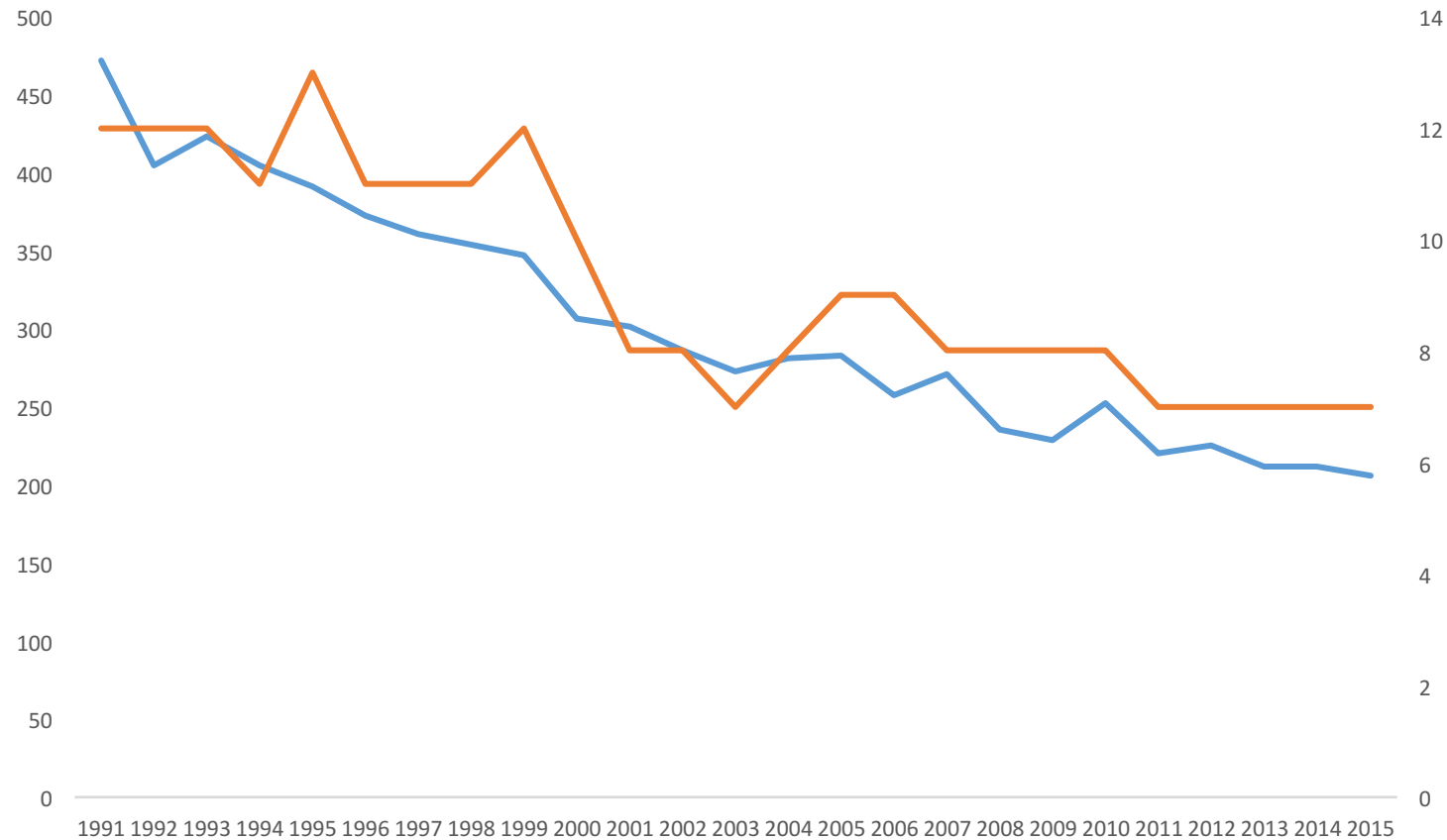


- Forecasting out irrigated and dryland acreage and yield, we see a slight upward trend in expected production over time
- Does not take account impacts of future declines in water except what is already included in irrigated acreage trends
- Assumes trend yields will continue, which is not likely unless new technology is developed
- Very little development in dryland yield technology to date

Gin Trends—U.S.

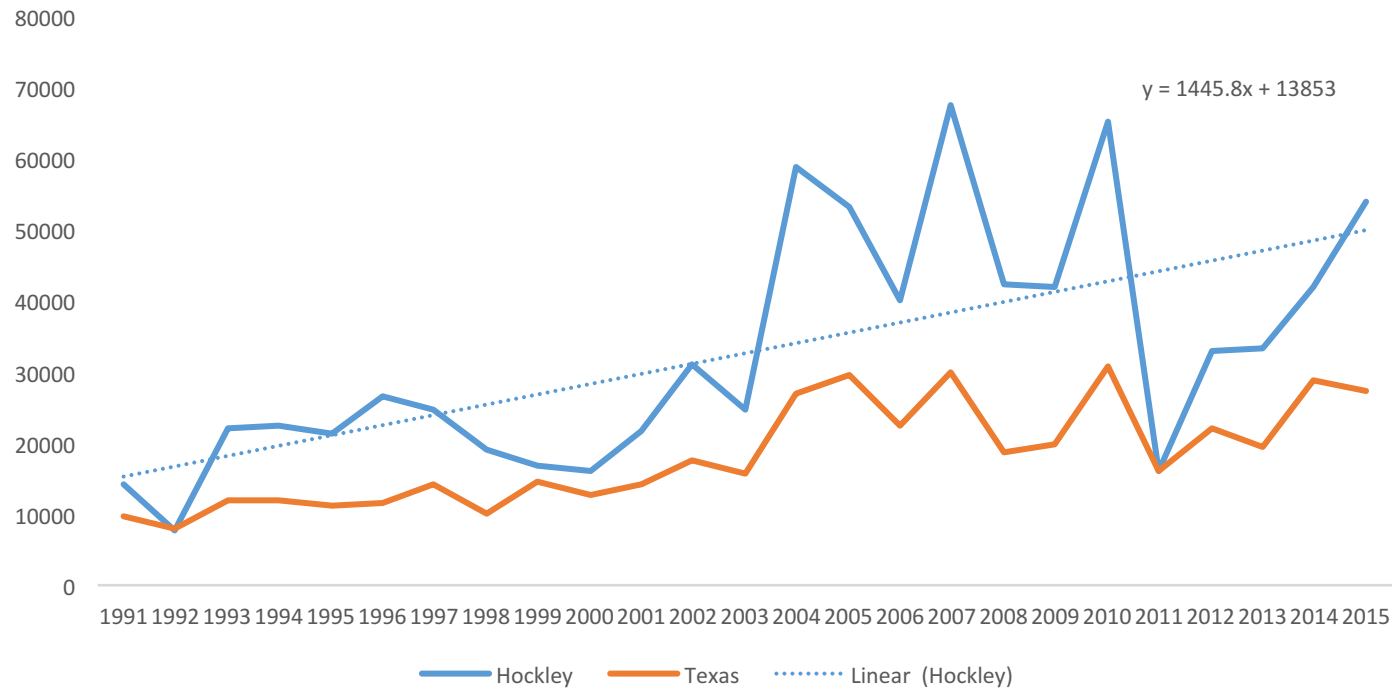


Gin Trends—Texas and Hockley County



- Gin numbers in Texas and Hockley county are following the same trend in terms of number of gins

Bales Per Gin



- Bales per gin is increasing at an average 1,445 per year.
- Based on the forecasted production from earlier, this means that Hockley county will likely shrink to 4-5 gins in the coming years.

Changing Marketing?

- With fewer gins (points of collection), what role will the merchant play in the future?



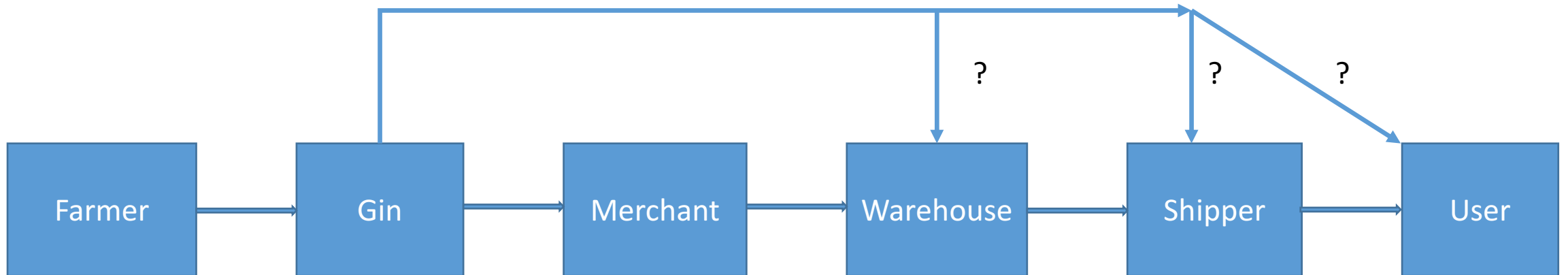
MARKET DESIGN

The PanXchange trading platform is a patented software as a service (SaaS) product that revolutionizes the way commodity traders locate and execute trades. The platform is designed to provide a market structure solution that is scalable across all physical commodity markets. Never before have traders had a service that allows them to enter orders into an active marketplace, where a service is constantly searching for matches, 24 hours a day. We're excited about what this platform means for traders, trade houses, and the market as a whole.

Think your business model can't change?



A new paradigm?



Can electronic trading in physical commodities by-pass the merchant? The warehouse? Consider that United Cotton Growers in Hockley County produces 120—150,000 bales per year alone. Why do they need you (merchants)?

New Opportunities

- Obviously, with change comes new opportunities
 - Participation in new trading opportunities offers you the ability to lower transactions costs
 - Fewer collection points means marketing can be more creative and specialized (already happening to some extent, but potential to grow long-term relationships with specific end users with specialized pools)
 - Lower costs for things like identity preservation/traceability



Conclusions

- Declining water is leading to a fundamental shift away from irrigated cotton to dryland cotton production systems
 - Limited development in dryland technologies to limit downside risks
 - So far, though, yield increases have offset acreage declines leading to growing production
- Economies of scale are leading to further structural shifts in cotton ginning
 - Leading to larger and larger, but fewer gins
 - Fewer collection points for cotton in the future

Conclusions

- New trading platforms in physical commodities could influence how cotton is traded, stored, and shipped in the future
 - Like to challenge especially the merchant sector to creatively fit within a new framework
 - Consolidation and on-line trading opens up opportunities for lowering transactions costs and costs of identity preservation
- Overall, changes have increased in speed...expect change to get even faster