



300 bushels/acre U.S. corn  
yield is achievable by 2030

**Beth J Calabotta**

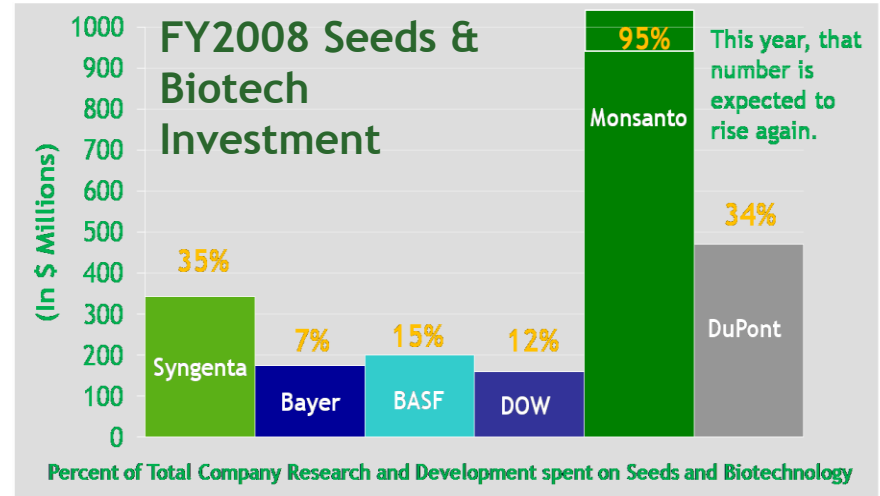
10 June 2009

EPA – RFS2 Workshop

# Monsanto Company at a Glance

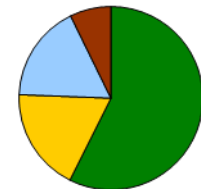
## MONSANTO'S VITAL STATISTICS

- A leader in seeds, crop protection and biotechnology
- Headquartered in St. Louis
- Employs more than 22,000 people worldwide
- More than 500 locations worldwide in 5 primary regions – Europe/Africa, Asia Pacific, India, Latin America and North America



Source: Monsanto, Phillips McDougall and SEC Filings

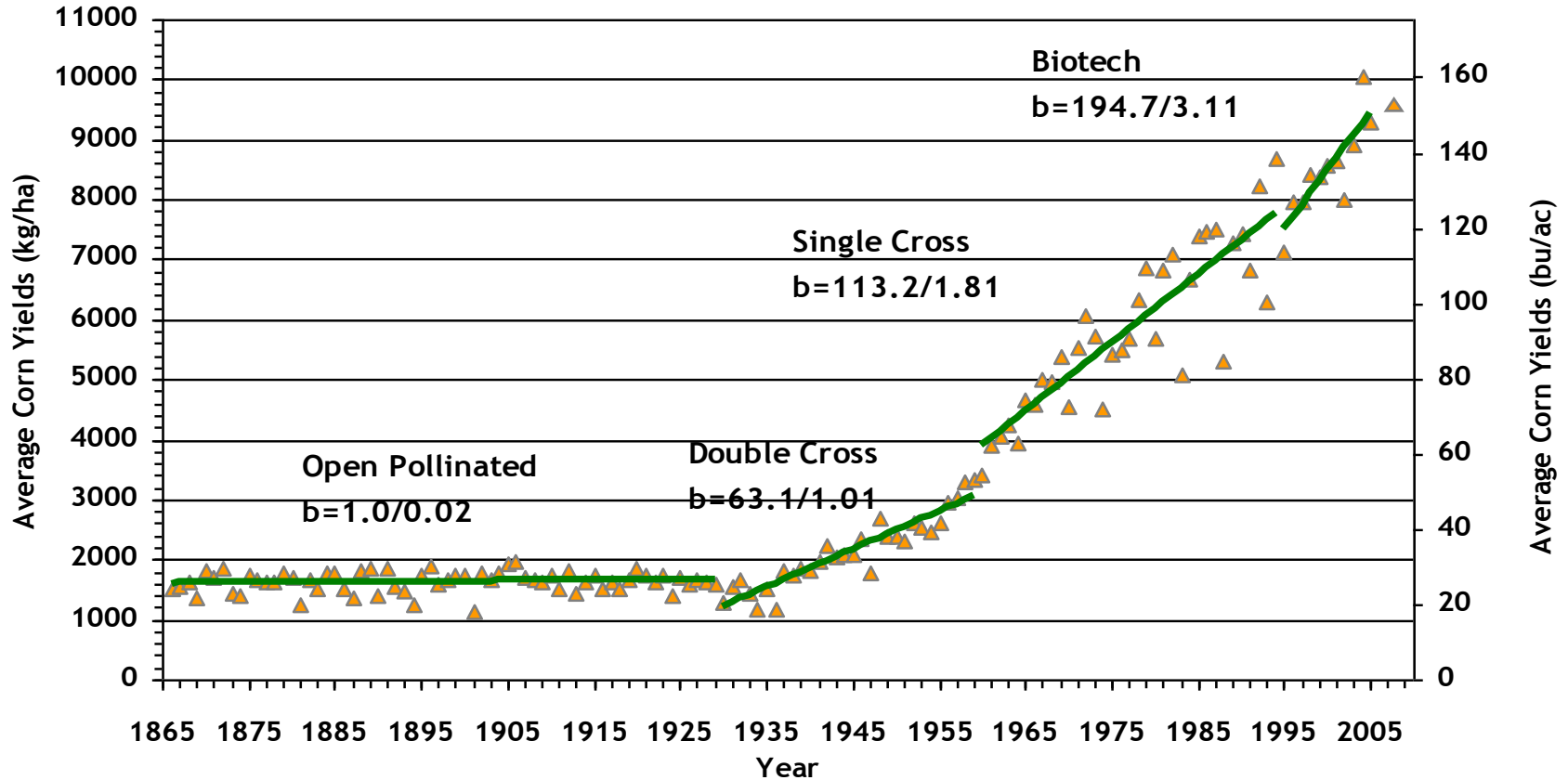
## Sales by Geography



Dedicated To Bringing The Next Generation Of Ag Products To The Market

# The rate of gain of crop yields is increasing

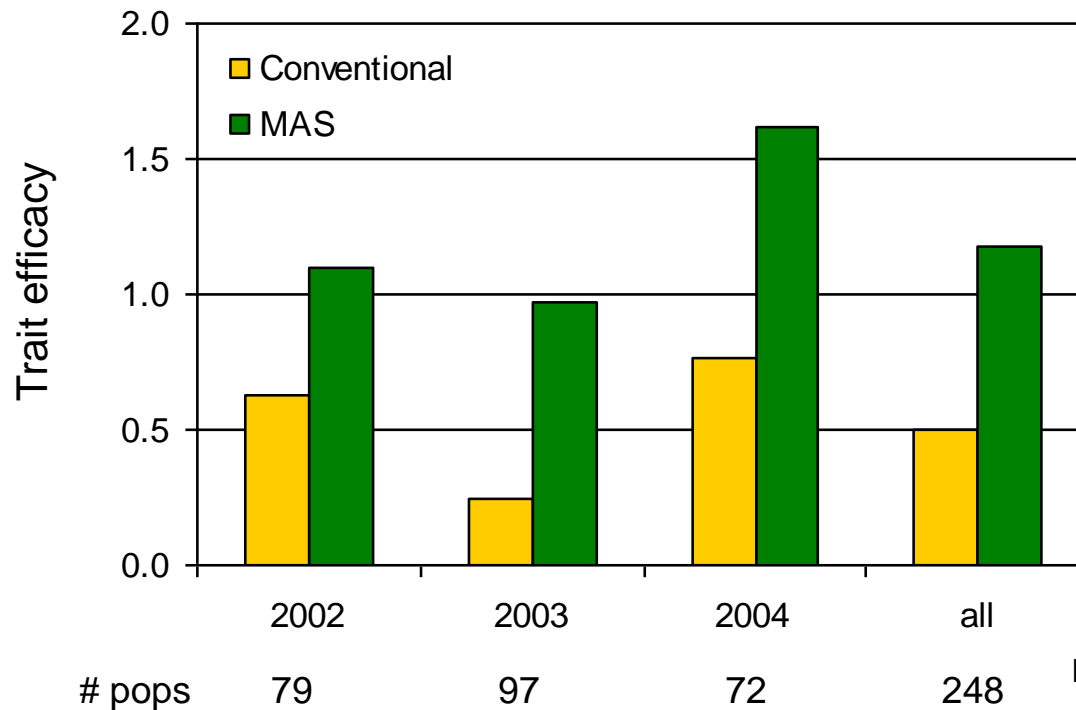
- Actual Breeding Plus Cultural Practice Gain



Source: March 2006. Crop Science. Ref# 46:528-543

# Marker assisted breeding has doubled breeding rate of gain

Increased rate of gain with marker assisted breeding

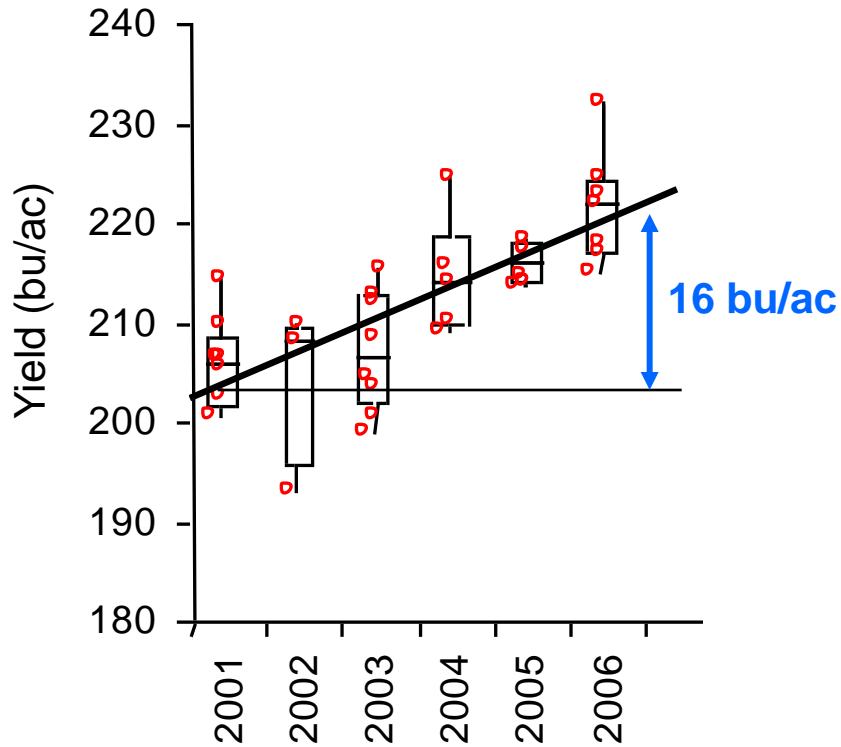


Eathington et al (2007) Crop Sci

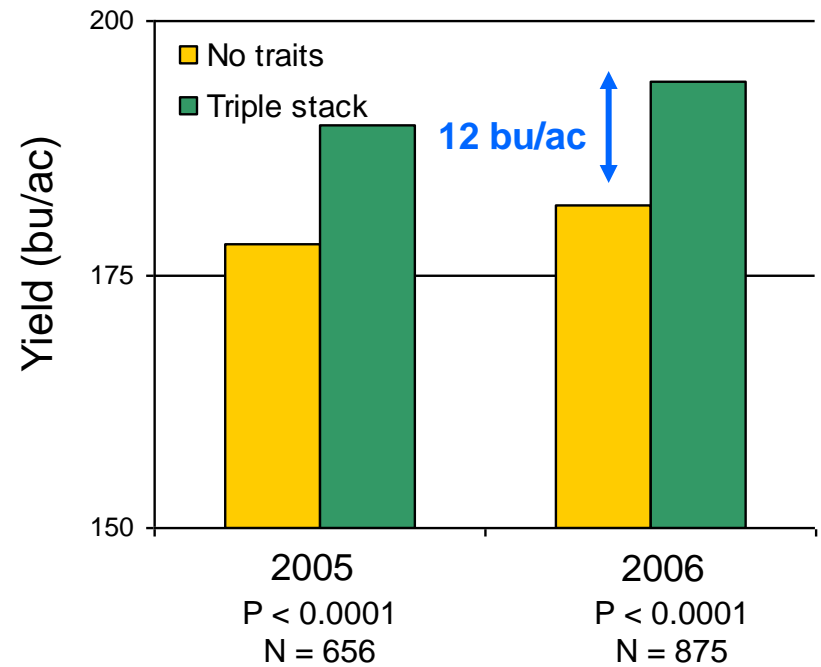
Marker assisted breeding has doubled the rate of gain in breeding, with the 1<sup>st</sup> products just beginning to come on the market

# Breeding and Biotech contribute to yield today

Yields of Dekalb RM110 hybrids released from 2001 - 2006

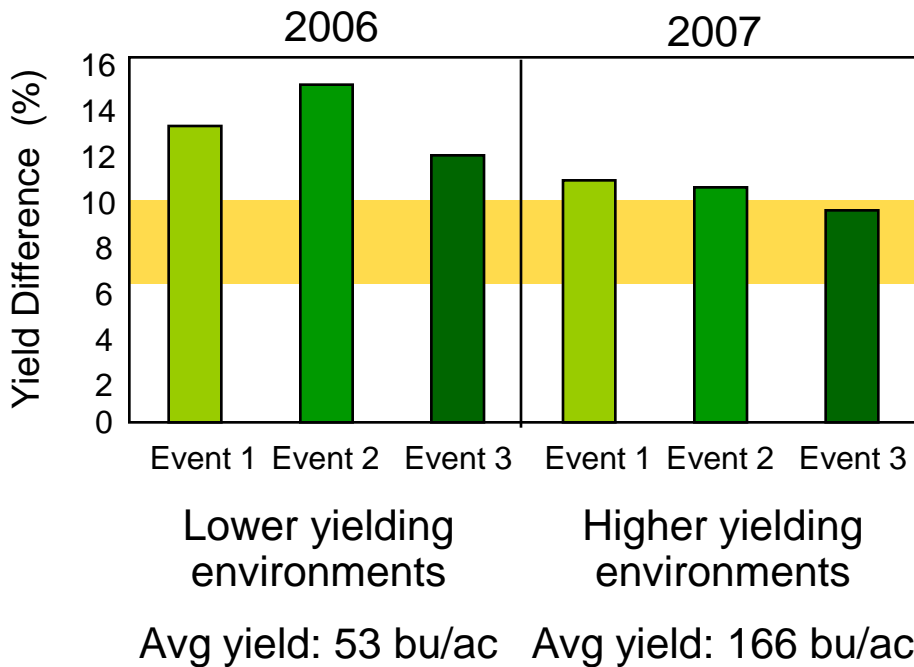


Increase in yield due to protective traits



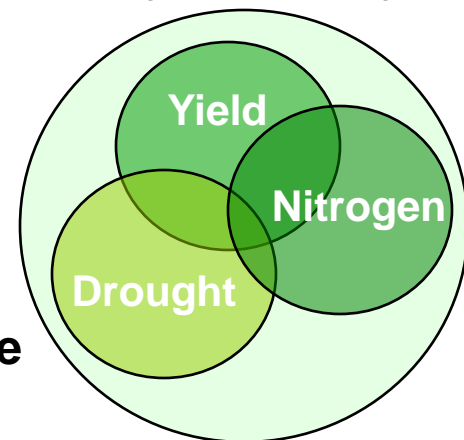
# Next generation biotech traits will directly increase yield

Drought efficacy for 2<sup>nd</sup> generation drought trait



- Broad acre drought trait is expected to provide a ~10% yield benefit in regions experiencing drought stress
- Early events from broad acre yield traits have shown an 8 to 10 bu/ac yield improvement
- Other yield traits are expected to have similar effects

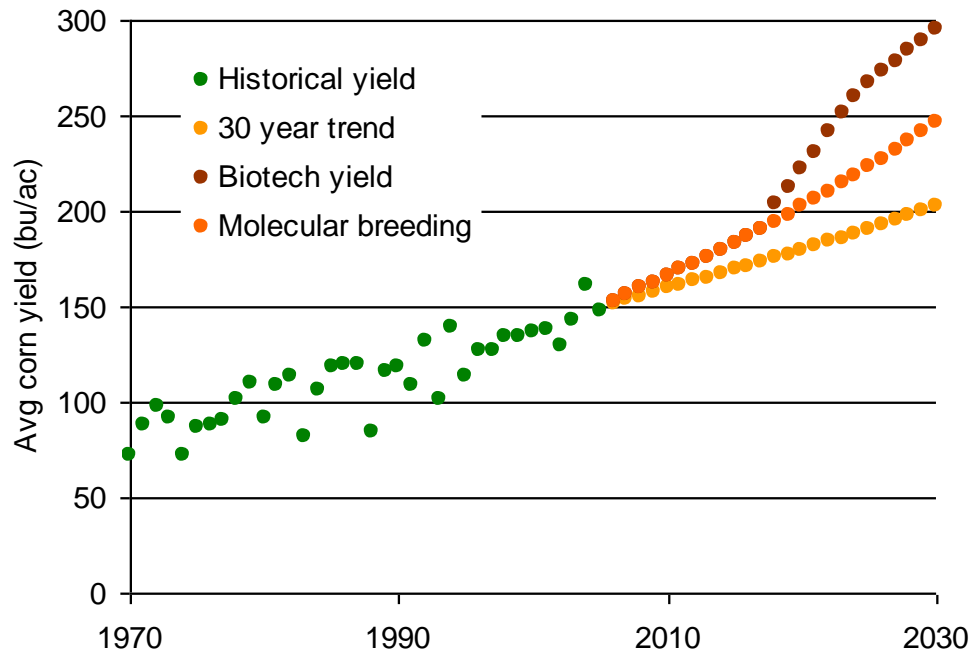
## Broad-acre yield family of traits



**Each overlapping yield category is a multigenerational family of traits in our pipeline**

# Corn yields will reach 300 bu/ac

Future yield potential based on Monsanto estimates



- **EPA's RFS2 proposal should incorporate assumptions that reflect accurate projections of new technology developments that are increasing the rate of yield gain**
  - Marker assisted breeding has doubled breeding gain
  - Current biotech traits protect genetic potential
  - Next generation biotech traits will further protect and increase yield potentials
- **Monsanto stands ready to help EPA with reaching this better understanding and in basing the RFS-2 program on good science and relevant data**