

# Ethanol Industry Update

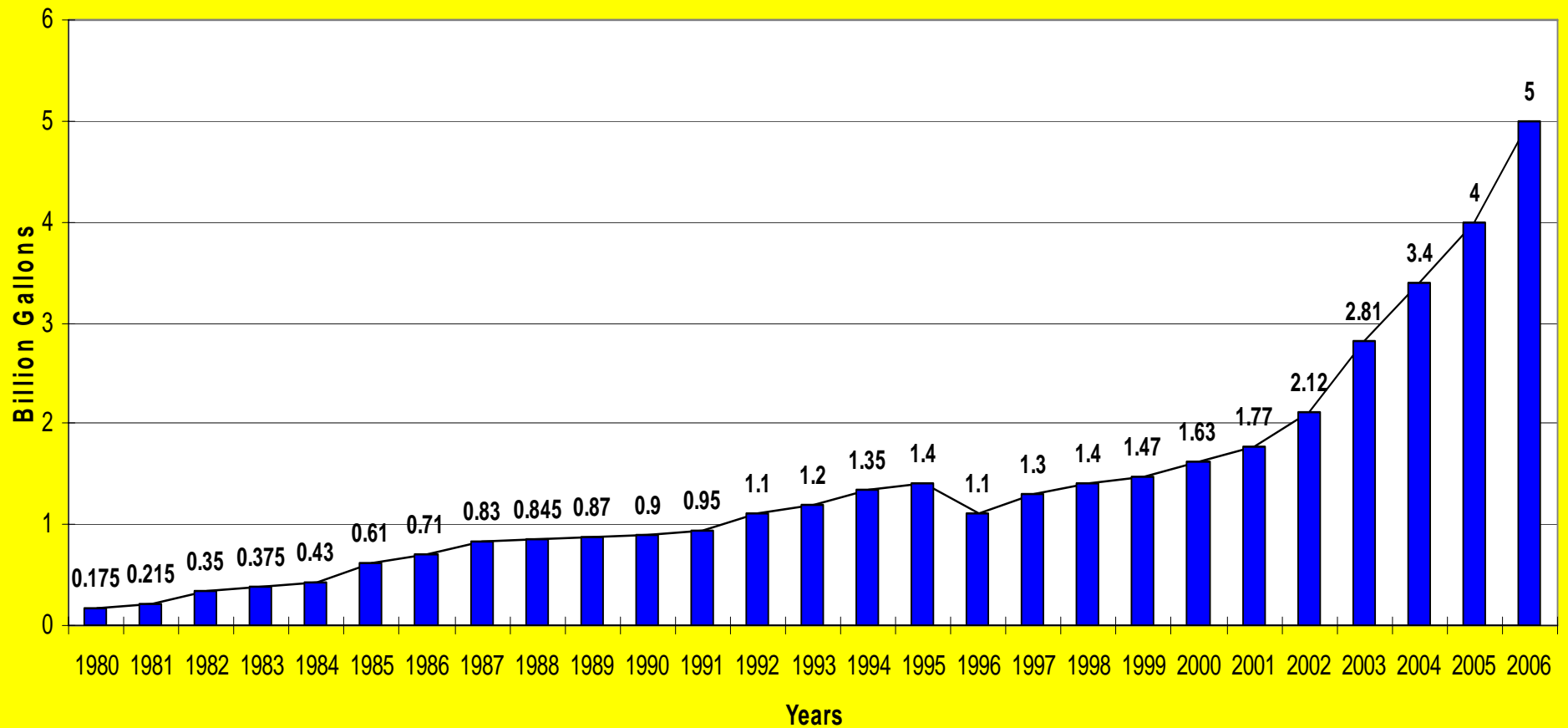
## Oklahoma Governor's Conference on Biofuels

University of Oklahoma, Norman, OK  
October 3, 2006

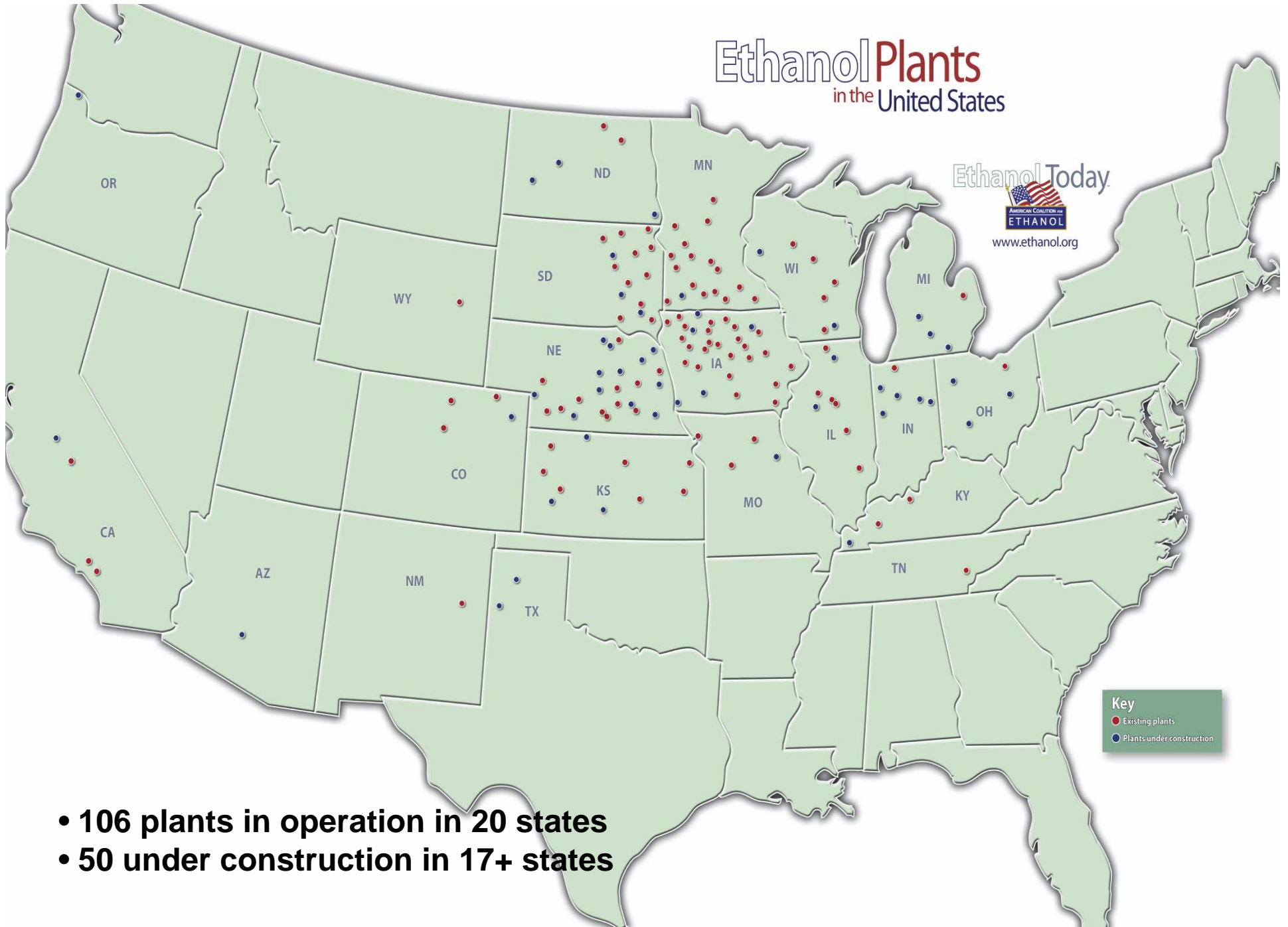
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# History of U.S. Ethanol Production

U.S. Ethanol Production



# Ethanol Plants in the United States



**Key**  
● Existing plants  
● Plants under construction

- 106 plants in operation in 20 states
- 50 under construction in 17+ states

# Unprecedented Growth in U.S.

- 106 ethanol plants – 4.9 billion gallon capacity
- 50 ethanol biorefineries under construction – 3 billion gallons capacity under construction
- 2 billion bushels of corn & other grain for ethanol in 2006
- Blended with 40% of gasoline supply

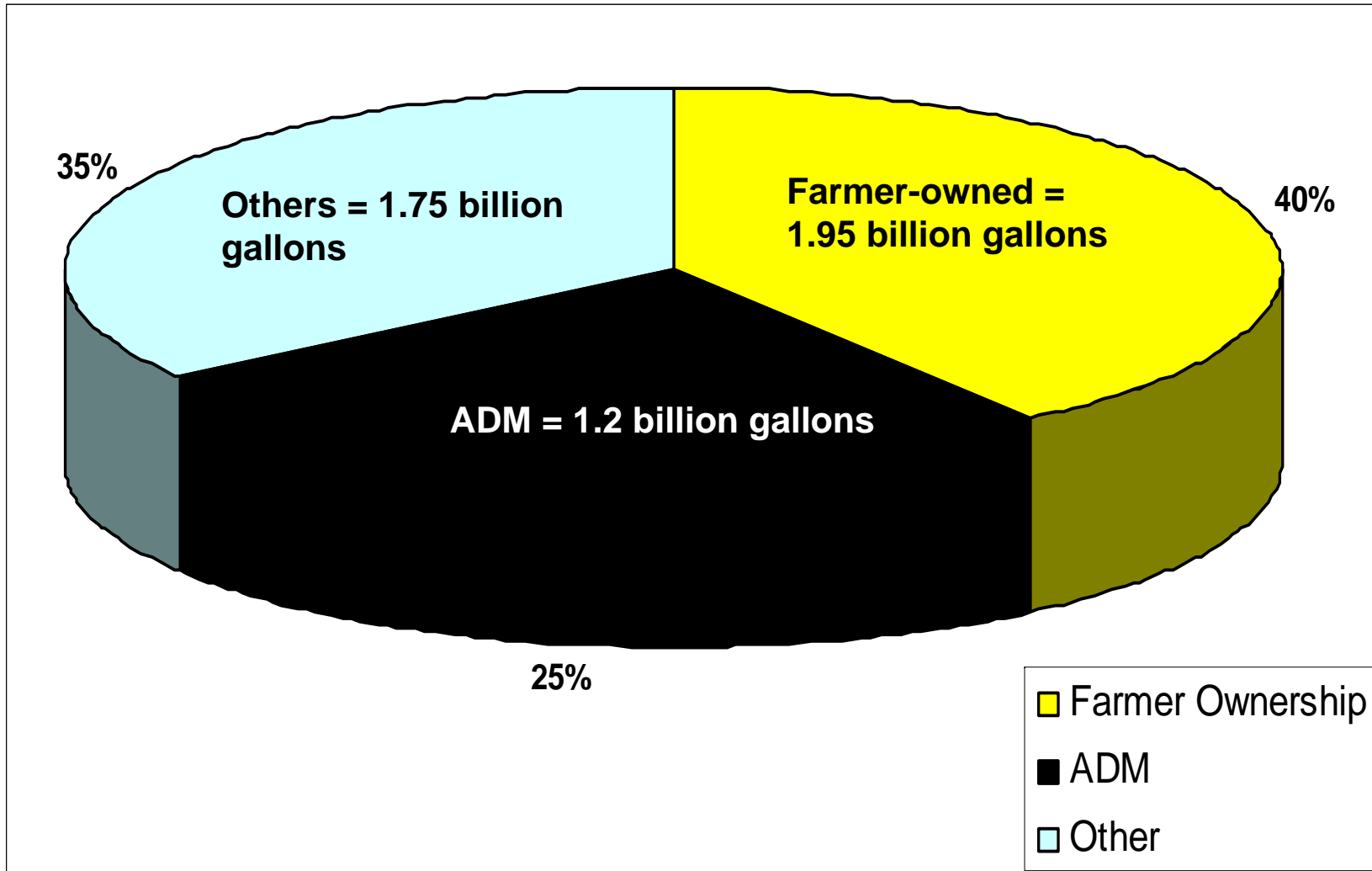
# Use of Fuel Ethanol

- E10 – 90% gasoline, 10% ethanol. All cars run on E10. Available coast-to-coast, blended in 40% of U.S. gasoline. Virtually all ethanol production is blended into E10.
- E85 – 85% ethanol, 15% gasoline. Approved for use in over 5 million Flexible Fuel Vehicles, 941 sites in 35 states for refueling, (168,000 total gasoline stations). Approximately 50 million gallons of ethanol production blended into E85.

# Farmer-owned stats...

- Modern-day ethanol industry largely built by farmers.
- 50 of 106 plants in operation today are farmer-owned.
- Yet – trending away from farmer-ownership today, just handful of 50 plants under construction are farmer-owned.
- Farmers still comprise sizable percentage of production capacity.

# Farmers are largest ethanol “producer,” with 40% of today’s production capacity



Others: Abengoa, Aventine, Cargill, Hawkeye, U.S. Bio, VeraSun, etc.

# Farmers & industry taking matters into their own hands...

- Technology innovations
- Expanding and diversifying
- Fagen Inc. - Commitment to guarantee at least 55% farmer/local ownership in new plant construction and reduce minimum buy-in to \$5000 to \$10,000.

# Technology Innovations

- Plants integrating “cold cook” process
- Chippewa Valley Ethanol Company, Benson, MN. 900+ farmer owners – pilot biomass gasification system for process heat/steam. Distill Shakers Vodka. Also doubling size of plant

# Expanding / Diversifying

- Northeast Missouri Grain (45 mgy plant with 300 farmer owners near Macon, MO) are the majority owners of Missouri Ethanol, LLC (also has 600+ farmer owners from in East Central Ag Products co-op).
- Agri-Energy LLC (30 mgy plant with 220 farmer owners near Luverne, MN) investing in 6 other ethanol plants.
- EXOL (45 mgy plant 100% farmer-owned near Albert Lea, MN) also building SoyMor biodiesel plant.

# Farmer role in future of ethanol industry

- Feedstock (grain and biomass) suppliers, and owners/investors.
- Possible future public policies address farmer ownership in biofuels (ex. 2007 Farm Bill, Missouri Gov. Blunt).
- In interest of ethanol industry to maintain diversity/balance to ownership structure – i.e. Congress less likely to support incentives if industry dominated by handful of firms.
- Given our need to reduce reliance on foreign oil, confident plenty of room for farmer-owned plants and other business models in ethanol industry.