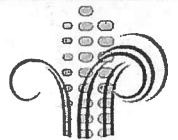
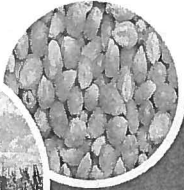


*Corn Marketing Program of Michigan
Michigan Corn Growers Association*

Overview of the Corn Industry

Jim Zook
March 2017





Michigan Corn

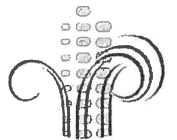
❖ Two organizations working for Michigan corn growers:

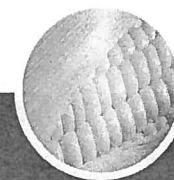
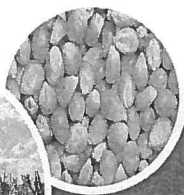
■ **Corn Marketing Program of Michigan**

- Check-off program
- Education and promotion
- Research
- Market development

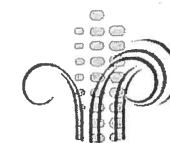
■ **Michigan Corn Growers Association**

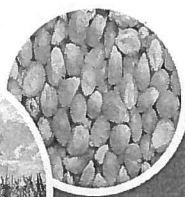
- Grassroots membership organization
- Advocate for policies that enhance the corn industry



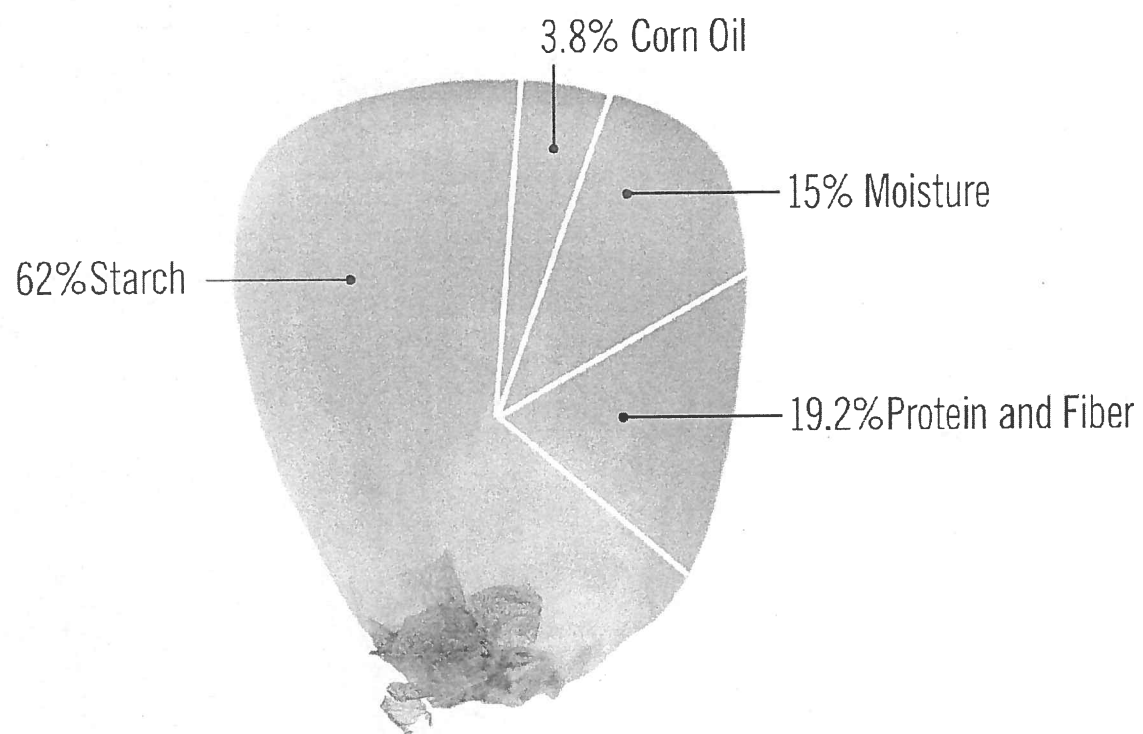


Types of Corn

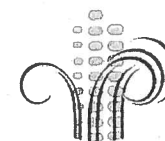




Components of Yellow Dent Corn



Source: Corn Chemistry and Technology, 1999



31.5

LBS. OF STARCH

Corn starch is preferred in many commercial food applications due to its translucent nature versus flour which is opaque.

Only the starch is used to make ethanol. The remaining nutrients, protein, fiber and oil, known as Dried Distillers Grains with Solubles (DDGS) are used as feed.

2.8

GALLONS OF
FUEL ETHANOL

17.5

LBS. OF DDGS*

13.5

LBS. OF GLUTEN FEED*

2.6

LBS. OF
GLUTEN MEAL**

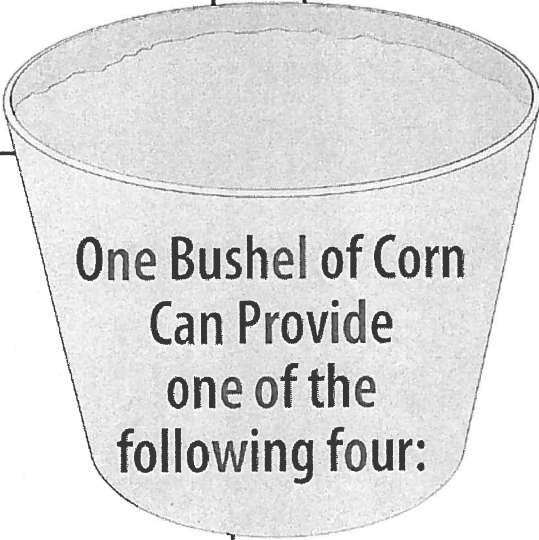
1.5

LBS. OF CORN OIL**

22.4

LBS. OF PLA FIBER/POLYMER

Corn starch can be used to create polylactic acid polymers. These can be processed into sustainable versions of fibers and plastics.



One Bushel of Corn
Can Provide
one of the
following four:

33

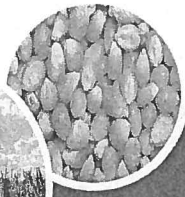
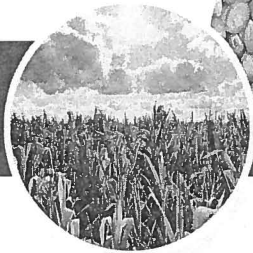
LBS. OF SWEETENER

Corn syrup is used as a sweetener, thickening agent and as a humectant, a water-absorbing ingredient helping food retain freshness.

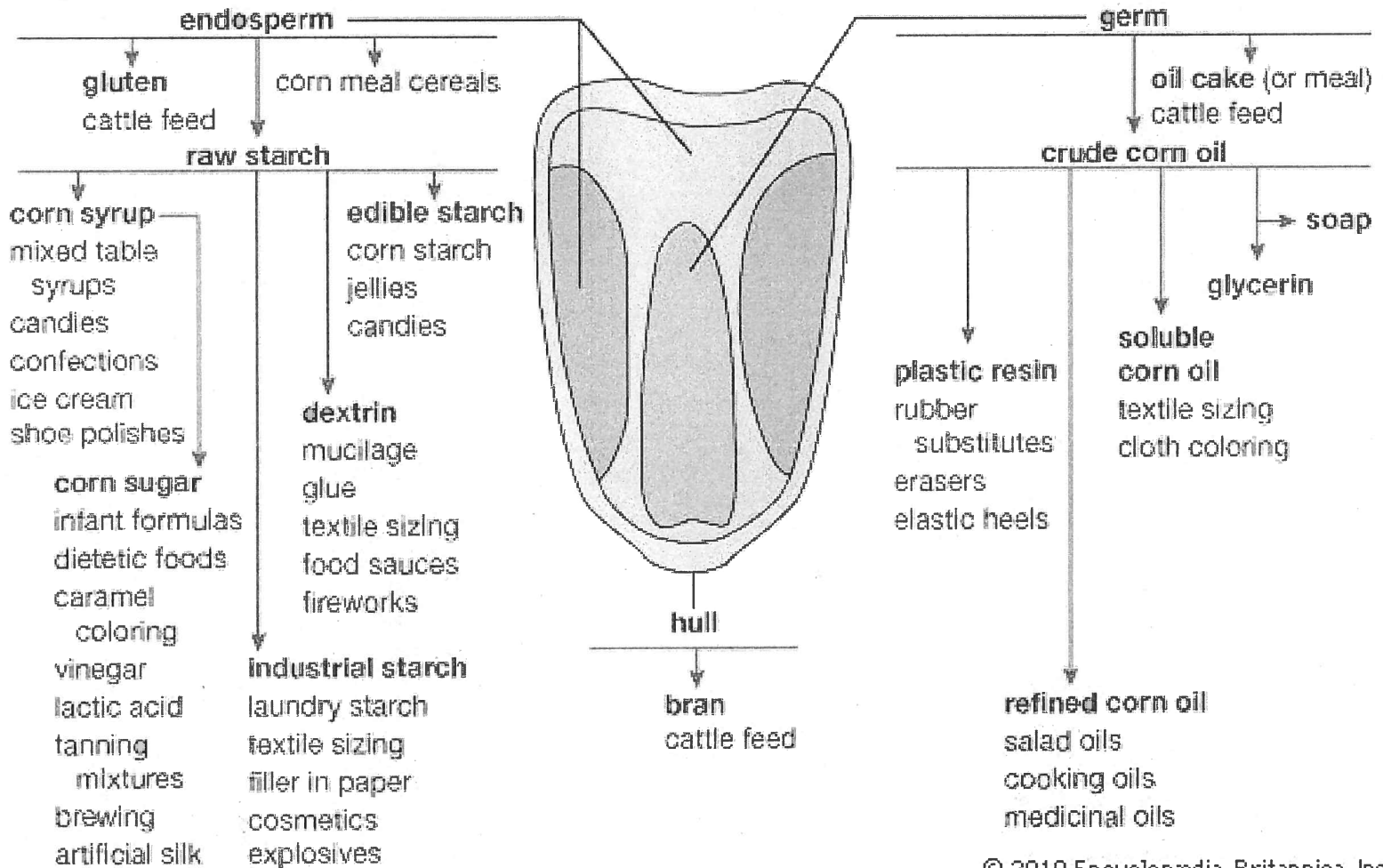
*In dry-grind ethanol process.

**In wet-mill ethanol process.

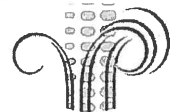
Gluten feed is 20 percent protein and gluten meal is 60 percent protein.

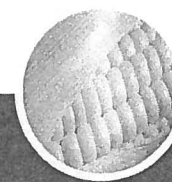
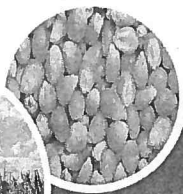
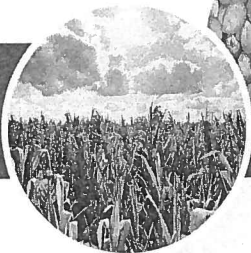


Products of the corn plant



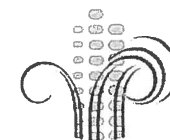
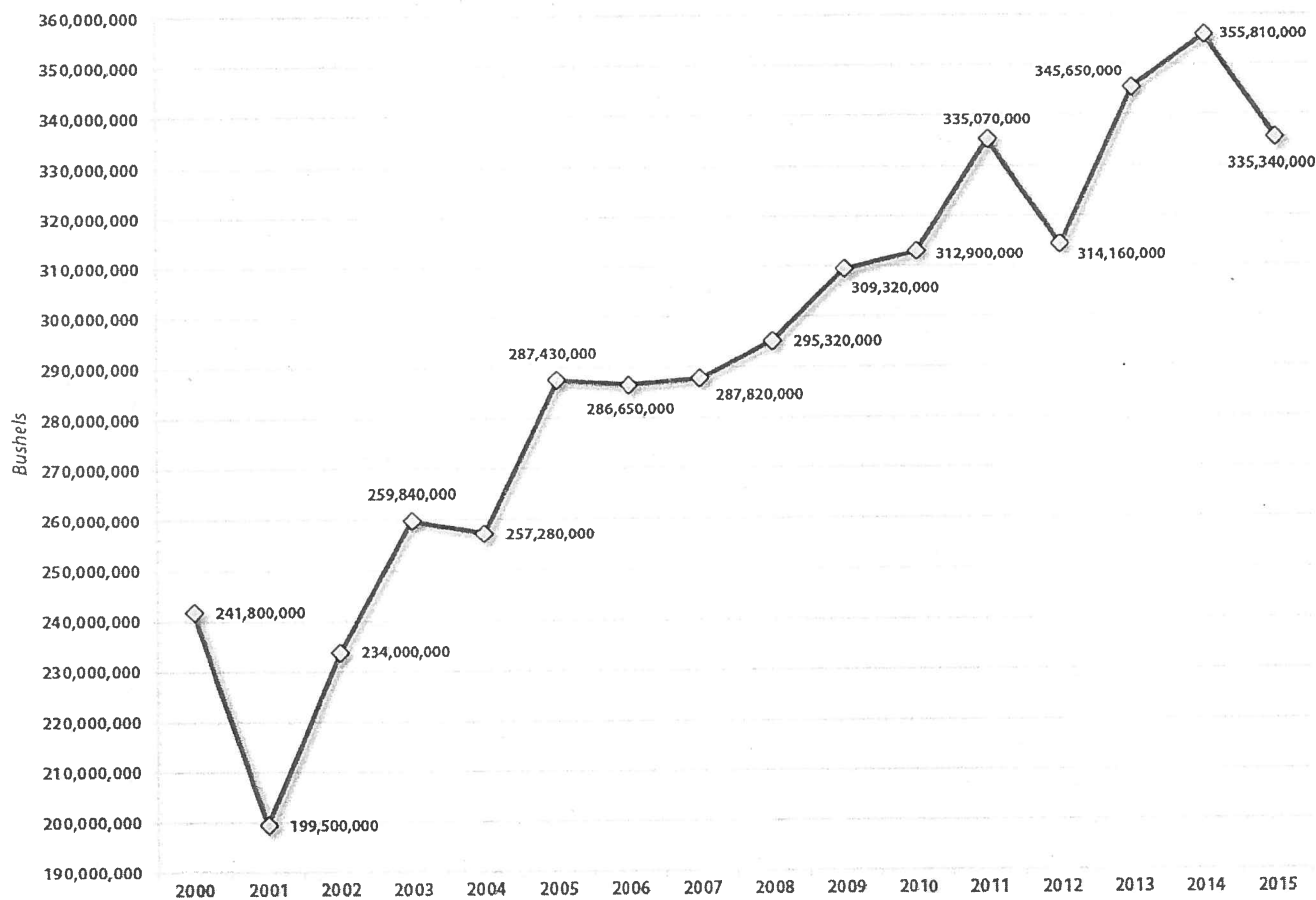
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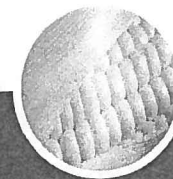
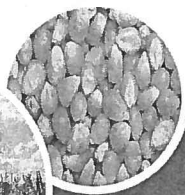




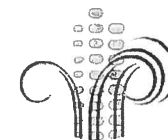
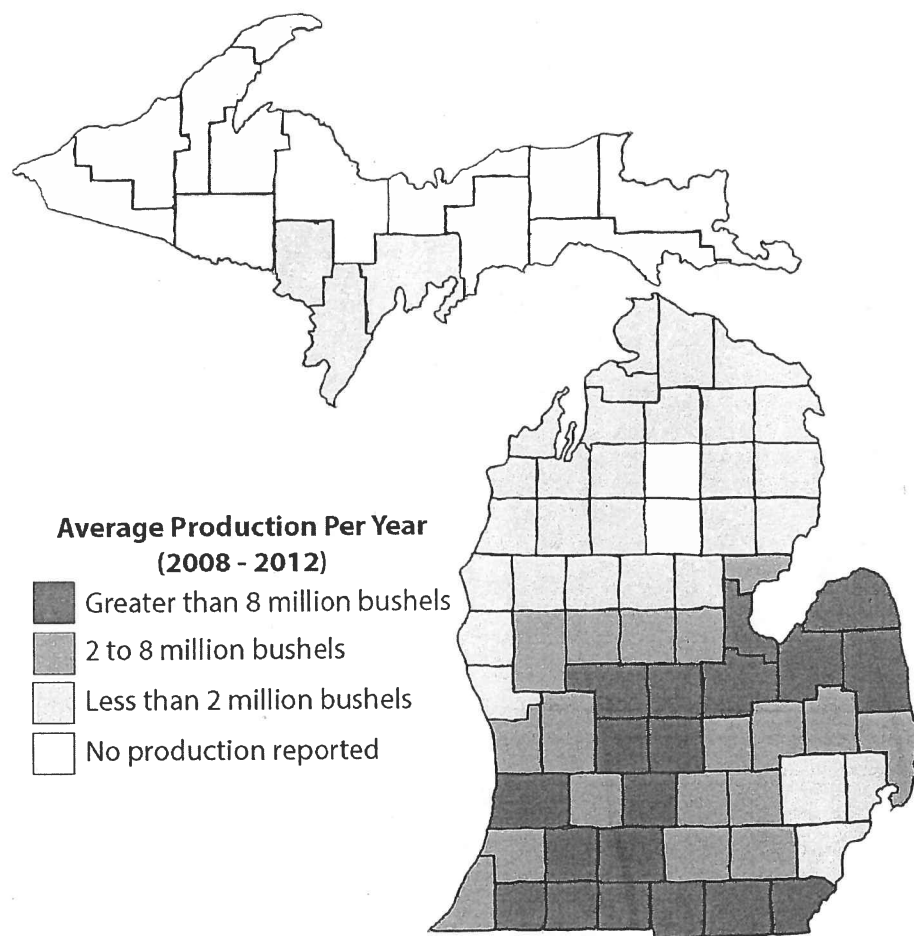
Michigan Corn Production

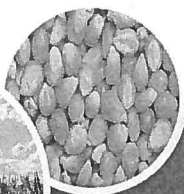
Michigan Corn Production





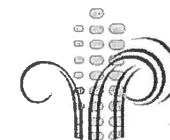
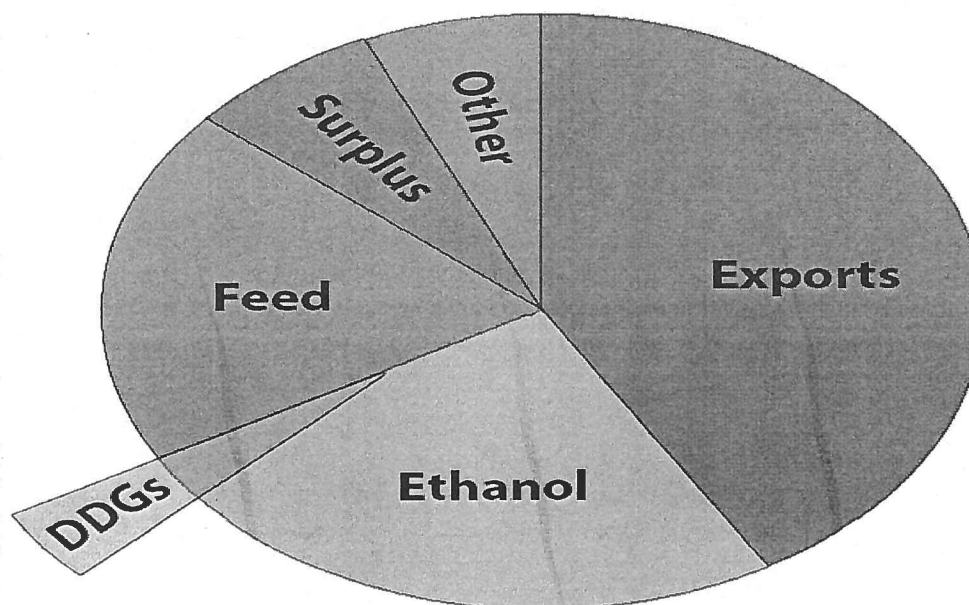
Corn Production By County

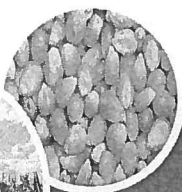




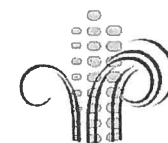
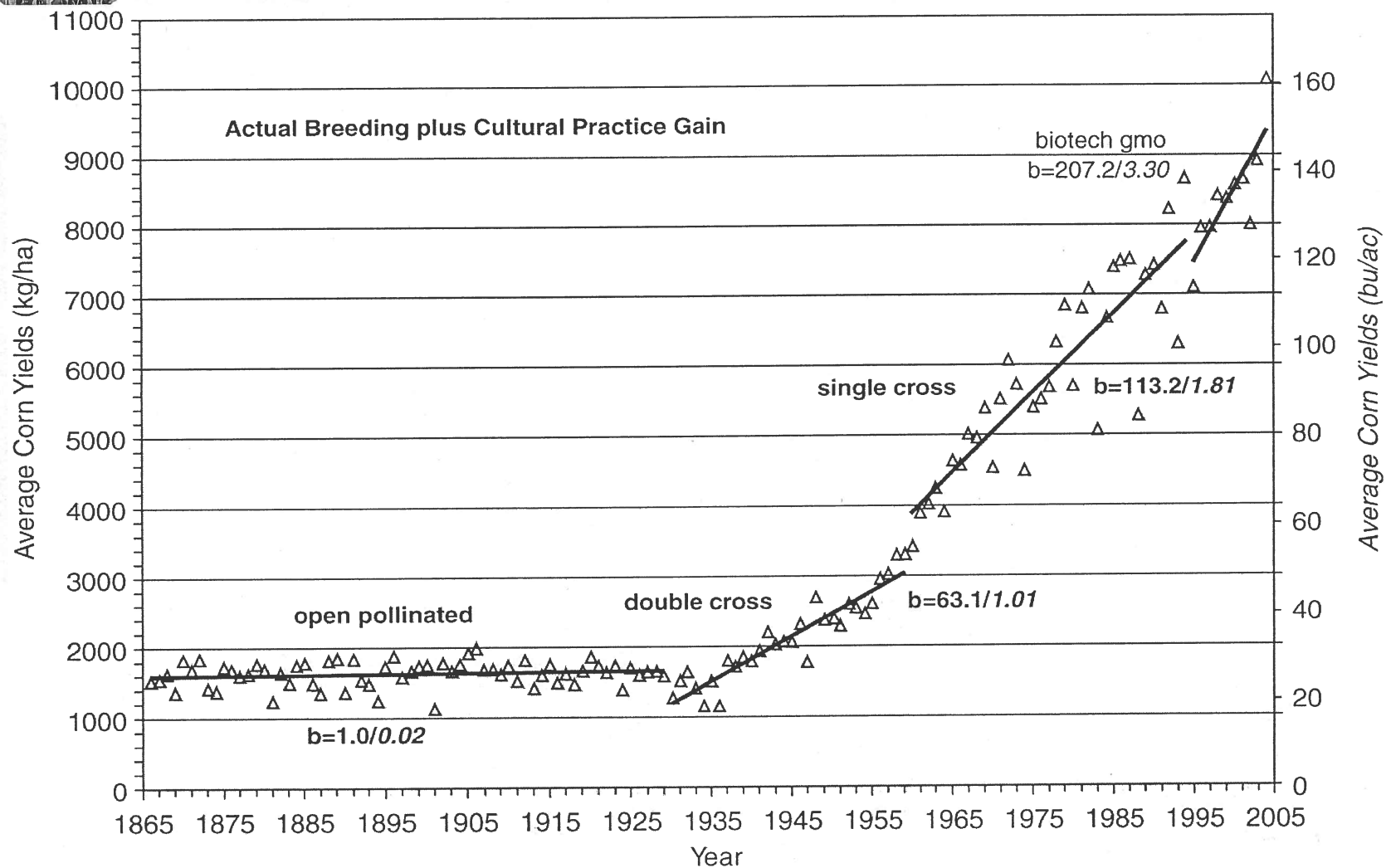
Michigan Corn Usage

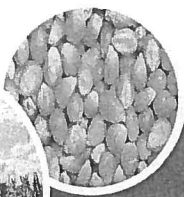
Total Supply:	391 million bushels
Exported out of MI¹:	162 million bushels
Ethanol²:	99 million bushels
Distillers Grains²:	16 million bushels
Feed:	76 million bushels
Surplus:	28 million bushels
Other:	26 million bushels





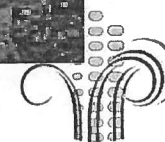
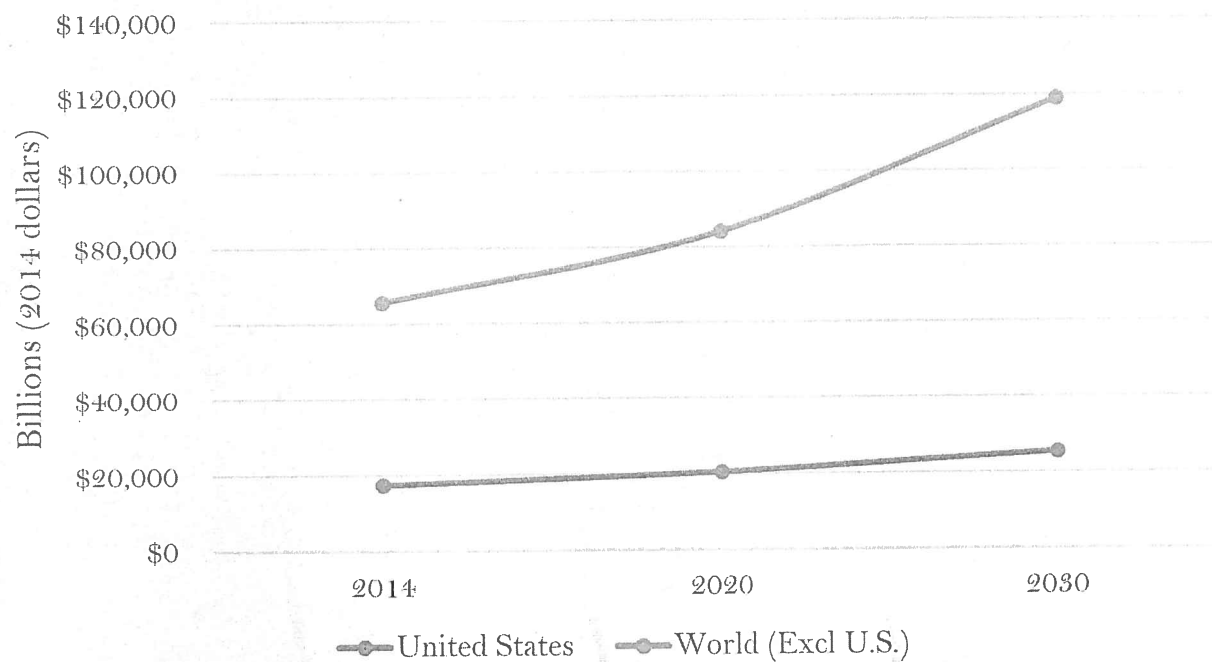
Corn Productivity Last Century

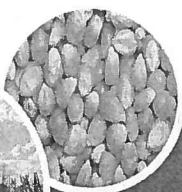




Global Growth

U.S. vs Rest of World GDP Forecast

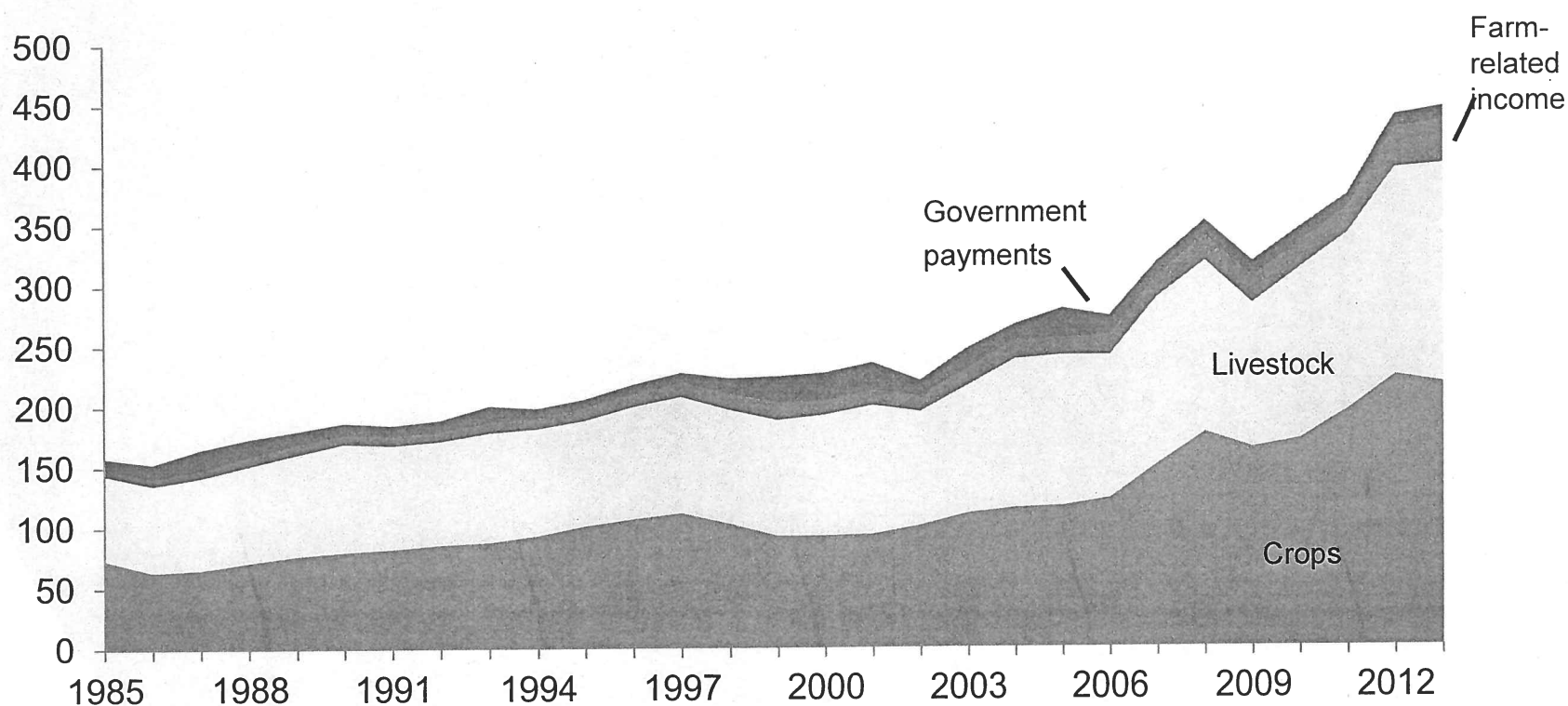




U.S. Farm Income: Sources of gross cash income

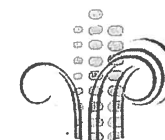
■ Crop cash receipts

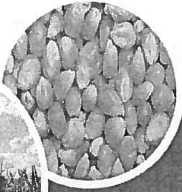
■ Livestock cash receipts



Source: *Farm Income Data*. Economic Research Service, USDA.

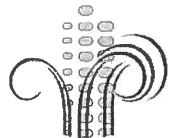
Source: Gopi Munisamy and Anne Effland, USDA

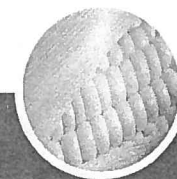
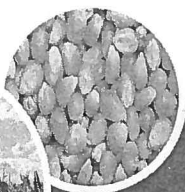




Corn Markets

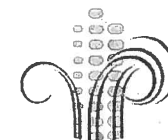
- ❖ Livestock Feed (Dairy, Beef, Hogs, Chickens)
 - Dependent on Consumer Income and Trends
 - Domestic and Internationally
- ❖ Ethanol Use
 - Domestic and Internationally
- ❖ Distillers Grain (Co-product of Ethanol Production)
 - Animal Feed (Protein)
 - Domestic and International
- ❖ Corn Oil (Co-product of ethanol Production)
 - Animal feed (Energy)
 - Plastics, Adhesives, and Sealers.

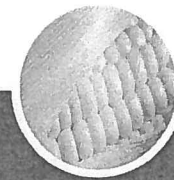
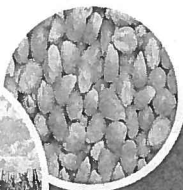
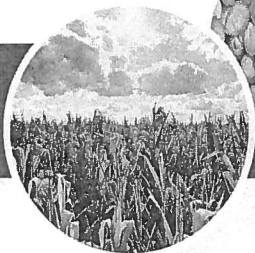




Market Drivers

- ❖ Domestic Wages
- ❖ Trade Agreements
- ❖ Value of the Dollar
- ❖ Clean Air Policy
- ❖ Environmental Concerns
- ❖ Price of Crude Oil

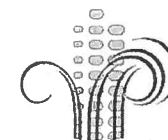
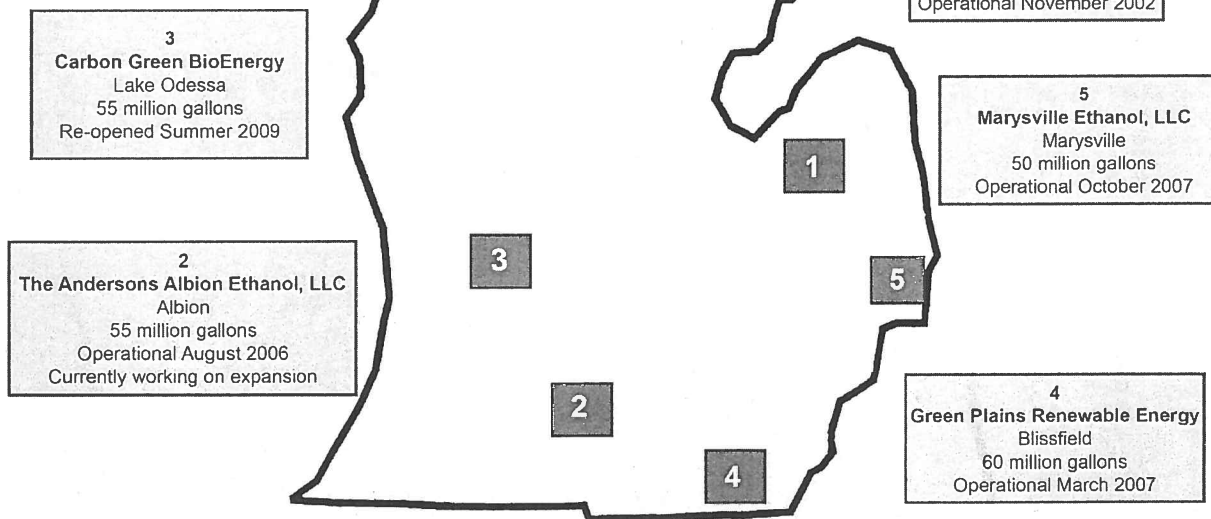


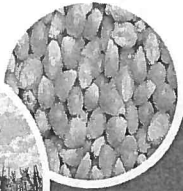


Michigan Ethanol Plants

Michigan Ethanol Plants

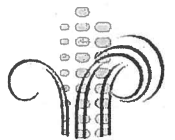
Current annual production capacity:
287 million gallons/year

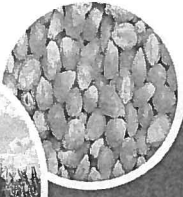
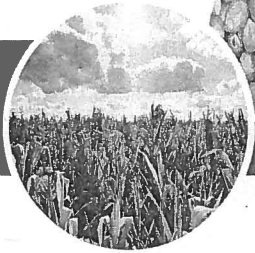




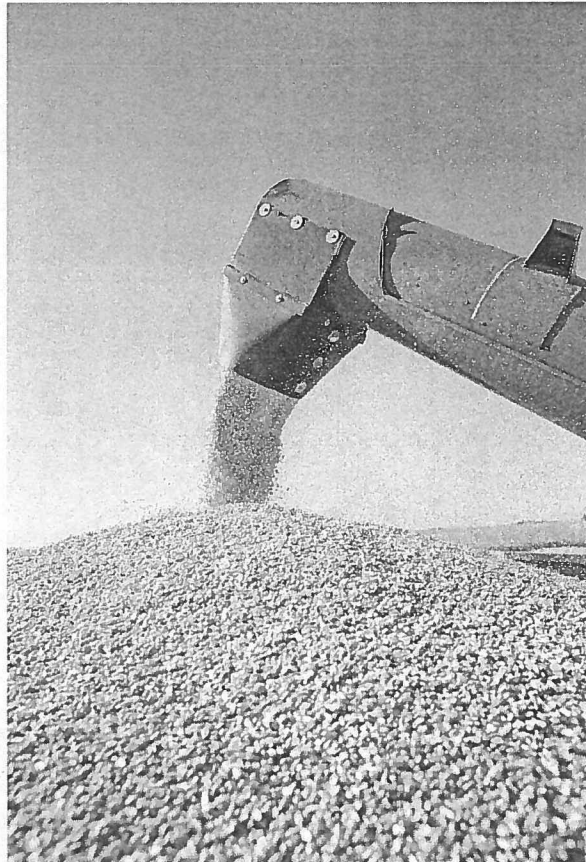
Ethanol and Consumers

- ❖ All Gas has 10% ethanol in today
- ❖ All motors and engines can use 10% ethanol
- ❖ All vehicles 2001 and newer can use up to 15%
- ❖ All Marine motors and lawn equipment can use 10% ethanol
- ❖ E 85 means up to 85% ethanol:15% gasoline
- ❖ Ethanol Non Carcinogenic
- ❖ Gas will degrade after 30 days must be stabilized, but not because of ethanol.





Questions?



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