

GM/IP Coexistence: A Growers Perspective

**Ken McCauley
National Corn Growers Association (USA)**



McCauley's Farm White Cloud, Ks

- My wife Mary & I
- Our son Brad
- 1,666 Hectares
- 75% corn/ 25% soy
- 340,000 bu. Storage
- Ethanol investments for future of farm
- Soybean seed contracts add value
- Grain storage gives flexibility and aids harvest

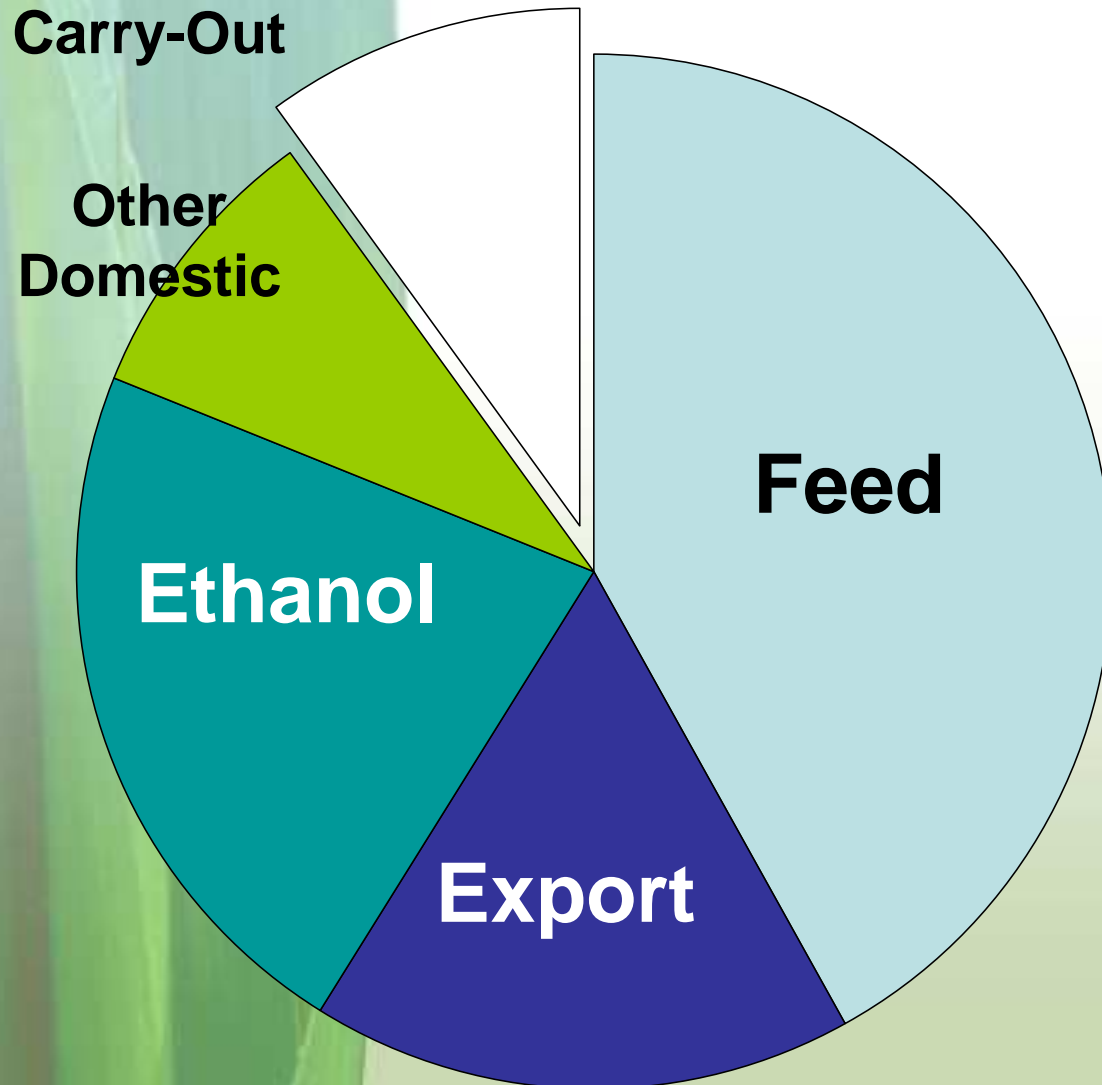


2007 U.S. Corn Production



- Planted:
37.9 million hectares
- Harvested:
35.0 million hectares
- Production
332.1 million MT
- *Most hectares since 1944*

2007 Corn Supply and Demand



**Total Supply:
365.8 Million MT**

Feed: 42%

Ethanol: 22%

Export: 17%

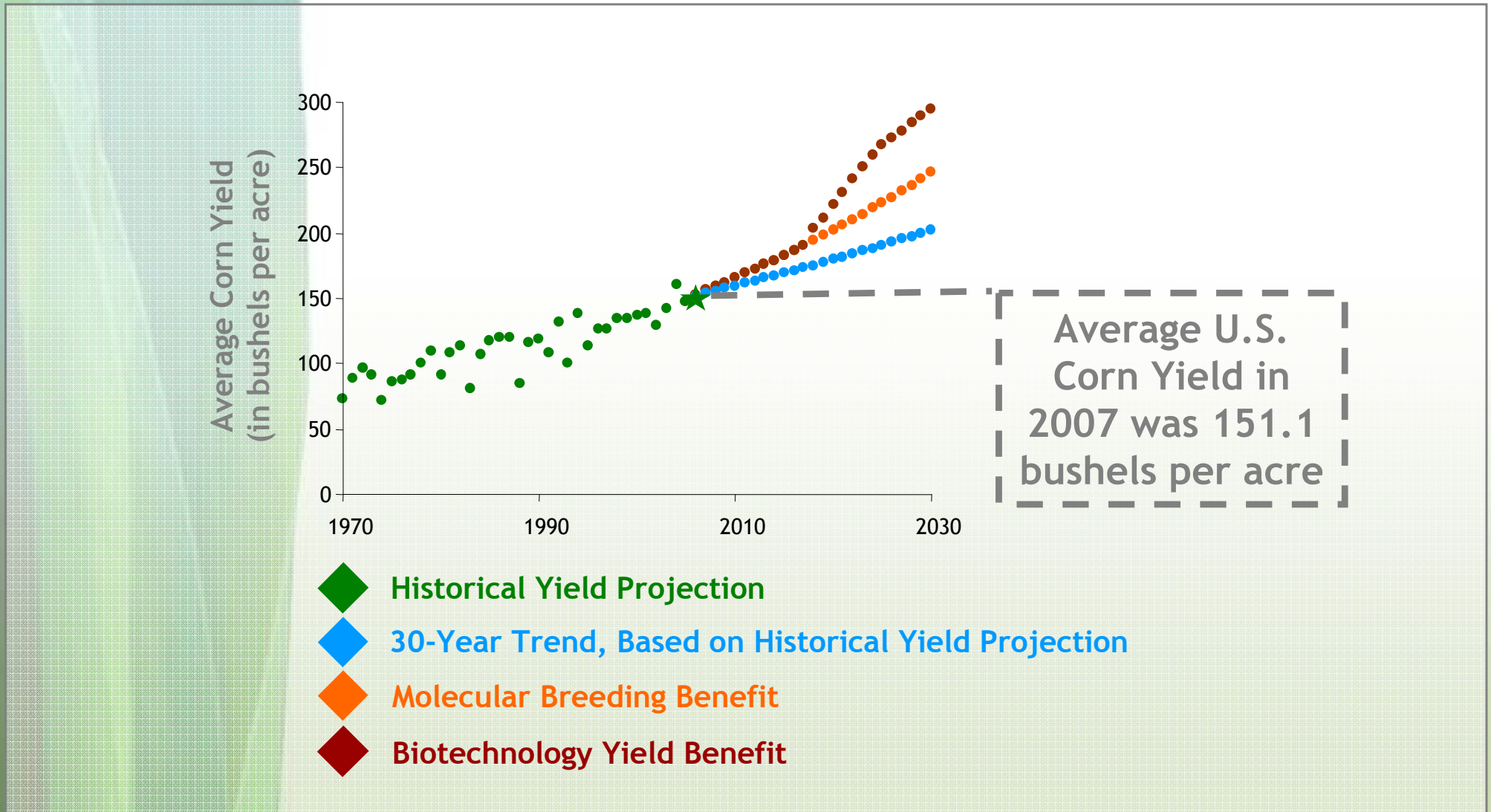
Other Domestic: 9%

Surplus: 10%

Three Steps to Meeting Demand

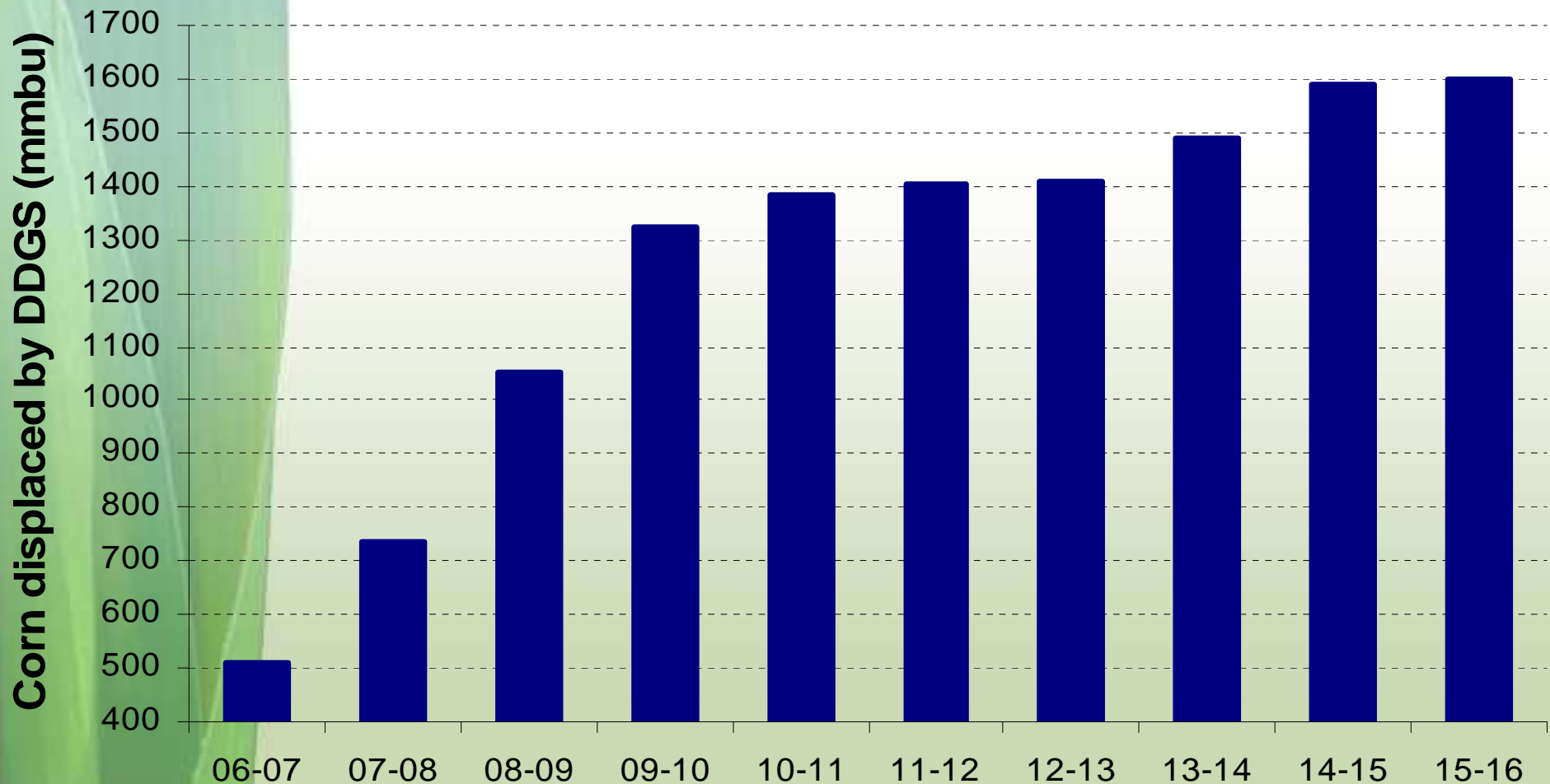
1. Increase corn production by boosting average corn yield significantly
2. Dedicate more corn to ethanol by focusing on value of coproducts
3. Improve efficiency to squeeze more ethanol from each bushel of corn

1. Corn Yields Trending Up

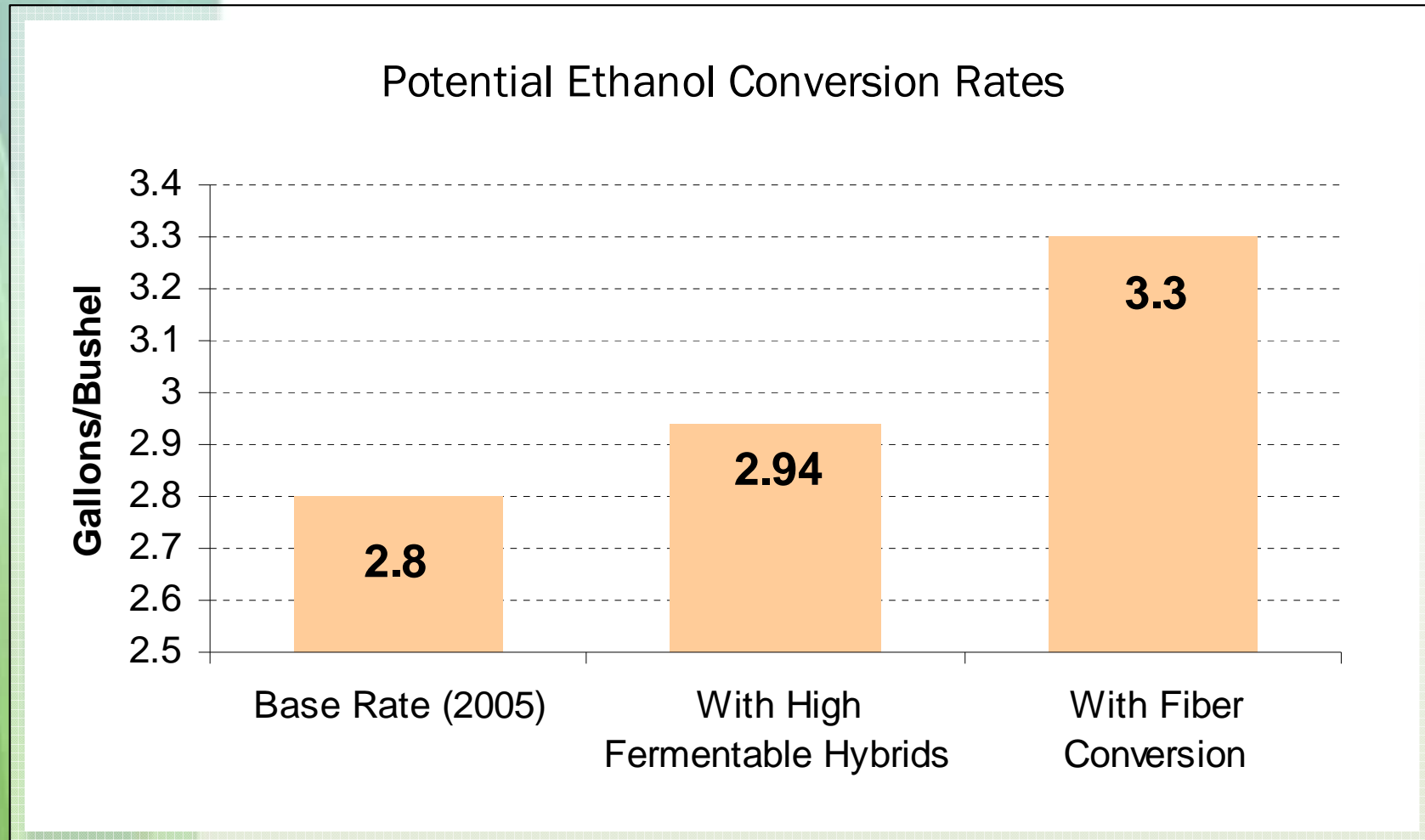


2. More Corn to Ethanol

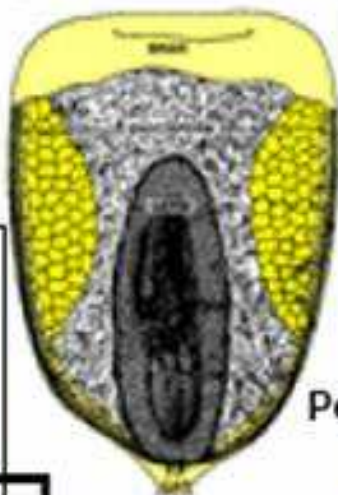
We increase portion of feed corn going to ethanol by replacing feed corn with high-nutrient ethanol coproducts



3. Efficiency in Ethanol Production



Corn Has Huge Potential for Biofuels



Ethanol Productivity

Endosperm → 435 Gal/Acre

Pericarp → 18 Gal/Acre (2010)

Stover → 100 Gal/Acre (2010)

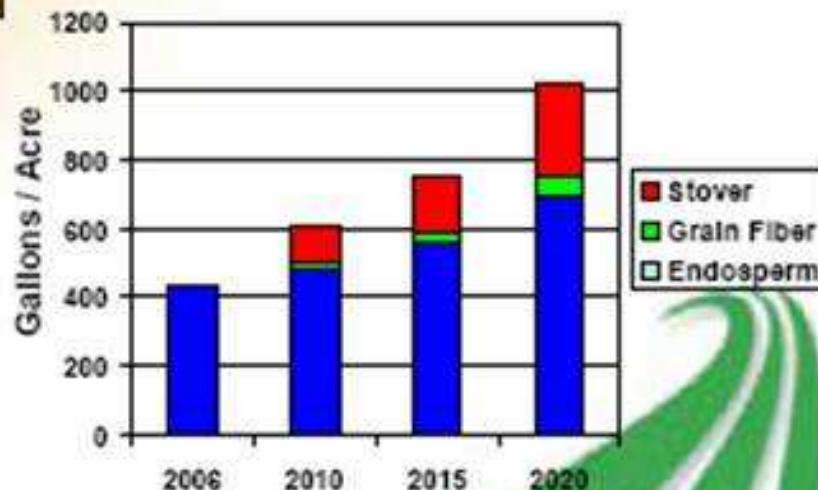


	10	15	20
<u>Grain Starch</u>			
Bu/Ac	180	200	250
Gal/Bu	2.7	2.9	3.0
Gal/Ac	486	580	750

	10	15	20
<u>Grain Pericarp</u>			
Ton/Ac	.45	.500	.625
Gal/Ton	40	60	90
Gal/Ac	18	30	56

	10	15	20
<u>Stover</u>			
Ton/Ac	2.5	2.75	3
Gal/Ton	40	60	90
Gal/Ac	100	165	270

**1,000 gallons /
acre by 2020?**






GM Corn: What We Believe

- We advocate for farmers to have access to GM technology, and to make production decisions based on their needs and the markets they serve
- We support regulatory systems based on sound scientific principles
- Responsible and accountable management by biotechnology providers, producers, suppliers, and grain merchandisers is imperative

US Regulatory System

- U.S. Environmental Protection Agency
 - Safety of Plant-Incorporated Pesticides
- U.S. Food & Drug Administration
 - Food and Feed Safety
- U.S. Animal Plant Health Inspection Service
 - Safety of release into the environment

US Corn Biotechnology Pipeline

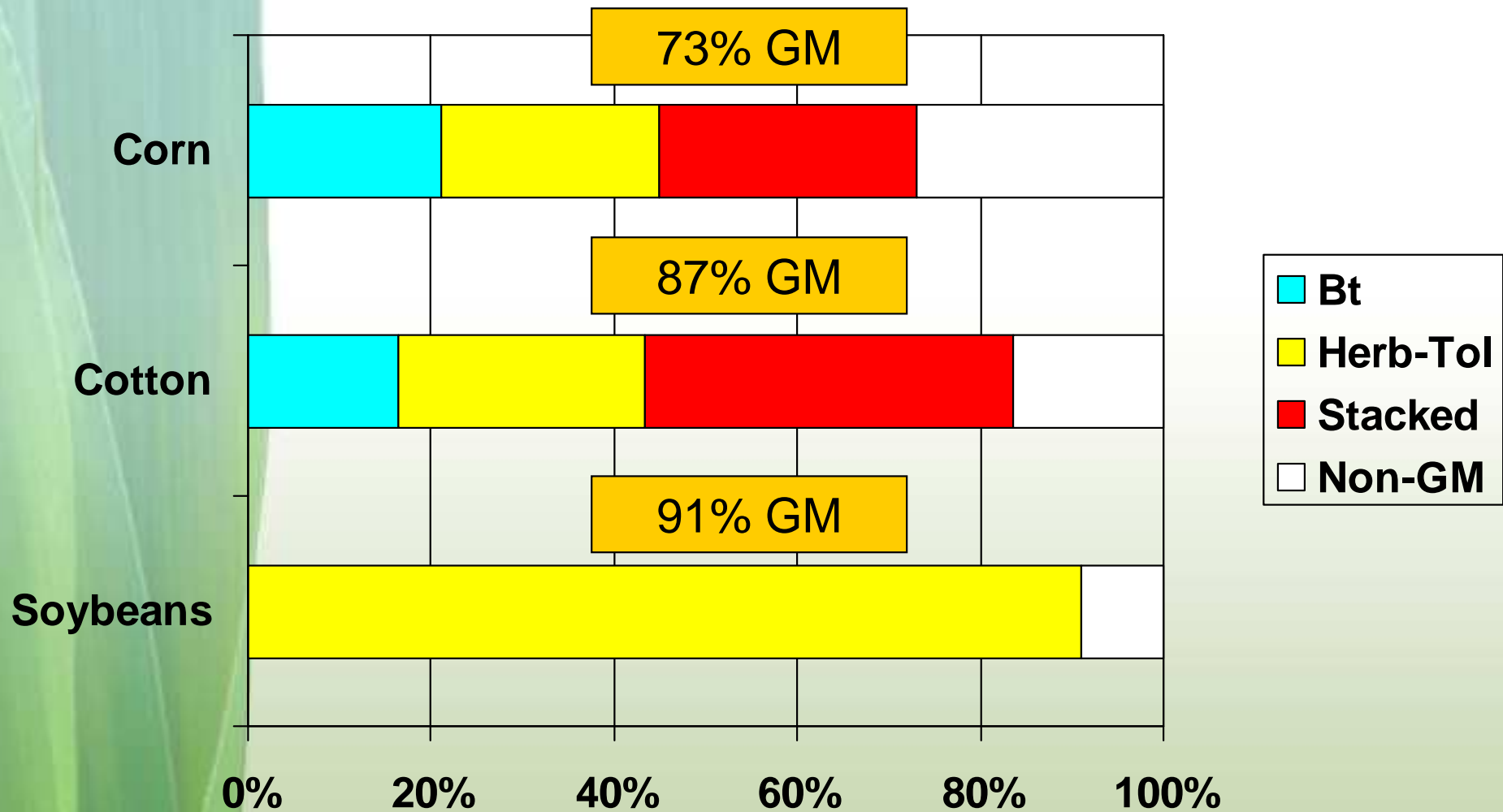
2008-09	2010-2015
   <p>High Lysine</p> <p>High Amylase</p>	<p>2nd Generation Insect Resistance</p> <p>Drought Tolerance</p> <p>Improved Nitrogen Utilization</p> <p>New Herbicide Tolerance</p>

Market Restrictions on GM Corn

- Livestock Feed
 - No market restrictions
- Ethanol
 - Acceptance of non-EU approved depends on coproduct market
- Wet Mill Products
 - Acceptance of non-EU approved depends on coproduct market
- Food Products
 - No biotech white corn hybrids commercially available
 - Some biotech yellow food-grade hybrids are available
 - Most food grade corn is sold under contract and contracts specifies hybrids and traits accepted
- Exports
 - Approximately 25% of Japanese market (~4 MMT) is non-GMO

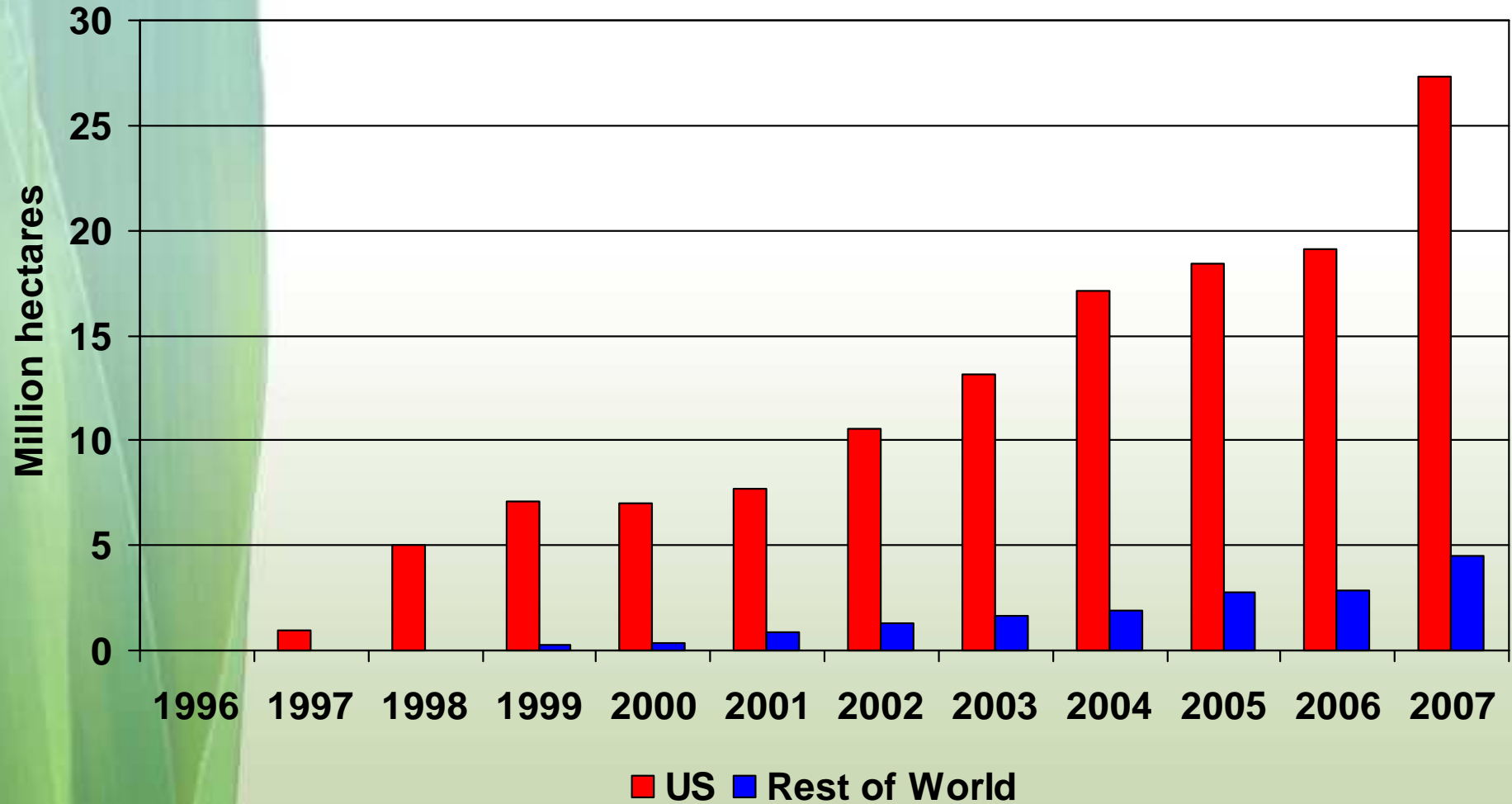


Three U.S. GM Crops



Global GM Corn Area

Monsanto Traits Only



Data Source: Monsanto, "Annual Report" 2007

Coexistence U.S. vs. EU

U.S.

EU

#1

Biotech

Biotech

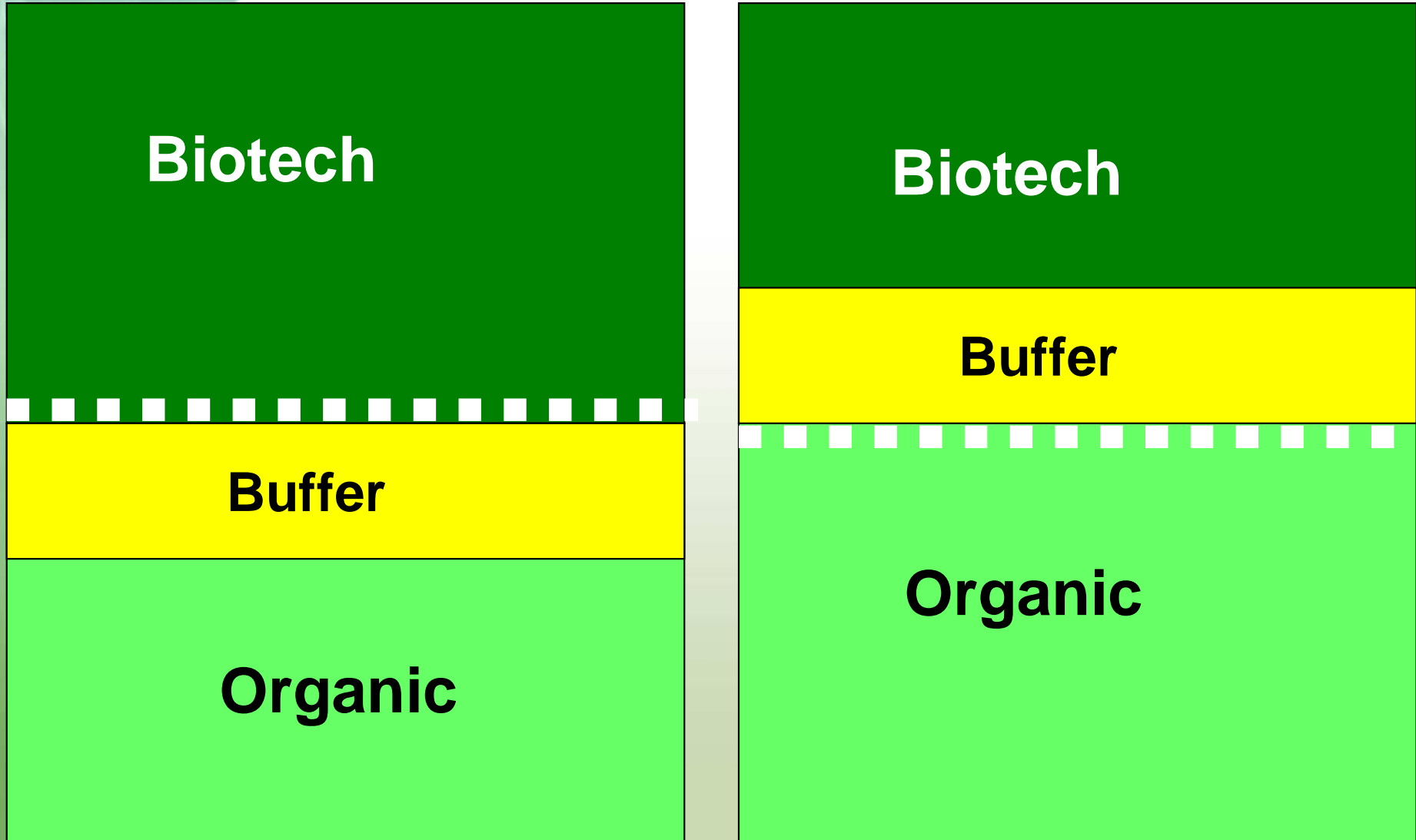
Buffer

Buffer

#2

Organic

Organic



“Know Before You Grow”

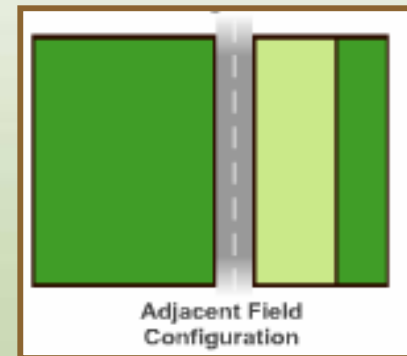
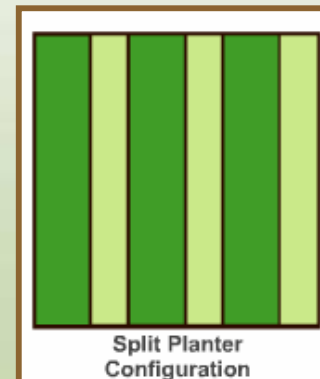
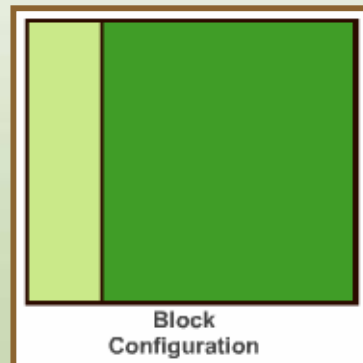
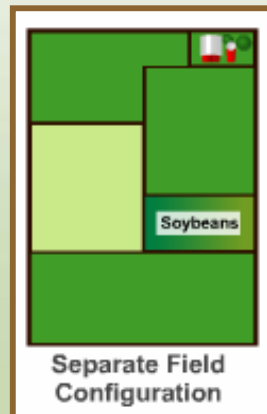
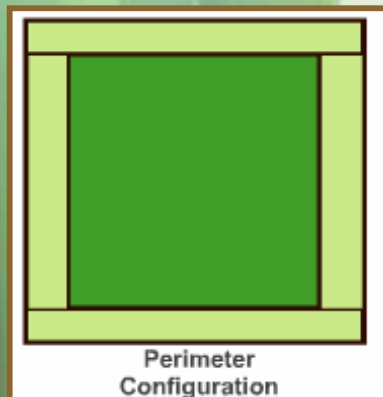
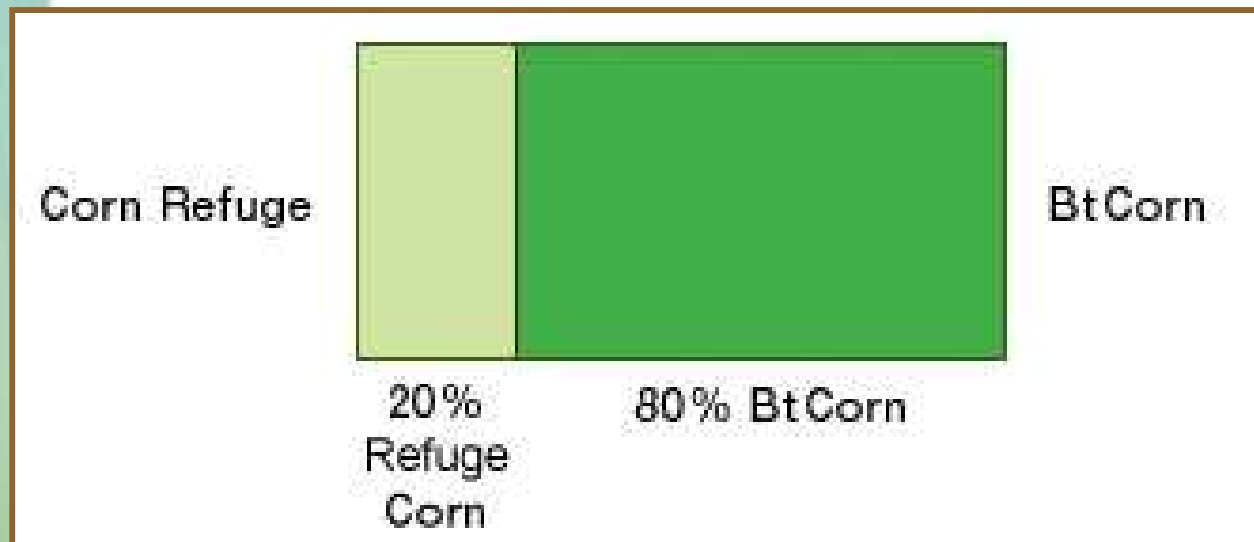
- Database tracks thousands of seeds according to Japanese, EU approvals
- Respected source of information

www.KnowBeforeYouGrow.com

“Know Before You Grow”

PRODUCT REGISTRANT TRADE NAME	CHARACTERISTIC	EVENT	JAPAN APPROVED	EU FOOD APPROVAL	EU PROCESSED FEED APPROVAL
Syngenta Agrisure CB/LL	Cry1Ab Corn borer protection Glufosinate herbicide tolerance	Bt11	Yes	Yes	Yes
DowAgrosciences Pioneer Hi-Bred Herculex I	Cry1F Western Bean Cutworm, Corn Borer, Black Cutworm and Fall Armyworm resistance Glufosinate herbicide tolerance	TC1507	Yes	Yes	Yes
MonsantoYieldGard	Cry1Ab Corn borer protection	MON 810	Yes	Yes	Yes
MonsantoYieldGard Roundup Ready 2	Cry1Ab Corn borer protection Glyphosate Herbicide Tolerance	MON 810+Nk603	Yes	Yes	Yes

Insect Resistance Management



“Respect the Refuge”



- Outreach effort to encourage planting refuge acres.
- Postcard mailed out to growers
- Billboards in several states

What We Believe



With high world demand for our corn, U.S. corn growers believe GM corn is a **safe** means to achieve higher **yields** while doing so in the most **sustainable** manner possible.

A wide-angle photograph of a lush green cornfield stretching to the horizon under a clear blue sky. The corn plants are in the foreground, showing their characteristic leaves and emerging tassels. The field is densely packed and extends far into the distance, creating a sense of vastness. The sky is a uniform light blue with a few very faint, wispy clouds near the horizon.

Thank You