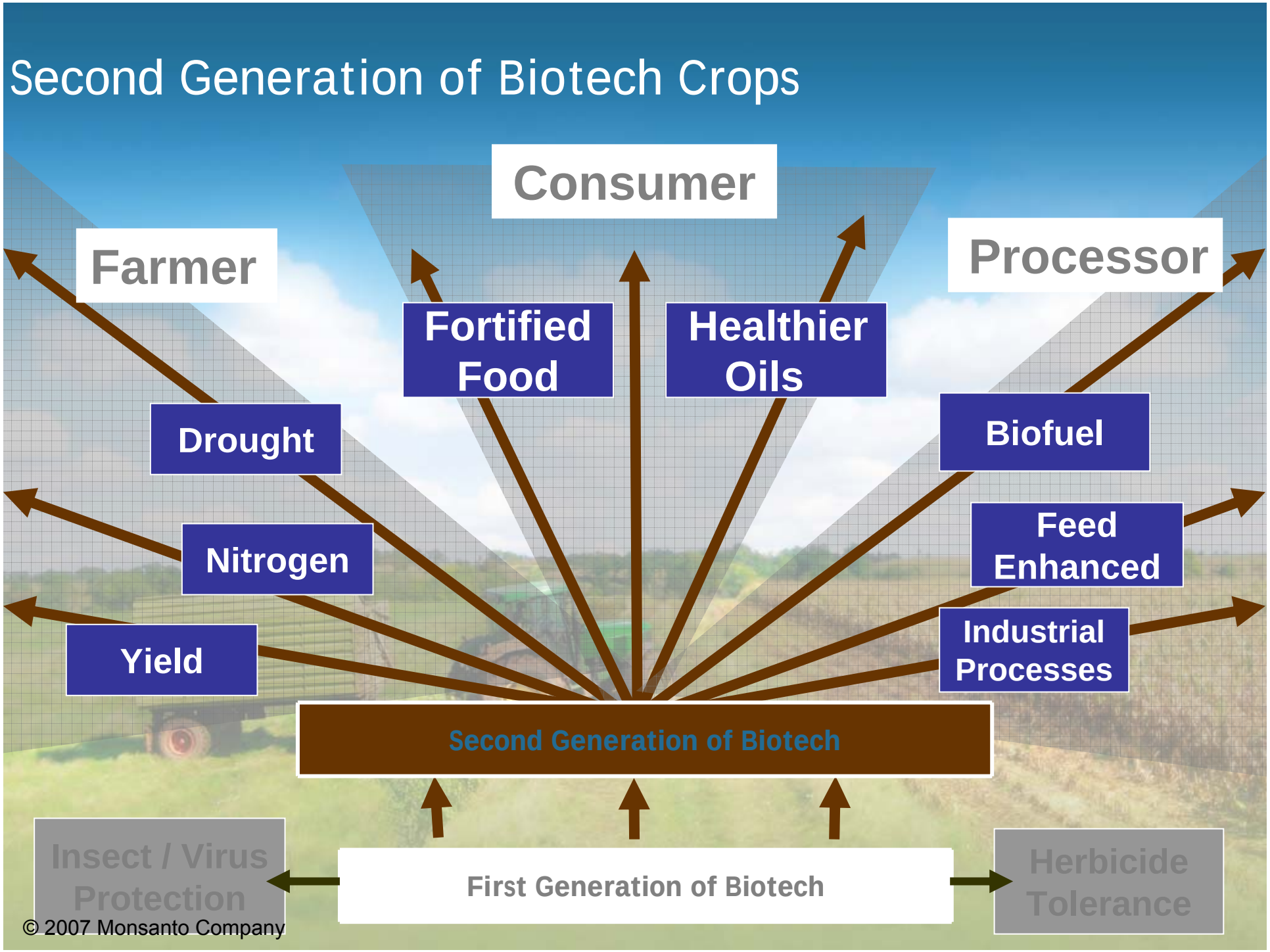
Monsanto and Renessen's pipeline products

Scientific hearing with Applicants – Scientific panel on Genetically Modified Organisms

March 21st, 2007

Fresh Until: 6/07

Bruno Tinland
Monsanto Company


Second Generation of Biotech Crops
Consumer
Farmer
Processor
Fortified Food
Healthier Oils
Drought
Biofuel
Nitrogen
Feed Enhanced
Yield
Industrial Processes
Second Generation of Biotech
Insect / Virus Protection
First Generation of Biotech
Herbicide Tolerance
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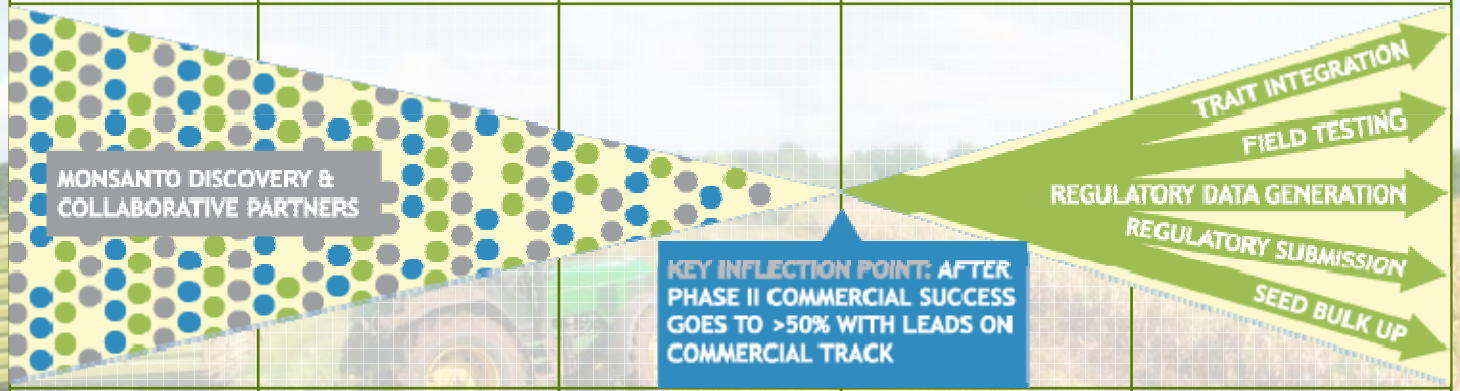
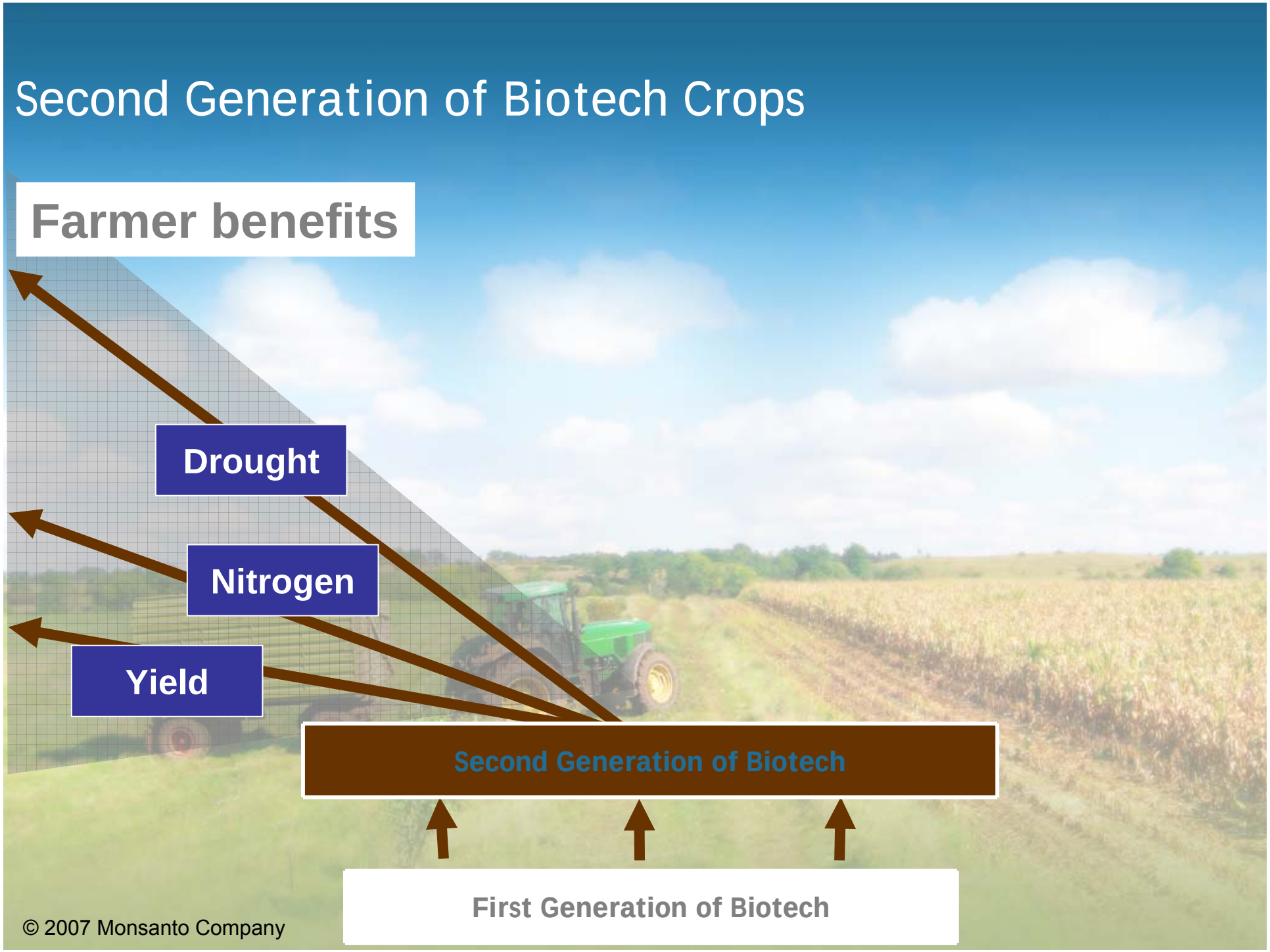
We Address Challenges One Phase at a Time, Beginning With Discovery

	DISCOVERY Gene/Trait Identification	PHASE I Proof Of Concept	PHASE II Early Development	PHASE III Advanced Development	PHASE IV Pre-launch
AVERAGE DURATION[1]	24 to 48 MONTHS	12 to 24 MONTHS	12 to 24 MONTHS	12 to 24 MONTHS	12 to 36 MONTHS
SPENDING	$2-5M	$5-10M	$10-15M	$15-30M	$20-40M
AVERAGE PROBABILITY OF SUCCESS[2]	5 PERCENT	25 PERCENT	50 PERCENT	75 PERCENT	90 PERCENT
GENES IN TESTING	TENS OF THOUSANDS	THOUSANDS	10s	<5	1
KEY ACTIVITY	•HIGH-THROUGHPUT SCREENING •MODEL CROP TESTING	•GENE OPTIMIZATION •CROP TRANSFORMATION	•TRAIT DEVELOPMENT •PRE-REGULATORY DATA •LARGE-SCALE TRANSFORMATION	•TRAIT INTEGRATION •FIELD TESTING •REGULATORY DATA GENERATION	•REGULATORY SUBMISSION •SEED BULK-UP •PRE-MARKETING



1) Time estimates are based on our experience; they can overlap. Total development time for any particular product may be shorter or longer than the time estimated here.
2) This is the estimated average probability that the traits will ultimately become commercial products, based on our experience. These probabilities may change over time.

Second Generation of Biotech Crops

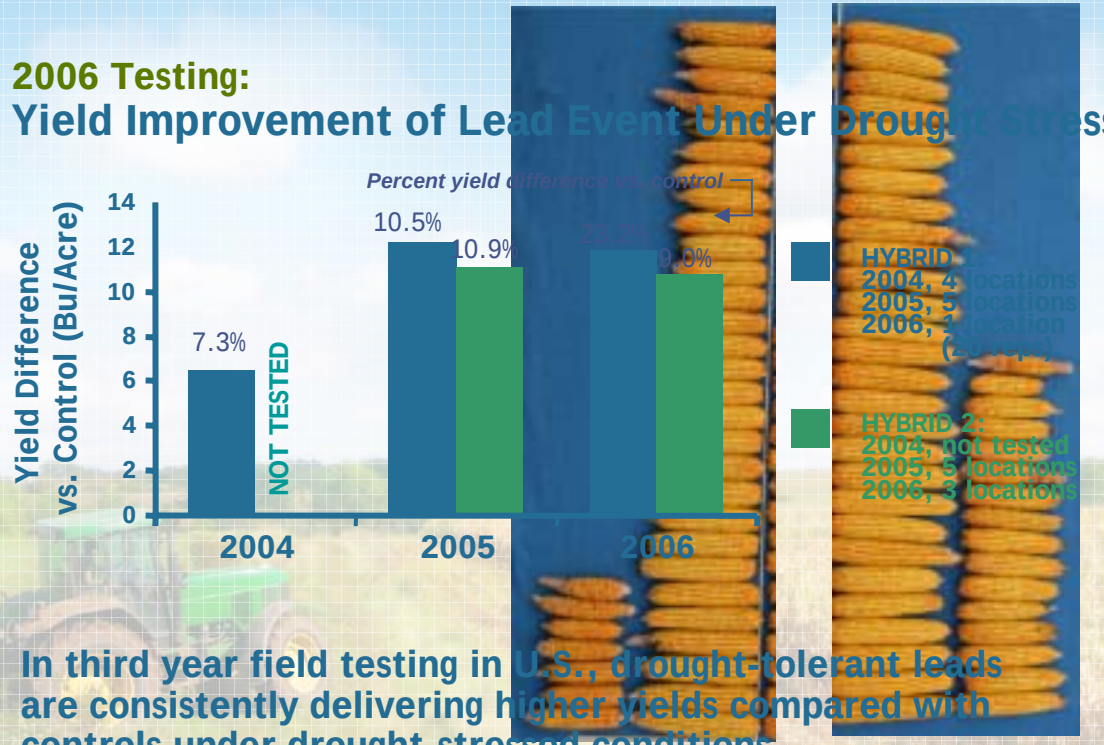


Overcoming Insufficient Fresh Water for Crop Usage

Drought Tolerant Corn

- Yield enhancement demonstrated again in 2006 under water-stress conditions in U.S.
- Lead event chosen
- 2007 trials expected to demonstrate yield enhancement in multiple hybrids under dryland conditions

2006 Testing:
Yield Improvement of Lead Event Under Drought Stress



In third year field testing in U.S., drought-tolerant leads are consistently delivering higher yields compared with controls under drought-stressed conditions

Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

Overcoming Insufficient Fresh Water for Crop Usage

Drought Tolerant Cotton

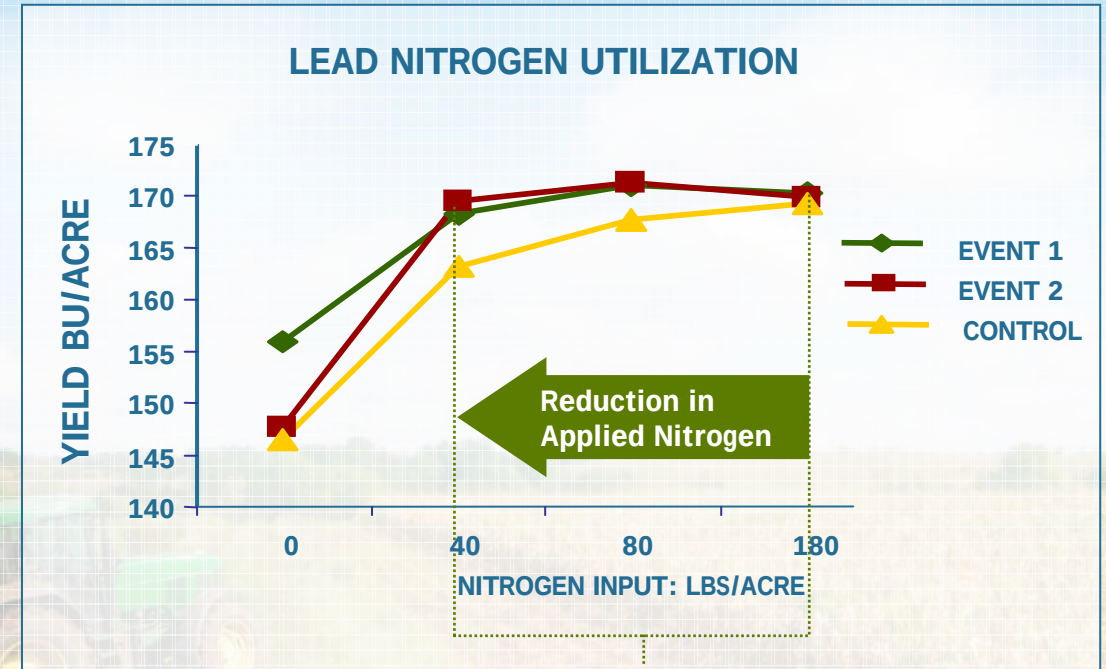
- Drought leads advancing to greenhouse screens
- First leads in field testing are showing promise
- Up next: Continued evaluation to assess drought performance

Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

Building Yield Enhancement By Using Nitrogen Efficiently

Nitrogen Utilization Corn Update

- Industrial scale genomic efforts are generating leads
- Lead events show roughly 10% yield increase in multi-location field trials under limiting nitrogen
- Up Next: Optimization to improve trait performance and continued screening



These 2 events show no yield drop off as the Nitrogen application levels decrease from 180 lbs/ac to 40 lbs/ac

Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

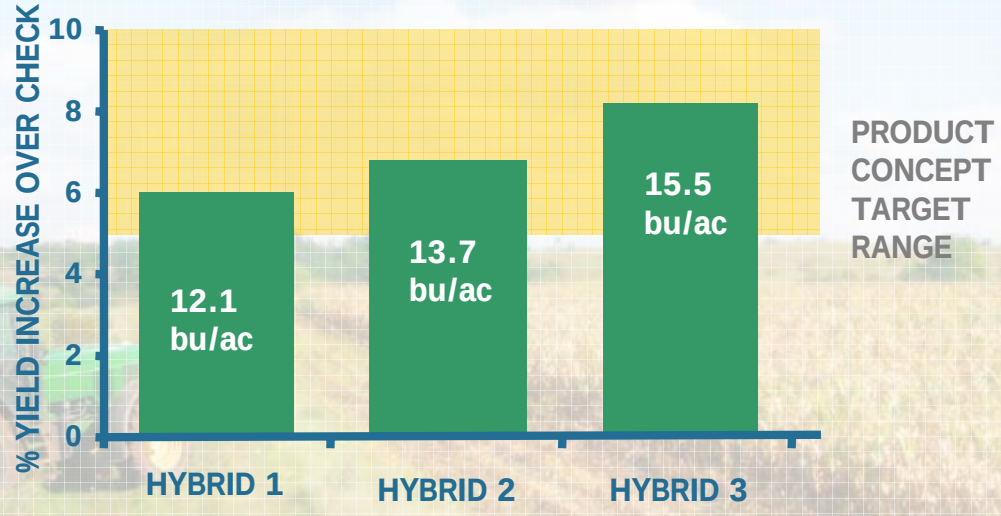
With Three Years of Field Data, Higher-Yielding Corn Exits Proof-of-Concept for Phase 2 Development

Higher-Yielding Corn

- In 2006 field testing, lead event shows yield efficacy in different test hybrids
- 3 years of data demonstrate yield increase in multi-location trials with multiple hybrid combinations
- Commercial transformations will be made, with further testing to select for lead events

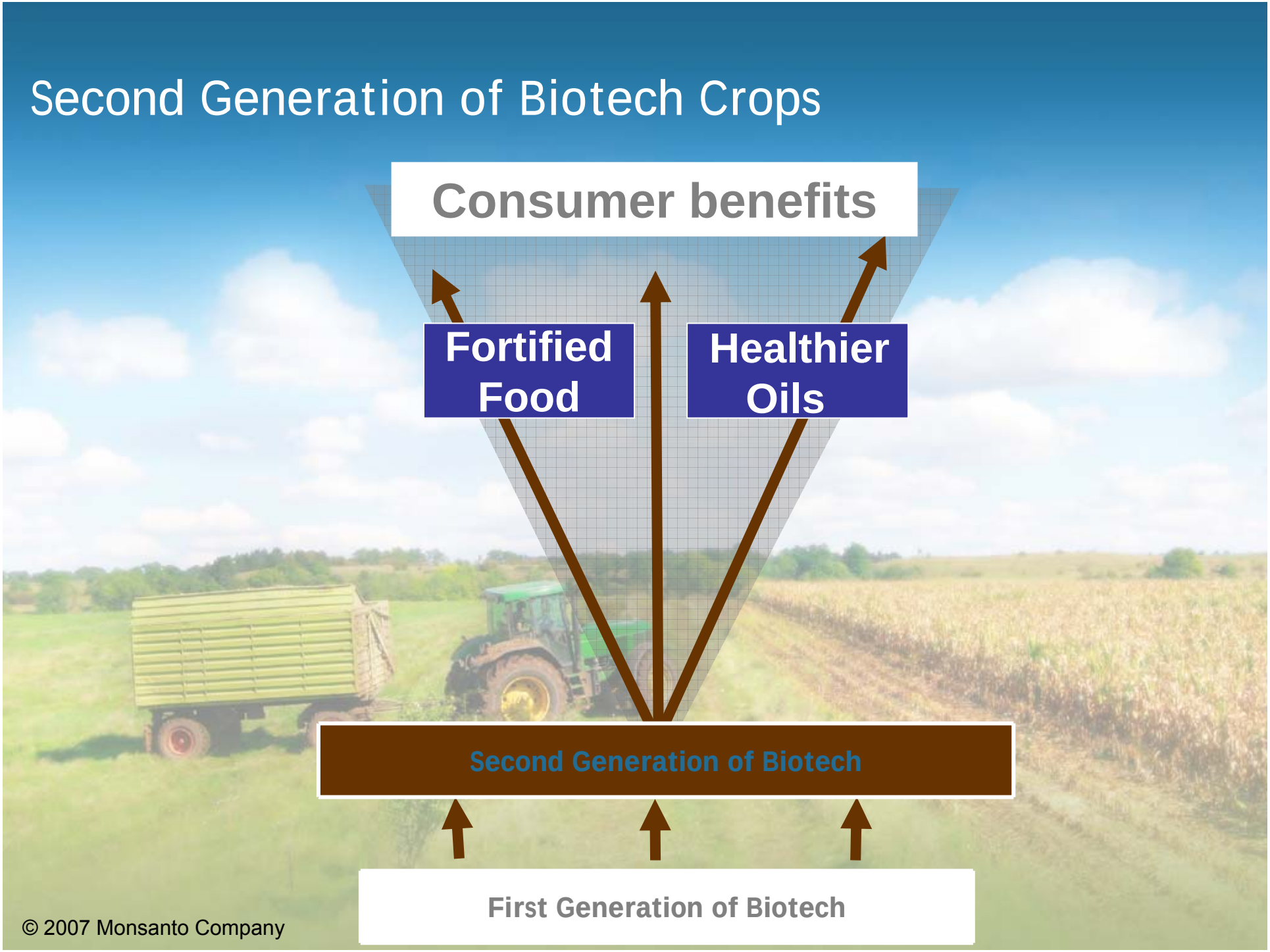
2006 TESTING:

2006 Field Results Indicate Increased Yield Versus Conventional Checks

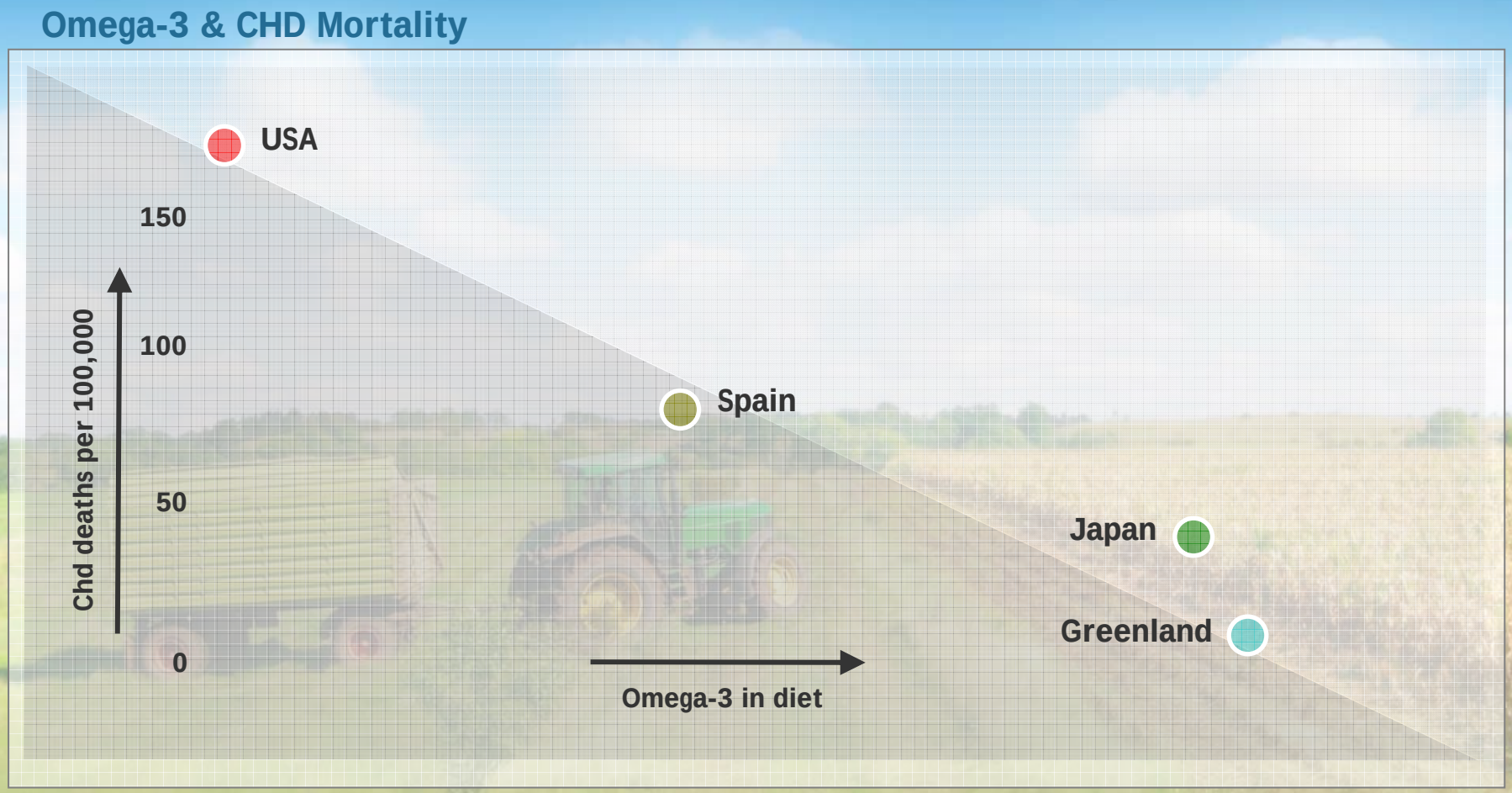


Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

Second Generation of Biotech Crops



Increasing Omega-3 for Health Benefits

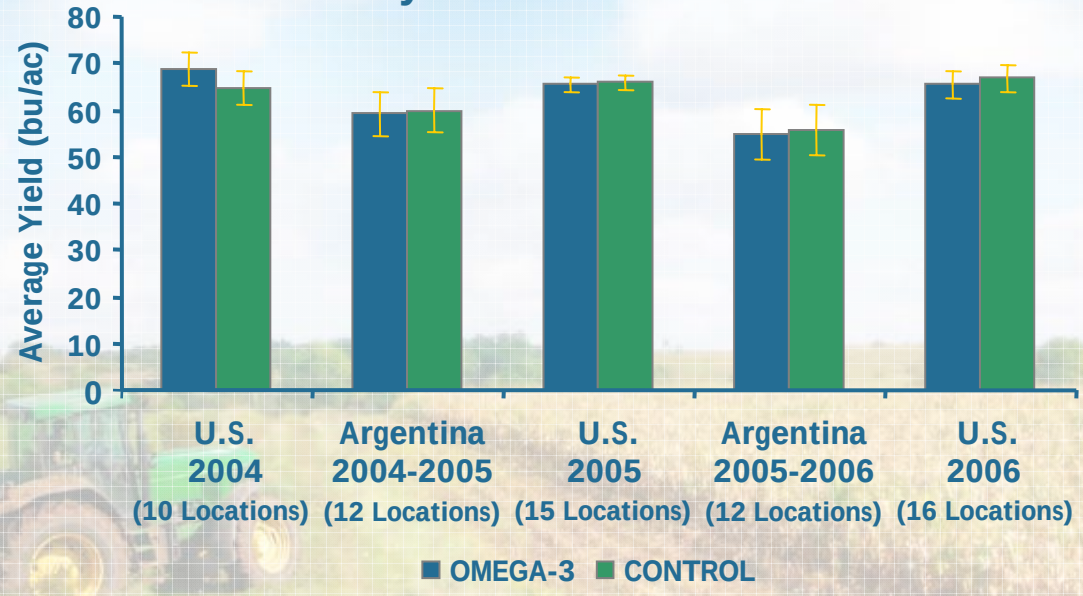


Omega-3 Soybeans Have Met Early Development Targets for Food Application and Field Performance

Omega-3 Soybeans

- Represents a land-based supply of essential Omega-3 fatty acids
- With soybean oil that would contain 20% stearidonic acid, the intent is for taste, shelf-life and oil stability to be as close to soybean oil as possible

Consistent Agronomic Performance of Omega-3 Soybeans in Field Trials

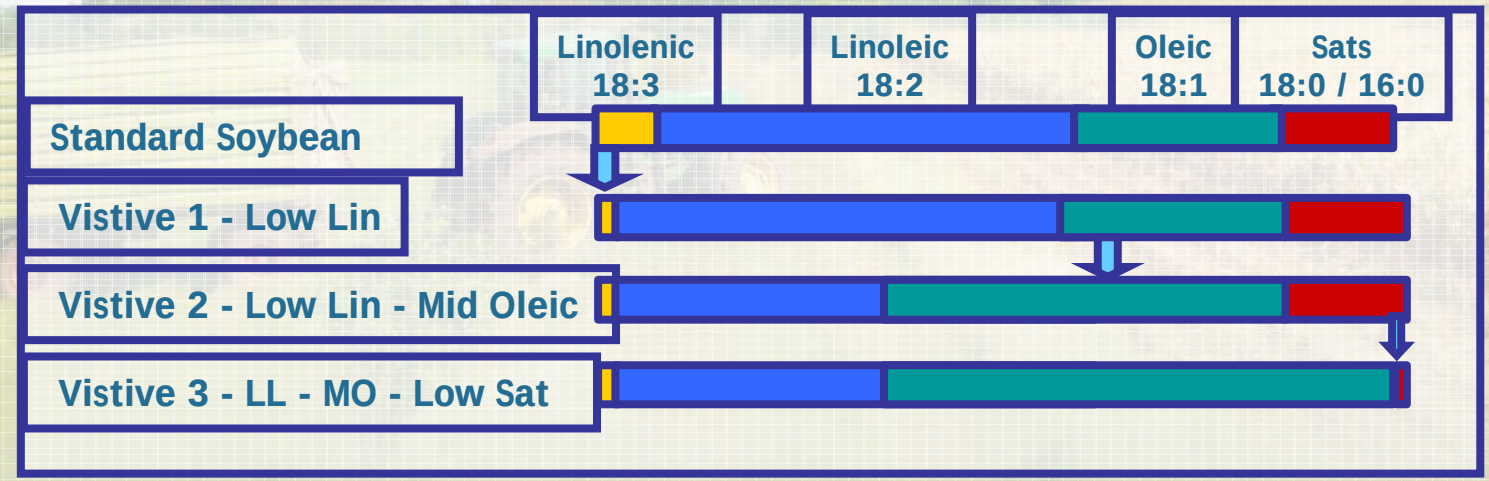


Over 5 growing seasons and 65 locations, no significant yield differences between the Omega-3 lead event and control

Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

Reducing Trans Fats for Health Benefits

- Reduce/eliminate trans fats with increased oil stability, requiring less hydrogenation
- Achieve yield parity and stack with Roundup Ready® trait
- Reduce linolenic acid to <3%
- Launched in 2005

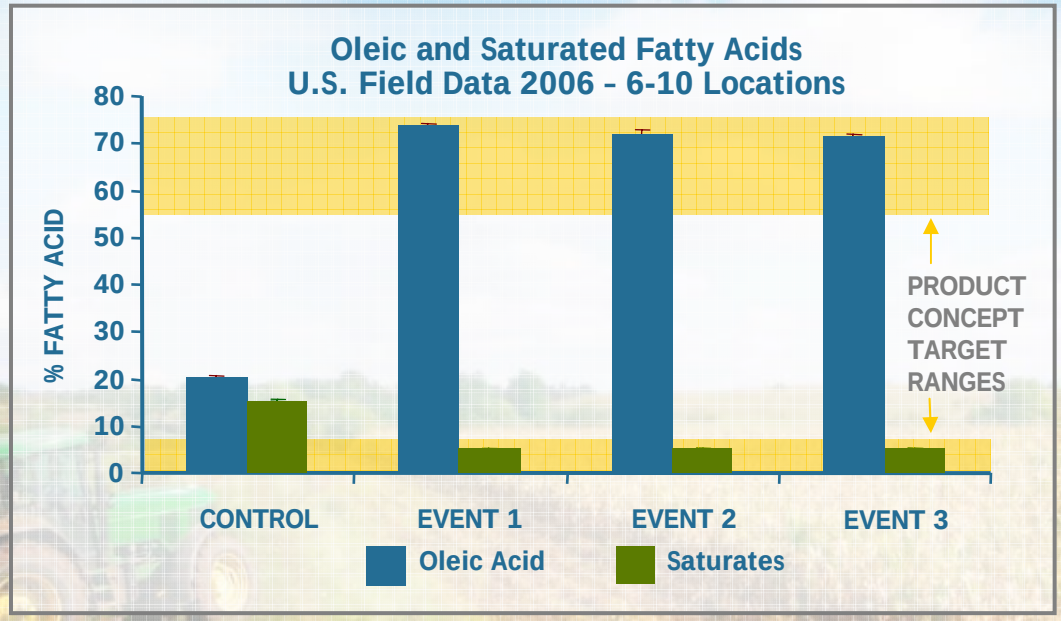


Vistive III Soybeans Continue to Meet Oil Composition and Yield Targets for Commercial Development

Vistive III Soybeans

- Designed to lower linolenic and saturate content, while boosting oleic content
- Phase 2 oil traits testing focuses on replicating oil-profile targets
- 2006 testing allowed for lead selection with multiple events hitting oil-profile targets

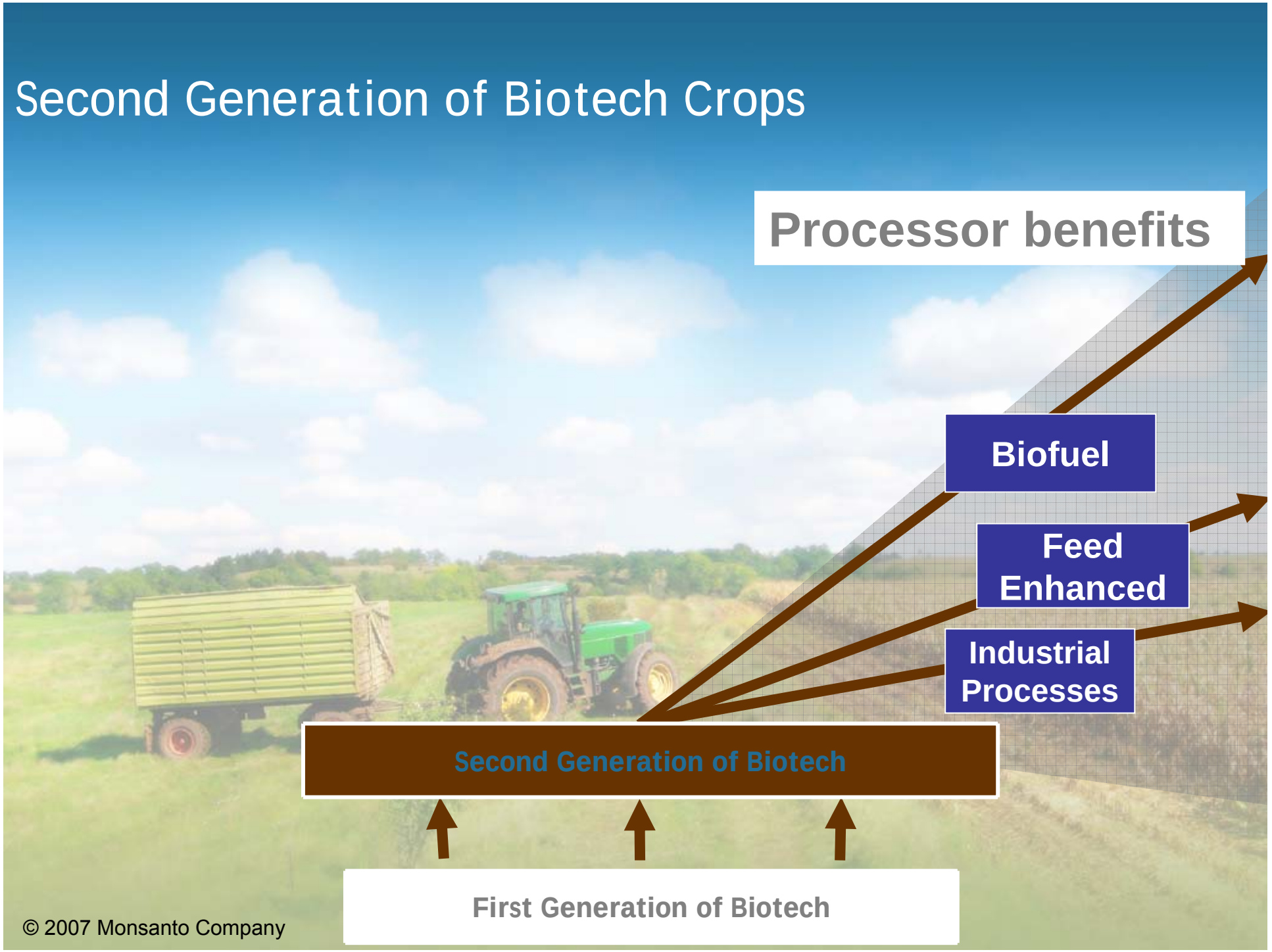
2006 TESTING:
Lead Events With Target Oil Composition Identified



In 2006 field testing, multiple events met target composition of 55-75% oleic and <7% saturates. Selection of leads is actively under way.

Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

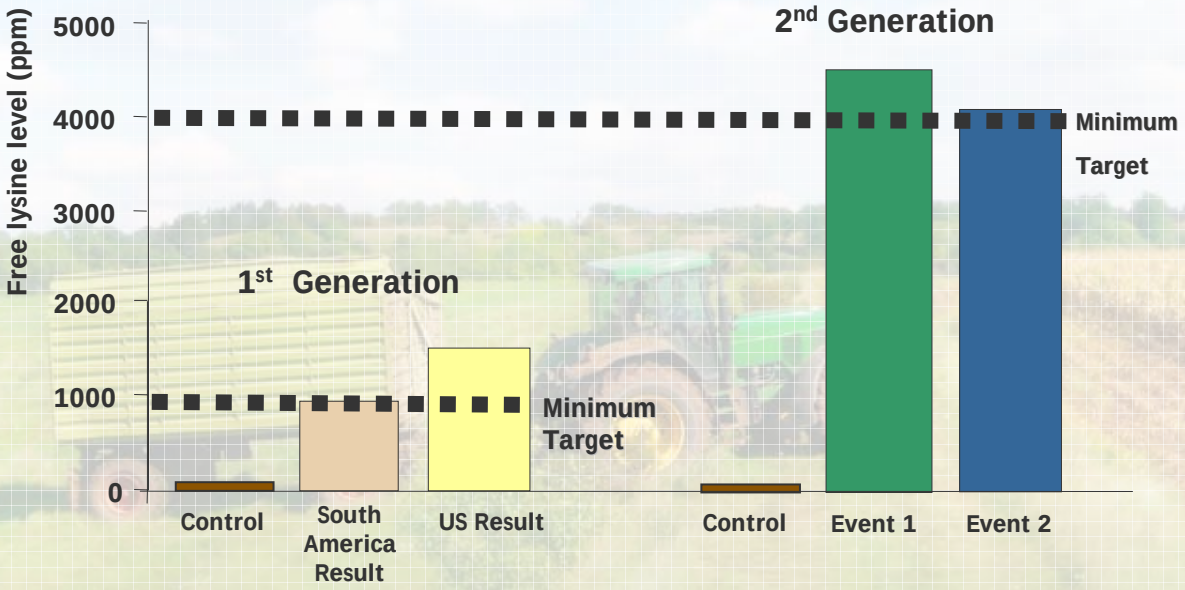
Second Generation of Biotech Crops

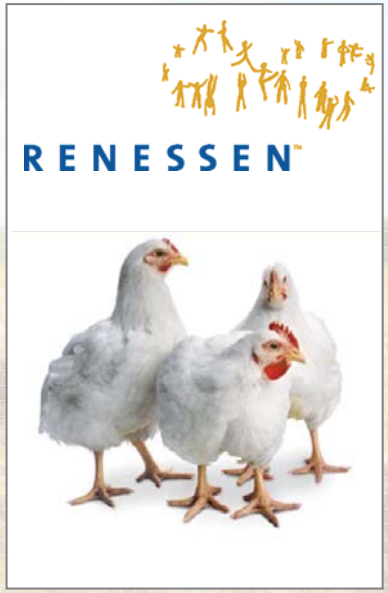


Enhancing Essential Amino Acids in Feed

Mavera™ High Value Corn With Lysine

- Enhance level of limiting essential amino acids and corn oil content in feed
- Lower cost of animal feed ration
- Improve amino acid balance
- Increase total energy



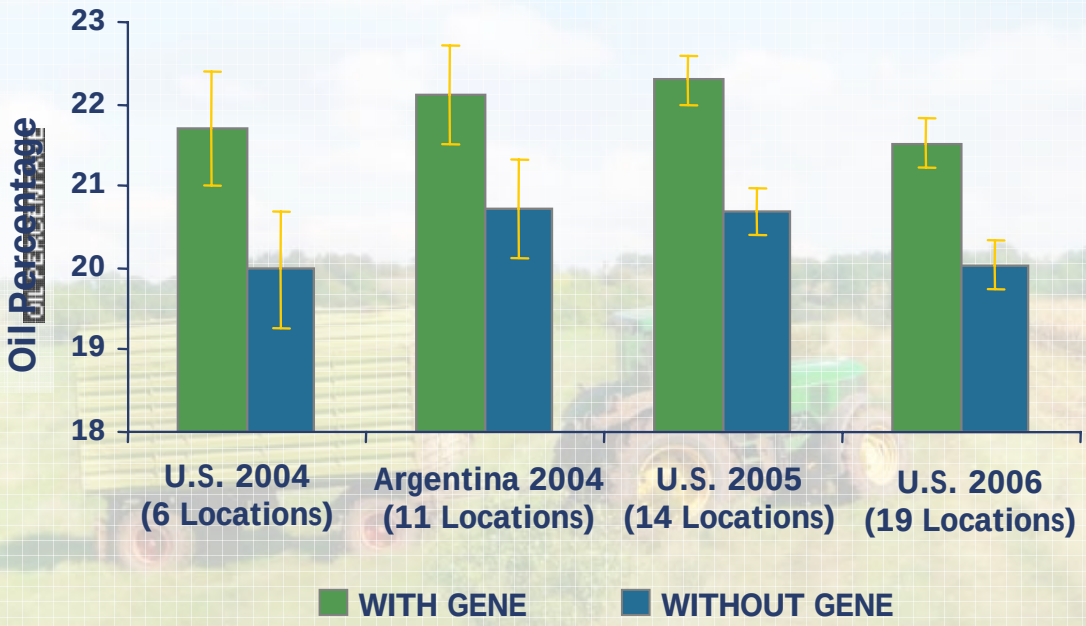


Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch

Enhancing Oil Yield for Grain Processing

High Oil Soybeans for Processing

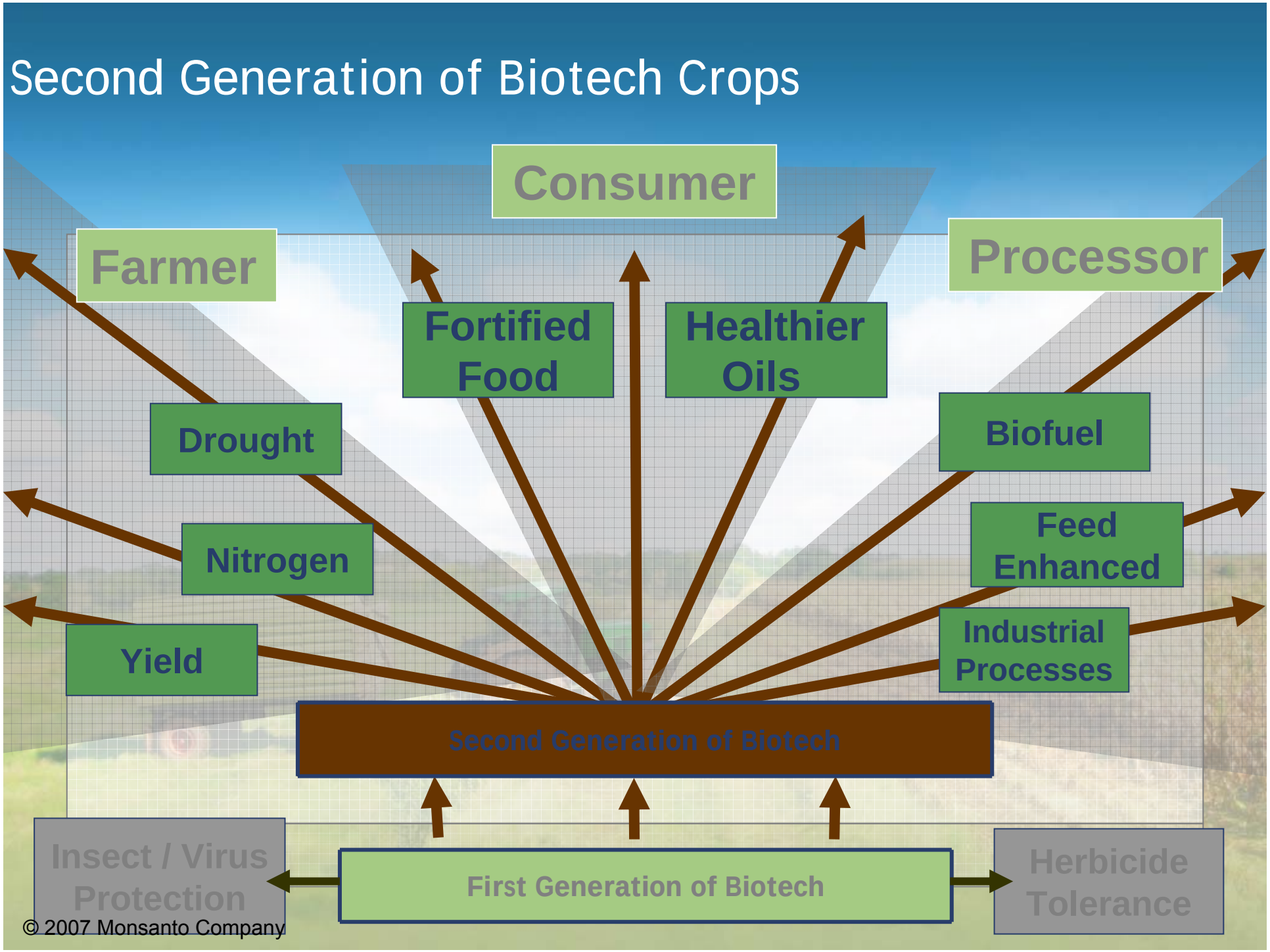
2006 Testing:
Multi-Year Testing for Higher Oil Content



- Targeted to increase total product offering by improving crushing yield and meal protein content
- In 4 seasons of testing, significant oil yield advantage has been shown with high-oil gene

RENESSEN™

Discovery	Phase 1 Proof of Concept	Phase 2 Early Development	Phase 3 Adv. Development	Phase 4 Pre-Launch	Launch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Feed Enhanced
Yield
Industrial Processes
Second Generation of Biotech
Insect / Virus Protection
First Generation of Biotech
Herbicide Tolerance
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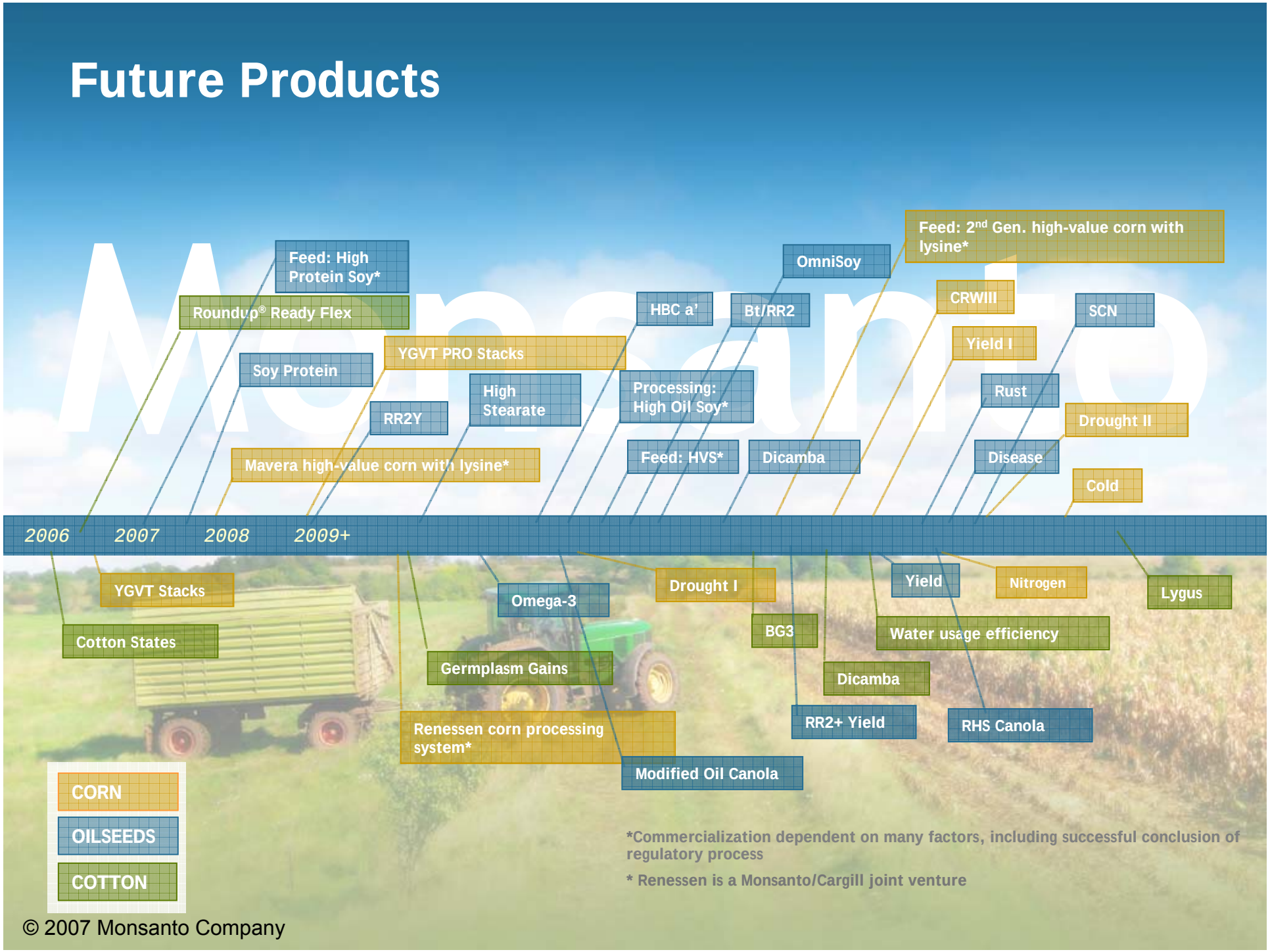
Future Products



*Commercialization dependent on many factors, including successful conclusion of regulatory process

* Renessen is a Monsanto/Cargill joint venture