

DuPont's Global Strategy for Increasing Agricultural Productivity

杜邦提高农业生产力的全球战略

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副总裁, 作物产品开发部
先锋国际良种公司

第五届国际杂交水稻研讨会
2008年 九月 11 – 15 日



Overview 概述

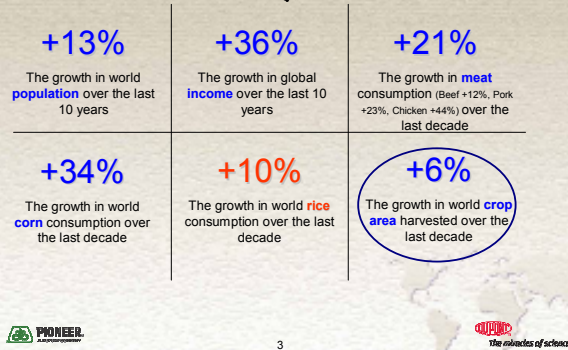
- Global food security
- DuPont/Pioneer Commitment to Increasing Agricultural Productivity
- Opportunities for Hybrid Rice



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Population & Income Drives the Demand for Corn & Rice in the Last Decade

在过去十年中, 人口与收入的增加, 提高对玉米和水稻的需求

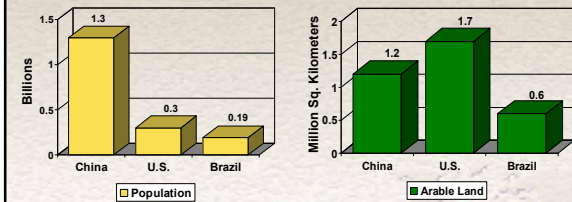


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Comparison of Population vs. Arable Land: China, U.S. and Brazil

人口与耕地比较: 中国, 美国和巴西

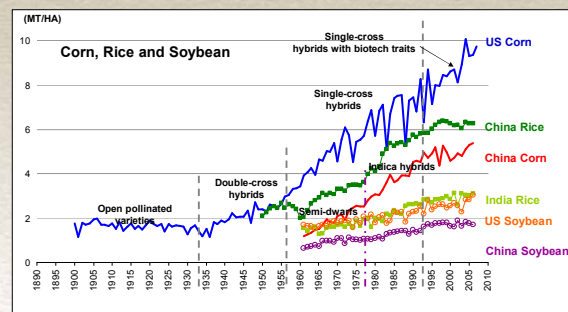
China is feeding 20% of the global population with 9% of the arable land



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Crop Improvement

作物改良



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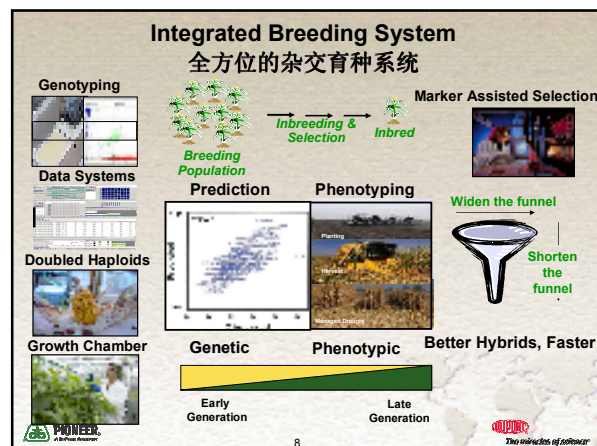
Seed Industry Evolution

种子产业的演变

- Global Research Networks
- Integrated Breeding Systems
- Molecular Breeding
- Trait Improvement



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Insect Control 害虫防治 Herculex® insect protection traits Herculex® 昆虫保护性状

European Corn Borer
Southwestern Corn Borer
Fall Armyworm
Black Cutworm
Western Bean Cutworm
Western Corn Rootworm

Check Transgenic

Grower's Benefits

- Yield potential
- Insecticide alternative
- Convenient and safe
- Consistent performance

Herculex® Insect Protection technologies by Dow AgroSciences and Pioneer Hi-Bred.
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Optimum® GAT® Trait 优化的GAT® 性状 Glyphosate ALS Tolerance

Commercial Introduction 2010

Multiple Mode Herbicide Tolerance

- Glyphosate + ALS
- Liberty®, when stacked with Herculex® traits
- Maximum grower flexibility
- Enabling herbicides with residual activity

Optimum® GAT® Enabled Herbicides
Glyphosate Alone

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Drought Tolerance: Water Use Efficiency 抗旱: 水分有效利用

Productivity Gains

- Four most advanced drought leads showing 5-14% yield increase in all stress locations (8) in the U.S. Corn Belt
 - No negative yield impact in well watered environments
 - All different modes of actions
- Season-long protection
- Wide area of adaptation
- Product Performance Stability

with trait
without trait

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Fertility: Nitrogen Use Efficiency 肥力: 氮肥有效利用

Productivity Gains

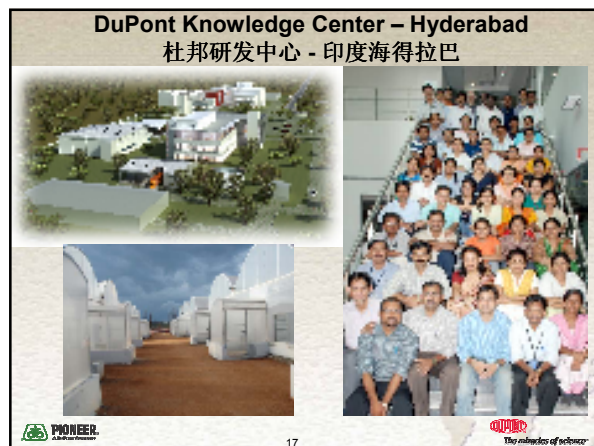
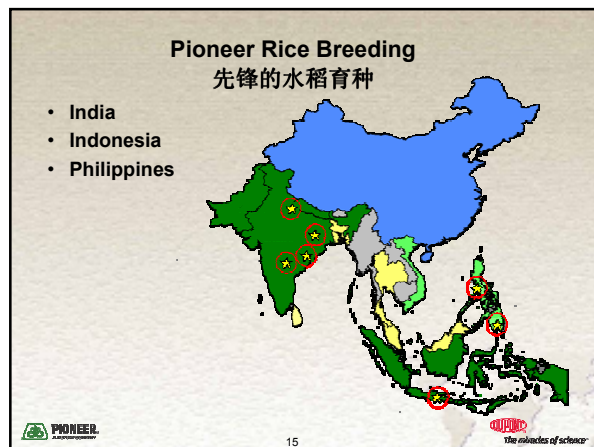
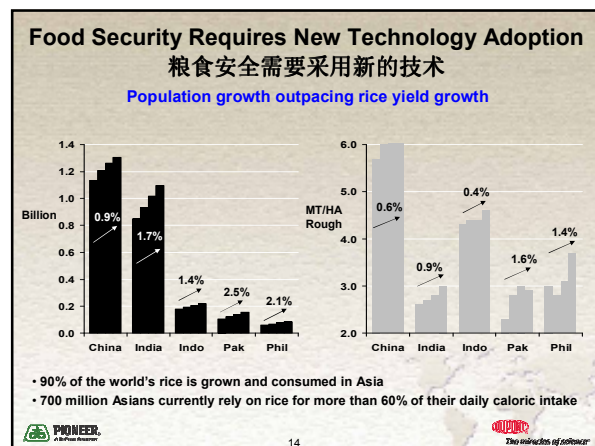
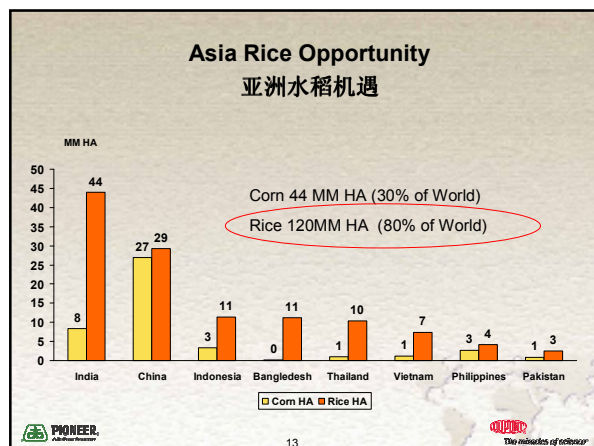
- Six of the top seven leads showing 10-24% yield increase in reduced nitrogen environments; four of the seven showing 7-9% yield increase under normal nitrogen conditions
 - 6 promising classes of genes underway
 - Early/mid-season protection
 - Risk mitigation

with trait
without trait

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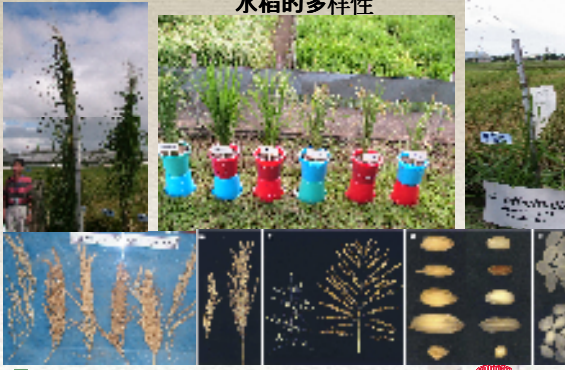
Pioneer Rice Research Objectives 先锋的水稻研究项目

- Leverage traits from internal programs and external alliances
- Proficient trait integration
- High Grain quality
- Economic seed production



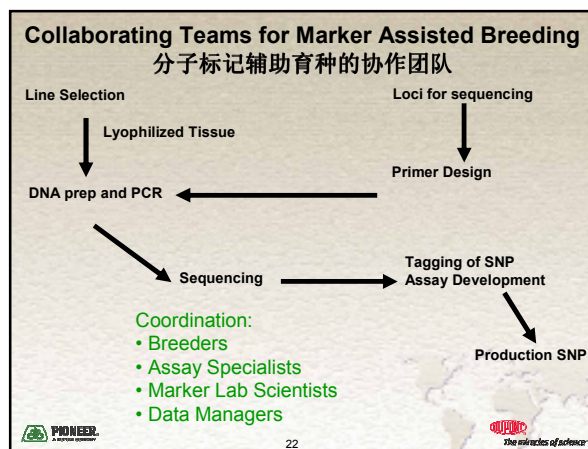
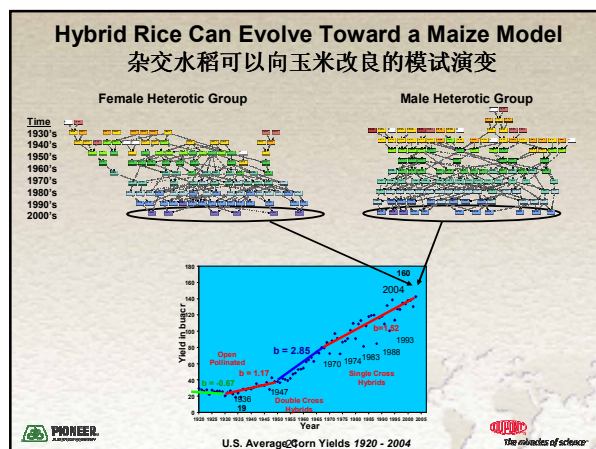
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Diversity in *Oryza* spp. 水稻的多样性



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20 Current Opinion in PB **PIONEER** The miracles of science



Effective Trait Assays 有效的性状分析方法



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Improved Hybrid Systems 改进的杂交系统



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Protect Yield from Pests/Stress 防止病，虫，草对产量的危害

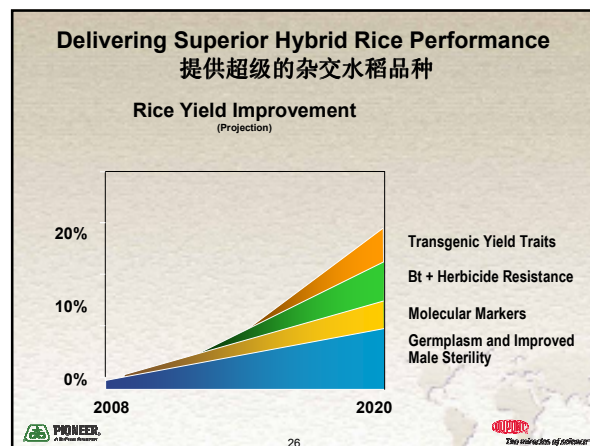


Insect Resistance **Herbicide Resistance** **Disease Resistance**

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Science, Solutions and Customer Success 致力于科学研究, 不断为顾客提供成功的解决方案

Thank You 谢谢



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