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WIPO-UPOV/SYM/03/3
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WORLD INTELLECTUAL
PROPERTY ORGANIZATION

INTERNATIONAL UNION
FOR THE PROTECTION OF
NEW VARIETIES OF PLANTS

WIPO-UPOV SYMPOSIUM ON INTELLECTUAL PROPERTY RIGHTS IN PLANT BIOTECHNOLOGY

organized by
the World Intellectual Property Organization (WIPO)
and
the International Union for the Protection of
New Varieties of Plants (UPOV)

Geneva, October 24, 2003

DISSEMINATION OF BIOTECHNOLOGY INTO AGRICULTURE

Mr. Stephen Smith, Germplasm Security Coordinator,
Pioneer Hi-Bred International, Inc.
DuPont Agriculture and Nutrition, Johnston, United States of America

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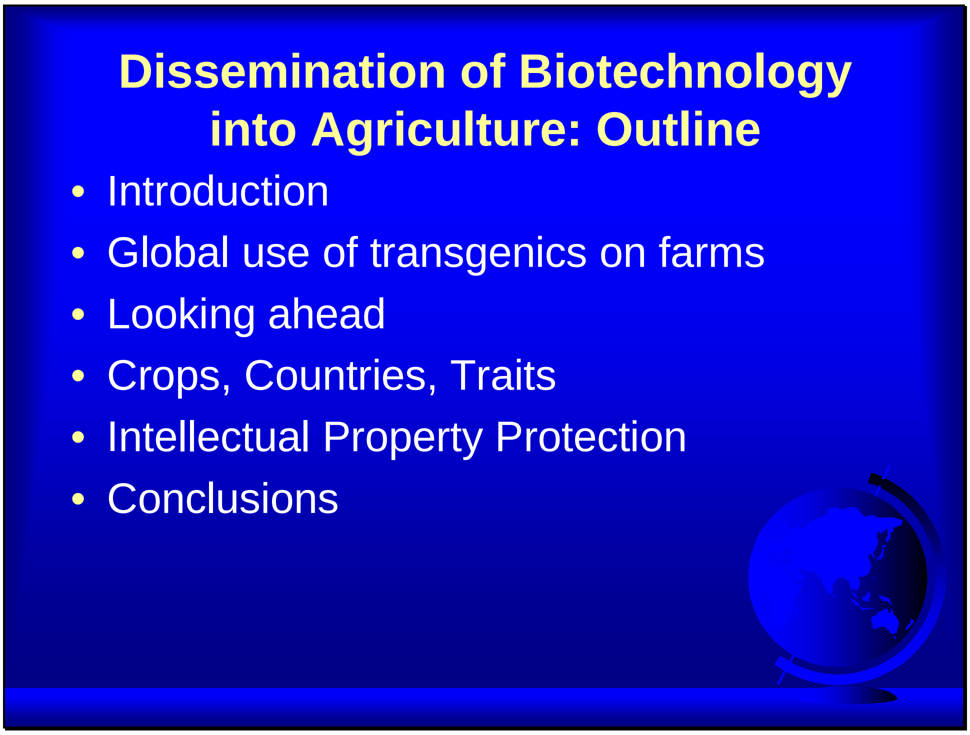

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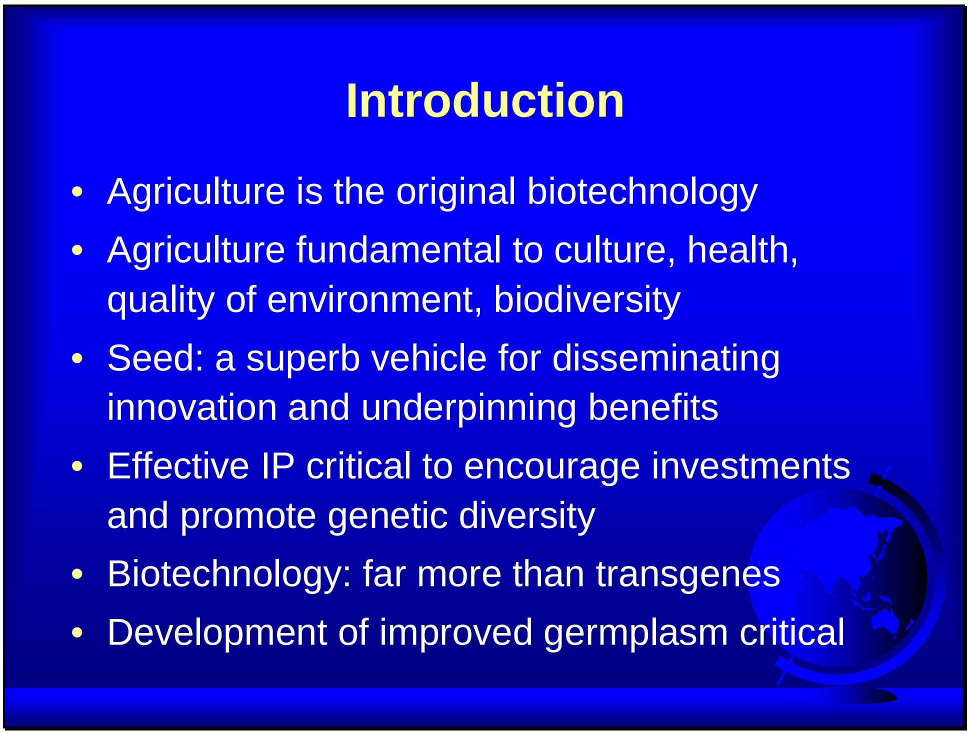

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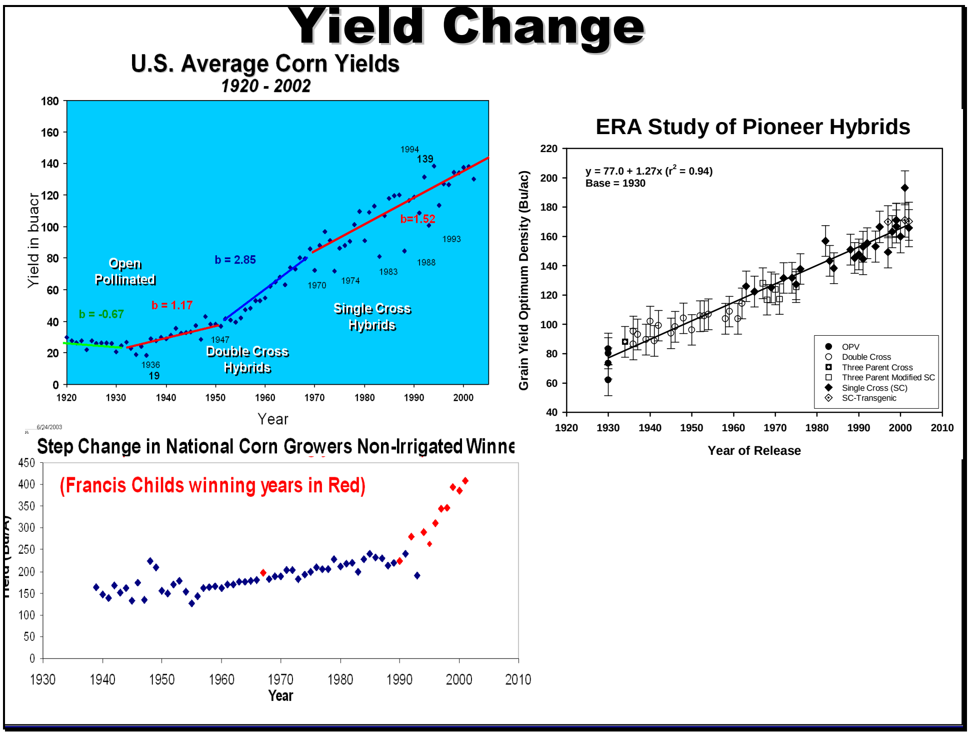

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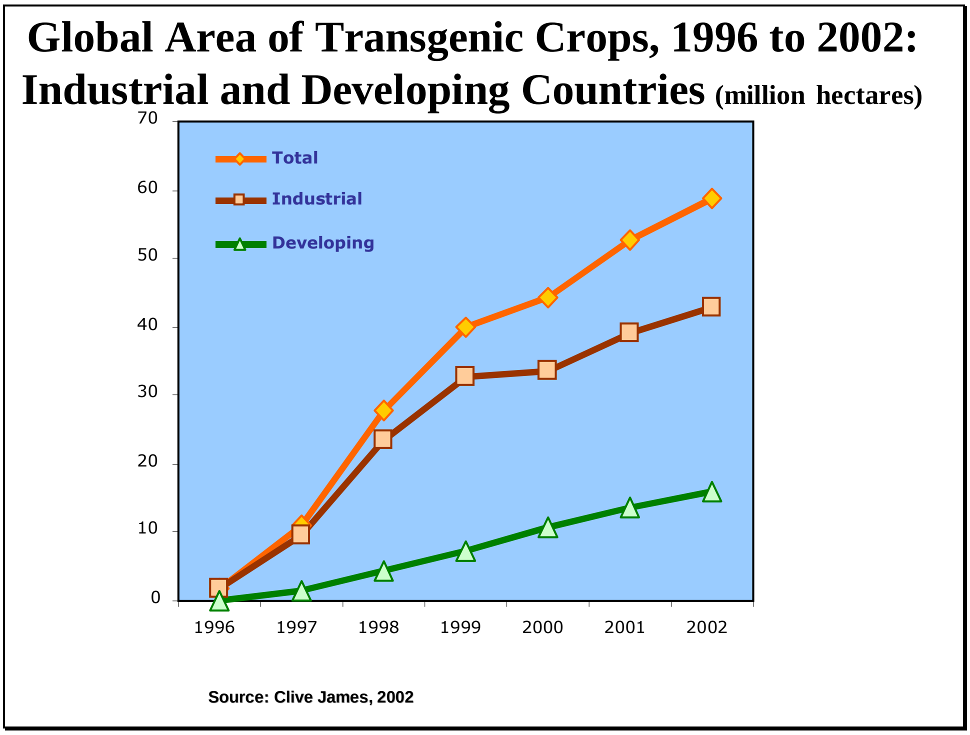

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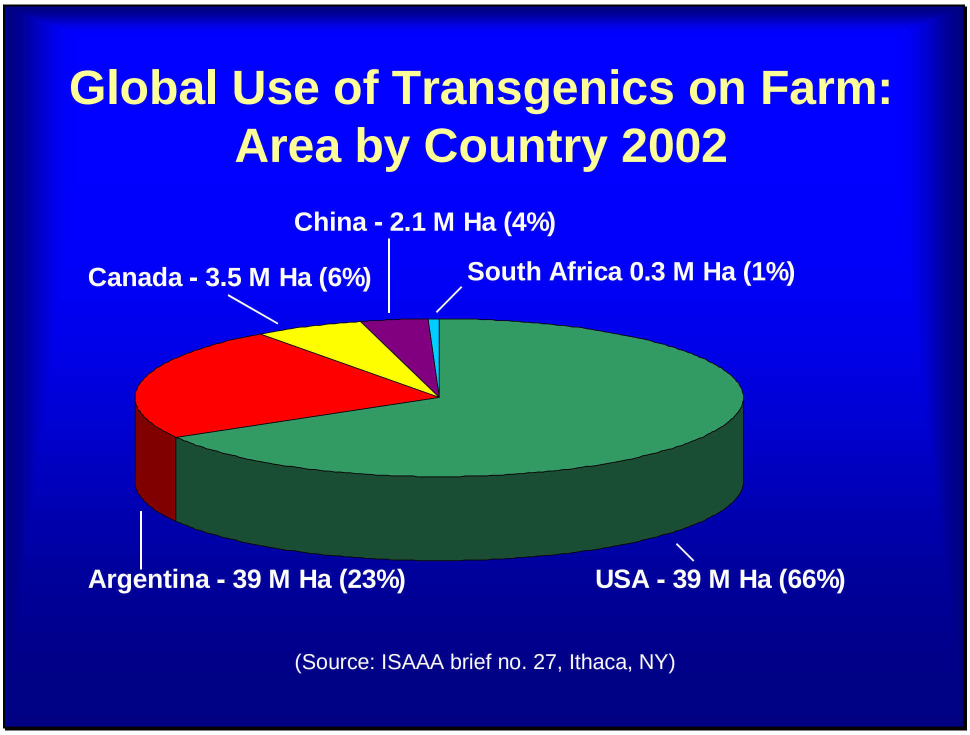

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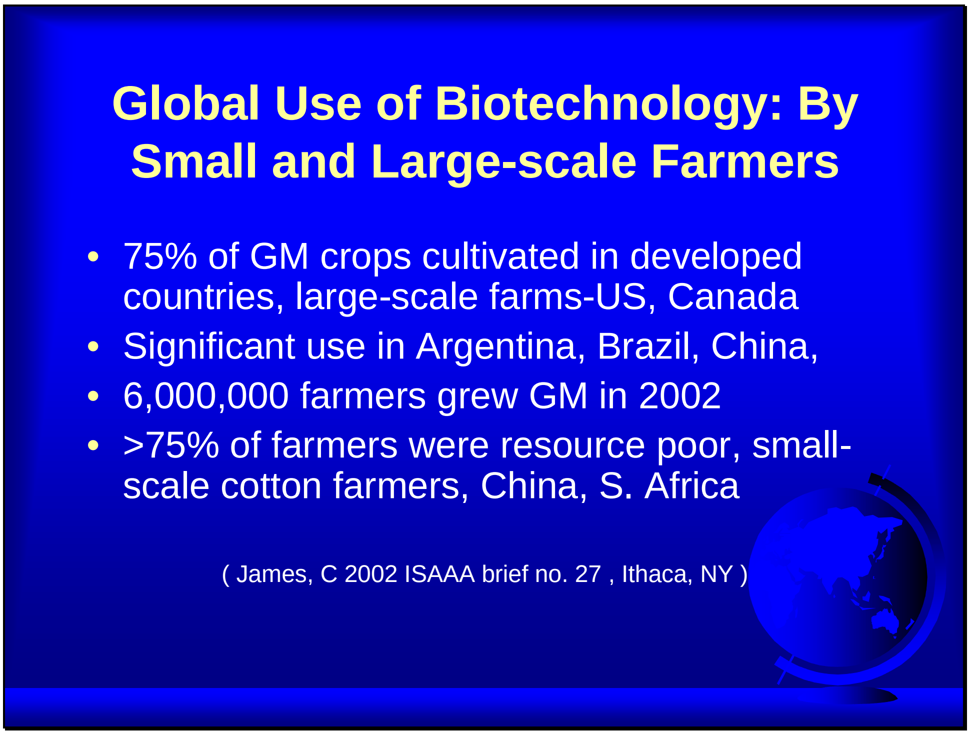

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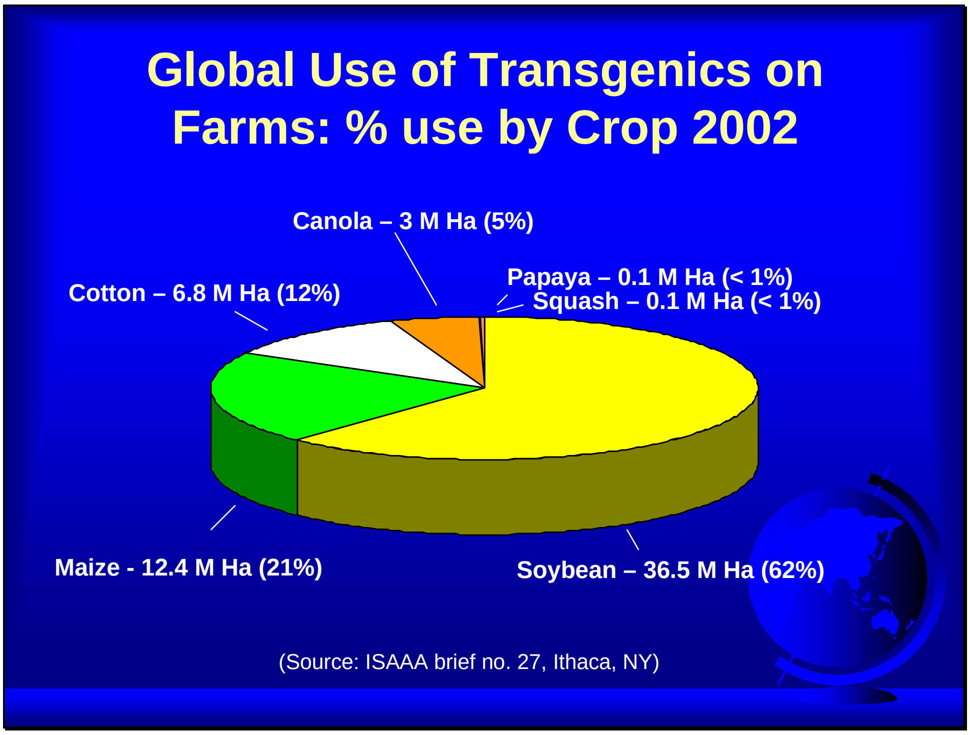

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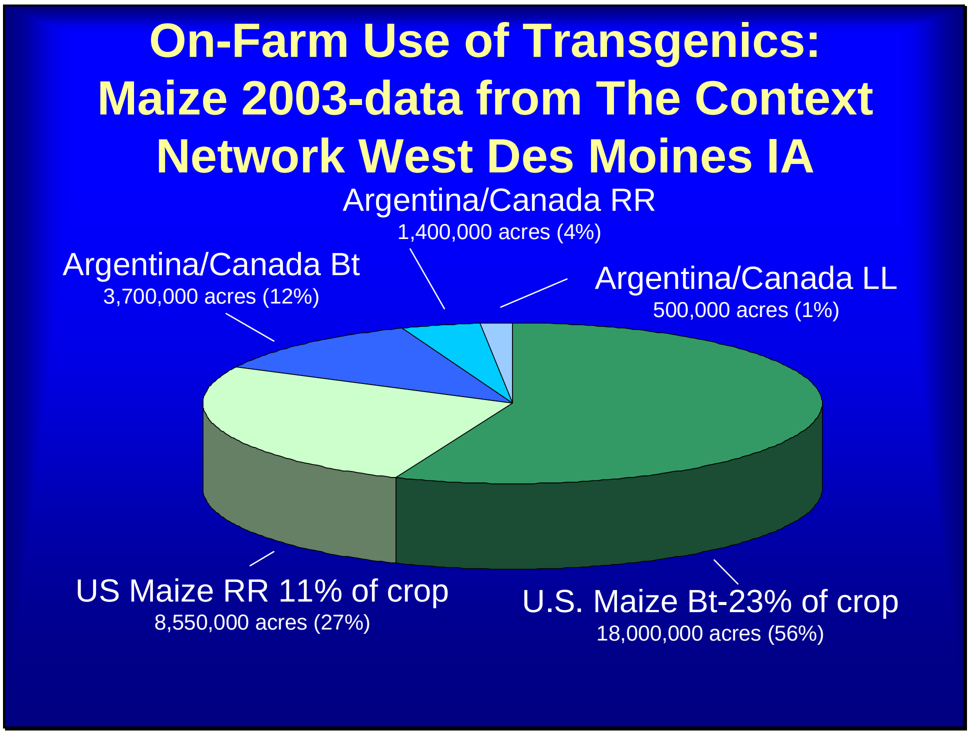

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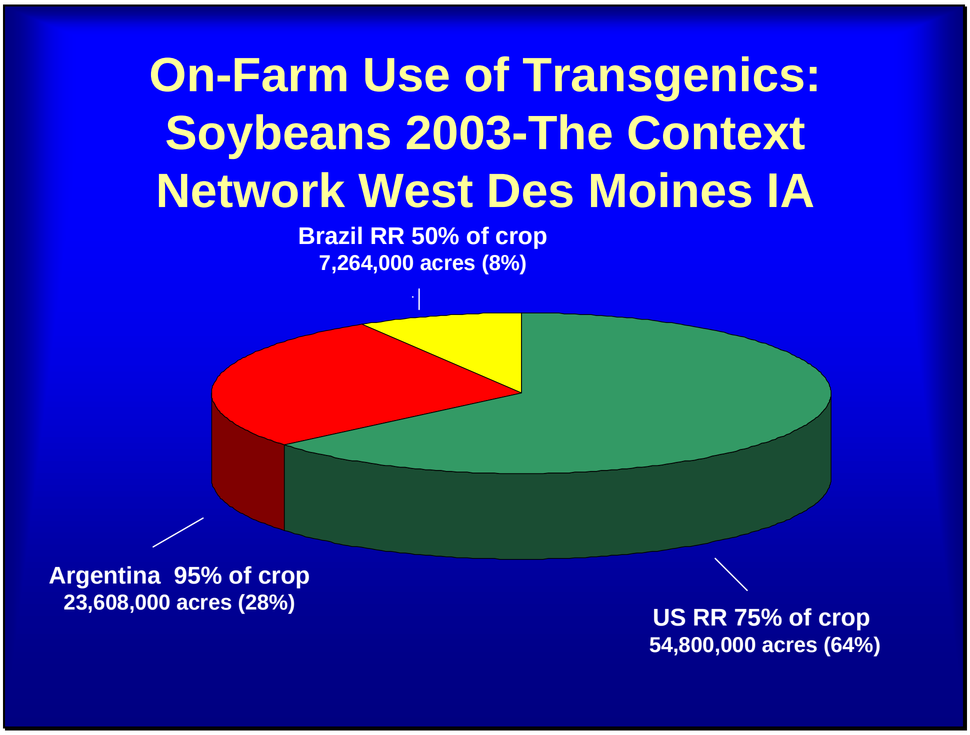

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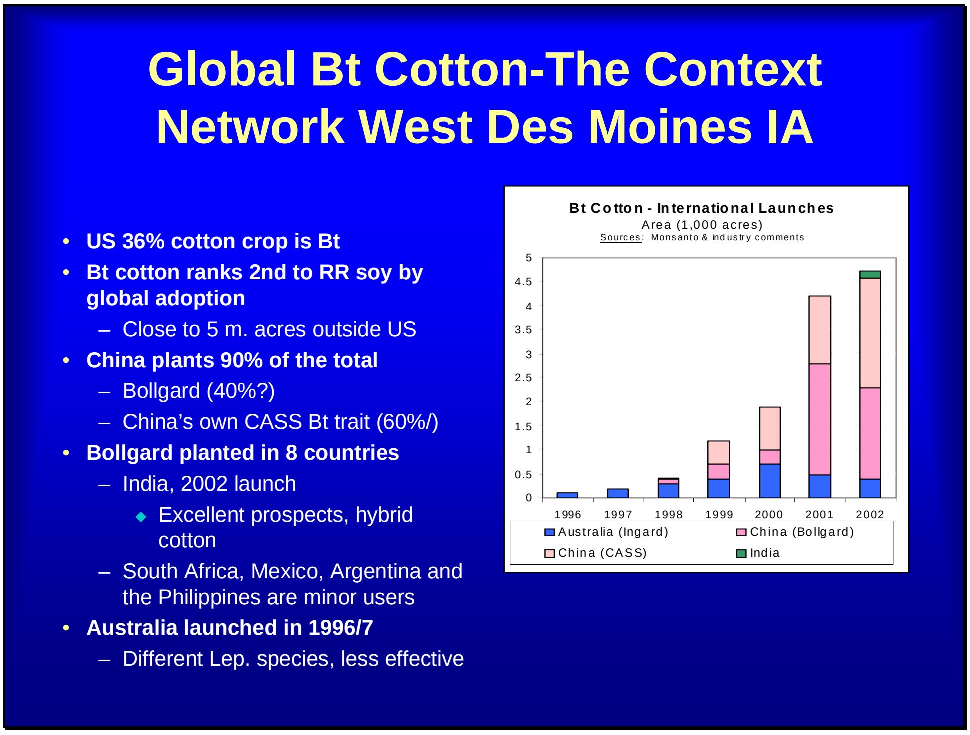

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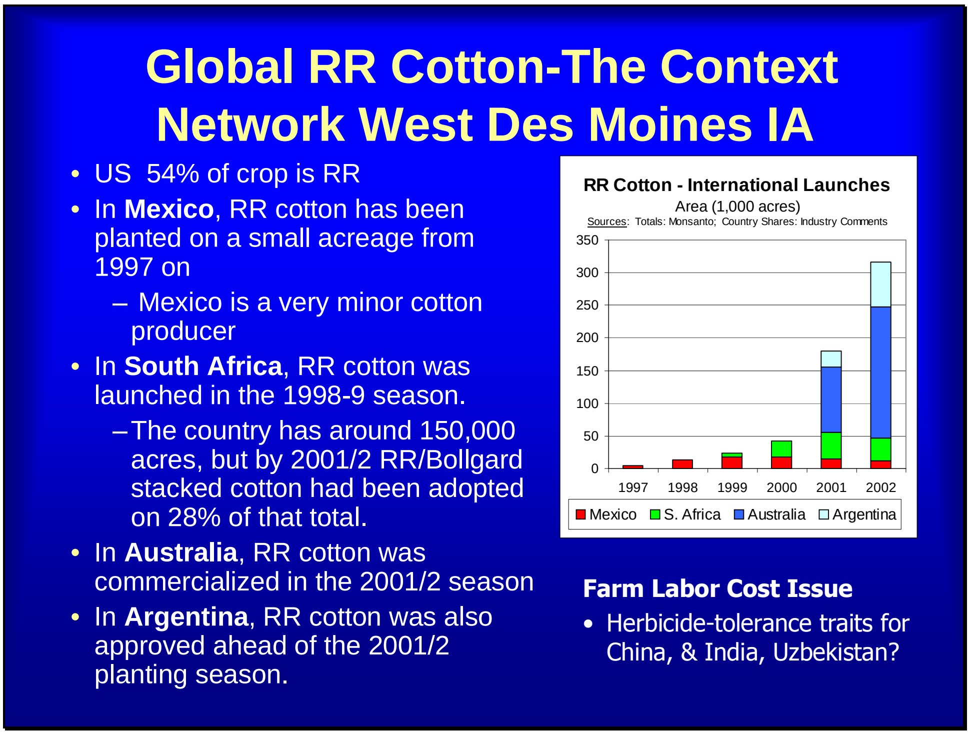

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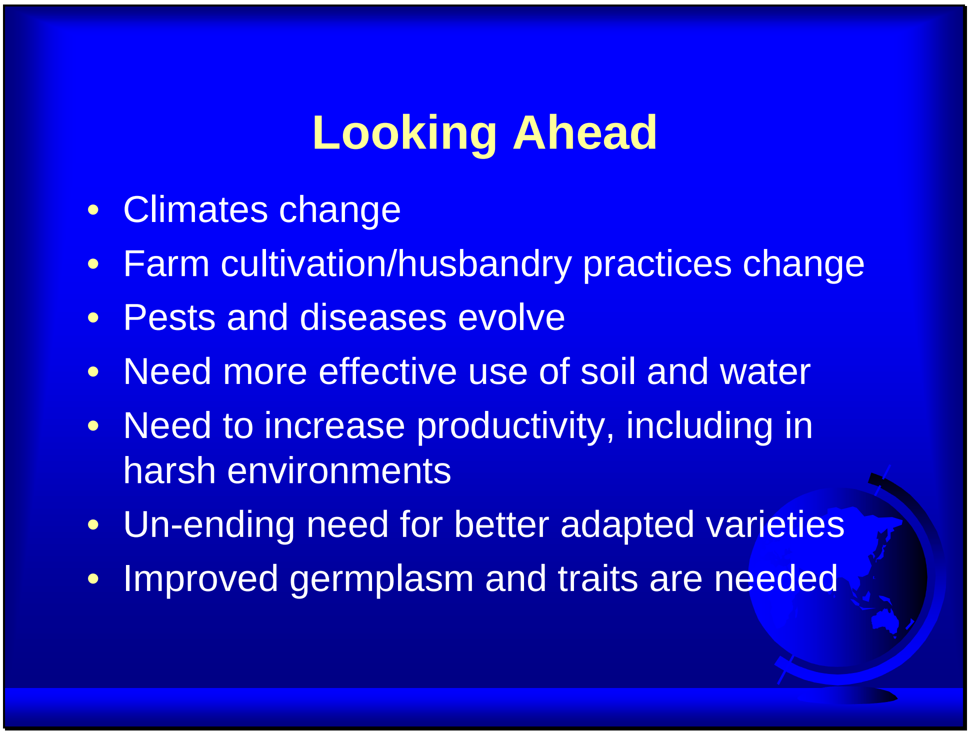

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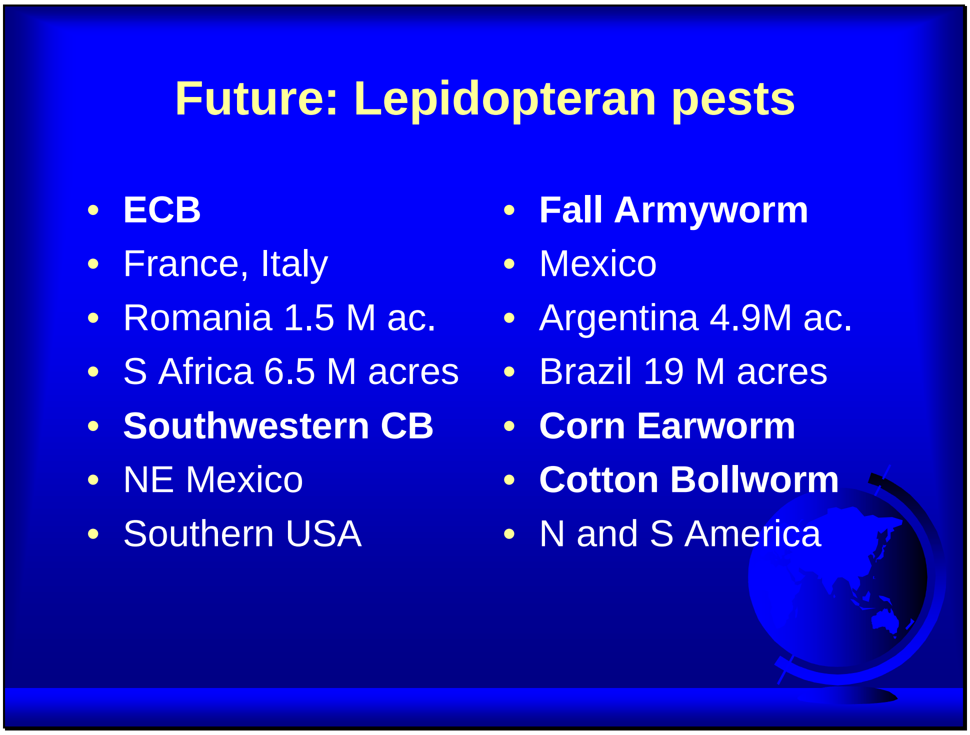

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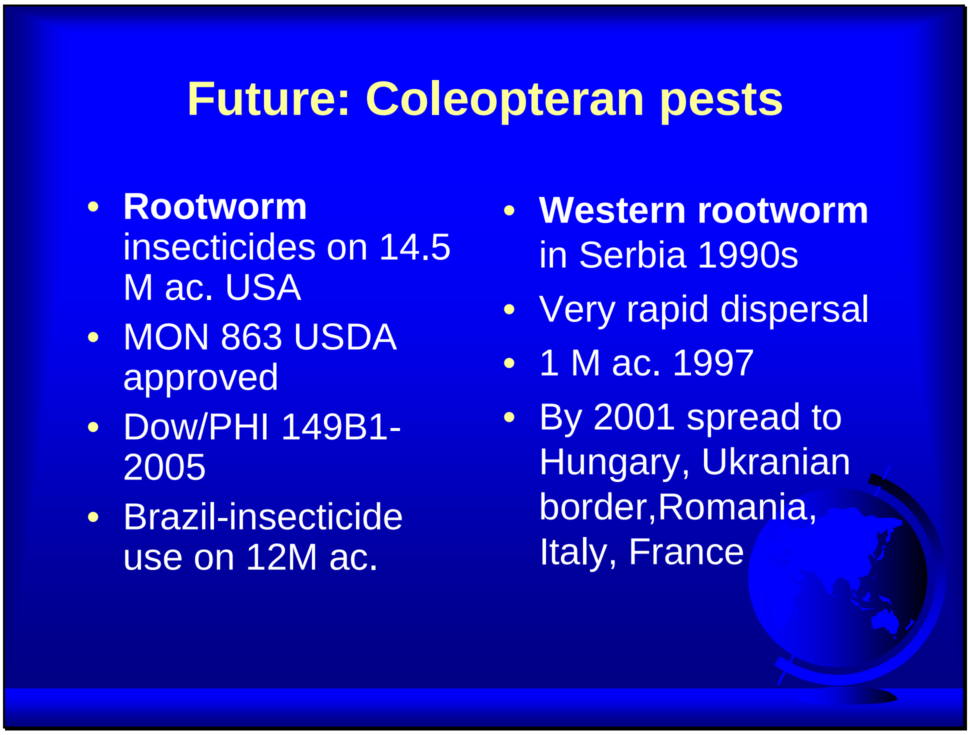

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The Challenge

- Population 2000 - 6 billion 2050 - 9 billion
  98% of projected growth will be in the developing countries
- Malnutrition/Poverty
  840 million people suffer from chronic malnutrition
  1.3 billion afflicted by poverty
- Cultivable Land per capita
  0.45 ha. in 1966
  0.25 ha. in 1998
  0.15 ha. in 2050
- World grain yields grew at 2.1 % in 1980s, but at less than 1.0 % per annum in 1990s.
- World consumption of meat tripled in last 40 years

→ ◆**Must double food production sustainably on same land area (1.5 billion ha) by 2050.**

Data from World Resources Institute

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Biotechnology Potential for Developing Countries: Crops

- Banana
- Beans
- Cassava
- Cocoa
- Coffee
- Cotton
- Cucurbits
- Groundnut
- Maize
- Millet
- Papaya
- Potato
- Rice
- Sorghum
- Sweet Pepper
- Sweet Potato
- Tomato
- Wheat

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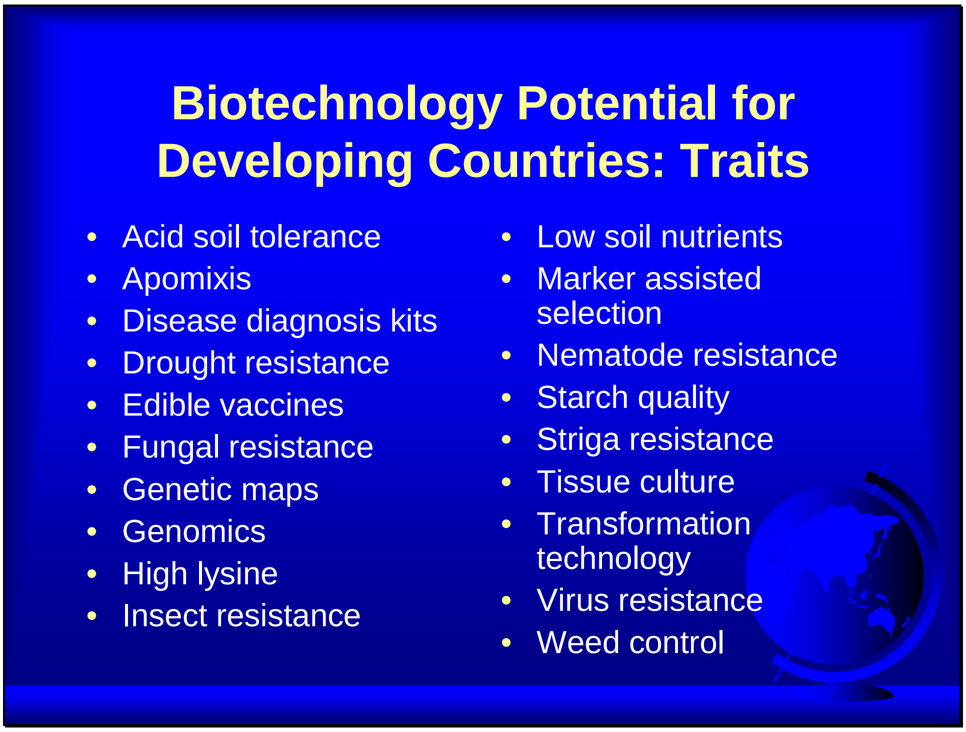

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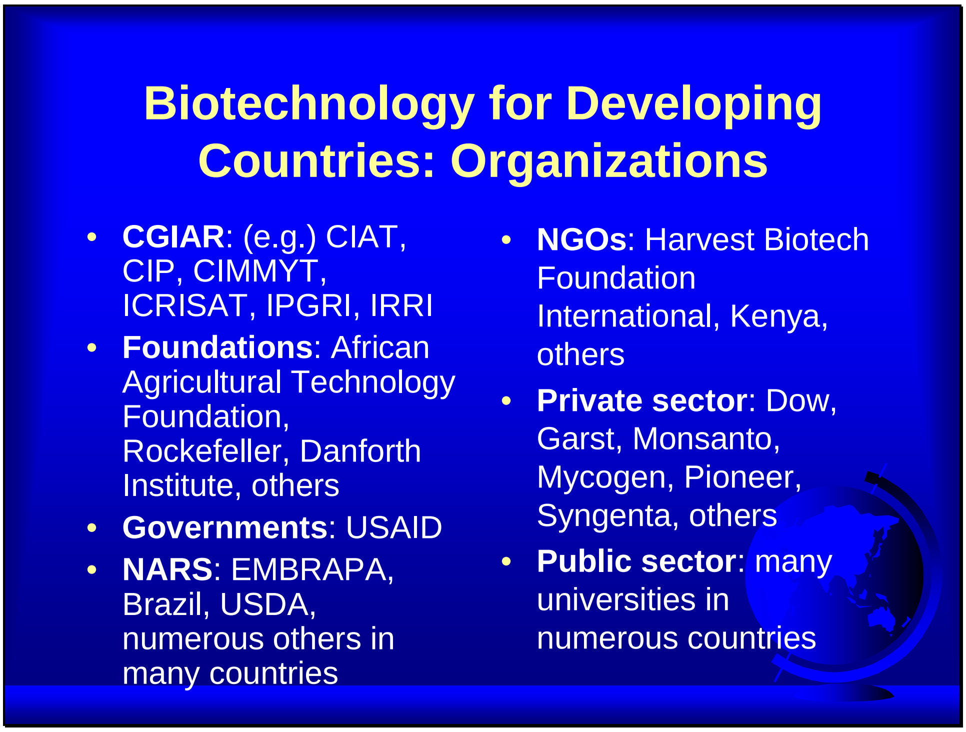

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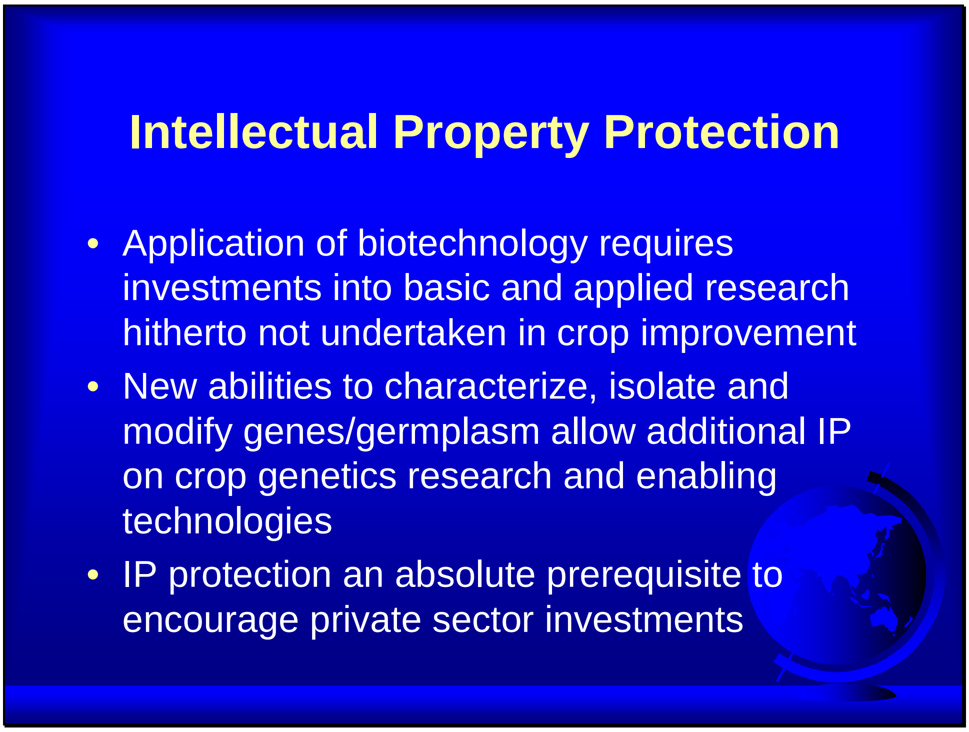

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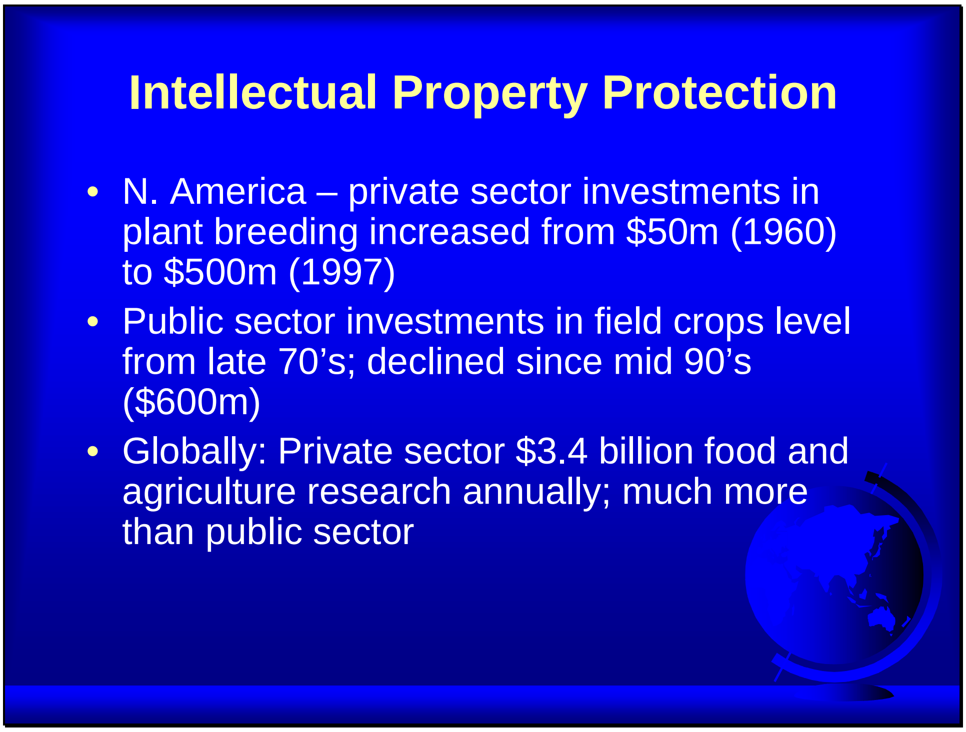

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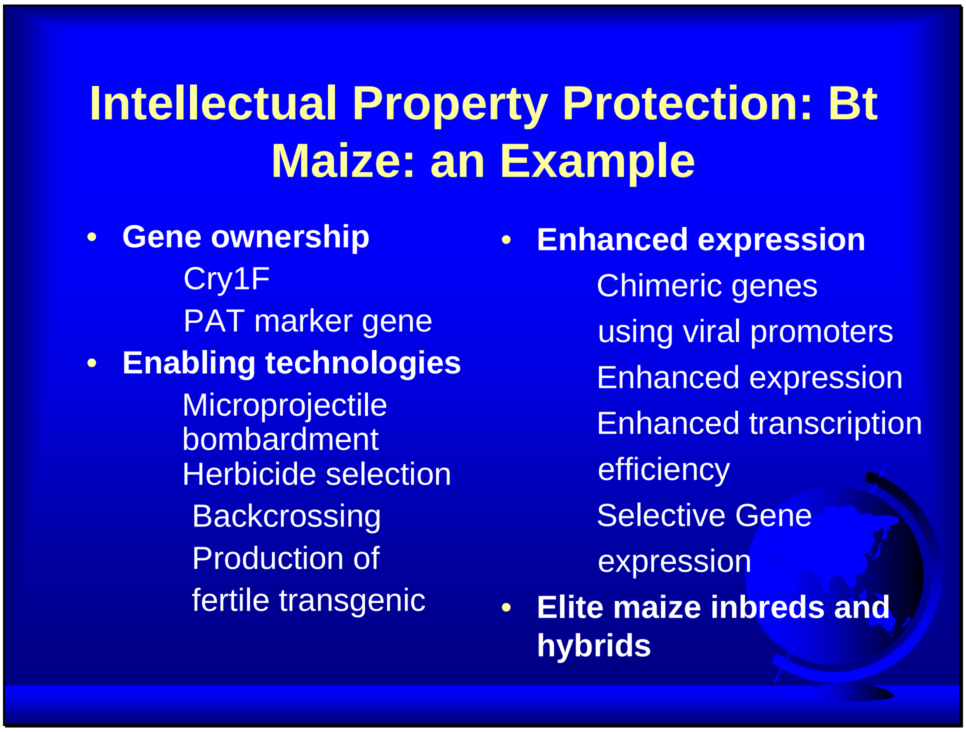

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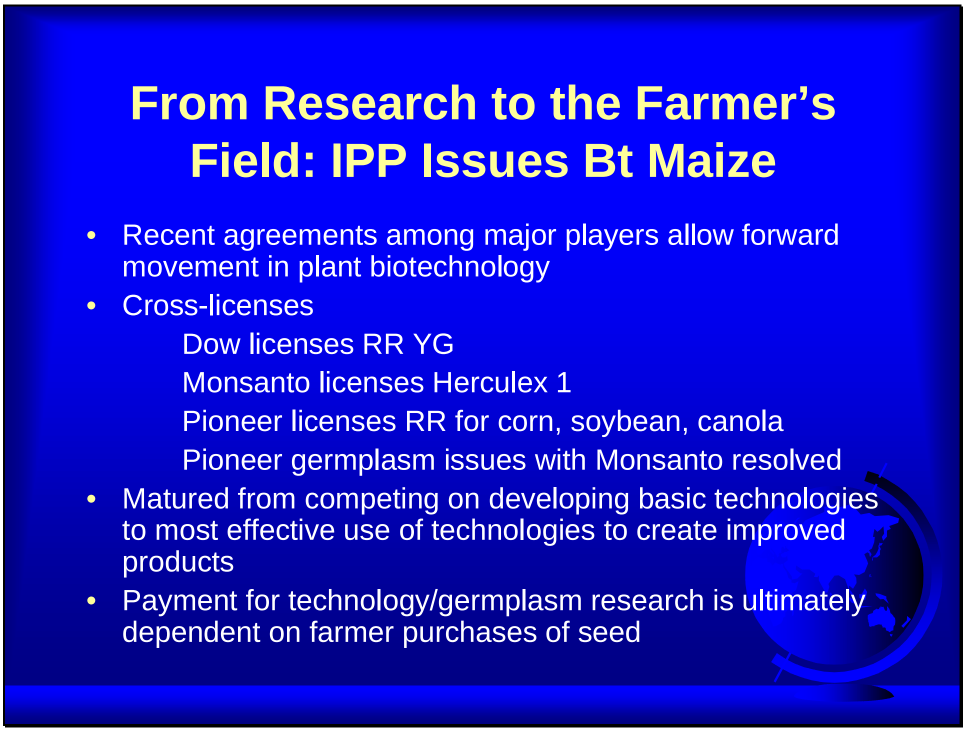

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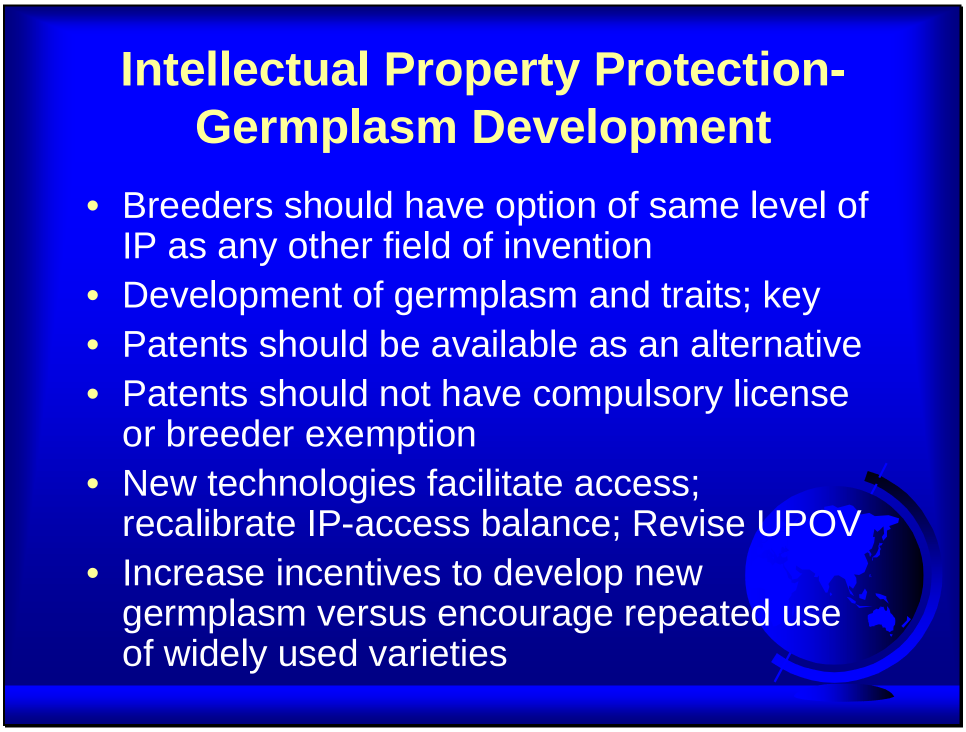

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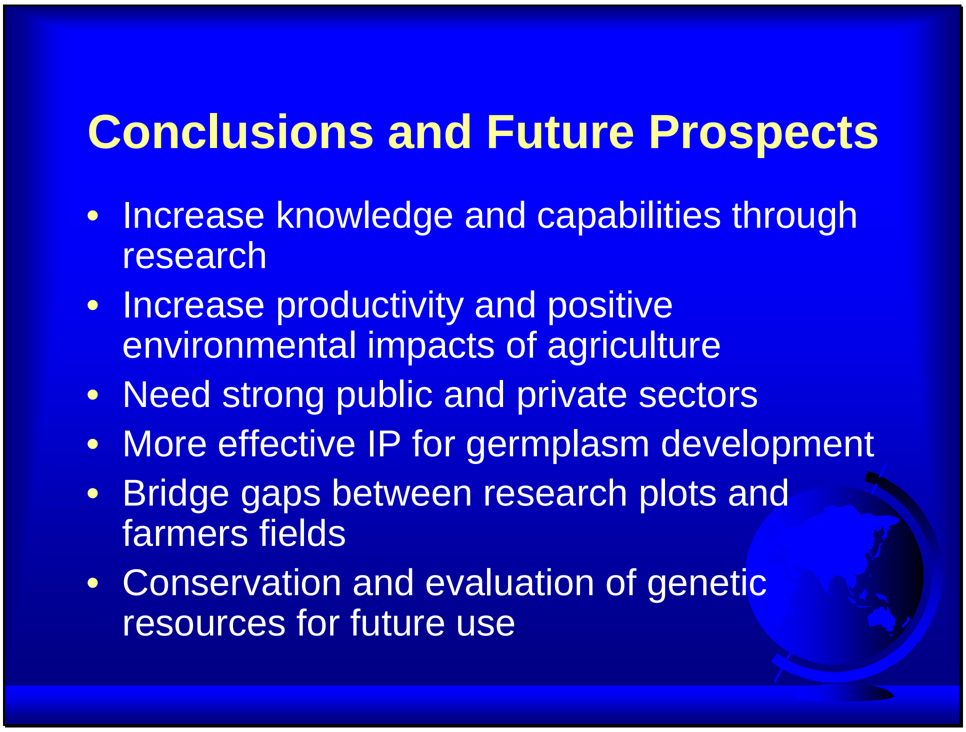

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