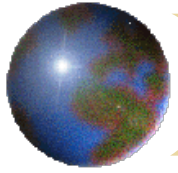


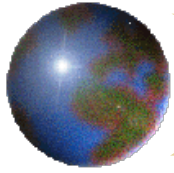
# *GMO – The Multinational Challenge*

## What Is a Manufacturer to Do?



## *Where Do We Go From Here?*

- The Definition and Application
- The Current Use
- The Projected Use
- The Regulatory Climate
  - Domestic
  - International



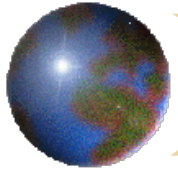
# *Application of Biotechnology*

## ❁ Improve Crop Performance

- ❁ Bt corn
- ❁ Roundup-Ready Soy

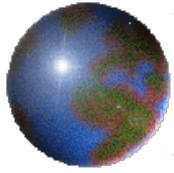
## ❁ Improve Profile

- ❁ Golden Rice
- ❁ Flavr-Savr Tomato



## *GMO Defined*

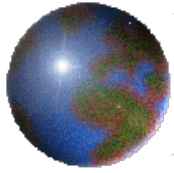
- ❖ A crop whose genetic makeup has been altered through manual insertion of genetic material from another organism
- ❖ This excludes genetic manipulations by any other means (crop selection hybridization etc.)



# *Current Uses and Inflammation*

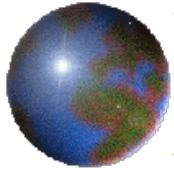
## ✚ Bt Corn

- ✚ Incorporation of a gene from *B. thurengensis*
- ✚ Thwarts the digestion of corn by insects
- ✚ Demonstration of Safety in Humans
  - Presented Prior to Use
  - Demonstrated by Direct Use of Bt
- ✚ No Immediate Consumer Benefit Demonstrated



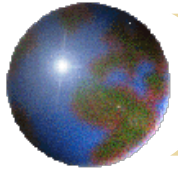
## *Current Uses and Inflammation*

- ⊕ Roundup ready Soy
- ⊕ Application of Herbicides
- ⊕ Demonstrable benefits to Farmers
- ⊕ No Immediate Consumer Benefit Demonstrated



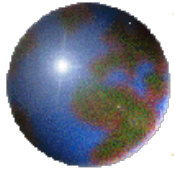
## *Current Uses and Inflammation*

- Cottonseed
  - Oils and Stearates
- Rapeseed
  - Oils
- Tomatoes
  - Flavr-Savr
  - Enhanced Lycopene levels
- Some Demonstrated Consumer Benefit



## *Inflammation Specifics*

- ⊕ All Starts with BSE
- ⊕ Lack of Faith in Science
- ⊕ Lack of Faith in Government
- ⊕ Lack of Faith in Industry



# *Inflammation Flashpoints*

## ⊕ Bt Corn

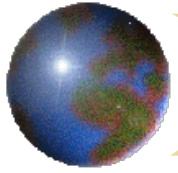
- ⊞ Dead Butterflies
- ⊞ Cross-pollination

## ⊕ Roundup Ready Soy

- ⊞ Does it Pass the “laugh test”?

## ⊕ Other Applications?

- ⊞ Have to Pass Muster



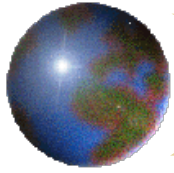
# *Challenges faced by the Multinationals*

## ✦ The Consumer Groundswell

- ▣ Support for Organic
- ▣ Support for “Real Food”
- ▣ Distrust on the Agency in Charge
  - Characterized by other arenas
    - Drugs Withdrawn
    - Cold Medications Withdrawn

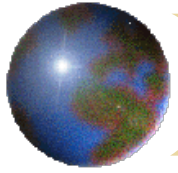
## ✦ The International Climate

- ▣ Is is Lack of Sophistication or Reality?



## *Internationally -- Europe*

- ❖ EU Regulation 258/97 (May, 1997) Novel Foods Regulation
- ❖ EU Regulation 1139/98 (September, 1998) Labeling of Roundup Ready Soy and Bt-176 Corn
- ❖ Requirements are for disclosure of the presence
  - ❑ Subject to Interpretation with an additional 1% allowance



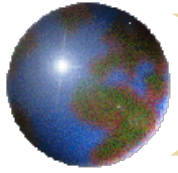
## *Internationally – Asia*

### ✚ Thailand

- ✚ Burned Cotton Crops
- ✚ Restricted Import of GM Wheat
- ✚ Bangkok Post – September 7, 2000
  - Farmers Opposed to GM Rice

### ✚ Japan – Mandatory Health Testing of GMO Products by 20001

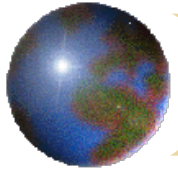
### ✚ Korea – Mandatory Listing of Presence



# *Internationally – Asia Last Thoughts*

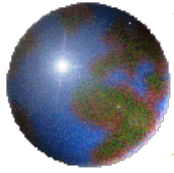
## ⊕ Foment of Concern

- ⊕ Malaysia – Opposed
- ⊕ India – In Favor Generally
- ⊕ China – Interested if They Can Scientifically Benefit



## *Domestically – Where's The Beef?*

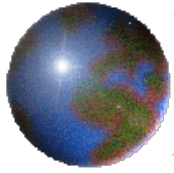
- ⊕ The FDA Has Jurisdiction
- ⊕ The EPA Has Jurisdiction
- ⊕ The FDA Has No Concerns
- ⊕ The EPA Has New Concerns



# *Outcomes*

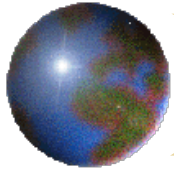
⊕ Awareness

⊕ Determination



## *Outcomes – Details*

- ⊕ Consumer Groups Are Very Vocal
- ⊕ Biotech Industry Is Very Vocal
- ⊕ FDA is On The Hook
- ⊕ International Aspects Cannot Be Overlooked



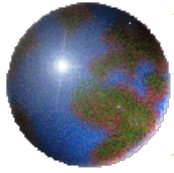
## *What's A Multinational To Do?*

### ❖ The Challenge is in the Science

- ❑ What is the Science?
- ❑ Where does the Consumer Benefit?
- ❑ What insurance Exists?

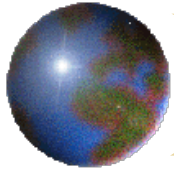
### ❖ The Challenge is in the Regulation

- ❑ Potpourri of Regulations
- ❑ Challenges Still To Come
- ❑ WTO Remedies



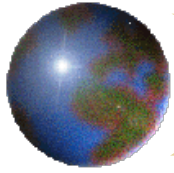
# *International Remedies*

- ✚ Work with USTR
- ✚ Work with Independent Organizations
  - ▣ TABD
- ✚ Work Directly
- ✚ OR
- ✚ Establish a Niche
  - ▣ Organic
  - ▣ LOHAS



## *Future?*

- ⊕ Will Organic Become More of a Niche?
- ⊕ Will the Consumer Groups Win?
  - ⊞ Citizen's For Health
  - ⊞ Consumer's Union
- ⊕ Is the Science All In?
- ⊕ For Now – Conform



# *Conclusions*

