View from 50,000 feet

Greenhouse Issues of Today with Impact for the Future

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Issues That Your Customers Face

- Food Safety
- Environmental Concerns
  - Waste discharge
  - Water Use
  - Energy conservation and alternatives
- Labor
  - Worker protection
  - Labor effectiveness and efficiency
  - Immigration
Issues That Your Customers Face

- Homeland Security
  - Pesticide storage
  - Terrorism insurance
  - Immigration reform

- Information Management
  - Computerization
  - Decision making tools
Issues That Your Customers Face

- Structural Design
- Customer Service
- Industry Education
Food Safety

- Farm to the Table
  - How safe is our food?
  - How can a greenhouse be better designed to facilitate safe and healthy food?
Environmental Concerns

- Waste discharge
- Water Use
- Energy conservation and alternatives
Environmental Concerns

- Waste discharge and Storage
  - Most states consider greenhouses a non-point source pollution risk
  - Requires that to be in compliance, an operator must follow *Best Management Practices*
  - Some states are changing this definition
  - Storage of collected water for recirculation is not considered a non-point source risk, but point source
Environmental Concerns

- Waste discharge
- Water Use
  - Greenhouses are 5-8 times more efficient than field production
    - What improvements need to be made?
    - Value of water is increasing
Drought in the U.S.
Drought in the U.S.

U.S. Drought Monitor

May 28, 2002
Valid 8 a.m. EDT

Drought Impact Types:
A = Agriculture
W = Water (Hydrological)
F = Fire danger (Wildfires)

Delineates dominant impacts
(N o type = All 3 impacts)

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. See accompanying text summary for forecast statements.

http://drought.unl.edu/dm

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Drought in the U.S.
Environmental Concerns

- Waste discharge
- Water Use
- Energy conservation and alternatives
  - Greenhouse systems are 10 times more efficient than in 1972
  - Is this enough to survive?
  - Is the state of the art system designed to be sufficiently energy efficient?
Labor

- Worker protection
- Labor effectiveness and efficiency
- Immigration
Labor

- Worker protection
  - Worker Safety
    - Pesticide issues
    - Re-entry restrictions
  - Ergonomics
    - Last April OSHA released its latest plan
    - Creation of a new National Ergonomics Advisory Committee to advise OSHA
      - Task specific guidelines
      - Identification of gaps in research and methods outreach
    - Labor unions oppose the OSHA plan and are trying to force a rule
      - S. 2184 in June will be an issue if the Democrats maintain a majority in the Senate
Labor

- Worker protection
- Labor effectiveness and efficiency
  - Improve production efficiency by increasing the salable product per unit area per unit time
  - How can greenhouse systems be changed to accommodate the *finesse* required for this complex goal?
  - How much computerization is required?
Labor

- Worker protection
- Labor effectiveness and efficiency
- Immigration
  - More than 50% of the agricultural workforce is considered illegal
  - Counterfeit papers are readily available
  - Current H-2A program is unworkable
  - Reform is needed, but with 9/11 will be difficult
Homeland Security

- Bush Administration has proposed to move many agencies under one new department
  - Animal and Plant Health Inspection Service, currently under USDA
  - How will this impact Q-37?
Homeland Security

- Terrorism Insurance
  - Reinsurance companies are dropping terrorism, but providers must maintain it until state regulators approve the exclusion.
  - Potential problem for businesses would be lack of coverage for workers compensation claim.
  - Most businesses can not self insure.
Homeland Security

- Pesticide storage
  - How secure are our pesticides?
- Immigration issues
  - How do we defend our industry against the xenophobic isolationists?
Information Management

- Computerization
- Decision making tools
Structural Design

- Given the complexity of the design and construction of a successful greenhouse crop production operation, how can the process be simplified or improved for crop production operations?
- How can the advent of new components or new structures be evaluated for their probability of success within specific applications?
Customer Service

- Repeat sales and *word of mouth* are directly proportional to service and customer satisfaction.
- Communication of the needs of the grower/manager and the capabilities and limitations of the equipment or structure must take place.
- How can the true value be obtained, and the customer value be portrayed so that all parties are satisfied during a product sale or service contract?
Industry Education

- NGMA
  - Meeting the Challenges of Today’s Horticultural Industry

- Universities
  - Focus on science and engineering
  - Educate the students for professional careers to meet these challenges

- Partnership