



Issues Facing U.S. Nursery Industry

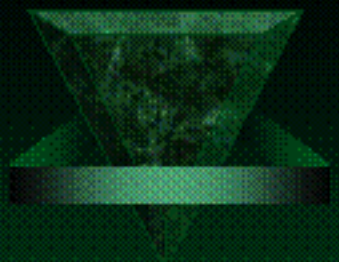
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Outline

- ✔ Introduction
 - Invasive alien species problem
- ✔ Brief Overview of US Nursery Industry
- ✔ Major Pests of the Industry
- ✔ Dilemma Facing the Nursery Industry
- ✔ International Agricultural Trading Environment—SPS Issues
- ✔ Implications for the Nursery Industry
- ✔ Concluding Remarks



Introduction (Cont'd)

Problem of invasive species not new ...

but

- **Has intensified in recent years,**

and

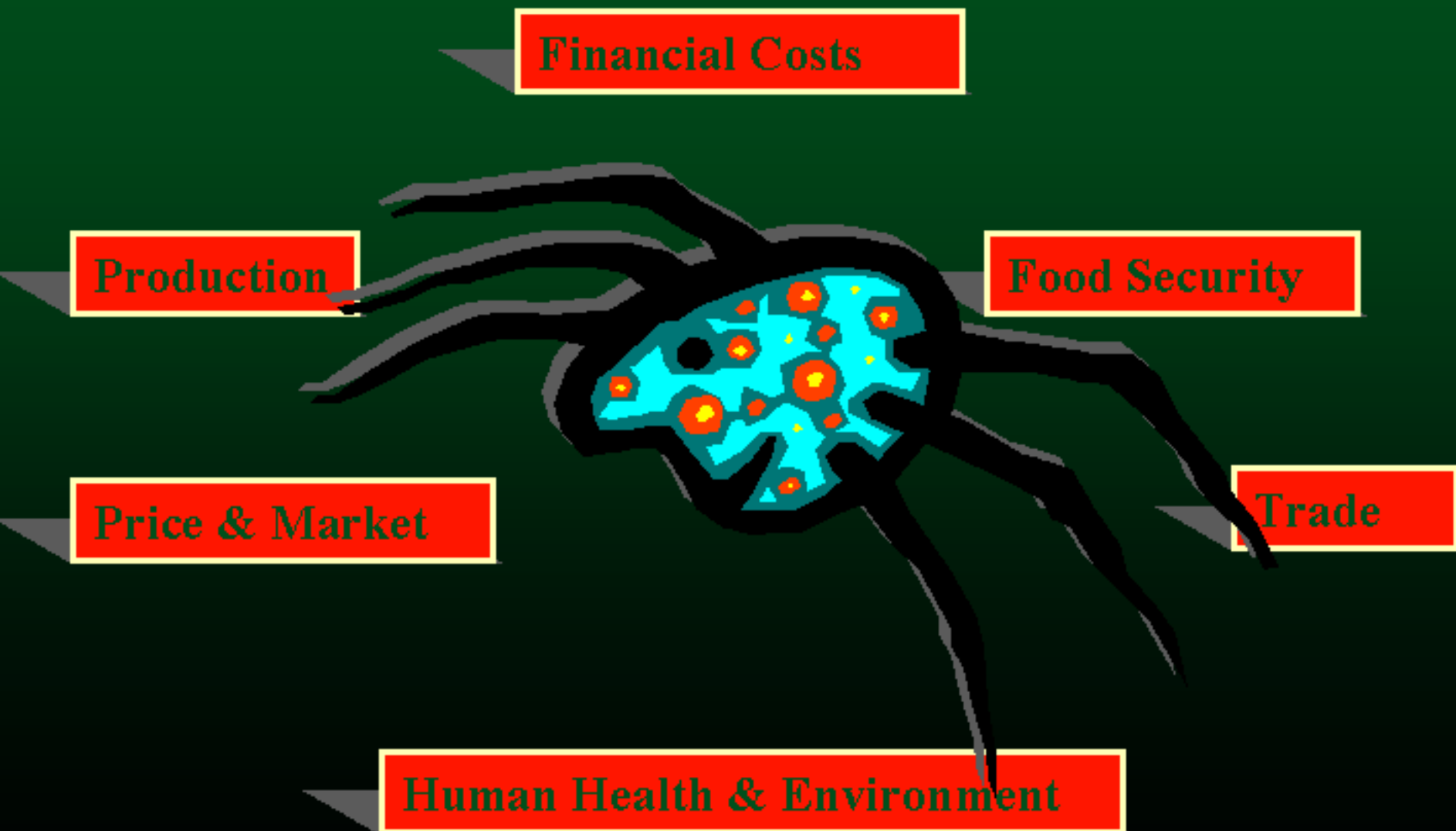
- **Potential exists for such species to be used strategically as instruments of bio-terrorism and bio-warfare**



Introduction (Cont'd)

- ✓ Increased trade and travel increase the risk of bioinvasion
 - Since 1995 agricultural imports to the US has risen 30%
 - More than 100 million people travel to the US annually
 - 16.7 million farm animals, mostly livestock and poultry pass through inspection points annually
 - 1.75 million illegal aliens enter annually
 - 20 million wild animals imported for exotic pet trade
 - 200 million ornamental fishes
 - 5.4 trillion plant units imported annually
- ✓ More than 700 species of quarantine pests found at 58 ports of entry in 2001

Fig.2. Types of Socio-Economic Impacts of Invasive Pests and Diseases





Introduction (Cont'd)

- ✔ Only two studies have attempted to assess the aggregate cost of invasive species at the national level
 - U.S. Office of Technology Assessment (1993)
 - Pimentel et al. (1999)
- ✔ Economic costs of all invasive species in the U.S. amounted to about \$137 billion per annum
- ✔ Annual price tag for battling agricultural blight in the US is estimated at \$9 billion

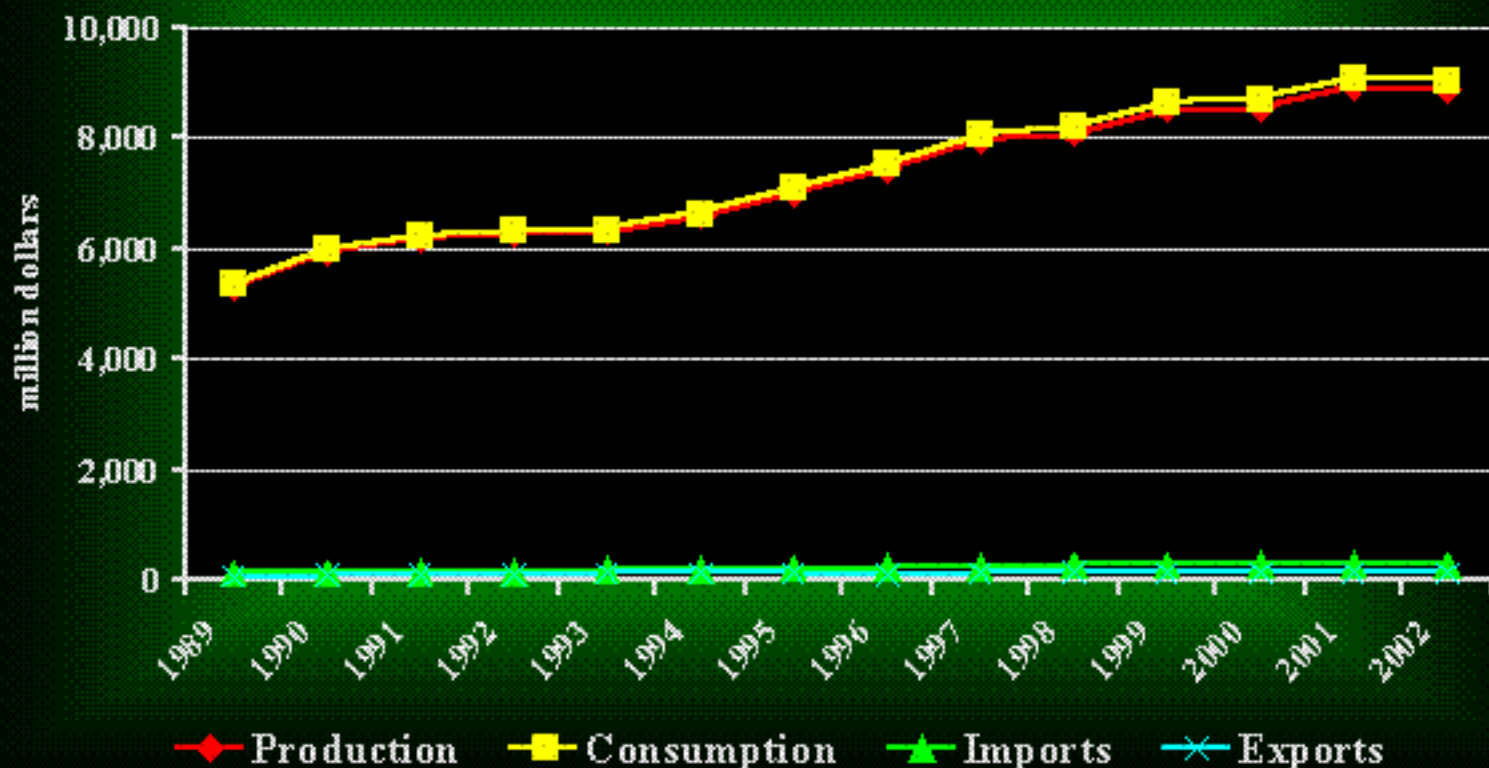


Nursery Crops Industry

- ✔ Nursery crops include:
 - broadleaf evergreens; coniferous evergreens; deciduous shade tree trees; deciduous flowering trees; deciduous shrubs and other ornamentals; fruit and tree nut plants; cut and to-be-cut Christmas trees; propagating material
- ✔ \$8.9 billion at farmgate
- ✔ Nursery & floral crops—\$13.8 billion

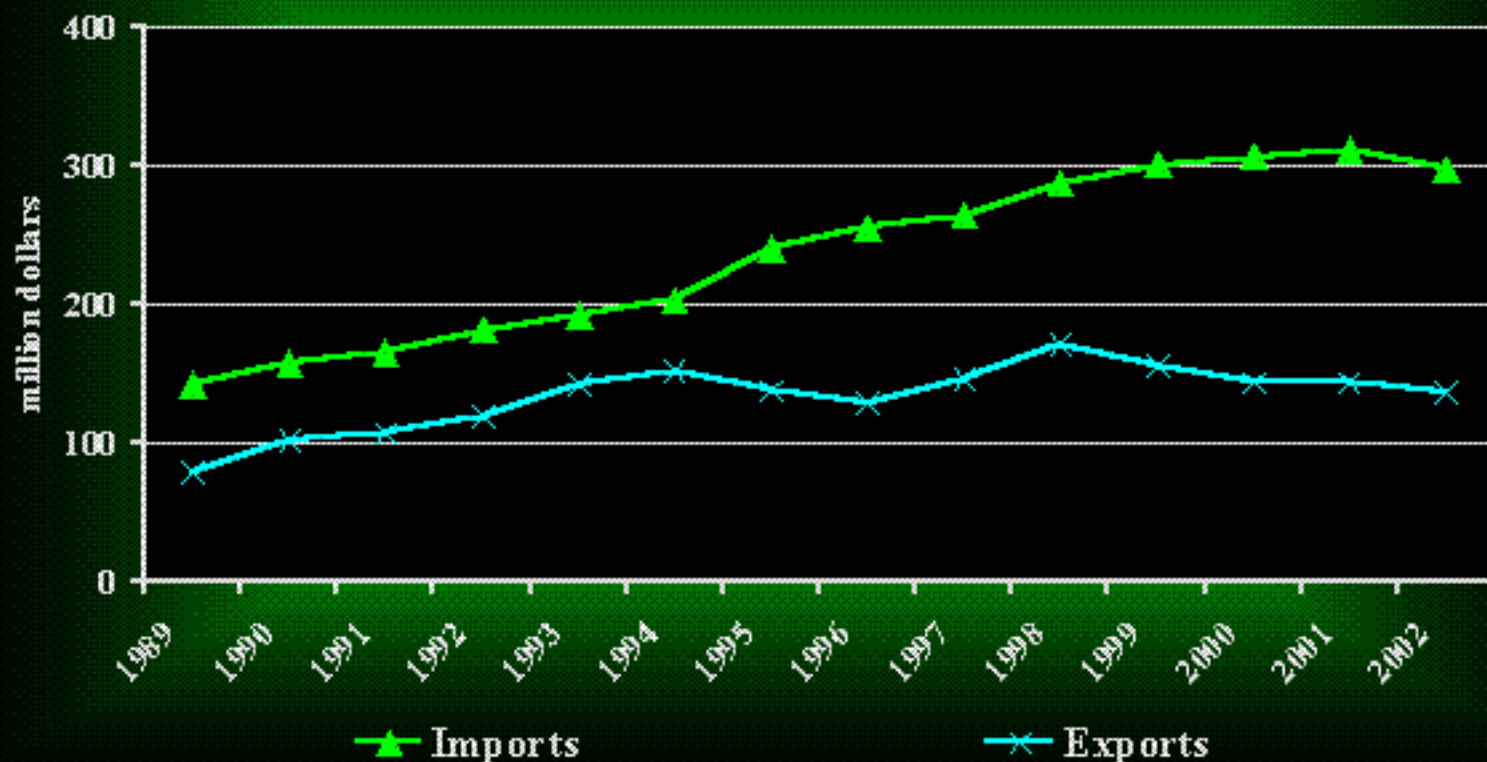
Nursery Industry

Table 1. US Nursery Crops: Value of Production, Trade and Consumption, 1989 -2002



Nursery Industry

Table 1. US Nursery Crops: Value of Imports and Exports ,
1989 -2002





Major Pests

- ✓ Invasive species problem
 - Pest plants
 - Plant pests
- ✓ Major plant pests (already present) include:
 - Gypsy moth
 - Sudden oak death (*Phylophthora ramorum*)
 - Citrus canker
 - Plum pox virus
 - *Ralstonia solanacearum* (race 3)
 - *Puccinia hermerocallidis* (daylily rust)
 - Asian, citrus and cedar long horned beetle
 - Emerald ash borer
 - Pink Hibiscus Mealybug

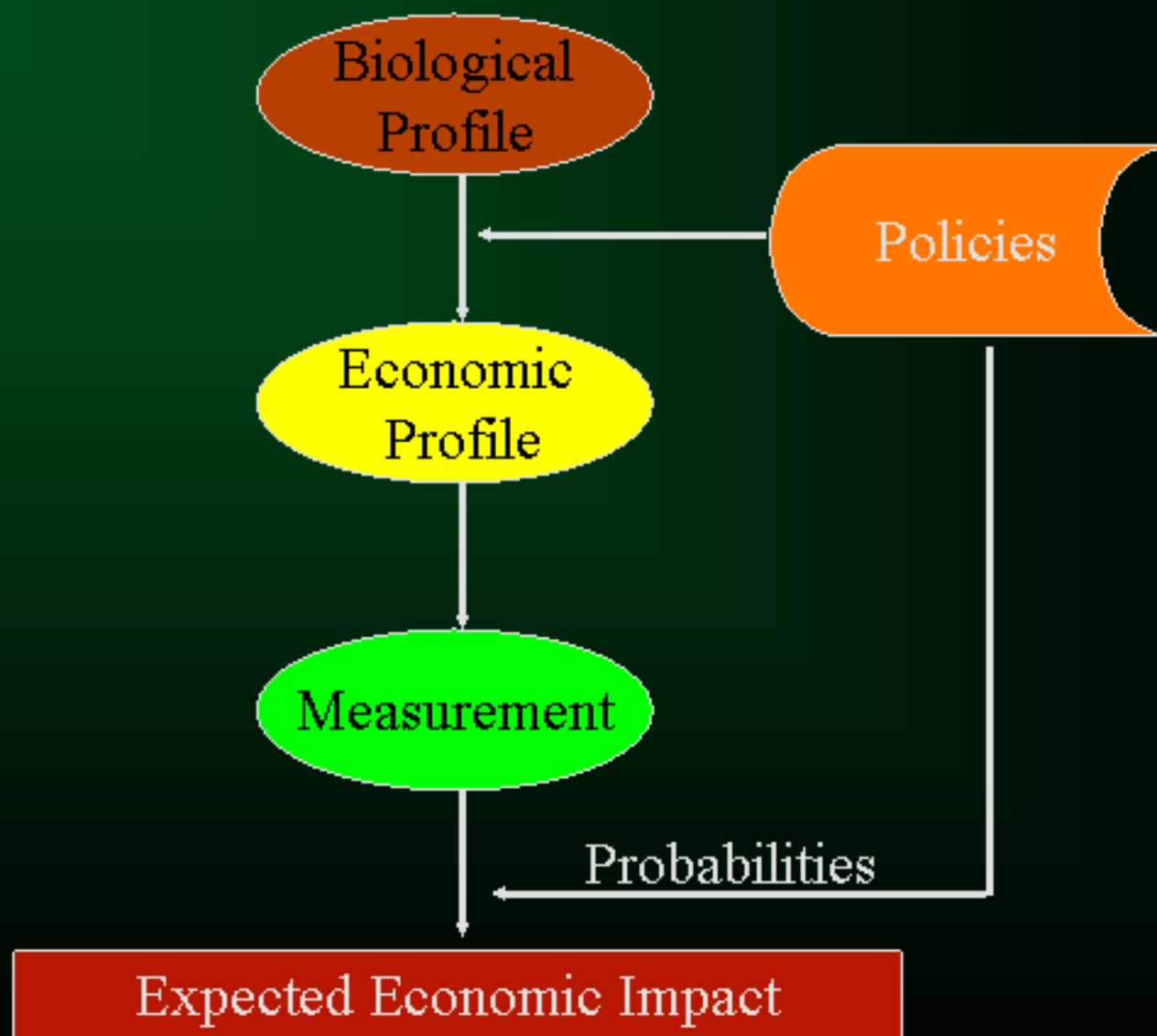


Major Pests (cont'd)

▼ Dirty Dozen (Coming soon)

1. Scale—*Ceroplastes destructor*(soft waxed scale)
2. Mealybug—Caribbean Mealybug (“minor”)
3. Virus—Gemini tospo
4. Thrips—*Scirtothrips dorsalis*
5. Bacteria—*Xylella*
6. Caterpillars—*Spodoptera littoralis*(Army worms)
7. Aphid—*Toxoptera odinae*(Mango aphid)
8. Snails/Slugs—Giant African Snail
9. Nematodes—Red Ring
10. Beetles—*Metomasius* spp
11. Whitefly—*Aleurocanthus spiniferus*(Orange spiny whitefly)
12. Mites—Oriental Red Mite

Integrating the scientific and economic input



Example of Economic Profile

Request to import larch logs that might be infested with larch canker

Market Impacts

Non-Market Impacts

Direct pest Effect

- ✎ Loss of Timber products
- ✎ Control costs

- ✎ Urban ornamental
- ✎ Wildlife habitat

Indirect pest Effect

- ✎ Tourism
- ✎ Trade effects

- ✎ Impact on the hydrological cycles
- ✎ Loss of Biodiversity
- ✎ Political effects



Nursery Industry Dilemma

1. US nursery industry currently regarded as world class with respect to high level of phytosanitary standards.
Factors responsible:
 - Fairly restrictive quarantine regulations
 - US list of pests to be excluded includes both domestic damaging pests as well as those not known to occur in the country
 - Severely curtailed the volume of nursery stocks entering the US and reduced the potential for accidental or intentional introduction and spread of damaging pathogens
 - Series of voluntary state certification programs
 - Help to prevent the spread of damaging pests already present in the country and facilitate the distribution of clean planting material



Nursery Industry Dilemma

2. Pressure from within the industry to open up
 - Argument that, the industry thrives on new imports to continue to excite consumers
 - Nature of plant exploration
 - Shift towards commercial volume trade vs. limited quantity variety acquisition
 - Multi-country ownership



Nursery Industry Dilemma

3. International pressure is mounting

- International agreements (WTO/SPS, NAFTA and proposed FTAA)
- SPS Agreement built around principles:
 - Harmonization
 - Equivalence
 - Non-discriminatory
 - Transparency
 - Regionalization
- Requires plant quarantine authorities to demonstrate (on the basis of science) the threat of a particular disease or pest that make necessary a particular SPS measure—implies “no risk in the unknown”
- Furthermore, SPS/IPPC requires that a country can only regulate against pests not yet present in the country or those present but are targeted by an official control program



Implications

▼ US will have to:

- Remove from its current list of regulated pests, all domestic ones for which no official control programs are being undertaken, irrespective of whether such pests have been known to cause economic damage
 - Resurgence of old pest problems
 - Introduction of newer more virulent strains
 - Nullification of certification programs
- Implement official control programs for all domestic pests on the current quarantine list
 - Costly to implement—APHIS emergency spending now \$150 million per annum



Implications (cont'd)

▼ US will have to:

- Implement mandatory certification programs
 - No existing model
 - Intrusive
 - Expensive



Concluding Remarks

- ✦ The nursery industry faces a dilemma of how best to maintain its “clean stock” image—achieved largely through restricted trade policies—and at the same time conform to the international trade rules by facilitating more open trade in nursery stock and planting material
- ✦ International pressure on the US nursery industry to harmonize standards and open up its market will only increase in the near future
- ✦ In light of the above, the only plausible solution appears to be that of implementing a system of mandatory certification program for the nursery industry