# Analytic Hierarchy Process for Prioritization of Exotic Plant Pests and Pathogens

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## Early Detection

- High cost of introduced plant pests
- Benefits of early detection

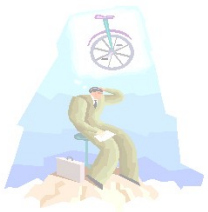
## Cooperative Agricultural Pest Survey (CAPS)

- **USDA APHIS and State Departments of Agriculture**
- **Early detection of exotic plant pests**
  - **Arthropods**
  - **Pathogens**
  - **Weeds**
  - **Mollusks**

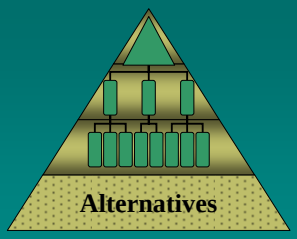
## Identifying High Priority Pests

## Prioritization Method Needs

- Dynamic
- Incorporate subjective and objective data
- Scientifically defensible
- Transparent
- Adaptable process to meet changing needs



## Analytic Hierarchy Process



## Pest Universe (139 pests)

*Focus: Exotic or limited distribution*

- Professional Society Pest Lists
- APHIS Pest Lists
- NAFC Exotic Forest Pest Database

## Criteria Development

*regulatory science*

*nematology*

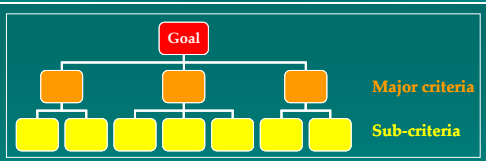
*entomology*

*malacology*

*plant pathology*

*economics*

## Criteria Hierarchy

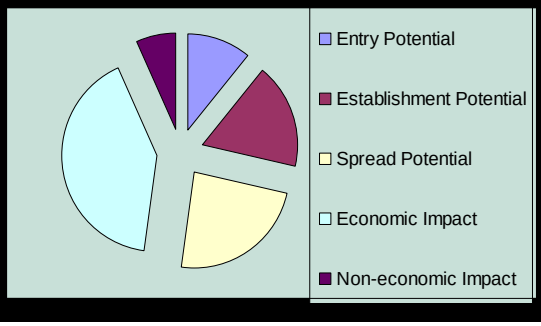



Entry Potential | Establishment Potential

Potential for Post-establishment Proliferation and Spread

Economic Impact | Non-economic Impact

## Priorities of Major Criteria

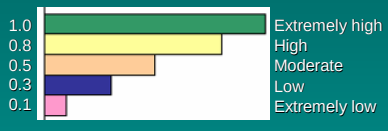



## Pest Evaluations

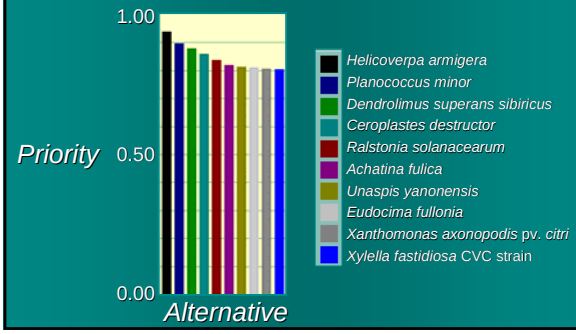
- Questionnaire
- 32 subject matter experts

## Pest Evaluations

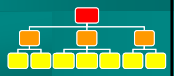
The pest's reproductive potential is:



## Prioritized List




## View for the Future



- CAPS Program
  - Subgroup for pest prioritization
  - Peer review of pest evaluations
  - Online access
- Other Programs/Projects

## CPHST Pest Prioritization Team

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