


The Minnesota Invasive Terrestrial Plants and Pests Center: Research for Results



Dr. Rob Venette, Director
Ms. Heather Koop, Associate Director

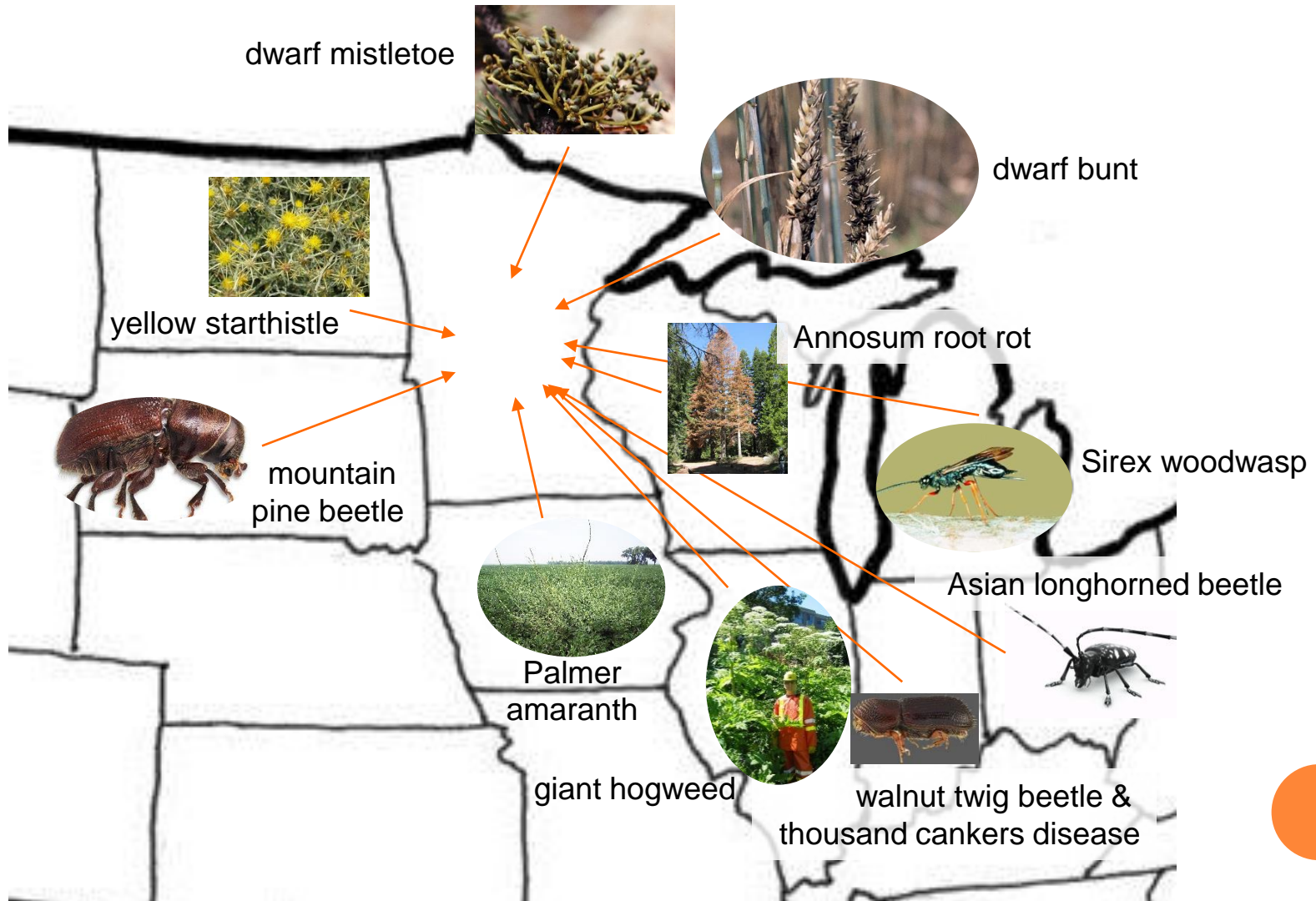
UNIVERSITY OF MINNESOTA

Minnesota Forest Resources Council, March 15, 2017

Overview

- Terrestrial invasive species as an issue (brief)
- History of MITPPC
- Initial prioritization and project selection
- Expanded prioritization and project selection

Terrestrial invasive species, a growing costly problem for Minnesota



Legislation to create MITPPC passed in 2014

“The purpose of [MITPPC] is to research and develop effective measures to prevent and minimize the threats posed by terrestrial invasive plants, pathogens, and pests, including agricultural weeds and pests, in order to protect the state’s native prairies, forests, wetlands, and agricultural resources.”

[ML 2014, Ch. 312, Sec 44]



Key points

1. University of Minnesota
2. Research!
3. Outcome based
4. All lands (including wetlands)
5. All terrestrial invasive species



Allocations to MITPPC from ENRTF

- FY2014 - \$1.46 million
- FY2015 - \$5.00 million
- FY2016 - \$3.75 million

- Funding scheduled to end in 2022
- Center Operations funded through a separate allocation from the General Fund in FY2014

- Damage from invasive species is expected to cost more than \$24 billion over the same time period (two story house = our Center vs 3.5 times the tallest building in the world = damage from terrestrial invasives).



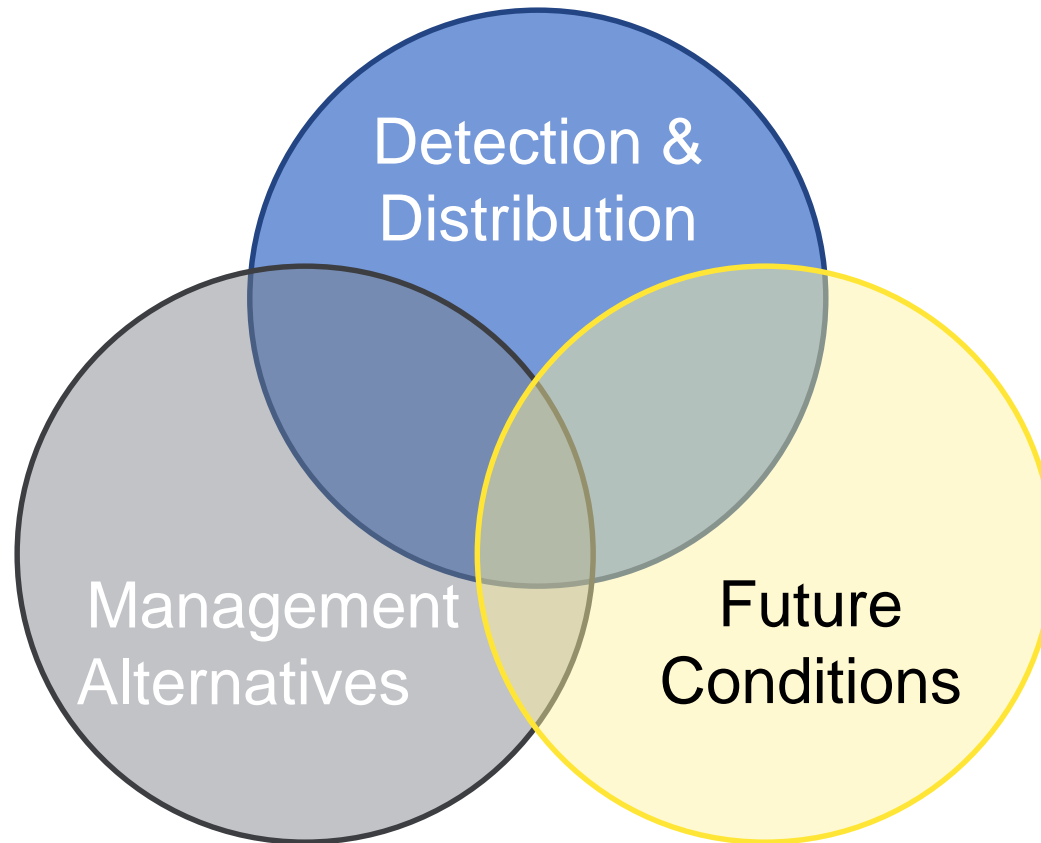
More than just extra funding: MITPPC adds value

- Prioritization
- Coordination
 - New teams
 - New talent
- Integration
 - University-wide
 - Stakeholders
- Preparation
 - Grad. students & postdocs
 - Moving beyond “one-off” projects
- Communication



University Research and
Outreach Centers

Priority topics for MITPPC: 2015



Initial research projects



Oak wilt:
New diagnostic technologies



Buckthorn:
New, sustainable
management



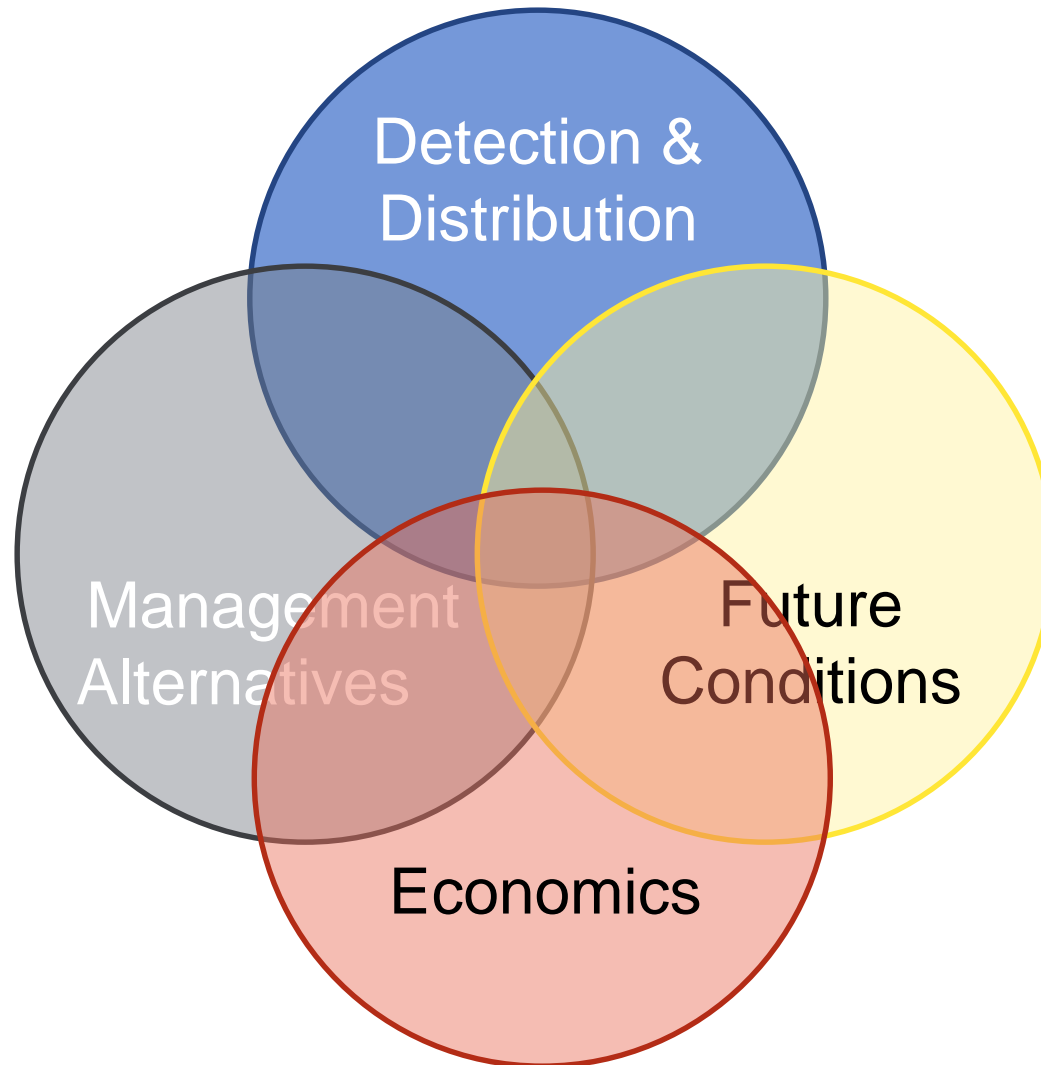
Brown marmorated stink
bug: Detection, distribution
and forecasts



Nine noxious weeds:
Current and future
distribution



Priority topics for MITPPC: 2016



124 Species were analyzed in ExpertChoice

The screenshot displays the ExpertChoice web application interface. The browser address bar shows the URL: <http://comparison.expertchoice.com/Comparison.aspx#/Project/>. The page header includes the ExpertChoice logo, the project name 'MITPPC Threat Comparison', and the status 'The project is OFFLINE'. The user 'Heather Koop' is logged in, with links to 'Resource Center', 'FAQ', and 'Logout'.

The main navigation bar contains tabs for 'Structure', 'Measure', 'Synthesize', 'Allocate', 'Iterate', and 'Reports'. The 'Measure' tab is active, showing a list of objectives for 'Phytophthora cinnamomi'.

The title of the current view is 'Rate the preference of *Phytophthora cinnamomi* given the following objectives'. Below this, a table lists various objectives with their current ratings and percentages. A detailed view for the 'Proximity to MN' objective is shown on the right, including a scale description and a 'Priority' section.

Objectives and Ratings:

Objective	Rating	Percentage
Proximity to MN	Medium	50%
Existence of Pathways	Medium	66%
Innate Dispersal Capacity	Moderately-Low	40%
Climatic suitability	Negligible	25%
Presence of hosts	High	100%
Hybridization/Host Shift	Medium	66%
Existence of Pathways	Medium	66%
Dispersal Capacity	High	100%
Extent of Invasion	Moderately-Low	40%
Existence of Vectors (Non-human) to Facilitate Spread	Low	50%
Problem Elsewhere	Medium	66%
Impacts to Yield or Marketability	Low	33%
Costs of Quarantine or Other Mitigation	Low	33%
Impacts to Recreation or Real Estate (Aesthetic impacts with economic consequences)	Low	33%
Consequences to native species	2	50%
Consequences to ecosystem services	0	13%
Impact to Human Health	0	14%

Proximity to MN Detail:

Intensity Name	Priority
<input type="radio"/> Very High	100%
<input type="radio"/> High	75%
<input checked="" type="radio"/> Medium	50%
<input type="radio"/> Low	25%
<input type="radio"/> Not rated	
<input type="radio"/> Direct Value	

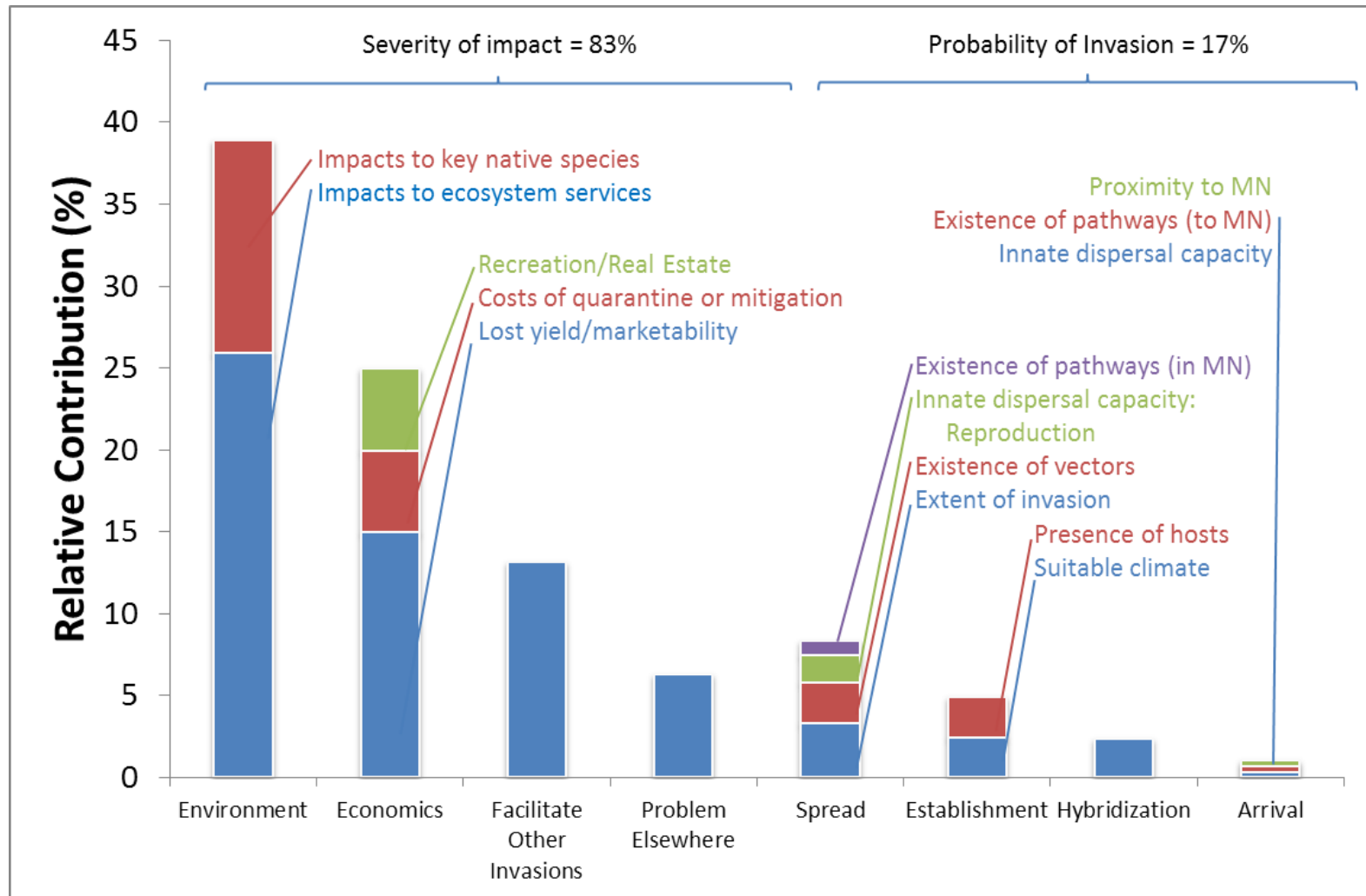
Navigation Box:

Steps: 1 ... 152 153 154 155 156 157 158 159 160 ... 166 Evaluated: 2263/2263

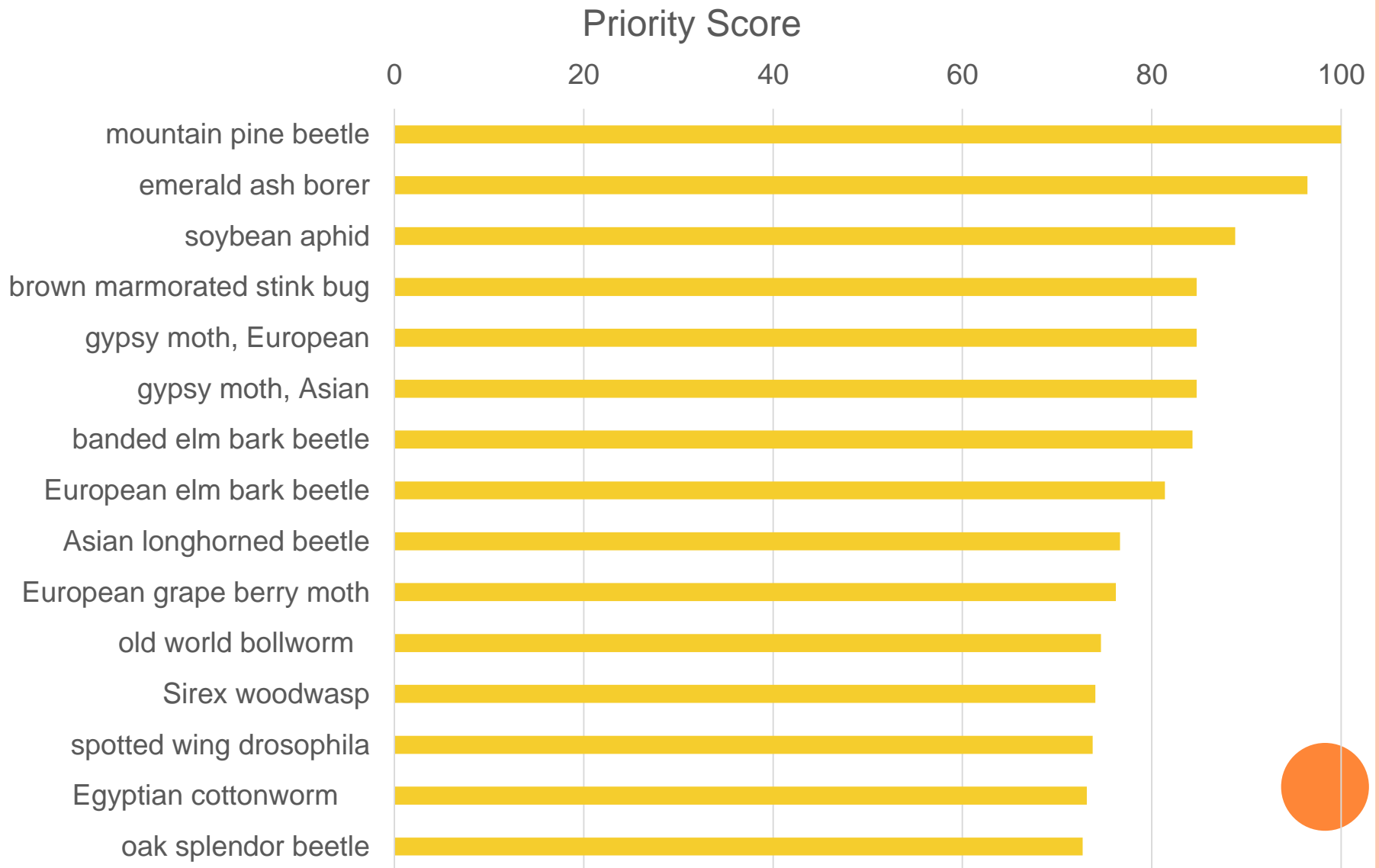
Footer:

English Release Notes Project status: Available but offline Version: 5.40.11

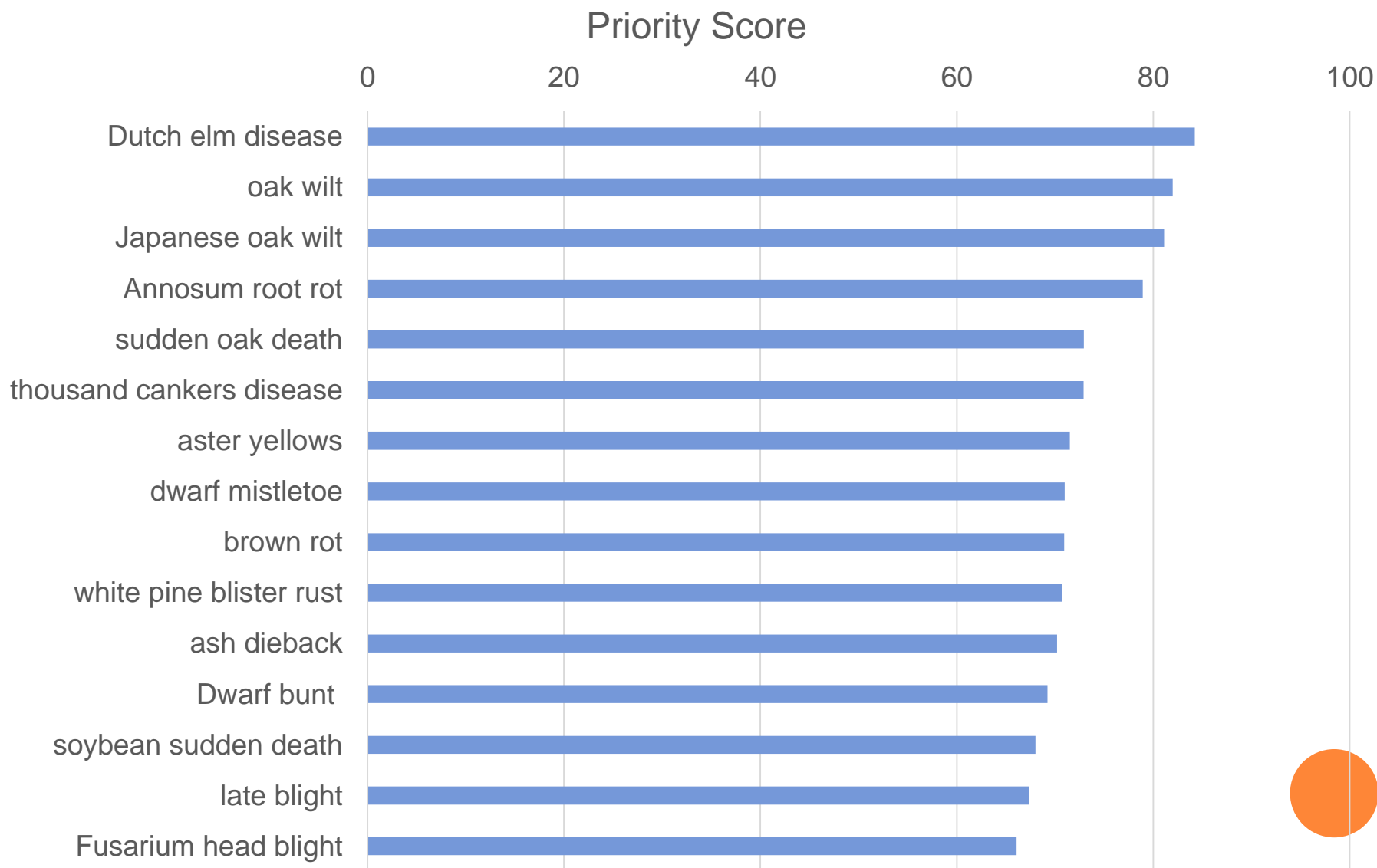
Final importance assigned to each criterion



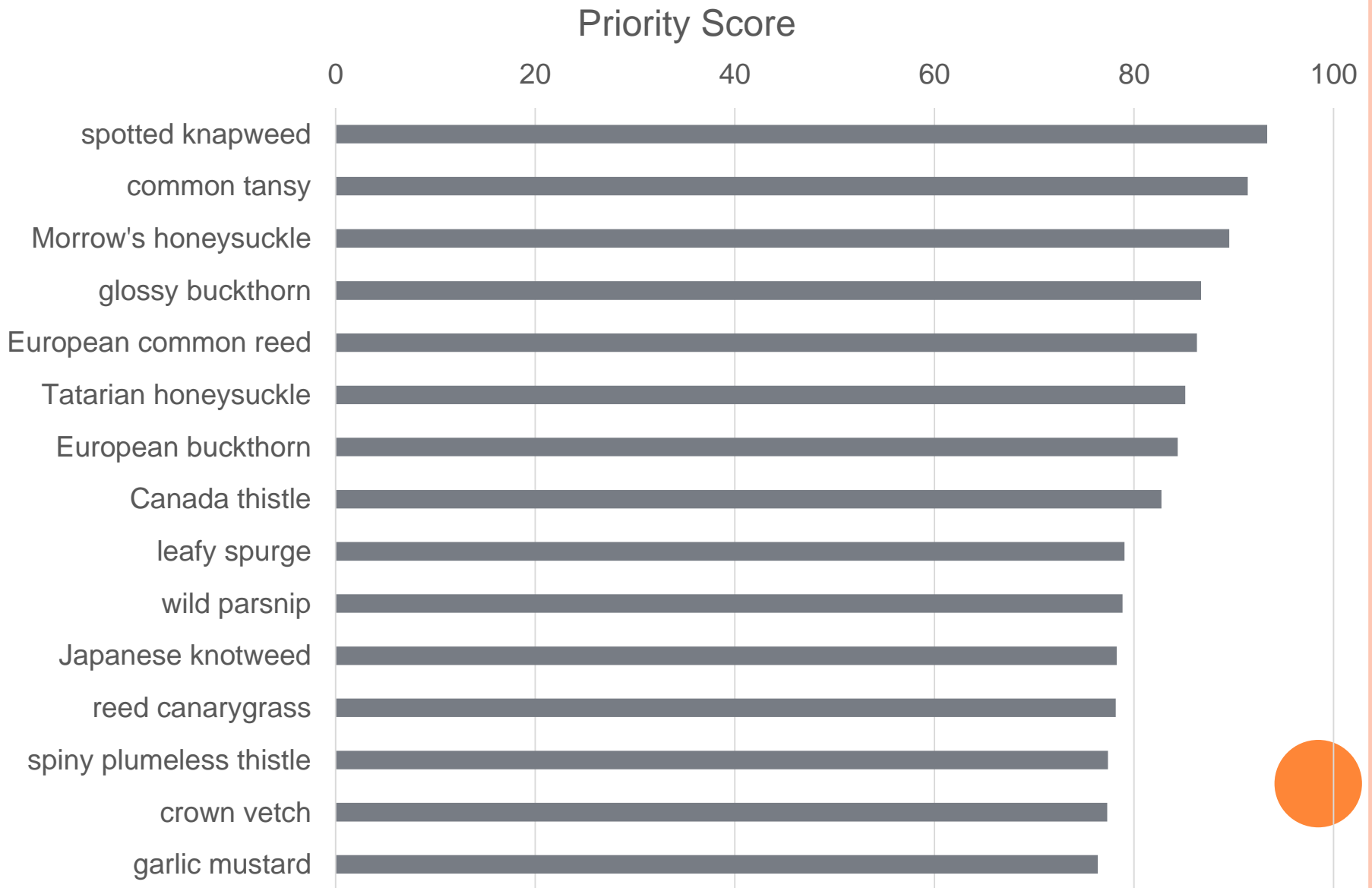
Top 15 insects



Top 15 Diseases



Top 15 Plants

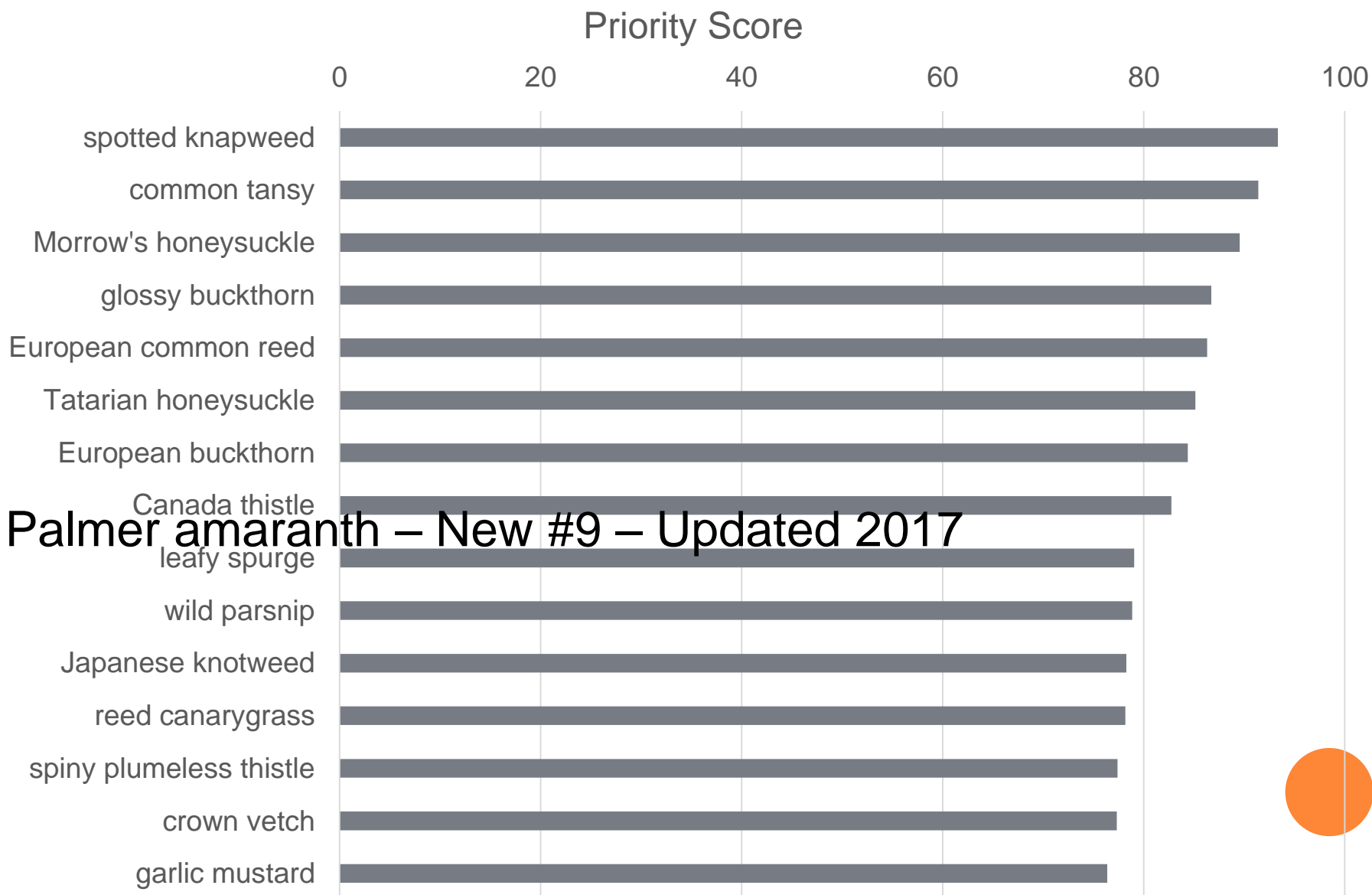


New projects for FY17

- 11 new projects funded with M.L.2015 ENRTF
- \$4.5 million in total project funding
- New forestry-related projects
 - Dispersal of larval gypsy moth
 - Emerald ash borer & “herd immunity”
 - Landscape detection of oak wilt
 - Buckthorn & bush honeysuckle
 - Mountain pine beetle
 - Garlic mustard biocontrol



Top 15 Plants





Thank you to the following organizations for their support of MITPPC

College of Food, Agricultural
and Natural Resource Sciences

UNIVERSITY OF MINNESOTA



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 - Website: www.umn.edu/mitppc
 - YouTube channel:
z.umn.edu/mitppcbutterflies
- Email:
 - Dr. Rob Venette, Director,
venet001@umn.edu
 - Heather Koop, Assoc. Director,
hkoop@umn.edu

