

Gathering and Interpreting Pest Trend Data

Pest Trend Impact Plots: Analysis and Extension (WC-AR-09-03)

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Project Objectives

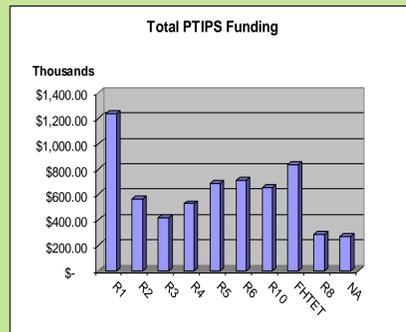
1. To collect, organize and analyze Pest Trend and Impact Plot (PTIPS) data.
2. To communicate pest trends in the USA to all interested parties by sharing the findings of Forest Health Protection's Pest Trend and Impact Plot data (as well as other sources).

Credit: Katy Mallams, USFS PNW

Recouping an Investment

- Between 1990 and 2006, Forest Health Protection invested \$6.19 million in the Pest Trend Impact Plots project. A series of 135 permanent plot sets were established nationwide to provide data for validation, calibration and development of pest models, improvement of pest damage estimates, and provide information for forest health monitoring.
- Over this 17 year period, plot sets were established and re-measured in stands affected by a wide variety of major forest pests, including:

- Comandra blister rust (33 plots)
- Root disease (2,822 plots)
- Dwarf mistletoe (409 plots)
- Pitch canker (30 plots)
- White pine blister rust (98 plots)
- Ozone damage (57 plots)
- Jack pine budworm (262 plots)
- Spruce beetle (95 plots)
- Western spruce budworm (1023 plots)
- Plus an unspecified number of plots tracking impacts of beech bark disease, piñon *Ips*, southern pine beetle and Douglas-fir tussock moth.



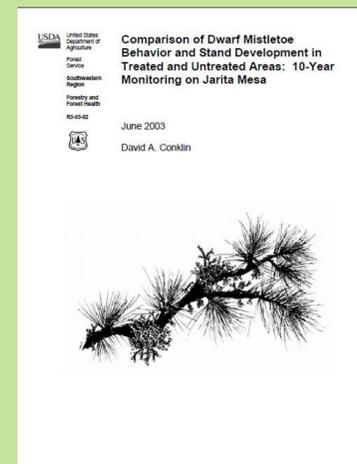
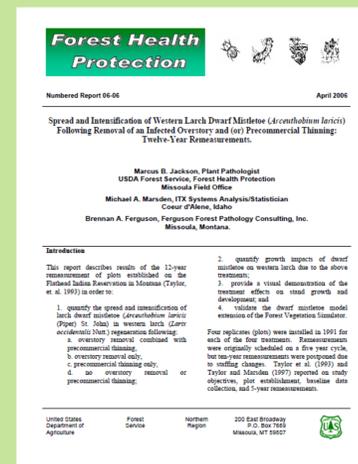
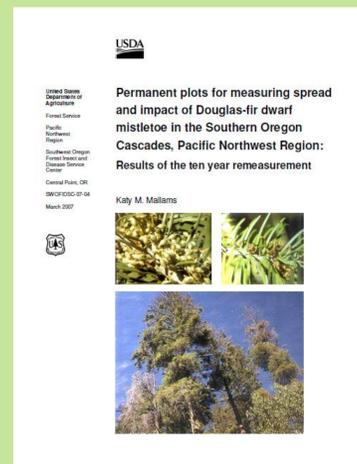
Total PTIPS funding from 1990-2006 by region



Credit: S. Frankel, USFS PSW

- Plots were successfully established and data sets collected, and for some studies analyzed and published. However, much of the data have not yet been analyzed and are currently scattered across the country under the management of various pathologists and entomologists, many of whom are nearing retirement.

What can we learn from the data? Where are the data?



While a significant portion of PTIPS-funded data have not yet been analyzed and published, some projects have resulted in valuable reports such as these shown above. We are actively seeking all such reports so that they may be incorporated into our future comprehensive data repository and Pest Trend website.

Justification

This project will build upon Forest Health Protection's substantial investment to deliver clear, concise pest trend information. Quantitative data on forest pests are limited and Pest Trend data are needed to provide a scientific basis for forest health management decisions and to determine appropriate programmatic funding levels and priorities. The compilation of past pest data will also contribute to greater understanding of historical forest pest conditions, which will be necessary for understanding the severity of forest insect and disease damage in response to climate change.

Products (In the Works)

This project aims to organize and analyze Pest Trend and Impact Plot data to communicate pest trends to all interested parties. To meet these objectives, we are currently seeking any available data and reports from pest trend plots. As data sets become available, they are being checked for accuracy and organized for incorporation into a comprehensive database. As more plot sets are contributed, we will develop:



Credit: Helen M. Maffei, USFS FHP

- A permanent data repository for all of the PTIPS datasets and reports.
- Pest Trend data summaries and other miscellaneous publications.
- A website that brings together findings on forest insect and pathogen trends in the US.

All of these objectives will be carried out in a cooperative manner with various data stewards.

**Come out, come out wherever you are!
Calling all Pest Trend data**

The success of this project depends on the cooperation of the many past and present Pest Trend data stewards, which might include you! Do you have write-ups, data, photos, or maps of forest pathogen or insect pest impacts in the US? A dusty box in your garage? A filing cabinet in your warehouse/outbuilding with folders left behind from yesteryear? Data on a floppy disc?



If you have materials to contribute, please contact Heather Mehl (hkmehl@ucdavis.edu) or Susan Frankel (skfrankel@fs.fed.us).