Assessing & Reducing Pesticide Risks in Tribal Communities

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What is a pest?

- Insects, rodents, nematodes, weeds, fungi, or microorganisms
- Nuisance **AND** cause injury
- Thresholds & risk
- Pests of significant public health importance

**Mental Health**

**Quality of Life**

**Damage:**
- Economic,
- Structural, Property

**Illness and/or disease:**
- Bacteria, plague, asthma, LCMV
What is a pesticide?

- Agent used to prevent, repel, mitigate or destroy pests
- Historical overview
- Intention vs. Use
- FIFRA & Regulation
- Pesticide safety & efficacy testing
Environmental Health & Pesticides

- Toxicity & Risk
- Routes of Exposure
- Acute & chronic effects
- Impacts widely varied
  - Formulation
  - Chemical class

Acute Effects:
- Asthma Attacks
- Flu-like Symptoms
- Eye/ Skin irritation
- Death

Chronic Effects:
- Asthma
- Cancer
- Neurological damage
- Immune System damage
- Endocrine system
- Metabolic Distruption
Project Summary

Interagency agreement between IHS & EPA
Help identify & address pest & pesticide issues within individual tribes
Purpose: outcomes & goals
Services: assessments, consultation, outreach, & technical assistance
Holistic approach
Assessment is a Public Health Essential Service

- Regularly and systematically collect, assemble, analyze and share information on a specific issue affecting or overall health of a community

Purpose: to provide systematic prioritization based on actual risks and measured needs

Screening tool used to characterize issues

A snapshot of what is happening

- Indicate need for further investigation
Q: Where are pesticides used?
A: EVERYWHERE!
Data Indicators: Northwest

- **Agriculture**
  - # of acreage
  - # of applicators

- **Aquaculture**
  - # of operations

- **Forestry**
  - # of acreage for forested lands

- **Structural**
  - # of facility service contracts
  - # of facilities covered by service contracts

* Conservation areas, invasive species, golf courses, hotels?
Pesticide Use Data: Using Targeted Questionnaires

- Interview key informants from different programs or facilities
- 5 different forms: housing, childcares & schools, healthcare facilities, natural resources or environmental programs, & public works
- Consist of questions that attempt to get at the root of *pesticide use, protections, risks, interests and needs*
- Additionally provide site/program specific assessments to complete “full picture”
Pesticide Needs & Interests

- Pollinator, Wildlife & Environmental Protection
- Agriculture/commercial inspectors & enforcement
- Invasive species management
- School/Child Care Integrated Pest Management
- Pesticide Safety/Worker Protection Standards
- Public Health Pest Prevention & Control

unique considerations:
- hunting, fishing, foraging, basket weaving
Contact

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**Fast Facts**

1. **Crawl, Do NOT jump or fly**
2. **Active at Night**
3. **Small but can see**
4. **No Disease**
5. **Groups or Solo**
6. **Feed on blood, every 3-5 days for 5-10 min**

- Size: 5-6 mm
Bed Bugs look different at different stages in their lives...

- Transparent & smaller than a grain of rice
- Size & color make it more likely to spot these
The Return of the SUPER Bed Bug

- Reproduction habits & pace
- More stuff, bigger homes
- Lack of education means:
  - they go undetected
  - we misdiagnose them
  - we don’t know how to get rid of them
  - we have unrealistic expectations of PMPs
- Chemical resistance
- Changes in Pest Industry

Reports on bedbugregistry.com
Top: 2008 Bottom: 2018
You **may** have bed bugs if you see:

- Droppings
- Eggs
- Bites
- Shed skin
- Blood stains or smears
- Live bugs
Don’t rely on bites alone ...

- Reactions vary greatly
- Line or circle theory (?)
- It’s nearly impossible to distinguish a bed bug bite from any other bite
Bed Bug Outreach Initiative

Tribal Pesticide Program Council (TPPC)
Environmental Protection Agency (EPA)

Fred Corey, Tribal Pesticide Program Council
Amanda Hauff, Environmental Protection Agency

Tribal Environmental Lands Forum
EPA began this bed bug outreach initiative in response to August 2015 TPPC Bed Bug Issue Paper

“Core bed bug team” at EPA created to address issue

As part of its efforts, the core team worked with TPPC to develop an outreach plan, Bed Bug Educational Package, and content additions to the TPPC webpage
Outreach Plan

• **Primary goal**
  - Assist tribal communities in their efforts to manage the expanding bed bug problem through information dissemination within tribal communities on how to prevent and control bed bug infestations

• **Secondary goals:**
  - To reduce negative social stigma
  - Raise general awareness of bed bugs in tribal communities
  - Inform general public in Indian country of bed bug control options and practices based on IPM principles
  - Develop a network of support for those tribes struggling with bed bugs
  - To share success stories
Bed Bug Educational Package

- 19-page packet of succinct, printable documents

- Addresses following topics:
  - Bed bug identification
  - Bed bug biology
  - Bed bug checklist
  - Top 10 bed bug tips
  - Cost-effective control methods
  - How to make an interceptor trap
  - Stigma poster
  - List of additional links/resources

- Includes TPPC cover letter
The core team also worked with the TPPC to develop content for the bed bug section of the TPPC’s webpage.

Content includes:
- Links to training and technical resources
- Information on federal funding opportunities
EPA and TPPC collaborated to disseminate the Bed Bug Educational Package and outreach materials to tribal communities across the country (through EPA Regions, federal partner agencies, and TPPC distribution lists)

Positive anecdotal feedback about materials

Bed Bug Educational Package used in trainings and distributed to community members
Contact

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