



## A SURVEY OF PEST MANAGEMENT PRACTICES ON WASHINGTON STATE DAIRY FARMS

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In 2014–2016, UW researchers in partnership with WSU Extension Integrated Pest Management (IPM) experts used results from this survey to engage dairies in using alternative IPM strategies. This team of dedicated scientists is working to determine the effectiveness of various IPM strategies in managing flies and reducing exposure to pyrethroid insecticides.

Presence of house flies, stable flies, horn flies, face flies, cattle grubs, lice, mites, and ticks.

Behavioral changes: increased tail flicking & reduced feeding.  
Other changes: reduced milk production & weight gain, coat & hide damage, annoyance for workers & cattle, and possible disease transmission.

Treatment for flies and parasites often means heavy pyrethroid insecticide use.

### SURVEY RESULTS

The presence of flies/parasites on cows was the number one reason respondents treat for pests.

- 92% of conventional dairy respondents reported using chemical treatment, such as pyrethroid and organophosphate insecticides, for flies on animals and/or premises.
- 2% of conventional dairy respondents said they treat for all flies daily to weekly. An additional 40% said they treat at least biweekly or monthly.
- 46% of respondents spent \$1-\$5 per cow on pest/parasite treatment in 2012, while 24% spent up to \$10 per cow.
- 46% of respondents spent \$100-\$500 in 2012 on premises treatments; 36% reported spending over \$500.

The top four pest management information sources cited by respondents were: personal experience, veterinarians, other producers, and chemical companies.



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## REDUCING PYRETHROID USE AND EXPOSURE WITH ALTERNATIVE IPM STRATEGIES

**What is Integrated Pest Management (IPM)?** "IPM is an effective and environmentally sensitive approach to pest management...used to control pest damage by the most economical means, and with the least possible hazard to people, property, and the environment." – US EPA<sup>1</sup>

### WHY REDUCE PYRETHROID INSECTICIDE USE?



- Potential for health hazards for humans and animals. Human exposure can result in abnormal facial sensations, dizziness, nausea, and loss of appetite<sup>2</sup>. Residue on work clothing may also cause family exposure.
- Potential for flies and other insects to develop resistance to pyrethroid insecticides, resulting in increased use and/or use of higher-risk insecticides
- Increased use of insecticides means higher costs for dairy managers.
- Potential harm to the environment including decreased groundwater quality and disruption of non-target beneficial insects and spiders.

### HOW CAN IPM BENEFIT MY DAIRY?

- Improved management of pests and reduced pyrethroid insecticide use.
- Reduced potential for
  - pest resistance to insecticides
  - exposure and health risks to workers and animals
- Increased economic gain due to potential reduction in pest control costs.



### HOW ARE WA DAIRY FARMERS USING IPM?

In our survey, conventional dairy respondents reported using various IPM strategies to manage flies, including:

- Cultural control with proper manure management (78%), general sanitation (64%), and cleaning feed alleys daily (58%)
- Biological control with wasp parasites (19%)
- Physical controls such as fans, ventilation and screening



1. <http://www.epa.gov/pesticides/factsheets/ipm.htm>

2. Chen, S. Y., et. al. (1991). An epidemiological study on occupational acute pyrethroid poisoning in cotton farmers. *Brit. J. Indust. Med.*, 48(2), 77-81.

Photo Credit: Holly Ferguson, WSU

**PLEASE CONTACT US WITH YOUR FEEDBACK & QUESTIONS AT ANY TIME.**

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