

PROACTIVE INTEGRATED PEST MANAGEMENT

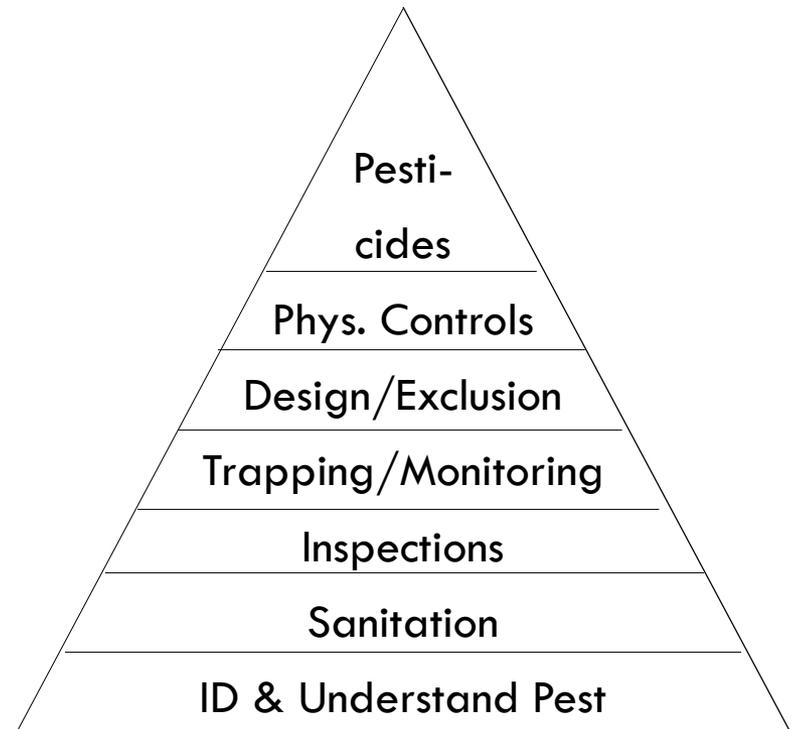
IFC Technical Training Series

What is IPM?

- ❑ **Integrated Pest Management (IPM) is:**
 - ❑ Effective and environmentally sensitive approach to pest management
 - ❑ Relies on a combination of common-sense practices
 - ❑ Based on unique needs; NOT a "one size fits all" approach
- ❑ **IPM combines:**
 - ❑ Comprehensive current & historical information on life cycles of pests
 - ❑ Understanding pest interaction with the environment
 - ❑ Available pest control methods deployed with the least possible hazard to people, food, property and the environment
- ❑ **IPM follows a multi-tiered approach:**
 - ❑ Establish appropriate expectations based on your data for pest management in the environment
 - ❑ Identify pests – determine which pests require monitoring, prevention and control

IPM Pyramid

- ❑ Pesticides are a small part of the big picture
- ❑ Sanitation, inspection and exclusion are more fundamental
- ❑ Anticipating pests should be the trend



What is Proactive IPM?

1. Identify the *potential* pest risks for the product and the facility
2. IPM program is designed based on the potential risks and gaps identified
3. Preventative measures are integrated into the IPM program to mitigate the risks and gaps

IPM Expertise is Critical

- ❑ Understand the types of pests attacking your plant
- ❑ Bait station placement by exterior doors or exterior multi-catch traps
- ❑ Pesticide applications – organic foods
- ❑ Data is less valuable if the IPM program is flawed
- ❑ Rodents, roaches, ants, spiders, flying insects and occasional invaders in a dairy plant
- ❑ Red/Confused flour-beetles, Warehouse beetles and Indian-meal moths, etc. in a Bakery
- ❑ Pheromone traps: dome traps vs tent traps, not by exterior doors, etc.

Every Facility is Unique

- ❑ Two identical facilities may produce different products and need different IPM programs
- ❑ Every facility needs their own IPM assessment to identify risks and gaps
- ❑ Sanitation is IPM at all facilities
- ❑ Pest risk is identified based on products being produced, facility integrity and the environment

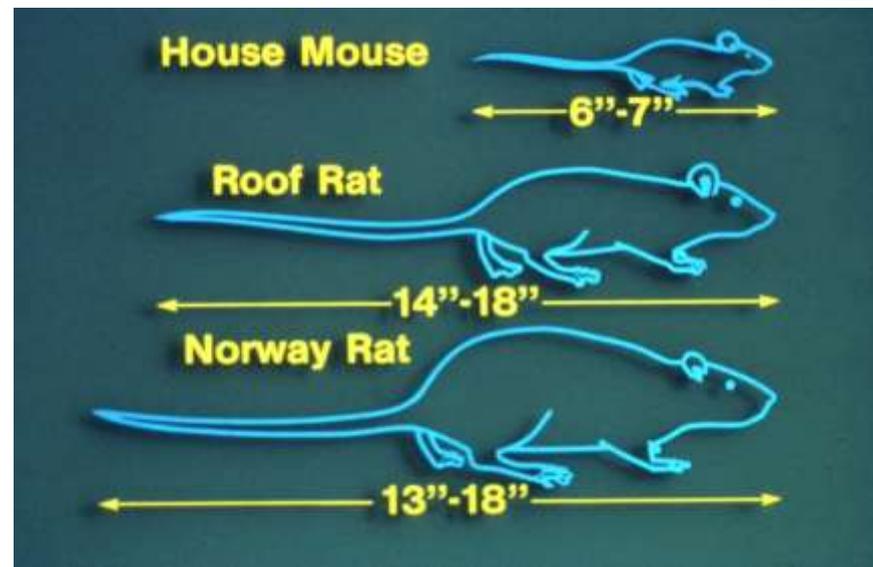
Pest Threats



- ❑ All food facilities are vulnerable to rodents and “incidental invader” insects
- ❑ Some facilities are especially vulnerable to infestation by “stored-product insects”
- ❑ Some facilities may have more threats from roaches or flies than others

Rodents

- ❑ Mice only need $\frac{1}{4}$ inch to gain entry
- ❑ Mice rarely need to drink!
- ❑ A good flashlight is the best inspection tool
- ❑ Report sightings or signs of activity
- ❑ Debris and sloppy conditions = nest sites
- ❑ Traps and bait stations are positioned along walls for a reason
- ❑ Remote monitoring



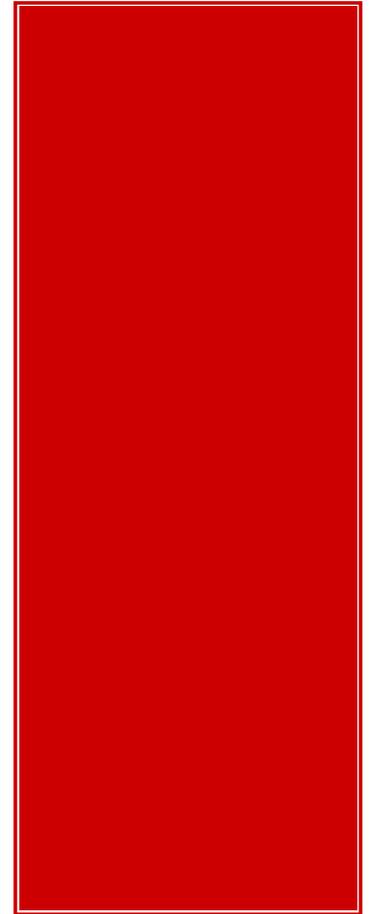
Birds



- ❑ Sparrows, starlings and pigeons are major pests, and sometimes other species – such as geese
- ❑ People also love these birds and don't want to see them harmed or in distress
- ❑ Birds can not be tolerated around food facilities. Most methods are not harmful but encourage birds to go elsewhere
- ❑ Employees must not feed or encourage birds!

Flies: Big or Little?

- ❑ Larger flies feed on garbage, dead animals and manure. Often enter as “incidental invaders”
- ❑ Small flies are probably breeding indoors. Clean!
- ❑ Almost any moist organic material can support flies



Technology/Data & IPM

- ❑ Technology/Data allows plant teams & pest management professionals the ability to analyze information from a variety of sources:
 - ❑ History of pest activity and evidence
 - ❑ Time of the year it traditionally occurs
 - ❑ Other contributing factors
 - ❑ Joint evaluation of data and action plan

Trapping/Monitoring & IPM

- Flying insects and Stored-product Pests are trapped and counted for trending and other useful purposes



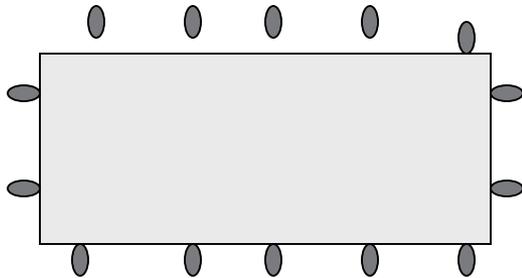
Data Analysis



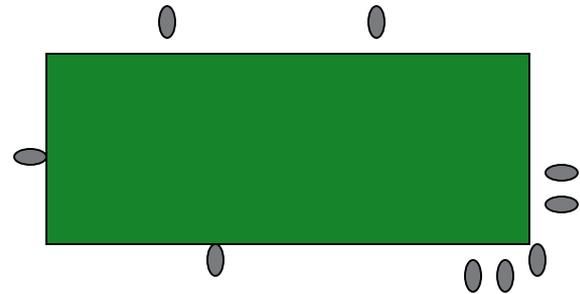
- ❑ Data on pest activity has been noted on service reports for years.... “snapshot”
- ❑ Software has enabled easier data management, mapping and communication....“Photo albums?”
- ❑ E-Notebooks provide ease of access
- ❑ ***Still requires a person with skill and insight to analyze!***

Are all Audits Based on Risk?

IPM device placement matrix

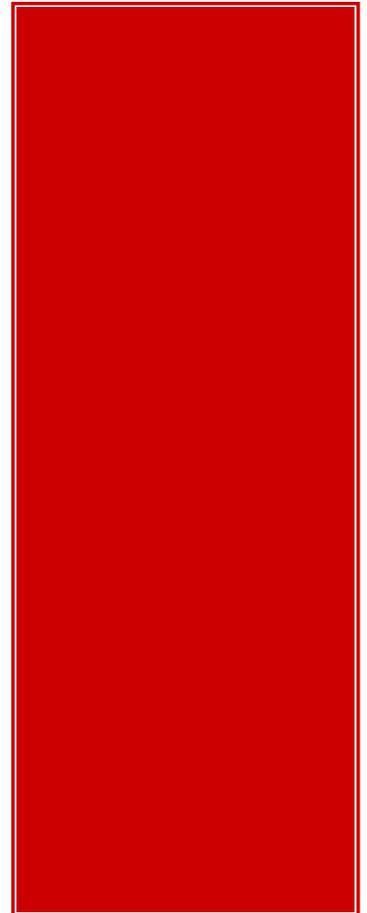


Can IPM device placement matrix change based on risk?



Insect Growth Regulators and IPM

- ❑ Trends help us to determine the best time to apply
- ❑ IGR's work to disrupt an insect's life cycle and reproduction
- ❑ Residual effect after treatment
- ❑ Crack and Crevice



Mating Disruption and IPM

- ❑ Significant Indian-meal moth reduction in warehouses
- ❑ Looks promising for Cigarette beetles
- ❑ Great for organic facilities

Concerns/Limitations

- ❑ Effective on only a few species at this time

What You Can Do To Help: Sanitation, Exclusion & Maintenance

- ❑ Create a IPM culture at your facility!
- ❑ Monthly facility inspections
- ❑ Master sanitation schedule is a living document
- ❑ Contribute to the general sanitation effort:
 - ❑ Respect sanitation lines. Keep locker and lunch areas clean. Clean up spillages. Remove damaged product promptly.
- ❑ Report pest activity promptly
- ❑ Respect pest control devices
- ❑ Do not encourage birds or wildlife!

Inspection:

Important aspect of pest control

- ❑ Trailers inspected incoming and outgoing
- ❑ Ingredients and supplies inspected
- ❑ Pallets – How and where are they stored?



Summary

- ❑ Proactive Pest Management combines several key components to protect a given food production facility
- ❑ Sanitation, Maintenance & Exclusion are the primary elements
- ❑ IPM expertise in a food plant environment by your pest company is very important

ANY QUESTIONS???

Thank you!