



Integrated Pest Management

An IPM Update

2004

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Overview



- **Basic IPM**
- **“KISS” IPM**
- **IPM Update**
- **IPM Benefits**



Basic IPM

- ➔ **Monitor Pest Population**
- ➔ **Determine Pest Threshold (Zero Target)**
- ➔ **Apply Strategies and Tactics**
- ➔ **Evaluate and Adjust Controls**
- ➔ **Communicate and Educate**

This Has Not Changed.



Our Mission:

*"...to protect
public health
and to safeguard
and improve the
natural environment..."*



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“Pest” means any insect, rodent, nematode, fungus, weed, or any other form of terrestrial or aquatic plant or animal life or virus, bacteria or other microorganism, except viruses, bacteria or other microorganisms on or in living man or other living animals. (EPA)

This Has Not Changed.

Pest Is Still A Pest.

Who needs pest control?

- Everyone!



Global Pest Pressures

This Is Changing.

Current State Of The Industry

Future - With or Without Pesticides?

- Fumigants = Methyl Bromide, Phosphine
- FQPA = Organophosphates, Carbamates
- Rodenticides = Outer Perimeter?
- Security = Global Restrictions
- Experts = “No Pesticides In The Future”
- IPM Tools of the Future – 2010 ???

This Continues To Change.



What is IPM ?



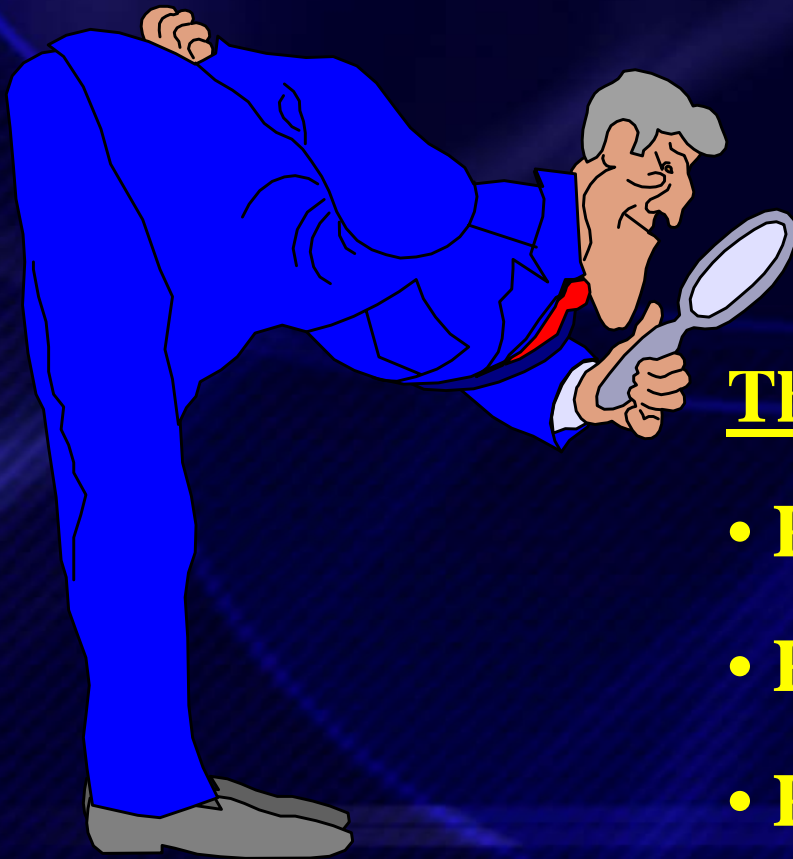
IPM is a preventative pest management system that combines several methods to keep pests below levels that may cause a loss of profit.

This Has Not Changed.

“KISS” IPM



“What do we have here?”



The 3 “K” Pest Control Approach

- **Keep Them Out.**
- **Keep The Place Clean.**
- **Kill & Remove What’s Left.**

IPM System Update



IPM Update



- **Knowledge Dependency**
 - Go To Experts
- **Web Design Training**
 - Fast Growth
 - Good / Bad
 - Blended Learning
- **Smarter IPM**
 - More Creativity

IPM Update



- **Outsourcing Increase**
 - Downsizing Impact
- **Rush Tendency**
 - Do More In Less Time
- **Verification Activity**
 - Pest Identification
 - Conducive Conditions
 - Checks & Balances

IPM Update



**Ounce Of Prevention Is
Worth A Pound Of Cure**

Security

- Property
- Inbound Shipments
- Outbound Shipments

Doing More Of What We Should Have Been Doing

- Better Maintenance
- Better Structures
- Better Doors / Windows
- Better Landscaping

IPM Update



- **Mergers & Acquisitions**
 - Creating Change
 - Who Do You Go To
- **Do More With Less**
 - Time
 - Money
- **Standards In Flux**
 - Enforcement
 - Consistency

IPM Update



- **Justify Treatment**
 - More Trapping Needed
 - Avoid Harvesting *
- **Timely Response**
 - Treatment Not Scheduled
 - Measurement
- **Smarter IPM**
 - More Planning
 - More Analyzing

IPM Update



Sanitation Is Pest Control

- Clean = Less Pests
- Dirty = More Problems
Leading to More Risks

Re-evaluate Procedures

- Efficiencies
- More Automation
- More Vacuuming

Food Safety Emphasis

- HACCP Pre-requisite

IPM Update



- **Technology Impact**
 - Maintenance = Big Stuff
 - Small Stuff Suffering
 - Screens, Door Sweeps, etc.
- **Food Safety Impact**
 - Equipment Focus
 - Product Contact Surfaces
- **Security Impact**
 - More Big Stuff

IPM Update



- **Under Utilized Element**
 - Cool = Transportation
 - Cool = Warehousing
- **Moderate Utilization**
 - Hot = Disinfestations
 - Problematic Areas
 - More Heat Treatments
- **Abused Utilization ?**
 - Negative Air Flows
 - Lights On Buildings

Temperature Modification

<u>Zone</u>	<u>Temperature</u>	<u>Insect Response</u>
Lethal	120°F to 140°F	Death in minutes
	110°F to 115°F	Death in hours
Sub-optimum	95°F to 100°F	Development stops
Optimum	75°F to 90°F	Maximum development
Sub-optimum	65°F to 70°F	Development slows
	55°F to 60°F	Development stops
Lethal	35°F to 45°F	Death in weeks
	-5°F to 10°F	Most S.P.I's die
	-20°F to -10°F	Death in minutes, insects freeze

IPM Update

Pest Management Professional

- Exterminator ?
- PCO ?
- Bug Guy ?



IPM Specialist

- Appearance
- Attitude
- Knowledge

Many Things To Many People

IPM Update



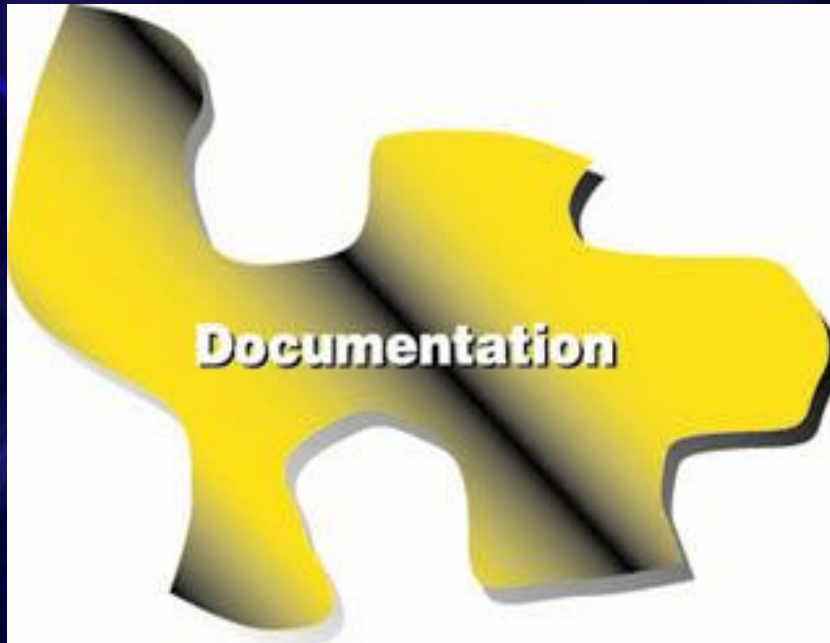
- **Options Limiting**
 - Shrinking List
 - Restrictive Labeling
 - Organic
- **New Product Pipeline**
 - Shrinking But Not Empty
 - Termidor a Recent Example
- **Environmental Pressures**

IPM Update



- **Mergers & Acquisitions**
 - Downsizing Impact
 - Standards Impact
- **Rush Tendency**
 - Do More In Less Time
 - Maintain Accuracy
- **Verification Activity**
 - Checks & Balances

IPM Update



- **Litigious Culture**
 - Defend Yourself
 - “Not Written = Not So”
- **Food Safety**
 - HACCP
 - Certifications
- **Instantaneous**
 - Internet
 - Information Dumping
 - Analysis Paralysis

An IPM System Update



GMP's

- Prevent products from being **contaminated**
- Prevent conditions that may contaminate
- Prevent actions that may contaminate
- Prevent pests that may contaminate

This Has Not Changed

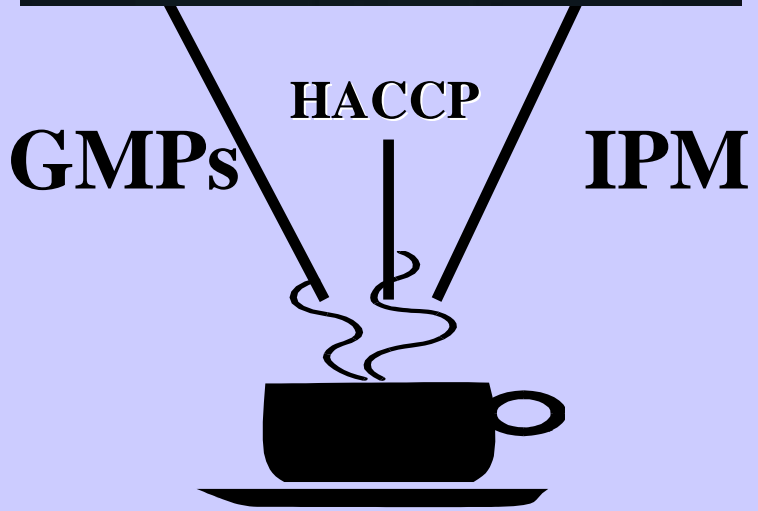
AND Probably Will Not Change.

Benefits of IPM

- Longer Term Relationships
- Increased Dependence On Your Knowledge
- Lower Chemical Use
- Protect Public Health
- Improve The Natural Environment
- Conduct More Profitable Business

These Have Not Changed.

Pest Management Interaction "Team"



Thank You

