

IPM CURRICULUM FOR AREA FOOD SERVICE SUPERVISORS

LOW-RISK INTEGRATED PEST MANAGEMENT TRAINING

William and Jean Currie, International IPM Institute

INSTRUCTION UNITS IN THIS LESSON PLAN:

1. The IPM policy, what it does, what not to do, your role in policy implementation, how to activate pest management help, expectations from Pest Management Technicians.
2. List problem pests.
3. Pest exclusion from site.
4. Storage: FIFO, delivery/quarantine, inspection.
5. Sanitation: A basic requirement – food, moisture, harborage.
6. Inspection and monitoring, observation and reporting.
7. Training objectives.

PERFORMANCE OBJECTIVES:

Unit #	Objective of Performance	Importance	Learning Difficulty
1	Know the IPM policy, understand roles in policy implementation and know how to get help in solving pest problems.	Very Important	Moderate
2	Be familiar with problem pests – insects, rodents, birds, cats, bacteria, virus, molds, etc., and why.	Important	Easy
3	Recognize how pests get in: C&C, doors, windows, deliveries, drains, personnel. Know how to keep them out.	Important	Difficult
4	Must know storage procedures: FIFO, delivery, inspection for pest presence, packaging, sanitation, moisture, 68°F, stains, odors, etc.	Important	Moderate
5	Must know sanitation procedures: Remove food, moisture, harborage from equipment, prep surfaces, floors, drains, grease traps, joints, mops, storage, outside conditions, personnel clothing, hair and beards, trash removal.	Very Important	Moderate to Very Difficult
6	Perform inspection: Outside and inside daily – general cleanliness, repairs, monitoring by Pest Manager, trap placement and type, report to appropriate party, Pest Management Technician, records, expectations.	Very Important	Moderate to Difficult
7	Provide quality training and oversight to enable personnel to transition from reactive to preventive practices for pest management.	Very Important	Difficult

KEY:

IMPORTANCE: Very important, important, not too important

OBJECTIVE OF PERFORMANCE: Must know, be familiar, have knowledge, understand, perform, demonstrate, etc.

LEARNING DIFFICULTY: Difficult, Moderate, Easy, Moderate to Very Difficult

AREA FOOD SERVICE SUPERVISORS LESSON PLAN

PREPARATION DATE: May 9, 2008

PREPARED BY: William E. Currie

UNIT OF INSTRUCTION: Low-risk IPM Policy Implementation

TITLE OF LESSON: Policy, Roles, Help, Problem Pests, Exclusion

INSTRUCTIONAL OBJECTIVE: Know the low-risk IPM policy, their role in implementation, and how to get pest management help. Understand why pests are a problem, exclusion of pests from entry.

TIME ALLOTTED FOR LESSON: 3 hours
METHOD OF INSTRUCTION: Lecture, guided discussion, demonstration
INSTRUCTIONAL RESOURCES: Manual, slides, flip chart, homework handout
A/V EQUIPMENT: Flip chart, PPT, slide projector, overhead projector, screen

GENERAL PLAN OF PRESENTATION: Introductions – our role – their charge. Why an IPM Policy? What it does, prohibited activities, their roles in implementation, how to get pest management help, expectations, problem pests and their importance, exclusion, points of entry, how to keep them out, who does what, supplies receiving and storage procedures, how it relates to low-risk pest management, homework.

INTRODUCTION: Names and roles of instructors, student introductions. Why are we here? Prepare low-risk pest management lesson plans and support the implementation of the low-risk pest management policy.

EXPLANATION/APPLICATION/PRESENTATION:

1. IPM policy does several innovative things, IPM defined, Precautionary Principle, approved pesticide list, notification, posting of products NOT on the approved list, emergency approval process, low-risk pest management training for staff, does not ban pesticides, emphasizes low-risk materials and methods, staff do not use pesticides (only licensed Pest Management Technicians are authorized), provides important roles for staff, reduce clutter, no food (except authorized sites). Observation and reporting of pest presence or evidence, reportable conditions (Pest Activity Log), process to get pest management help. Facility Manager is site point of contact. Expectations from Pest Management Technicians and maintenance actions.
2. Good bugs and bad bugs – tolerance for critters – low tolerance in kitchens and classrooms. Which ones are pests (list from group) and the importance of each (from group).
3. Exclusion: sizes of pests, smaller pests mean more work to exclude. What do pests need: air, water, food, temperature, shelter, light. How do pests get in? (Doors, windows, pipes, vents, cracks and crevices, dumpsters, supplies, clothes – staff). How do we keep pests out? (Close doors, door sweeps, screens, caulk, cleaning, hair and beard covers, clean clothes, etc.) Whose job is it? (Occupants, maintenance, Cafeteria Managers, Facility Managers, Pest Management Technicians)
4. Storage: prevent pests from entering sites in delivered products. Recognize signs of pest presence – damaged packaging, urine stains, droppings, dead or live insects. Damaged goods can be entry points for established or future infestations. Refuse, repair/repackage or quarantine, records, condition of packages, pest evidence, FIFO, rotation important to avoid pest problems, good storage practices discourage pests, storage maintenance, sanitation, temperature 68°F, moisture levels, inspection of delivered and stored supplies. Retain uniformity and quality, point out problems, keep good records, thorough inspection (get down on hands and knees and look under and behind equipment, etc.), use all tools of inspection.

CONCLUSIONS/SUMMARY: Low-risk pest management requires dedication and may be tedious and time-consuming when performed correctly. A thorough understanding of why such procedures are so important frequently imparts a degree of significance to even the most mundane task. Pests live where conditions favor them. Good pest management practices prevent pest presence by eliminating pest access to their needs. Review and cover main points, Q&A.

HOMEWORK ASSIGNMENT:

1. Read Manual.
2. Write out procedures for getting pest management help.
3. Describe your role in the policy implementation.
4. List pests or evidence of pests you observe this week (what, when, where in detail).
5. Design a checklist for receiving and storage supplies and products.
6. Prepare a lesson plan to train staff on today's material.

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT ONE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Policy, Roles, How to Activate Pest Management Help
 UNIT OF INSTRUCTION: Unit 1: Lecture, PPT or Overhead Transparencies – 30-35 minutes

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Policy, implementation. What's different, IPM definition, do's, precautionary principle, approved product list, notification, posting, emergency approval, training	Lecture	Moderate
2	Don'ts, only licensed Pest Management Technicians apply pesticides, remove harborage (clutter), no BAN, phase out pesticides over time	Lecture	Difficult
3	Roles, sanitation, no food, pest-proof food storage, eliminate clutter, observation and reporting, teach others	Lecture	Moderate
4	Reportable conditions, pest sighting, pest evidence, droppings, gnawings, webbing, fecal focal points, scattered trash, etc.	Lecture, Display, Q&A	Difficult
5	Facilities Manager, point of contact, may examine situation, call to report, information directed to appropriate office	Lecture	Easy
6	Expectations, Pest Management Technicians respond, emergencies that day, others soon, thorough inspection and monitoring	Lecture, Demo (monitors, traps)	Easy
7	Low-risk pesticide application, follow-up, repair structural defects, prevent pest access	Lecture	Easy
8	Basics of IPM: exclusion, sanitation, habitat modification, inspection, monitoring, low-risk pesticides, records	Lecture	Difficult

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
 METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT TWO

COURSE DESCRIPTION: Low-risk Integrated Pest Management Implementation
 SUBJECT MATTER: Problem Pests
 UNIT OF INSTRUCTION: Unit 2: Lecture, Guided Discussion, Group Performance – 15-20 minutes

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Good bugs/bad bugs – every living organism in nature has a role – indoors – less tolerance for critters.	Lecture, PPT, Slides	Easy
2	List problem pests.	Guided Discussion, Group Input, List on Flip Chart	Easy
3	From list, determine level of importance – emergency, urgent, routine, non-essential.	Guided Discussion, Group Performance	Moderate
4	Summary – Q&A		Easy

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT THREE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Exclude Pests from Entering the Site (Cafeteria/Kitchen, Classroom, Campus)
 UNIT OF INSTRUCTION: Unit 3: Lecture, Guided Discussion – 1 hour

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Pests come in all sizes – exclusion effort increases as size decreases.	Lecture, Demo, PPT, Slides	Moderate
2	What do pests need and where do they find it? Air, water, food, shelter, temperature, light (for plants).	Guided Discussion	Easy
3	How do pests get in? Doors, windows, pipes, drains, vents, supplies, clothes, cracks and crevices, dumpsters, etc.	Guided Discussion	Moderate
4	How do we keep pests out? Close doors, door sweeps, window screens, caulk cracks and crevices, clean drains, quarantine supplies, close trash containers, etc.	Guided Discussion	Moderate to Difficult
5	Whose job is it? Occupants, Cafeteria Managers, Maintenance, Facility Managers, Pest Management Technicians, teachers, principals.	Guided Discussion	Difficult
6	Summary, Q&A		Easy

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
 METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT FOUR

COURSE DESCRIPTION: Low-risk Integrated Pest Management Implementation
 SUBJECT MATTER: Food Storage – FIFO – Delivery and Quarantine
 UNIT OF INSTRUCTION: Unit 4: Lecture, Guided Discussion, Demonstration – 1 hour

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Delivery inspection for pests – obvious signs, pest itself, fecal pellets or spotting, odor of urine (rodents, cockroaches), webbing or frass (moths), dead insects, gnaw marks, rub marks, damaged packaging. Less apparent signs – disturbed or scattered items, cockroach odor, odor of mold spores. Quarantine away from site, return, repackage, repair.	Lecture with Examples and Hands-on Demo	Easy
2	Check for quality and integrity of packaging – paper, plastic, cellophane, wrapping of goods.	Lecture, Hands-on Demo	Moderate
3	Accurate and complete record keeping.	Lecture, Q&A	Moderate
4	Proper storage procedure – FIFO and why?	Lecture, Q&A, PPT	Moderate
5	Storage maintenance/sanitation – temperature – moisture, accessibility.	Lecture, Q&A, PPT	Moderate
6	Site inspection: Why necessary (retain uniformity and quality, point out problems, keep good records, document success of program), and how to do it (thoroughly!! Get down on knees and look under equipment, use all inspection tools).	Guided Discussion, Demonstration	Moderate
7	Review – repeat major points, Q&A	Guided Discussion	Easy
8	<p>HOMEWORK ASSIGNMENT:</p> <ol style="list-style-type: none"> 1. Read Manual. 2. Describe your role in the Policy implementation. 3. List pests or signs of pests you observe this week, when and where. 4. Design inspection checklist for receiving and storing supplies and products. 5. Prepare a lesson plan to train staff on today's material. <p>Hand in at beginning of next class.</p>		

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
 METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion

AREA FOOD SERVICE SUPERVISORS LESSON PLAN

PREPARATION DATE: May 9, 2008

PREPARED BY: William E. Currie

UNIT OF INSTRUCTION: Low-risk IPM Policy Implementation

TITLE OF LESSON: Sanitation – Inspection and Monitoring – Training the Trainer

INSTRUCTIONAL OBJECTIVE: Know sanitation procedures and inspection and monitoring methods supporting the IPM program. Know training techniques to cover “must know” information first, guided discussion, show and tell, demonstration, then coach “hands-on” performance to build proficiency and comfort level.

TIME ALLOTTED FOR LESSON: 3 hours
METHOD OF INSTRUCTION: Lecture, guided discussion, demonstration
INSTRUCTIONAL RESOURCES: Manual, slides, flip chart, homework handout
A/V EQUIPMENT: Flip chart, PPT, slide projector, overhead projector, screen

GENERAL PLAN OF PRESENTATION: Homework discussion, sanitation procedures and why, inspection and monitoring, Train-the-Trainer methods, evaluation, their charge.

INTRODUCTION: Review homework prepared by students from prior session on policy, problem pests, exclusion, receipt and storage of supplies, and lesson plans.

EXPLANATION/APPLICATION/PRESENTATION:

1. Sanitation, basic elements, thorough cleaning, elimination of all harborage, moisture management.
2. Guided discussion – determine both obvious and less obvious harborage sites, examples of structural defects, equipment, clutter.
3. Examples of importance of thorough cleaning – smallest and unobvious food sources feed a colony of cockroaches, ants, maggots, beetles.
4. Workers systematically avoid cleaning most difficult places – guided discussion to develop list of such places.
5. Discuss proper cleaning equipment and its use – list on Flip Chart.
6. What is done with cleaning equipment after use? Guided discussion to cover cleaning of equipment – dry storage of mops, wiping out buckets, etc.
7. Inspection – Sherlock Holmes lamented, “My Dear Watson, you look but do not see!” Guided discussion to show how this shortcoming could affect the success of the IPM program – poor cleaning feeds pests – poor inspections overlook potential problems – could lead to eventual failure of the program when all concepts are disregarded.
8. List procedure for proper inspection. Check sanitation and storage – thorough cleaning of all surfaces (floors, walls, flashing, shelves, etc.) and all equipment.
9. Guided discussion and demonstration to list inspection tools.
10. List record keeping reasons and procedure for reporting problems.
11. Guided discussion why inspection is important to IPM.
12. Discuss the tools for monitoring for pest presence – demo.

13. List Do's and Don'ts of monitoring and how this supports the IPM approach.
14. Training objectives – change behavior to change attitude – change is easier with incentives and recognition – recognize any movement toward the ideal goal.
15. IPM advantages: fewer pests, fewer toxic pesticides, less illness, students learn more – faster, fewer interruptions by pests, your work environment is under your own control.
16. Cover “must know” information first – use “guided discussion” to get class input and buy-in. Use “show and tell” and “demonstration,” then coach “hands-on performance” by trainees to build proficiency and comfort.
17. Evaluation, Q&A.

CONCLUSIONS/SUMMARY: Change. You are part of a team. Help others to change to the low-risk pest management program.

HOMEWORK ASSIGNMENT: Pass this information on to others.

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT FIVE

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Sanitation – A Basic Requirement – Food – Moisture – Harborage
 UNIT OF INSTRUCTION: Unit 5: Lecture, Guided Discussion, Demo – 45 minutes to 1 hour

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Homework discussion: 1. IPM help procedures 2. Policy implementation role 3. Pest observations 4. Receiving and storing checklist 5. Lesson plan	Guided Discussion	Difficult
2	Sanitation – critical elements – thorough cleaning of all surfaces and equipment – moisture management – elimination of all harborage – remember to eliminate harborage	Lecture, Guided Discussion	Moderate
3	Identify harborage – structural defects, holes, cracks and crevices, unsealed flashing, hollow legs, equipment voids, food processing equipment, clutter.	Guided Discussion	Moderate
4	Thorough cleaning procedure concept – deny pests access to any food – food on counters or prep surfaces – scraps on floors or in equipment – flour dust on beams.	Guided Discussion – what is food for a cockroach? Ant? Maggot? Beetle?	Moderate
5	Thorough cleaning – the most difficult places to reach and clean – that’s where the bugs are.	Guided Discussion, Group Participation	Moderate
6	Sanitation equipment – what to use and how to use it. List equipment (brooms, mops, buckets, rags, soaps, etc.)	Guided Discussion – list on Flip Chart	Easy
7	Sanitation equipment – maintenance and storage – what is procedure after cleaning?	Guided Discussion	Easy
8	Routine daily inspection – why is it important	Lecture, Q&A	Moderate
9	Summary, Q&A		Easy

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
 METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT SIX

COURSE DESCRIPTION: Low-risk Integrated Pest Management Implementation
 SUBJECT MATTER: Inspection and Monitoring, Observation and Reporting
 UNIT OF INSTRUCTION: Unit 6: Guided Discussion, Demonstration – 1 hour

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Inspection: looking versus seeing. Why is this so important? Set procedure.	Guided Discussion, Group Examples	Moderate
2	Inspection equipment: Clothing, hard hat, checklist, flashlight, hand lens, mirror, tools to access equipment, pen or tape recorder, etc.	Guided Discussion, Demonstration	Easy
3	Record keeping and reporting: Keep all checklists on file, make notes on problems and actions, know how to report problems.	Guided Discussion	Moderate
4	Monitoring: How important is it? Early indicator of problems. Zero in on “hot spots” – determine effectiveness of actions.	Guided Discussion	Moderate
5	Tools used to monitor: Sticky traps (non-attractant vs. attractant), pheromone traps, tracking powder.	Guided Discussion, PPT, Demonstration	Easy
6	Monitoring Do's and Don'ts: 1. Do keep accurate records of placement 2. Do keep accurate records of results 3. Do keep accurate records of actions 4. Don't move traps – destroy traps – or forget traps	Guided Discussion, List on Flip Chart, Discuss Importance of Each	Moderate

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
 METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion

AREA FOOD SERVICE SUPERVISORS LESSON PLAN UNIT SEVEN

COURSE DESCRIPTION: Low-Risk Integrated Pest Management Implementation
 SUBJECT MATTER: Training objectives
 UNIT OF INSTRUCTION: Unit 7: Lecture, Guided Discussion, Demonstration – 1 hour

INSTRUCTIONAL PROCEDURE:

No.	Instructional Sequence (Tasks)	Instruction Method (Performance)	Learning Difficulty
1	Training objective: Change behavior from reactive to preventive pest management program.	Lecture	Difficult
2	Change behavior to change attitude – perfect practice makes perfect behavior – success makes more success.	Lecture	Moderate
3	Change is easier with incentives and recognition – recognize any movement toward the ideal behavior.	Lecture	Moderate
4	IPM advantages for you: Fewer pests, less illness from pesticide exposure, students will learn more and faster, less interruption by pests.	Lecture, PPT	Easy
5	Your work environment is under your own control with these new low-risk pest management techniques.	Lecture	Moderate
6	Cover “must know” information first – guided discussion will get class input and buy-in.	Lecture, Demonstration	Moderate
7	Use “show and tell” to illustrate techniques.	Lecture, Demonstration	Moderate
8	Demonstrate, then coach “hands-on performance” by trainees to build proficiency and comfort level with skill.	Lecture, Demonstration	Moderate
9	Evaluation, Q&A	Class Performance	Easy
10	Charge: Teach IPM to others.		

INSTRUCTIONAL SEQUENCE: What comes first, chronological order
 METHOD OF INSTRUCTION: Lecture, demonstration, performance, discussion