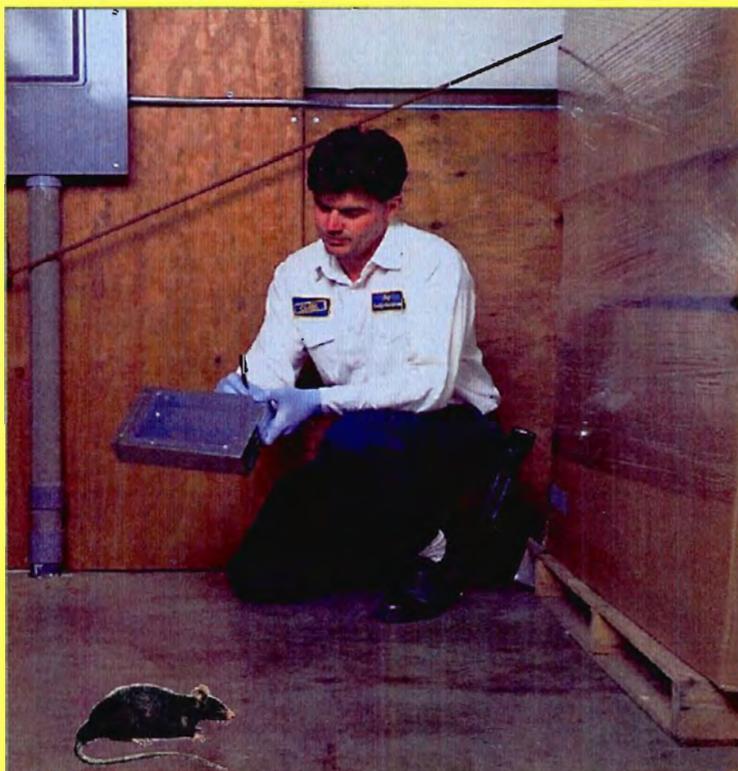


**REPORTS PREPARED
BY
MR. JAMES BOWYER
CLARK PEST
CONTROL**



November 3 - 25, 2000



Compiled by Agriculture Led Export Businesses
12 Dokki Street, 6th Floor
Dokki, Cairo

TEL 02-338-1445

FAX 02-748-0729

USAID Project No. 263-0264



JAMES BOWYER
Clark Pest Control
Sales & Marketing Manager
1540 Waterwheel Drive, Apt 4
Sacramento, CA 95833
TEL (916) 925-2966
EMAIL j.bowyer@clarkpest.com

Jim Bowyer has been an active part of the structural pest control industry for over 43 years. During this time Bowyer has owned and operated his own firm in the states of California, Texas, Arizona, and has been licensed in five states.

Bowyer has also served as President of the Pest Control Operators of California, Inc. (PCOC), in 1973, the state-wide trade association representing the majority of California's structural pest control firms. He has also held numerous other positions within PCOC, including Public Relations Committee Chairman, Liaison to the California Association of Realtors and served as president and Trustee of Political Action by Pest Control Operator (PAPCO) for 17 years, PCOC's Political Action Group . He has also served for many years as an active member of PCOC's Legislative Committee.

Since 1995 Bowyer has been with Clark Pest Control Company, where he serves as Sales & Marketing Director. He is an active member in the California Association of Realtors, including many local Real Estate Boards: The California Restaurant Association, Community Association Institutes (CAI), Council of Condominium Homeowners Association (COCHA), Executive Council of Homeowners (ECHO), Northern California League of Food Technologists (NCIFT), Member of several chapters of California Environmental Health Association (CEHA), is a member of Orange, Los Angeles, San Diego Counties and Northern California's Food Sanitation Advisory Committees (FSAC) and serves at present as the Northern California Chapter President, is also credential as a Certified Quality Control Sanitarian. He is a member of the California Hotel & Motel Association (CH&MA) the largest State Hotel/Motel Association in the country and the California Lodging Industry Association (CLIA).

Bowyer has lectured at many meetings and seminars about the legal aspects of the structural pest control industry, various types of wood destroying organisms, diseases caused by pests and the potential liability in Real Estate transactions and how to best manage pests.

AGRICULTURE-LED EXPORT BUSINESSES (ALEB)

Scope of Work

#12, Dokki Street, 6th Floor, Dokki, Cairo, Egypt

UNITED STATES AGENCY FOR INTERNATIONAL DEVELOPMENT

ABT ASSOCIATES, INC.

Assignment: Task 2, Mr. James Bowyer

Level of Effort: Maximum, 24 days in country, 2 travel days, plus 9 days in the United States

Time In-Country – November 3 – 25, 2000 (approx)

PEST MANAGEMENT SPECIALIST

Desired Professional Qualifications: The consultant shall have a practical understanding of integrated pest management. He or she must have worked in the private sector for at least ten (10) years. An understanding of how different commodities are processed and handled is also a must. The consultant needs to understand basic Good Manufacturing Practices (GMP's) for the a range industries and what can be done to protect foods and ingredients proactively from infestation. He or she must also have demonstrated an ability to organize materials and present them in a classroom environment.

Education: A minimum of a B.S. degree in food science or a related discipline is preferred. Proven practical experience may be substituted for educational requirements.

Language: There is no language requirement. A basic knowledge of Arabic would be useful, however.

Computer Literacy: Reporting requires a basic understanding of word processing and other programs. All reports are prepared in Microsoft Word 6.0 or higher.

Level of Effort and Duration of the Assignment: The assignment will consist of a minimum of two in-country phases, each lasting 2-3 weeks each. There will time allocated prior to each trip to prepare training materials and after the return to the United States. The time after the trip (maximum of 3 days) will be used for preparation of final reports. Final reports are due three weeks after departure from Egypt.

Background of Work: The Agriculture-Led Export Businesses project has been developed to increase exports of processed foods from private sector Egyptian food processors. Over the three year life of the project, the goal is to increase exports by some \$10,000,000US. This will be accomplished through concerted efforts to enhance marketing, business and technical practices by exporters and potential exporters. The project also seeks to build alliances, links and associations to expand export businesses and improve the health and viability of the Egyptian food processing industry.

To compete in the international market place, especially in Europe, the United States or Japan, processors of all foods must be able to manufacture high quality products under the basic Good Manufacturing Practices described in Codex and other regulations, such as 21 CFR Part 110 in the United States. They must also be able to adequately document practices to assure safety, wholesomeness and quality. Pest control is an integral part of these programs, especially when considers the large number of shipments that detained and eventually rejected for infestation. This is a real concern here in Egypt.

Work Activities: The objective of this task is to enhance understanding of the dehydration process and improve in-plant practices. This shall be accomplished through working with the industry directly and in a classroom environment. There will be several visits as part of this project to work with processors and assess progress made by those visited on earlier trips.

The specific role of the consultant shall be;

1. Lecture in technical programs on specific topics in the areas of sanitation and pest management. The consultant will be asked to do several one day programs specifically targeted at Integrated Pest Management (IPM) Time will be provided to prepare these materials prior to departure. Any materials previously developed by the consultant and used in the program shall be clearly marked that these are the property of the consultant and that permission for their use in this project only is granted to USAID and ALEB by the author. Target audiences will be the industry and Pest Control Operators (PCO's).
2. Visit private sector processors, especially dried fruits and vegetable processors, that are sensitive to infestation, evaluate practices and offer suggestions as to improving operations.
3. Visit distribution warehouses to evaluate practices and offer suggestions for improving operations.
4. Prepare trip reports for each site visit that include recommendations for improvement. These will be shared with the client. Each trip report should include a cover memorandum to the Task 2 leader that will not be included in the report to the client.
5. Recommend other "in country" activities once the consultant has gained an understanding of the situation.
6. Recommend to ALEB means to improve or modify programs.
7. Work with other Task Leaders while in country in the areas of marketing, business and association development as required.
8. Prepare a summary report at the end of the in-country portion of the project.

During the first visit, the consultant will focus on working with processors to upgrade in-plant operations. The future visit will continue with this activity, but will also serve to evaluate progress in operations visited the first trip.

Reporting: All reports should be submitted in hard copy and electronically to Mr. Stier. Reports shall be prepared using MICROSOFT Word 6.0 or above in an arial font in an 11 pitch on size A4 paper. Trip reports shall be prepared while in-country and submitted prior to departure. The summary report should be submitted within three weeks of the departure from Egypt.

Richard F. Stier
Director, Technical Services
Agricultural Led Export Business

Mr. Tarek Shata _____
CTO Approved Disapproved

Mr. Dennis Buda _____
COP Approved Disapproved

PEST MAANGEMENT-02.doc
SEPTEMBER 11, 1999, RFS

PRINCIPLES OF INTEGRATED PEST MANAGEMENT

INTRODUCTION

One of the most important elements of a food processor's overall sanitation programs is pest control. Food regulations throughout the world mandate that food processing and handling areas be free from pests. The reason for this is quite simple. Pests carry disease and could possibly contaminate the foods being processed. For example, there are reports that say flies carry some 47 diseases that can be passed onto man.

The best means for assuring that an operation is through the application of the principles of Integrated Pest Management or IPM. IPM focuses on excluding pests and taking steps to prevent their becoming entrenched in a plant. Operators want to deny pests food, water and shelter, and keep them out of the plant. If this is done effectively, there will be no need to resort to the last resort.....eliminating the pests. Pest control operators have stated that 90% of pest control is good sanitation, so this program dovetails quite nicely with other programs that ALEB has offered such as sanitation and HACCP prerequisites.

THE PROGRAM

The program will address the following areas;

- ◆ Defining IPM & Principles
- ◆ Sanitary Design to Exclude Pests
- ◆ Insects & Their Control
- ◆ Rodents & Their Control
- ◆ Birds & Their Control
- ◆ Pest Elimination
- ◆ Hands-On Demonstration of Pest Control Tools



FACULTY

Mr. Jim Bowyer - Clark Pest Control

Jim Bowyer has been an active part of the structural pest control industry for over 43 years. During this time Bowyer has owned and operated his own firm in the states of California, Texas, Arizona, and has been licensed in five states.

Bowyer has also served as President of the Pest Control Operators of California, Inc. (PCOC), in 1973, the state-wide trade association representing the majority of California's structural pest control firms. He has also held numerous other positions within PCOC, including Public Relations Committee Chairman, Liaison to the California Association of Realtors and served as president and Trustee of Political Action by Pest Control Operator (PAPCO) for 17 years, PCOC's Political Action Group. He has also served for many years as an active member of PCOC's Legislative Committee.

FOR MORE INFORMATION

Mr. Richard F. Stier
Mr. Morad S. Ahmed
ALEB
12 Dokki Street
Giza, Cairo
EGYPT
EMAIL rfstier4@egyptonline.com
morad@egyptonline.com

**NOVEMBER 20 , 2000 @ 10:00 -
HOTEL MERCURE, ALEXANDRIA**

**NOVEMBER 21, 2000 @ 10:00
ALEB TRAINING CENTER, 12
DOKKI STREET, DOKKI, CAIRO**

REGISTRATION FORM

PEST MANAGEMENT

NAME
COMPANY
ADDRESS
TEL
FAX
EMAIL

I will attend the program in

CAIRO

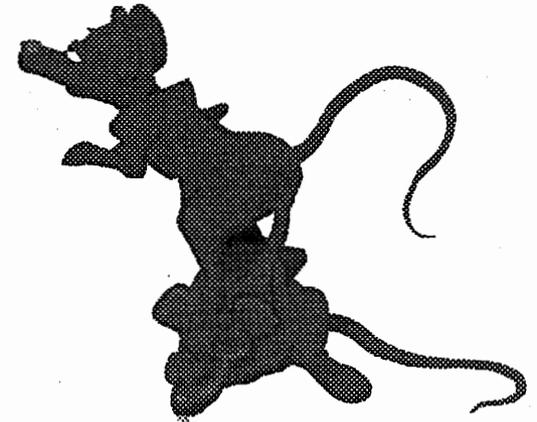
ALEXANDRIA

REGISTRATION INFORMATION: There will be a 100 LE fee for this program. Attendees will receive instruction, a course binder, coffee breaks, and lunch. They will also receive a Certificate of Attendance

FOR FURTHER DETAILS:

AGRICULTURAL LED EXPORT BUSINESSES
12 DOKKI STREET, 6TH FLOOR
DOKKI, CAIRO
TEL 338-11445 / 348-0728
FAX 348-0729

**PRINCIPLES OF
INTEGRATED
PEST
MANAGEMENT**



A WORKSHOP SPONSORED BY
AGRICULTURAL LED EXPORT BUSINESSES,
THE INSTITUTE OF FOOD TECHNOLOGISTS
&
CENTER FOR ADVANCED FOOD
TECHNOLOGY

**NOVEMBER 20, 2000 @ 10:00 AT THE
HOTEL MERCURE, ALEXANDRIA
NOVEMBER 21, 2000 @ 10:00 AT THE
ALEB TRAINING CENTER, 12 DOKKI
STREET, DOKKI, CAIRO**

USAID PROJECT NO. 263-0264

Record of Attendance

Workshop: Principles of Integrated Pest Management

Date: Nov. 21, 2000

Location: ALEB Office

Speaker(s): Dr. Jim Bowyer

Contact Name	Position	Company Name	Address	Tel	Fax	Payment		
						Cash	Check	Free
1- Sayed Ismail Megahed	Q.C	United Co. For Poultry		7361330- 011/331631	011/331632			
2-Eng. Mohamed El Mongy		El-Dakahlia co. for poultry.	18 El Obour buildings-salah salem St.-Cairo.	2605004-4025051	4039287			
3-Dr. Alaa Khalil		El-Dakahlia co. for poultry.	18 El Obour buildings-salah salem St.-Cairo. 2605004-4025051	2605004-4025051	4039287			
4- Samer Neama	Agri. Eng.	Satiaco	2 Sayed Zakaria, Sheraton Buildings .Helioplice	2661276	2661274			
5-Eng. Mohamed Barakat		El-Dakahlia co. for poultry	18 El Obour buildings-salah salem St.-Cairo.	2605004-4025051	4039287			
6-Dr. Sayed El Shalakani.		El-Dakahlia co. for poultry	18 El Obour buildings-salah salem St.-Cairo.	2605004-4025051	4039287			
7-Mohamed Bahgat		Heinz-Egypt.	6 th of October city. 2 nd Industrial zone, #36	011/330474	011/330467			
8- Ashraf Edward	Agri Eng.	Sotiaco						
9- Akram Aziz	Agri Eng.	Sotiaco						
10- Samy El Gabery		El Nasr						

11- Mohamed Kamal Mohamed	Agri. Eng.	Technogreen		015/369520	015/369510			
12. Fathy Ahmed Abd Rabou		El Rashidi El Mizan	178,Port said St.,Sayeda Zainab.	3903477	3903470			
13- Mohamed Mahemoud Dyab	Agri. Eng.	Pico						
14. Dr. Mona El Bakery	Q.A&Q.C Manager	SEKEM for herbs.	Belbies-Sharkeya	055-882114-5-6 2807994	2806959			
15- Mohamed Tolba	Agri Eng	Wadi Food						
16- Kamal Anwar		Chipsy						
17- Hanan El Hamaki	Agri Eng.	Pico						
18- Adel Ibrahim	Agri. Eng.	Pico						
19- Abdel Nasser Morsy		Cairo Agro Processing Co.						
20- Hanan El Garib		Farm Frites						
21- Ahmed Fayed		Farm Frites						



March 15, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Dear Rick,

Enclosed is a summary of my recent trip to Egypt from November 3rd through November 25th. This is my third trip to Egypt and it appears to me that the food processors are gaining more interest and knowledge as time goes on in food safety. I think by continuing to give your presentations and get management level of the food processing plant to better understand the GMP's and the HACCP requirements will do well for this industry in Egypt, especially as management buys into food safety. Others will follow their lead.

Continued good luck and success to you and the ALEB program.

Sincerely,

Jim Bowyer
Quality Assurance Manager

Summary

11/3/00 to 11/25/00

Dear Rick:

On November 3rd I left to go to Egypt and the trip continued through November 25th. The programs and audits that were involved in this trip, I believe were exciting to those that attended the various seminars and to the plants that were audited. The personnel from the various plants and those attendees of the seminars seemed much more interested in obtaining information than they had on the previous trips. Their interest in GMP's, HACCP, and sanitation was very rewarding to me personally and speaks well of the ALEB program.

During this visit 11 food processing plants were visited. During these visits, meetings were held with management personnel, an audit was conducted, with written reports followed up with recommendations and findings. I attended two days of the Market Outlook Seminars and assisted in that endeavor. There were two pest control seminars held one in Cairo and the other in Alexandria on the Principles of Integrated Pest Management. In addition, there was a presentation given to the Egyptian Agribusinessmen Association (EAGA) on rats, mice, and birds. The Chief Executive Officer is Adel Sayed Ahmed. Additionally there was a meeting held with the pest control firm called Sotaico and their management and ownership. The personnel present at this meeting were Mr. Nagy Toueg, Founder and President, Mr. Rawl Camel Toueg, and Mr. Adel.

Following is a brief summary of the visits and seminars that were conducted:

- 11/5/00 Met with management personnel from the Farm Frites Company. The personnel that I met with was Mr. Ahmed M. Fahed, the Quality Assurance Manager and Hanar Gharib, QA Department Head. This management team was very receptive to improving their standards and look forward to attending the pest control seminars. Recently they had failed rather badly on a pest control audit they had from an outside firm. They scored only 22 out of 100 possible points. After our audit, we found many conditions that should exist and that improvement was necessary. They took many of the recommendations immediately and started working on updating their equipment and type of services. In fact recently one representative came to the United States and purchased several thousands of dollars worth of equipment to update the pest control and sanitation at this facility. (See report for specific findings and recommendations)
- 11/6/00 Went to the City of Kafr El Zayat and met with management of the Daltex Company. The management team I met with was Amr Ahmed Ali, Project Coordinator and their QA Manager. There were several findings and recommendations, which can be found in the report for this plant. The

management team seemed quite enthusiastic about improving their sanitation and pest control maintenance.

- 11/7/00 Visited with the El-Nenaiea Company in El-Nenaiea City. This plant was in a remodel mode and it was difficult to see what the finished product would be like. The equipment and pest control monitoring devices were not in place due to the construction. They had planned on being finished by the opening of the onion-processing season. Had a meeting with Mr. Hisham Zahran, owner and Mr. Ahmed Gharieb, Quality Control Manager. There were a number of findings and recommendations, which can be found in the report for this plant.
- 11/8/00 Visited the Wadi Foods processing plant. They produce a number of products including virgin olive oil, table olives, minced pickles, pickled vegetables, onions, lemons, cucumbers, peppers, olive pesto, sundried tomatoes and olive oil. Met with the Engineer, Yasser Mohammed Fahmy and the planning and follow-up manager. This plant is located in the 10th of Ramadan area and is an interesting plant with surrounding olive tree orchards. They have several needs and I made verbal suggestions with a written report to follow. Wadi Foods has their own orchards around their facility. (See report for findings and recommendations)
- 11/9/00 Went to the El Rashidi, El Mizan Confectionery Company in the 6th of October City. This is a large company producing Tahina and other products from sesame seeds to form sesame cream. These products can be served on meat or as a snack on bread or a dessert. Met with Dr. Mahmoud Abdel, Wahof Research and Development/QA & QC Director, Mr. Ahmed Ganel M. Hanar, Resources Manager and Engineer, and Fathy Ahmed Abdalla, the Health Management Manager. We had an insightful meeting and discussed some of the needs. I then did an audit of this plant and these findings and recommendations are found in the enclosed report.
- 11/10/00 Day off - Worked on notes for reports
- 11/11/00 Spent the day working on reports
- 11/12/00 I visited the Dr. F. Elshobaki Trade and Export Agencies. The company exports herbs and spices, mostly to the United States, Japan, Europe, and the United Kingdom. This firm does only export and no domestic business. I performed an audit and review of this company's needs. The needs to this structure are many but I seriously doubt that structural corrections will be done.
- 11/13/00 I attended and met with attendees of the ALEB Market Outlook Conference at the Conrad Hotel.

- 11/14/00 Worked and attended the ALEB Market Outlook Seminar at the Conrad Hotel.
- 11/15/00 I visited the Americana Company. I met with Mohamed Seleh of the QA Department, M. Hisham Said, the Warehouse Manager, and M. Desoky Shehata, the Operations Manager. This plant is quite clean and orderly. Storage practices were overall good. Further findings and recommendations are in enclosed report. I then went back to the office and started to prepare a program for a seminar, to be held on 11/23/00, for the Sega Egyptian Agribusiness Association.
- 11/16/00 I visited the Nile Fruit Pulp Company and met with Mr. Abdul Nasser Morsey, the Engineer, Quality Control Manager and Mr. Khalid El Sayeda, Engineer and fruit production manager. The Nile Fruit Pulp Company is a Cairo Agro-processing Company that produces 20 ton per day, primarily of mango and guava juices. I then performed a pest management audit of this company.
- 11/17/00 Today was a weekend and my birthday. I spent the day working on reports and seminar presentations.
- 11/18/00 We traveled to Alexandria to do plant audits and a Pest Management Workshop.
- 11/19/00 We visited the Dean of Public Health in Alexandria, and then went to the Seclam Company, a processor of cheese, yogurt juices and milks. I also met with the Chairman of the Board and then Engineer, Ashrof Amin, QA Manager Engineer, Ahmed Khamis, and the Manager of the Sanitation and Pest Control Department. This plant was being remodeled and my findings are in the enclosed report.
- 11/20/00 I conducted a Sanitation and Pest Management Seminar on rats, mice, and birds. This IPM Program was presented in Alexandria, Egypt at the Mercury Hotel.
- 11/21/00 I presented the same seminar as above at the ALEB office in Cairo, Egypt.
- 11/22/00 I met with Dr. Sherif Maamoun, the Director of Quality Assurance and Dr. Lamiaa Farouk, the Manager of Quality Assurance for Roasty Company. Roast is a chicken processing plant. I visited with management and performed a pest control audit on both of their plants. This was a relatively clean plant with some good practices in place. I also discovered a live rat.

11/23/00 I put on a workshop for the Egyptian Agribusiness Association (EAGA) which were composed of food processing plant management members. It was well attended and it ran over 1 1/2 hours over schedule.

11/24/00 I met with the owner and two of his associates of the Sotaico Pest Control Company. I reviewed ideas to advance their IPM Program. I worked on reports and started packing for travel the next day 11/25/00.

11/25/00 Travel Day

You can see from the above, daily audits were done in many areas of Egypt, including Cairo, Alexandria, the 10th of Ramadan City, the 6th of October City, Kafr El Zayat, El Nenaiea City, and Helopolis to name a few. It was my observation that much headway has been accomplished with the program. This was my third trip and the people appear much more receptive to the practice of good sanitation standards and IPM. Their interest in following the GMP's and in developing a certified HACCP program have also greatly improved. Overall I would say the ALEB program is getting the food processors attention and that your efforts Rick have been successful in getting that attention.

Sincerely,

Jim Bowyer
Quality Assurance Manager

JIM BOWYER – VISIT SCHEDULE

MONTH NOVEMBER 2000

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
			1	2	3 JIM BOWYER ARRIVES	4
5 VISIT FARM FRITES Ms. Hanen Gharieb TEL 015-362-956 FAX 015-362-2966	6 VISIT DALTEX Mr. Hesham Naggar TEL 02-305-0505 FAX 02-304-4424	7 VISIT EL NEANAIEA Mr. Ahmed Gharieb TEL 218-1650 FAX 218-4694	8 VISIT WADI Foods Mr. Khalil Nasrullah TEL 304-5140 FAX 346-4520	9 VISIT RASHEEDY MIZAN Eng. Magdy Iskander TEL 010-105-0013 FAX 02-390-2470	10	11
12 VETERAN'S DAY HOLIDAY VISIT EL SHOBAKI Dr. Farouk El Shobaki TEL 02-386-9898 FAX 02-348-1120	13 MARKET OUTLOOK	14 MARKET OUTLOOK	15 MARKET OUTLOOK VISIT AMERICANA Mr. Mohamed Dagher	16 VISIT CAIRO AGRO PROCESSING Mr. Ashraf Hassan	17	18 TRAVEL TO ALEX
19 VISIT SICLAM Mr. El Sisy TEL 03-535-9099 FAX 03-534-9870	20 PRINCIPLES OF INTEGRATED PEST MANAGEMENT (ALEX)	21 PRINCIPLES OF INTEGRATED PEST MANAGEMENT (CAIRO)	22 VISIT ROASTY & MONTANA Dr. Sherif Maamoun	23 THANKSGIVING HOLIDAY PRESENTATION TO EAGA 16:00	24	25 JIM BOWYER DEPARTS
26	27 BEGINNING OF RAMADAN	28	29	30		



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



Abt Associates Inc.

February 4, 2001

Ms. Hanan Gharib
Farm Frites
10th of Ramadan City
Industrial Zone A2 (Lot C)

Dear Ms. Hanan:

I am a copy of Jim Bowyer's report from his audit of your facility last November. If you follow the recommendations in this report and properly use the new supplies that you have ordered from the United States, I am confident that you will do much better on the next Tricon Audit.

The recommendations should be self-explanatory, but allow me to emphasize a few points;

1. Insect Electrocuters – Each unit should be marked with a number and the locations recorded on a master map. A program should be developed to both service (clean) the units on a regular schedule and replace bulbs. Even if the bulbs appear to be working, they may no longer be effective for attracting pests.
2. Exterior Bait Stations – When you get the new bait stations, be sure that each station is numbered and anchored to the ground or elsewhere. Once the bait has been placed in the unit, the stations must be locked. Each station must be numbered using a wall plaque and the location recorded on a master sheet. Activity and changes in bait must be monitored and recorded.
3. Logs and Monitoring Forms – Logs and monitoring forms will need to be developed for all bait stations, live traps, insect electrocuters and other traps. All of these forms must then be placed in a pest control manual for reference and ease of access.

Good luck on the program and the audit

Please feel free to call should you have any additional questions, or require any additional information.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: M.S. Ahmed, Files

January 15, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Farm Frites

Dear Rick,

On 11/5/00 I visited the Farm Frites Food Processing Plant in the 10th of Ramadan City. I met for 2 hours with Ahmed M. Fayed, Quality Assurance Manager and with Hanan Gharib, Quality Assurance Department Head. This was a frank, beneficial and enlightening meeting. After the meeting Hanan Gharib and I did an audit of the plant.

This plants main product is French fries and its primary client is the Tricon Company (KFC, Pizza Hut & Taco Bell). They have two 12-hour shifts each day, six days a week with 300 employees. This plant is 21,800 square meters and produces 110 tons of product per day. Farm Frites has been in operation for 11 years and exports 70% of their products to the Gulf States and 2% - 3% to Japan. The rest of their product is domestic. They would like to improve their exports. They have had an outside pest control Service Company, named Agritec for the past 10 or 11 years. There is no documentation or pest control log on file. They had an audit by Tricon in July of 2000 and failed with a 22 out of a possible 100 score.

The following are a few findings, recommendations and procedures to set in place as soon as possible:

- Fly activity was noted in the packaging section and other areas. Recommend additional fly light traps placed in the proper positions so as not to attract them from the outside, but to eliminate the ones that are already inside. Those mounted on the inside of the exterior walls should be installed at heights of approximately 2 meters and those on the interior floor should be no higher than 2.2 M.
- Insectocutors should be replaced with Vector, Gilbert or Gardner type fly light units with glueboards. With this type of unit the fly not only flies near the lamp, but also should he land, will stick to the glueboard. With these type of units there will be no fragmentation of the insects. These types of units, especially the Gardner, have a stronger lamp with more glue space. All lamps should be of the shatterproof bulb types.
- There is no documentation of service or cleaning of the fly light traps. Fly lights were observed to be dirty and were obviously not cleaned as needed. The fly light traps must be inspected, cleaned and serviced on a scheduled basis. Experience will show how often cleaning should be done. The schedule will depend on the catch. We recommend that inspections and cleaning be conducted on a weekly basis at the beginning of the program. This may then be adjusted as needs require. Be sure that schedules are established in writing. Cleaning, inspection and service will always depend on needs. Service should also be documented on a master log. This log should contain the date, what was found, when glueboards were replaced and the frequency each fly light trap

was serviced. Each unit should also have a dating card attached to the unit itself, properly dated that corresponds with the master log.

- There is no record of dates when bulbs were being replaced. Several bulbs were out and I suspect others have surpassed their useful life and were, therefore, no longer effective for attracting and controlling flies. We suggest the purchase of a light meter to monitor the UV emissions. We also suggest that all bulbs be replaced with shatterproof bulbs. Bulbs should be replaced at least twice per year or more frequently if needed. Replacement should follow a written schedule.
- There is no map showing the location of fly light traps with corresponding numbers on the map indicating locations of the fly light units. We recommend that all fly traps be numbered and a map prepared showing the number and location of each fly light. This document should be kept in the pest control log.
- At the delivery and loading dock the door was left open and spills of peas were noted that have not been thoroughly cleaned up. This condition was both attracting many birds to feed and allowing some flies to gain access into the plant. Another area where this condition was observed was at the potato intake or loading area leading into the packaging area. These doors are not sealed and potato spills are not picked up or cleaned as they occur. Recommendations for the (2) above findings: 1) thoroughly clean spills as they occur and 2) fit doors or install new roll up door properly fitted. Should working requirements mandate that they remain open for ventilation, install fine mesh netting on a tight fitting frame that can be raised and lowered when required. A small door can be built into netting for foot traffic as required. There are companies that will custom make these doors.
- Install proper sized industrial air curtains on all exterior walk through, sliding and roll up doors, and replace the ones that aren't working properly.
- Seal all openings in walls and around plumbing on all exterior walls. These repairs will help prevent birds, rodents, and flies from entering the plant.
- Recommend enclosing potato loading equipment area with fine mesh netting to discourage access for birds and flies.
- Storage and debris found around the exterior of the plant. Recommend that all debris is eliminated and that storage is removed away from the building.
- Vegetation was found next to the building and climbing the building. Recommend that the vegetation be removed.
- Inside the plant there was found that there were some drains that had no cover or screens. Recommend a drain cover or screen be installed on all drains.
- Some windows were open or broken and have no screens. Install screens on all windows that can be opened and repair all broken windows and torn screening.
- It would appear there is no written, specific cleaning schedule. Recommend a written cleaning schedule be completed with specific assignments for certain people and specific assignment areas to perform these tasks.

- On the inside of the plant there are racks and shelves stored against walls. Recommend that nothing be stored up against the wall. There should be a corridor of approximately 45cM between wall and product. We also suggest that products be stored on a raised metal rack with at least 15cM clearance.
- There were noted leaks in plumbing and standing water in washing area. Repair plumbing and clean up all standing water leaks as they occur.
- Some cracks and crevices were noted in walls and floors. Seal all cracks and crevices with a smooth, easily cleanable epoxy type substance.
- Walls were found to be dirty. Clean all walls as part of the regular cleaning schedule.
- Debris and junk was noted in the compressor room. All debris and junk needs to be removed and eliminated.
- Debris was noted outside. Remove all debris from exterior trash areas.
- Exhaust fans have no screening to prevent entrance of flies. Install a small mesh screen to prevent fly entry.
- Exterior has exposed poison bait. There are also some bait stations with 15 – 20 cM diameter clay pipes with bait inside, which can easily fall out and is accessible to animals, birds or people. Recommend this system be eliminated immediately and the following system be installed:
 - Install tamper-resistant rodent bait stations. All stations should be installed at both sides of all exterior doors and every 15 M on the exterior of the plant buildings. This is known as a 2nd line of defense.
 - Install tamper-resistant rodent bait stations on the exterior fence lines of the property every 30 M. This is known as your 1st line of defense.
 - Each tamper-resistant rodent bait station will have a dating card inserted and the station will be opened, inspected, cleaned, bait replaced as necessary.
 - All exterior bait stations shall be the types that can be locked.
 - Each station will have a wall placard adhering to the wall or fence directly above the station and have corresponding numbers on both the station and the placard.
 - Diagram map indicating position and number of all tamper resistant rodent bait stations and monitoring devices.
 - All bait stations must be anchored.
 - Monitoring devices now consist of a few single catch wire cages. We recommend installing tin cats (live traps) on the interior wall adjacent to all exterior doors on both sides of doors and that additional traps be placed on inside of exterior wall every 12 M. Secure station to floor. Install dating card, wall placard with corresponding numbers.
- There is no pest control log. This should be set up immediately. The pest control log should consist of the following: Copies of all pest management sanitation inspection reports, fly light machine information, information on tamper-resistant rodent bait stations, both interior and exterior locations of units, MSDS copies, copies of labels and labeling information, Certificate of insurance, copy of license or certification of your staff or those from the outside agency, pest sighting sheet, approved pesticide listing and material use reports.

Above are a few observations and recommendations found during the audit. These recommendations should be implemented immediately and then another audit be done to determine progress. Let me know if you should have any additional questions or concerns.

Sincerely,

Jim Bowyer
Quality Assurance Manager

Exhibit 1

Standards for Sanitation and IPM Pest Control

1. **Building Exterior.** Is there litter? Are weeds and brush kept clear? Is equipment stored outside? Are pallets or cardboard stored properly? Is trash area properly maintained? Is building free of cracks, crevices or holes?
2. **Building Structure.** Are all windows closed and screened? Do doors fit tightly? Are there cracks or holes in the walls? Does the roof leak? Are there cracks in the floor that can collect debris? Are there cracks around door thresholds, dock plates, etc.?
3. **General Housekeeping.** Is wall clearance adequate? Are spills cleaned up promptly? Are floors cleaned regularly? Do employees have specific cleaning assignments? Are there written instructions?
4. **Storage Practices.** Is storage up off floor by a minimum of 6"? Is storage 18" away from walls? Is there ??? isleways? Are rack legs clean? Are the upper levels of storage racks cleaned? Are pallets clean? Is there spillage on or under racks? Are easily infestable items segregated? Are infested products returned or damaged products segregated?
5. **Employee Areas.** Are lunch or break rooms clean? Are locker rooms clean? Are employee lunches stored or consumed in product areas?
6. **Receiving Practices.** Is there a separate area for damaged products? Are raw materials dated upon arrival?
7. **Storage Organization.** Are shelving/pallets clean and well organized? Are toxic products separated from food grade items? Are maintenance facilities separated from food items? Are nonfood odors present in the facility?
8. **Inventory Control Practices.** Is there a system in place that assures the proper rotation of products? Are finished goods shipped out on a first in, first out (FIFO) basis?
9. **Insect Control.** Is there evidence of insect infestation? Are there conditions present which could support an infestation? Is there potential harborage? Are dead insects present on windows or other areas? Are insect light traps clean?
10. **Rodent Control.** Is there evidence of a rodent infestation? Is there evidence of birds? Is rodent proofing adequate?

11. **Monitoring Results.** Were any insects caught in pheromone traps? Were any insects caught in sticky traps? Do the number of insects caught indicate an infestation? Was the infestation localized?

Exhibit 2

Pest Management Strategy:

Food processing facilities present an attractive and complex pest control environment. Pest activity in and around food processing facilities has considerable impact on product quality and requires compliance with standards. To effectively meet these challenges it is necessary to apply the principles of Integrated Pest Management (IPM) programs consisting of four (4) basic steps

A.

1. An understanding of the biology and ecology of a pest is critical to develop an effective control program.
2. Always seek a permanent solution to pest problems rather than a series of temporary solutions. Permanent solutions include altering conditions to prevent future occurrences.
3. Use the principles of Integrated Pest Management (IPM) when developing a pest management program.
4. Use pest control methods that have the least impact on the environment and nontarget organisms.

Monitoring by a professional pest control company should be used to constantly monitor pest activity. Application of pesticides may be made but will be limited to preventative applications in areas of historically high pest activity and areas where pests are likely to enter the interior. Pest sighting logs (Exhibit 4) are critical sources of information during these inspections.

On the basis of inspections and monitoring, recommendations should be made to help prevent pest infestation. (See Exhibit 3 for sample Pest Management Inspection Report) These recommendations fall into the following areas.

B.

1. Sanitation - The development of a pest infestation is greatly reduced by high standards of sanitation. Sanitation can be defined as the removal of conditions (food, water, harborage) which encourage or allow a pest population to survive.

2. Building Maintenance - Proper building and repair practices can prevent significant pest problems. Drainage, sealing, caulking, rodent-proofing, construction and general maintenance of buildings are important steps in this area. An example would be the simple sealing of cracks and crevices which provide harborage for insects within buildings.

3. Facility Practices and Procedures - This involves changing behavior of people working in the plant. An example would be making sure that doors to the outside are not kept propped open or that trash is eliminated dumpster lids or trash containers are kept closed.

These recommendations will be documented in the "Sanitation Inspection Report" (Exhibit 4) along with any pest activity noted during service. A detailed list of inspection standards of some items that are included in our sanitation report (Exhibit 3). A customized Sanitation Inspection form can be developed for your plant. The following are the five (5) basic types of control measures that can be used to develop a pest management plan. An IPM program will include at least two (2) or more of the following:

1. Sanitation - Proper sanitation is necessary for prevention but is a means of controlling existing infestations. The removal of food and water sources stresses the pest populations, making traps and baits more effective. In addition, university research has shown that oils, greases and dirt render many insecticides less effective.

2. Mechanical Control - These methods involve the use of traps, barriers, caulking, mechanical exclusion (screening), using air currents and manipulation of environmental factors (temperature and humidity).

3. Cultural Control - This involves changing the habits and behaviors of people to reduce infestations. An example of this would be changing

cleaning schedules to help train food processing plant or warehouse personnel to clean spills as soon as they occur. prevent product accumulation or

4. **Biological Control** - Traditionally this measure uses biological organisms or their by-products to control pests. Examples include the use of *Bacillus* wasps for fly control or cockroach control. *Thuringiensis* for aquatic breeding insects, parasitic fungus for

5. **Material Application Control** - The correct and safe use of materials may constitute a portion of our control operations. All materials are carefully reviewed for their appropriateness and appropriate application techniques that have been selected.

Although the use of chemical control measures, may be use, they will not always be a part of our control plan. Many of the non-chemical control measures need to be implemented by your plant facility personnel. These recommendations will be reported to facility management on our "Sanitation Inspection Reports," (Exhibit 3).

Exhibit 5

IN-HOUSE SURVEY GUIDELINES

(Use this as a guide for your in-house survey inspection)

Consider the following information when completing your in-house survey inspection report.

A. Exterior of the facility:

1. Make note of sanitation conditions. Look for excessive debris, excessive standing water, liquid or product spills. Poor interior or exterior storage practices.
2. Check outside bait stations for the following:
 - ~ Are they anchored?
 - ~ Is the bait fresh?
 - ~ Are markers in place?

- ~ Are service date stickers under lid?
 - ~ Last time serviced? _____
 - ~ Are stickers dated and initialed?
 - ~ Has there been rodent activity? (Evidence of bait being eaten or droppings)
 - ~ Are the bait stations placed sufficiently for a good preventative monitoring program?
 - ~ Are the bait stations numbered for a rodent location map?
 - ~ A note how many will be serviced each month?
3. Are birds roosting?
 4. Were fire ant hills seen?
 5. Dead flies by lights?
 6. Is there high grass or weeds outside, or near exterior fence line?
- B. Interior of facility:
1. Check Ketch-Alls or Tin Cats for the following:
 - ~ Are they properly wound?
 - ~ Are they properly placed?
 - ~ Are wall markers present?
 - ~ Check dates - are they serviced on a regular basis?
 - ~ Are they clean inside? (Free of webs, dirt and debris?)
 - ~ Any evidence of rodent activity? Are the Ketch-Alls or Tin Cats sufficiently in place for a good preventative monitoring program?
 - ~ Tin Cats or Ketch-Alls damaged?
 - ~ A note how many serviced each month?
 2. Make note of rodent droppings and where each month.
 3. Are there any infestations - insects/rodent - location and type.
 4. Ask employees about pest sightings and frequency.
- C. Insects:
1. Any evidence of insect activity? Where?
 2. Is there a flying insect problem? What kind?
- D. Structures and Sanitation:
1. Look for and note any structural deficiencies (open doors, door sweeps, screening required, lift doors in need of repair, broken windows, etc.)
 2. Look for dirt, webs, debris, mold and leaks.
 3. Make drawing of facility noting locations of monitoring devices and bait stations.
- E. Equipment
1. Do they have light traps in place?
 2. Are they properly placed?
 3. Do they need additional light traps to keep flying insects under control?
 4. Trays clean? Bulbs changed?
- F. Program/Pricing:
1. Note all types of services and time for each.
 2. Note bird control, pheromone trapping, etc. (any other necessary programs)

LIST OF VENDORS TO PURCHASE EQUIPMENT

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(330) 425-8353 Fax
www.jteaton.com

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Carl Doucette
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El Segundo, CA 90245-0265
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985-8273 Fax
(310) 322-8575 Fax

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(562) 802-3296
www.target-specialty.com

Atlantic Paste & Glue Co., Inc.

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(916) 933-0785 (Fax)
(916) 201-6225 (Mobile)
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November 12, 2000

Mr. Amr Ali
Daltex
42 Wadi El-Nil Street
Mohandseen, Cairo

Dear Mr. Amr:

We would like to thank you and your staff for taking the time to entertain my Jim Bowyer when he visited with you last month. Mr. Bowyer prepared a detailed list of observations and recommendations (attached) as a result of that visit. Once you have had time to go over the list, please feel free to contact Mr. Morad or myself should you have any questions.

After reviewing the recommendations, we would suggest one of two things be done.

1. Consider hiring an outside pest control agency to carry out the pest control maintenance that is currently being done "in-house".
2. Make an effort to obtain additional training for the "in-house" crew so that they have a greater understanding and appreciation for their work.

If you decide to adopt either one of these options, do not hesitate to call us if you would like any more information. We have enclosed two documents that you may find useful when it comes to upgrading your pest control program.

We are also enclosing several pictures that Mr. Bowyer took while in your plant. Pictures #1, 2 and 3 show management and staff in the processing area. Even though the men, including yourself have short hair, we would suggest that hair covers (hairnets or caps) be worn whenever you enter the processing area. Picture #4 shows the fruit and vegetable processing area. It is clean and well maintained, but be sure that the areas at the top of the walls are screened to exclude pests. Picture 5 shows the herb garden on the grounds. This is an attractive and well-maintained area, but remember that vegetation can both attract and harbor pests.

Thanks again for your hospitality.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: Files, M. Ahmed

November 20, 2000

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Daltex
42 Wadi El-Nil St.
Mohandseen, Giza, Egypt

Dear Rick,

On November 5, 2000 I visited the Daltex Company. I reviewed their procedures, systems and toured their plant with Mr. Amr Ahmed Ali, the Project Coordinator and their Quality Assurance Manager. We reviewed the documentation that they had in several areas.

This plant is a food processing and packing house. It has over 8,000 square meters of space. The firm was started in 1955 as growers and in 1965 they started their own food processing and packing plant. They now produce potatoes, many different citrus items including: oranges, lemons, legumes, strawberries and mangos. Daltex's main product is potatoes, oranges and lemons. During the season for potatoes, which is from mid-December to the mid-April, they process over 300,000 metric tons of potatoes each season. Only 5% of their total product, both vegetable and fruit, is used for domestic use. The 95% balance is all exported to the United Kingdom, Europe, Asia, the Gulf States and Libya. They export to a total of over 23 countries. The reason that they don't do more domestic sales is that in Egypt it is not very profitable.

In May of 2000, Daltex started food processing juices. They have approximately 4,000 square meters that they use for the processing of juices. They are anticipating building a new processing area which should be completed in four months. All of the juices that are processed are sold and used in the domestic area. None of the juices are pasteurized. The life span of unpasteurized juices is only 2 - 3 days, so exporting to other areas would not be possible, although they have shipped the juices in a frozen state to the Gulf. They have additional plans to pasteurize and may go into exporting the juices to the Gulf States, when they get a pasteurizing machine. When juices are pasteurized they will have a shelf life of 8 - 10 days. They are negotiating with a United States firm to purchase a pasteurizing machine. The juices they process at present time are: orange, guava, strawberry and banana. They are producing 4,000 liters of juices per day, in the food processing area.

Depending on the time of year and the season, Daltex will run one, two and sometimes three shifts. At their peak periods they will have 600 - 900 employee workers. Daltex introduced their HACCP program four years ago and have made much progress in complying and documentation. However they are not HACCP certified as of yet.

They presently have no outside pest control service and have three people taking part in pest control maintenance. They check bait stations, do quality assurance and sanitation among other functions.

Following are a few observations noted during our tour and audit of the Daltex Plant, including the potato packing and processing area, the citrus packing and processing area, the cooler rooms and the juice processing area:

- Inside the potato packing and processing area there were tamper-resistant bait stations for mice and rats installed. The tamper-resistant rodent bait stations for the mice were inserted inside 8" diameter tile, clay pipes. All bait stations were located on the interior of the building. Recommend that all interior tamper-resistant rodent bait stations be removed from the interior of all buildings and relocated to the exterior building areas and exterior fence line.
- At present time there are 25 tamper-resistant bait stations for mice and 10 for rats. This is an insufficient amount of tamper-resistant rodent bait stations. With the new plan of exterior installation of tamper-resistant rodent bait stations they are to be placed on either side of all doorways, including sliding, roll up or walk through doors. In addition, they are to be placed every 50 linear feet (15 M) where you have long runs without doorways.
- Both inside and outside the citrus packing and processing area, there were no tamper-resistant rodent bait stations at all. It was indicated that they had been removed recently during cleaning and were going to be reinstalled prior to the season starting in two weeks. These locations need tamper-resistant rodent bait stations installed on the exterior with the same specifications as in the potato packing and processing area. These do not need to be installed on the interior.
- The majority of the tamper-resistant rodent bait stations are the small mice bait stations. Replace all mice type tamper-resistant rodent bait stations with additional tamper-resistant rodent bait stations, rat size, as both rats and mice can enter these stations.
- Around the exterior fence line, no tamper-resistant rodent bait stations were found. Install tamper-resistant rodent bait stations each 100 linear feet (30 M) along the exterior fence line.
- The tamper-resistant rodent bait stations that were installed have no wall placards indicating proper positioning of the tamper-resistant rodent bait stations. Once the new installations are in place, install wall placards with corresponding numbers on the tamper-resistant rodent bait station and the wall placards, indicating positioning of tamper-resistant rodent bait stations. This will make it easy to identify if a tamper-resistant rodent bait station is moved or missing.
- There were no dating cards inside each of the tamper-resistant rodent bait station. Install dating cards in order to verify when services have been done.
- During these inspections of the tamper-resistant rodent bait stations they are to be opened up, thoroughly cleaned, dated, fresh bait added and sealed.
- None of the tamper-resistant rodent bait stations were anchored. Anchor all tamper-resistant rodent bait stations to the ground with either Liquid Nail or chained to a fence line in order that they are secure and will not move.
- With the removal of tamper-resistant rodent bait stations from the interior of the buildings there will be no monitoring or protecting devices. Install Tin Cats, glueboards or snap traps on the interior of the packing house for both the potato and citrus cooler rooms and the food processing areas. These will be non-toxic devices to capture and monitor outside rodent invaders when they enter building. When using snap traps, they should be at either side of exterior doors and then each 15 linear feet around the circumference of the building. When using Tin Cats, one at either side of all exterior doors and no further than 40 linear feet (12 M) thereafter. Wall placards with corresponding numbers on both the wall placard and the monitoring device will need to be installed to indicate where these devices are located.

- The frequency of service on exterior tamper-resistant rodent bait stations was indicated in the log that all tamper-resistant rodent bait stations were being checked on a twice per month basis. Then in another area it was indicated that it should be done weekly. Exterior tamper-resistant rodent bait stations should be checked on a once a month basis. The interior tamper-resistant rodent bait stations and monitoring devices should be checked on a weekly basis.
- In the potato, citrus, cooling rooms and juice food processing area there were cracks and crevices in the floor and walls. Seal or caulk all cracks and crevices with an epoxy and that the surface be smooth and readily cleanable.
- Two air curtains were installed in the juice food processing section. Both were incorrectly mounted and were pulling the air and flies into the building. One of the units was adjustable, so while we were there we adjusted it so that the air current was pushing out the flies and not pulling them in. The other unit is not an adjustable type machine. Install proper air curtains at all exterior doors. Install a custom made, industrial type air curtain for the larger doors and properly fit so outside invaders will not be able to gain access. With the currents as strong as they are, they will also help prevent birds from entering the structure.
- Some of the exterior doors were being kept open. Close all exterior doors, when not in use, to prevent outside invaders such as: rodents, flies, and birds from entering the building. Install self closing doors in the food processing area.
- In the food processing area some management and visitors entered without head gear. It should be a practice in any food processing area, that at all times, anyone entering always wear a head cover and if they have beards, a beard cover is to be worn. Remove all jewelry, including: watches, rings, bracelets etc. prior to entering.
- Birds and flies were entering potato, citrus, and juice processing and packing areas as the doors are not fitted properly. All doors need to fit properly and any spaces at the bottoms, sides or tops need to be sealed to prevent entry of rodents, birds or flies.
- Many windows were open, but had no screening. Install screens on all windows if they are going to be left open for ventilation.
- On the top of the packing sheds there is large mesh screening installed which is not preventing invaders from entering. Install smaller mesh to prevent the entry of invaders.
- The fans in the packing sheds have no screening. Seal all fans with screening to prevent the entry of flies and birds.
- It was stated that the Fly Light Traps were being checked twice per month. There was no documentation found on the fly light units stating when they had been serviced. Some were dirty. Clean the fly light units as often as necessary. In addition, there should be a dating sticker on each fly light unit.
- Some of these fly lights were the electrocutor type. Replace these units with the Vector or Gardner type fly lights, so that fragmentation of the insect will not occur.
- It was noted that some of these units were installed very high, attracting flies from the outside. These units need to be placed between five and seven feet off the ground, in the darker areas to attract more of the flies.
- These same fly machines had burned out bulbs. Replace all burned out or broken bulbs regularly twice per year as they lose their UV power and are not as effective. These bulb changes need to be documented to track when the service was last done.
- The fly light machines have no glueboards inside of the units. In addition to attracting the flies, glueboards need to be installed inside the fly light units, in order that the flies will stick to the glueboards and not continue to fly around.
- It was noted that there were twenty (20) fly light machines installed at the present time. This is not a sufficient number of fly light units for the size of the structure. Installation of more fly light units will be needed to control the flies.

- It appears that most of the bulbs are not shatter-proof type glass. It is mandatory in the processing area that the bulbs be shatter-proof.
- There was a written schedule for frequency of cleaning. No specific duties are assigned to specific workers. They are signed on a daily basis by supervisors. Documentation needs to be provided with specific employees doing specific cleaning duties for daily, weekly and monthly cleanings.
- It was stated that it depends on the time of year and what particular activity is going on as to what would be assigned and to who. It is constantly changing. I suggest that the sanitation duties be assigned to specific people so that they are aware of their responsibility.
- In the juice processing area there are openings at the bottom of the door. I suggest that all doors be properly fitted and sealed.
- There are cracks and crevices in the walls and floors in the juice processing area. Seal and caulk all cracks and crevices with an epoxy type material and make certain that the floors are smooth and cleanable.
- In the juice cleaning room, there is a rusted out maintenance locker. Remove or discard this locker from this area.
- There are cracks and crevices around the sink in the juice processing cleaning area. Seal and caulk with a smooth epoxy. At present time these cracks and crevices are allowing a place for insects and bacteria to hide and multiply.
- Seal all cracks and crevices in the juice processing area with an epoxy so that it is smooth and cleanable.
- I reviewed the documentation on the pest control inspections that were being done. The findings were general in nature and not specific. Recommend that a detailed sanitation inspection report be used, customized to specific areas. (See example form enclosed)
- No MSDS sheets or labels of materials being used were found in the pest control log. The pest control log must have MSDS sheets, with labels and labeling information inserted into the pest control log and readily available.
- There was no pest sighting sheet for people to document when pests are found. Enclosed is a pest sighting sheet that could be used.
- Could not find any documentation of chemicals being used or the frequency of usage. A material used report must be inserted in the pest control log.

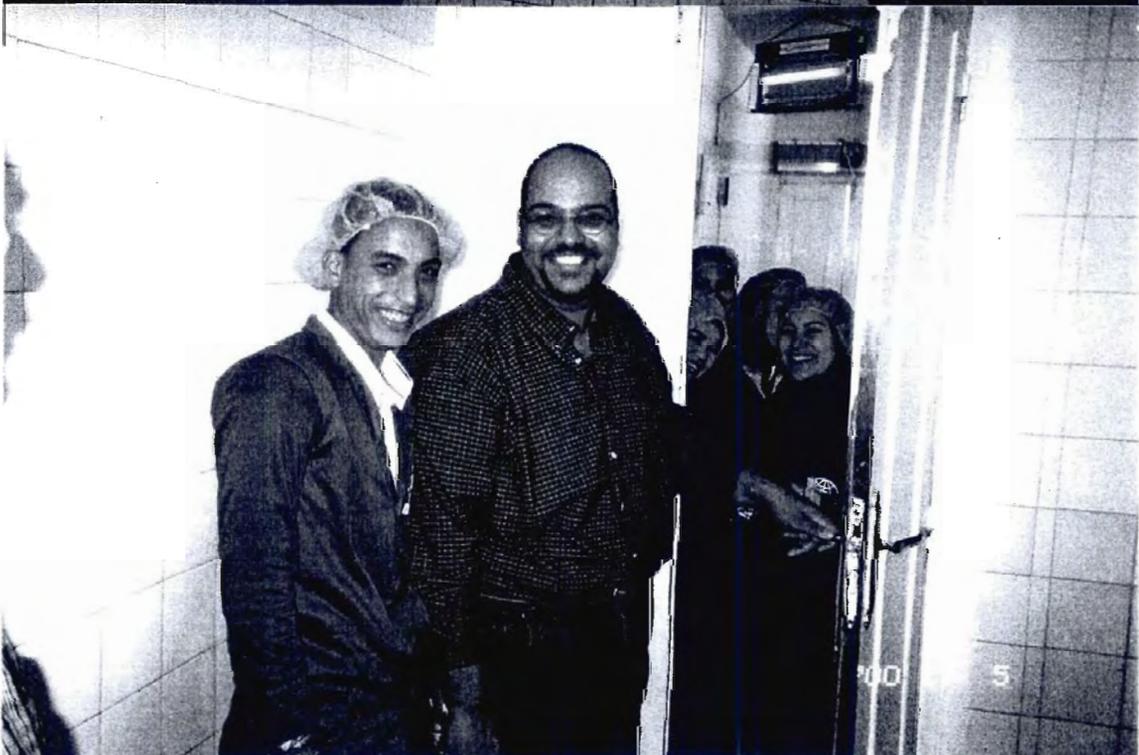
All of the above may seem like quite a bit at one time. However these steps are necessary in order to protect the environment and to have a good food safety culture. I hope these suggested items will be helpful to you in your efforts in food safety and protection of the food you produce. Should you have any questions do not hesitate to let us know.

Sincerely,

Jim Bowyer
Quality Assurance Manager



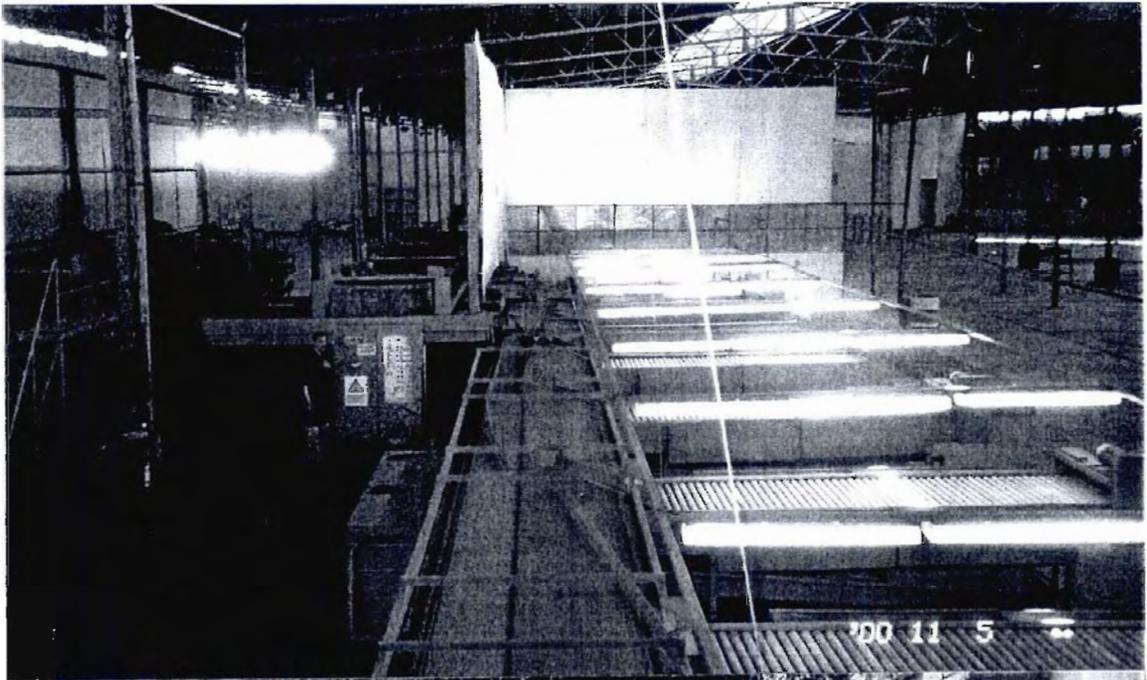
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3



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6

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Rodent Control

Training Guide

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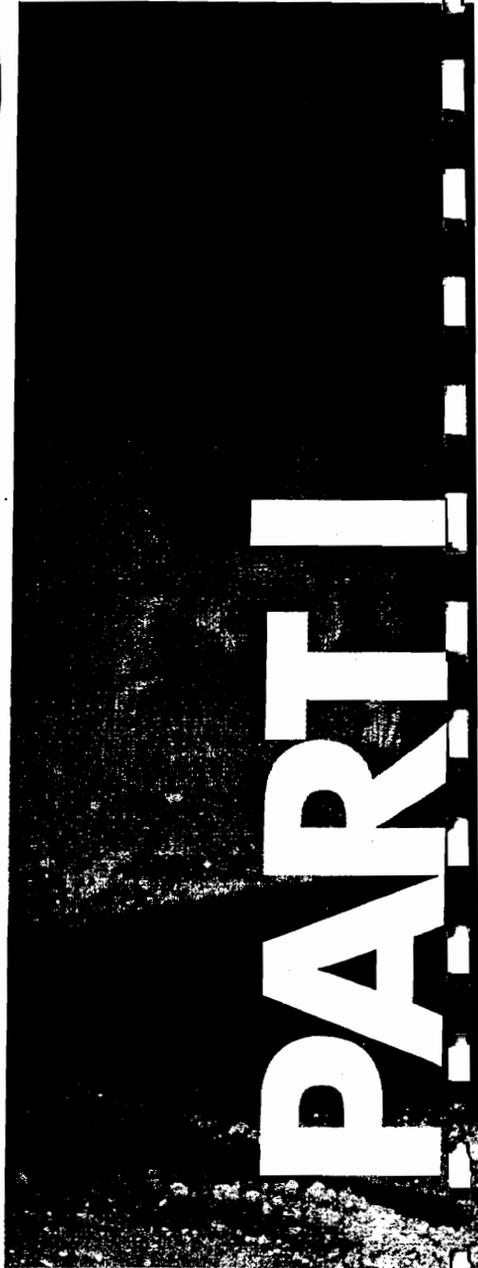
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Rodents



Rodents not only represent a health risk to humans, they also can cause

fires by gnawing on wiring.



INTRODUCTION

Few pests evoke stronger feelings in people than rodents. In residential settings, rats and mice typically prompt reactions ranging from mild fear to outright disgust. If a homeowner encounters a rat or mouse on the way to the bathroom in the morning, or in the basement while doing the laundry late at night, chances are you're going to receive an *immediate call*.

In commercial accounts one rat or mouse could literally shut a company down. Rodents can gnaw on valuable electronic wires, creating havoc for a company's computer system. Or, rodents can pose a significant contamination threat to food production.

Regardless of the type of account, ro-

dent pests are of significant concern to everyone, as their presence in our buildings may also threaten our health.

The purpose of this *J. T. Eaton Rodent Control Training Guide* is to present to you, the pest management professional, a guide for conducting state-of-the-art rodent control programs in both residential and commercial accounts. The guide provides you with a step-by-step approach to inspecting, analyzing and implementing outstanding rodent control service. Additionally, this guide offers two handy wall charts featuring architectural drawings of a typical home and commercial account. On the wall chart, the key rodent "hot spots" and treatment sites are

highlighted. The wall charts can be used in conjunction with the training guide to assist you in solving the various rodent problems you might encounter in residences and commercial accounts.

KEY ELEMENTS. Any successful rodent control program features four key elements: 1) the inspection; 2) proper sanitation; 3) rodent proofing; and 4) population reduction. A thorough review of each of these elements follows for both residential and commercial accounts.

THE INSPECTION. Successful rodent control begins with a thorough inspection of the premises. It is futile to undertake any rodent control job without first conducting an inspection to determine the cause of the problem. That's because what at first may appear to be a rodent problem could, in fact, be caused by a skunk, raccoon or other vertebrate pest.

Once rodents have been identified as the cause of the problem, the species infesting the premises and the conditions contributing to the infestation should be identified. In order to conduct a quality inspection, you must first possess the proper equipment. Key pieces of equipment include a powerful flashlight, inspection mirror, clipboard, stepladder, tool kit and – most important of all – a rodent survey form (see related story at right). A black light to identify rodent urine stains also may be helpful, although this piece of equipment is most often used in commercial facilities.

The survey form for residential and commercial accounts, available from J.T. Eaton, contains general information about the customer and treatment site, along with a list of factors contributing to the rodent problem. Included in the inspection form is the address of the account; type of structure inspected; name, address and phone number of the owner; a description of the overall condition of the building; and the dates of previous inspections or control measures. If you're inspecting an apartment, the name, address and phone number of the manager or key contact also should be included.

The other survey form contains a comprehensive checklist of specific factors contributing to the rodent problem (i.e. structural defects, poor sanitation, etc.) and signs of rodent activity. Space is also available to create a thumbnail sketch of the structure to track the location of bait stations and traps in the account.

Upon arriving at the account spend a few minutes with the client, asking him or her about where rodents were last seen and when they were seen. When working on apartments, it is important to have the building manager accompany you on the inspection because he/she will play a key role in determining the success or failure of the program. This may not be necessary when interacting with homeowners or commercial clients. A simple review of factors contributing to rodent entry and survival may be all that is necessary when consulting with homeowners. ■

KEY ELEMENTS OF AN IPM PROGRAM FOR RODENTS

1. The Inspection
2. Proper Sanitation
3. Exclusion (Rodent Proofing)
4. Population Control

J.T. EATON

PROPERTY INSPECTION
GENERAL INFORMATION

COMPANY NAME _____ PHONE _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 OFFICE CONTACT _____ PHONE # _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____
 OWNER/PRESIDENT _____ PHONE _____
 ADDRESS _____
 CITY _____ STATE _____ ZIP CODE _____

TYPE OF STRUCTURE: WOOD _____ BRICK _____ BRICK/WOOD _____
 OTHER _____ BRICK/STUCCO _____ MURTURE _____

APPROXIMATE NUMBER OF RODENTS: GOOD _____ FAIR _____ POOR _____
 OTHER COMMENTS _____

DATE OF PREVIOUS INSPECTION: CHANGE _____ DATE _____ OTHER _____
 DATE OF LAST INSPECTION: _____
 DATE OF LAST TREATMENT: _____

PREVIOUS CONTROL MEASURES: BAIT _____ TRAP _____ BAIT/TRAP _____
 OTHER CONTROL MEASURES: _____
 OTHER COMMENTS: _____

J.T. EATON

REASON FOR RODENT INFESTATION

RODENT SPECIES: RAT _____ MICE _____
 MOUSE _____
 SQUIRREL _____
 SKUNK _____
 RACCOON _____
 OTHER _____

RODENT SIGNATURES TO SEARCH ACTIVITY: HOLE SIGNATURE _____
 URINE SIGNATURE _____
 OTHER SIGNATURE _____

RODENT ENTRY POINTS: ROOF _____
 FOUNDATION _____
 WALLS _____
 WINDOWS _____
 OTHER _____

RODENT SURVIVAL FACTORS: FOOD _____
 WATER _____
 SHELTER _____
 OTHER _____

RODENT CONTROL MEASURES: BAIT _____
 TRAP _____
 OTHER _____

RODENT PROOFING: ROOF _____
 FOUNDATION _____
 WALLS _____
 WINDOWS _____
 OTHER _____

RODENT SANITATION: URINE _____
 Feces _____
 OTHER _____

WARNING: DON'T FORGET TO CONDUCT A RODENT SURVEY

A survey form is essential when conducting a rodent inspection. A typical form consists of general information about the property, as well as a checklist of factors conducive to rodent infestation. To receive copies of the two sample survey forms featured here, write

J.T. Eaton & Co., Inc.
 1393 E. Highland Road
 Twinsburg, OH 44087

COMMON SIGNS OF RODENT ACTIVITY

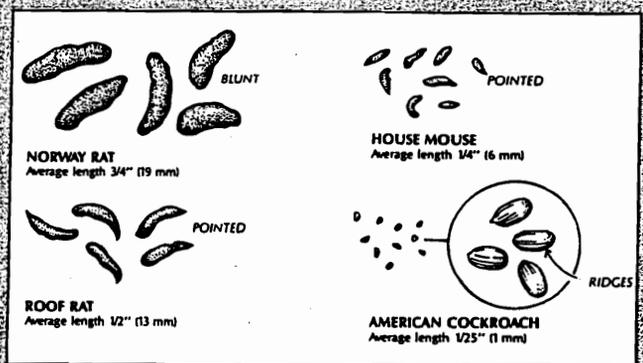
For any rodent control program to be successful, technicians must be able to identify the key signs of rodent activity. These include:

- **Live or dead rodents.** The most positive proof of an infestation, of course, is to see live rats or mice in the account. However, because rodents are generally nocturnal and secretive in their habits, live animals are seldom seen.

- **Sound.** The various noises made by rats and mice may give clues to their presence and location. These noises are rarely heard, however, unless the area is otherwise quiet.

- **Droppings.** The presence of rat and mouse feces is one of the best indications of an infestation. Norway rat droppings are the largest, ranging up to 3/4-inch long and 1/4-inch in diameter (see illustration). They vary in shape from having bluntly rounded ends to being spindle-shaped in appearance. Roof rat droppings generally are smaller and more regular in form. The ends are usually quite pointed. Mouse droppings are very small, averaging only about 1/4-inch long. Mouse droppings are sometimes confused with cockroach droppings, so be alert to the differences between the two when conducting an inspection. Cockroach droppings are much smaller than mouse droppings and are characterized by blunt, almost squared off ends and ridges. It's important to be able to determine the age of the rat and mouse droppings. This information is necessary in deciding whether an area is currently infested. Fresh droppings are soft enough to be pressed out of shape and often have a glistening, moist appearance. The color varies according to the kind of food eaten, but usually they are black or nearly black. Within a few days, depending on climatic conditions, droppings become dry and hard. Later, the surface becomes dull, and over an extended period of time they assume a grayish, dusty appearance and may crumble easily.

Note the various physical characteristics of rodent feces. Norway rat droppings are the largest, ranging up to 3/4-inch long, while house mouse droppings are very small, averaging 1/4-inch long.



- **Runways, tracks and rub marks.** Since rats and mice generally occupy only a limited area, they may use the same pathways over and over again. Outdoors or on unclean floors these runways may appear as clean-swept earth paths 2 to 3 inches wide. In many areas rats and mice leave dark smears or rub marks when rubbing against objects as the result of natural oils and dirt on their bodies.

- **Gnawing.** Recent gnawing through wood can be distinguished by the fresh, light-colored appearance of the gnawed surface and the presence of small chewed pieces or cuttings in the vicinity. The edges of the gnawed area become darkened in a few days, and small cuttings are soon scattered or swept away.

- **Burrows.** Norway rats prefer to live in the ground. Their burrows are easy to recognize and relatively easy to find. They occur along the outside walls of homes and apartments and in dirt basements. Away from homes, burrows can be found in embankments and under heavy growths of brush and bushes. House mice living in and around buildings seldom burrow. Often the age of rat and mouse burrows may be determined by how well worn they appear. Holes in current use are free of dust and cobwebs and may have a slick, beaten-down appearance.

- **Nests.** Rats and mice generally conceal their nests very well. They may be found in such places as between walls, under floors and in attics. The nests of both the house mouse and the Norway rat are almost always well hidden. The roof rat also lives in concealed locations within and around buildings, but will build large ball-shaped nests in trees and dense bushes.

- **Miscellaneous signs.** Urine stains, hairs or the characteristic odor of rats and mice will be encountered during the survey process. On some surfaces stains show up clearly in normal light; on other surfaces they are revealed by the use of a black light. Such a light is portable and should be a part of an inspector's arsenal. In heavy rat or mouse infestations a peculiar musty odor may be present.

Not all of these signs of rodent activity may be present in a home or apartment, but at least some will accompany virtually every rodent infestation.

(Source: Vector borne Disease Control: Biological Factors in Domestic Rodent Control, U.S. Department of Health and Human Services)

PART II

KNOW YOUR ENEMY

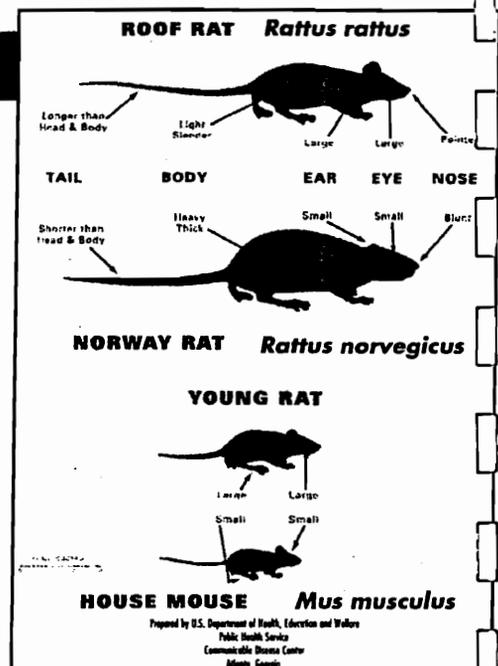
SPECIES	NORWAY RAT	ROOF RAT	HOUSE MOUSE
	<i>Rattus norvegicus</i>	<i>Rattus rattus</i>	<i>Mus musculus/ Mus domesticus</i>
APPEARANCE	Large, robust	Slender, grayish	Small, slender
AVERAGE WEIGHT	7-18 oz.	5-9 oz.	0.5 oz - 1 oz.
HEAD	Blunt	Pointed	Blunt
EARS	Small	Large	Large
TAIL	Shorter than body, dark above, lighter below	Longer, extends all the way to the tip of the head	Small, uniformly dark
DROPPINGS	Blunt, average length $\frac{3}{4}$ "	Pointed, average length $\frac{1}{2}$ "	Pointed, average length $\frac{1}{4}$ "
FEET SPAN	1-2 inches	2-12 inches	1-2 inches
LITTER SIZE	8-12	6-10	5-6
LITTERS PER YEAR (MAXIMUM)	5-6	5-6	5-6
FOOD CONSUMPTION	1.0 oz./day	1.0 oz./day	0.1 oz./day

RESIDENTIAL RODENT CONTROL PROGRAMS

Residential rodent control programs require a combination of technical competence and customer communication skills. Both of these qualities are apparent in the initial phase of any successful rodent control program — the inspection.

THE EXTERIOR. Begin the inspection with a walk around the structure and property. Be on the lookout for conditions that are inviting to rodents, including overgrown weeds and garbage cans without secure-fitting lids. Carefully examine the building exterior for structural damage, potential harborage sites, poor sanitation and other conditions conducive to rodent activity. Specifically check for:

- Open or loosely covered trash cans or dumpsters
- Shrubs or vegetation abutting the home
- or apartment building; overhanging tree limbs
- Open or broken windows or screens
- Openings around pipes or conduits
- Poorly fitting doors
- Telephone and electrical lines leading into the home or apartment building
- Cracks or broken concrete on the building foundation
- Piles of wood or debris on the ground around the structure
- Evidence of poor ground care around ponds or landscaping
- Dense foliage or ivy contacting building
- Pet food
- Bird feeders
- Compost bins
- Harborage sites under decks
- Caps at corners of aluminum siding
- Basement window wells



Pest management professionals must have a thorough understanding of the physical characteristics of various rodent species to perform their job properly.

- Damaged siding next to foundation walls
- Gaps around chimney caps
- An open flue leading into a fireplace

If any of these conditions are present they should be noted on the survey form and brought to the customer's attention as soon as possible. If rodent burrows or rub marks are found, additional control measures will be required. A sketch of the structure and property highlighting where problem(s) exist should be included in the form. This will provide you with important insights when implementing the control program. Additional pest problems (i.e. cockroaches, birds, etc.) should be noted on the survey form.

THE INTERIOR. It's a good idea to begin the interior inspection at the front of the structure and proceed in a systematic fashion throughout the building. Using the wall chart accompanying this supplement (on pages 8-9), let's walk through a typical residential structure, beginning with the front entrance.

■ **Building Entrances (A):** When entering the various entrances of a home or apartment building, closely examine the door. Is it tight fitting? Are there gaps between the door and frame? If there's a screen door, is it broken? Is there any other damage to the door? Inform the customer of any structural problems so they can be corrected.

■ ***Kitchen (C):** The ready availability of food, water and shelter makes the kitchen particularly inviting to rats and mice. That's why it is essential that this area be treated as a primary infestation site. Beware of food left on counters and sinks, poor sanitation and faulty garbage disposal practices. Check for food

attractive, resulting in control problems.

The three most common nesting sites in kitchens are: (1) voids beneath the sink cabinet; (2) within the base void of the refrigerator; and (3) within the base void of the stove.

■ **Dining Room/Family Room (D, E):** Since food and water are not readily available in the primary living area of homes and apartments, rodents are usually not a problem in these areas. However, if the structure has a fireplace in the den or family room, rodents can enter from these locations.

Keep in mind that while conducting the rodent inspection you will want to keep an eye out for other possible pest problems. If you encounter an insect infestation in these areas, note it on your inspection report and inform the customer immediately. It could result in additional business.

■ **Bathrooms (B):** Rodents find bathrooms very attractive because water is usually available. That's why it's so important to repair leaking pipes, damaged spigots and other potential water sources *before* rodents become a problem. Since Norway rats sometimes travel through sewer systems and up into toilet bowls, it may be worthwhile to install J. T. EATON'S Rodent Guard, a toilet trap system, to exclude rats from these areas.

scraps around and under counter-top appliances, and identify possible nesting sites behind, under and around refrigerators, ranges and other "dead spaces." Thoroughly inspect pantries and other food storage areas for broken packages of food. Some kitchens also feature a dining area or breakfast nook that collects food scraps and crumbs that are attractive to rodents. Drains and sewer traps frequently collect water and scraps of food that rodents find

■ **Bedrooms/Living Room (F,G):** Bedrooms, like the living room, are usually not a primary harborage site for rats and mice. However, children's rooms often contain a lot of clutter, not to mention food items (i.e. candy, cookies, etc.), so secondary infestations are a possibility.

■ **Basement (H):** Basements are extremely attractive to rodents because they are warm in the winter



Because children and pets are commonly found around residential structures, rodent control in these locations requires special care. When using rodenticides to control a rodent population in these environments, tamper-resistant bait stations should always be used.

*These are primary infestation sites. Extra time should be taken when inspecting or treating these locations.

**JT EATON®
4 the Birds®
BIRD REPELLENT**

- Transparent
- Easily Applied
- Discourages Nuisance Birds from Roosting and Nesting
- Liquid or Gel Formula



**JT EATON®
AC FORMULA 90™**

- Effective Single Feeding
- Tempting Seed Bait
- Efficient Anticoagulant
- High Rodent Acceptance



**JT EATON®
STICK-EM® GLUE TRAPS**

- Non-poisonous
- Indefinite Holding Power
- Traps Rats, Mice, Snakes and Insects by the Score
- Keeps Pests from Dying Inside walls



**JT EATON®
K.I.O.® SYSTEM™
DUST INSECTICIDE**

- Effectively Controls Crawling Insects
- Easily applied
- Insects Cannot Build Resistance



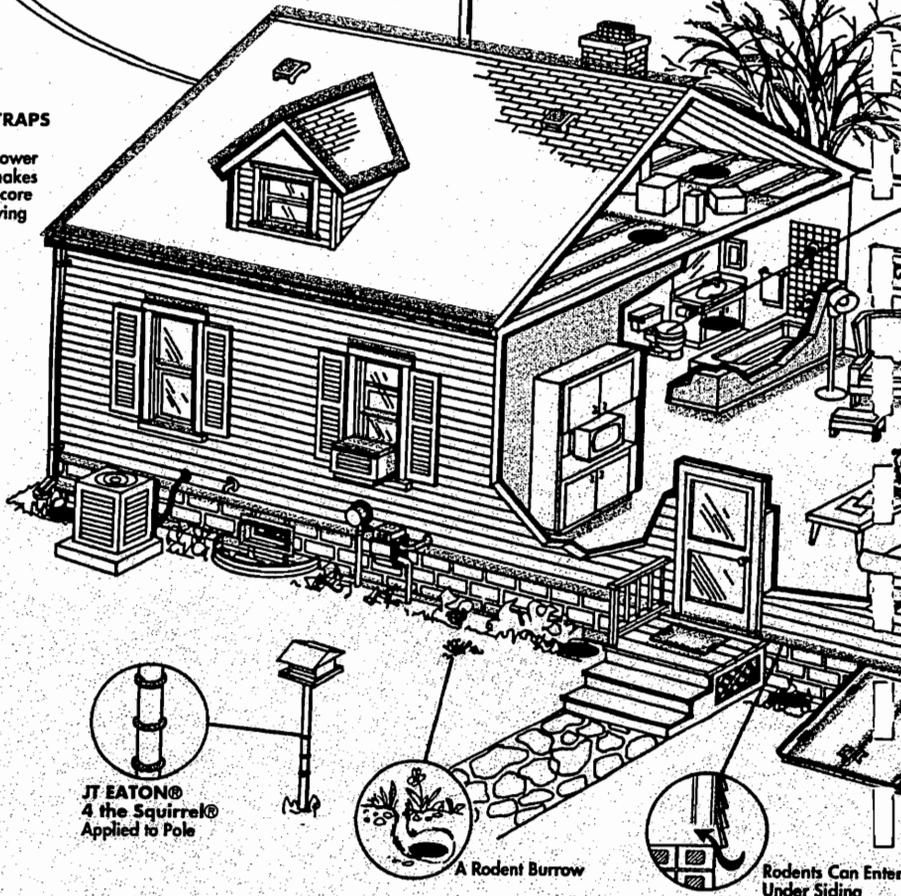
**JT EATON®
4 the Squirrel®
SQUIRREL REPELLENT**

- Translucent
- Easily Applied
- Discourages Nuisance Squirrels
- Convenient Gel Formula



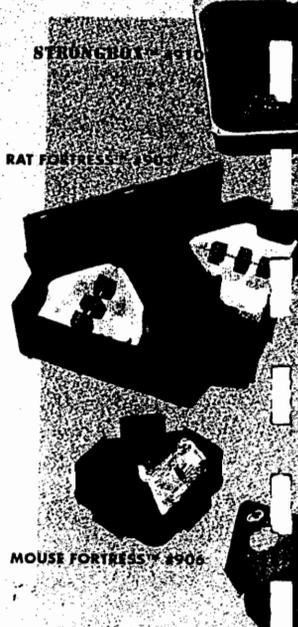
**JT EATON®
BAIT BLOCKS®
WITH BITREX®**

- Wax Blocks Palatable to Mice
- BITREX® "The Most Bitter Substance in the World" Added to BAIT BLOCKS®
- 1 oz. Block w/Hole



JT EATON PRODUCT USE CODE

RODENTICIDES	
● Wax Blocks	● BAIT BLOCKS®
● Wax Blocks	● BROMETHALIN All Weather BAIT BLOCKS®
● Seed Bait	● AC FORMULA 90™
● Wax Blocks	● BAIT BLOCKS® with BITREX®
REPELLENTS	
● Liquid or Gel Formulas	● 4 the Birds® BIRD REPELLENT
● Gel Formula	● 4 the Squirrel® SQUIRREL REPELLENT
INSECTICIDES	
● Non Chemical	● EATON'S K.I.O.® SYSTEM™ INSECTICIDE DUST®
NON-POISONOUS	
● Traps	● STICK-EM® GLUE TRAPS ● RAT & MOUSE, MOUSE and ELEPHANT SIZES™



This Training Guide is to be used as a recommendation only. Specific placements are dependent on actual situations, used in accordance with label requirements, as well as, good PCO practices and Federal, State and Local laws.

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Training Guide for Residential Applications

RODENT CONTROL

A Typical Residential Building with Key Rodent "Hot Spots" and Recommended Treatment Areas.

**JT EATON®
Rodent Guard**
• Keeps Rodents
from Entering
Through Toilet



K.I.O.® Kills Fleas

**JT EATON®
BAIT BLOCKS®**
• Mold and Moisture Resistant
• Molasses/Peanut Butter
or Apple Flavors
• Special Food and Grain Mix
• High Rodent Acceptance
• Tamper-Evident Pails
• 2 oz. Block w/Hole

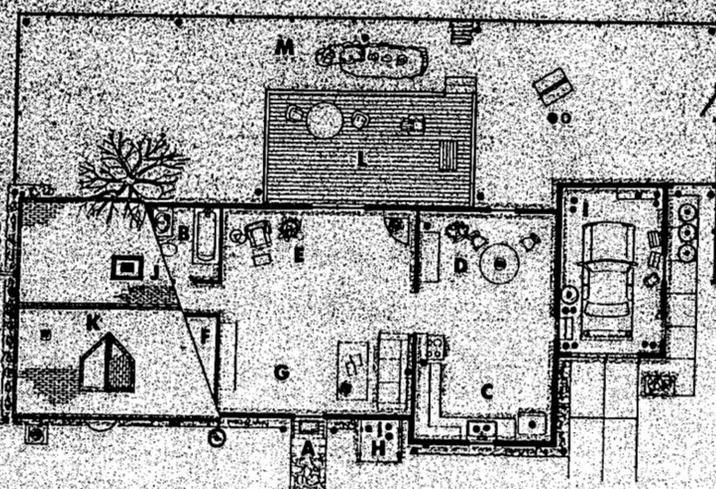


**JT EATON®
BROMETHALIN
All-Weather BAIT BLOCKS®**
• Mold and Moisture Resistant
• 1/2 oz. Block w/Hole
• Single Feed
• Fast Acting
• Stop Feed



- A** • Entrances
- B** • Bathrooms
- C** • Kitchen
- D** • Dining Room
- E** • Den/Family Room
- F** • Bedroom
- G** • Living Room
- H** • Basement
- I** • Garage
- J** • Attic
- K** • Roof
- L** • Deck/Patio
- M** • Yard

***K.I.O.® SYSTEM™** is best used indoors along perimeters, but works well outdoors when kept dry.
FOLLOW PRODUCT LABEL INSTRUCTIONS



GOLD KEY™ #904

GOLD KEY™ #907
Mouse

Follow Product Label Directions.

OUR RECOMMENDATION: Baits should be placed in Tamper-Resistant Bait Stations. Use Field Proven Durable EATON® Tamper-Resistant Metal or Plastic Bait Stations.

EATON®, JT EATON®, BAIT BLOCKS®, BAIT-BLOCKS®, STICK-EM®, K.I.O.® are registered trademarks and AC FORMULA 90™, SYSTEM™, STRONGBOX™, RAT FORTRESS™, MOUSE FORTRESS™, GOLD KEY™, and ELEPHANT SIZE™ are trademarks of J.T. Eaton & Co., Inc., Twinsburg, OH 44087. 4 the Birds® and 4 the Squire® are registered trademarks of Bird Control International, Macedonia, OH 44055. BITREX® is a registered trademark of Macfarlan Smith, Scotland.

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and cool in the summer. In addition, they frequently serve as a storage area for bulk foods in homes, providing an excellent food source for rodents. Because they are "quiet" areas, rats and mice frequently take up residence in these locations. Make sure household items and other goods are placed up off the floor.

Key "hot spots" in basement storage areas include around windows and ledges,

false ceilings, and the sill plate – especially at each of the corners and where utility lines may lead up from the sill plate into kitchens or baths. PCOs should also inspect in and around washers and dryers, where a ready water source exists and air vents lead to the outside of the structure. (Note: In some recently constructed homes, the washer and dryer may be located in a room off the kitchen.

In apartment complexes, they are typically found in the basement.) Crawlspace are sometimes open to the basement, providing excellent runways for rodents. (Note: Homes with dirt floor basements require special care.)

Some basements feature a half bath or portable shower stall, prime water source for rodents. That's why it's so important to thoroughly inspect these locations.

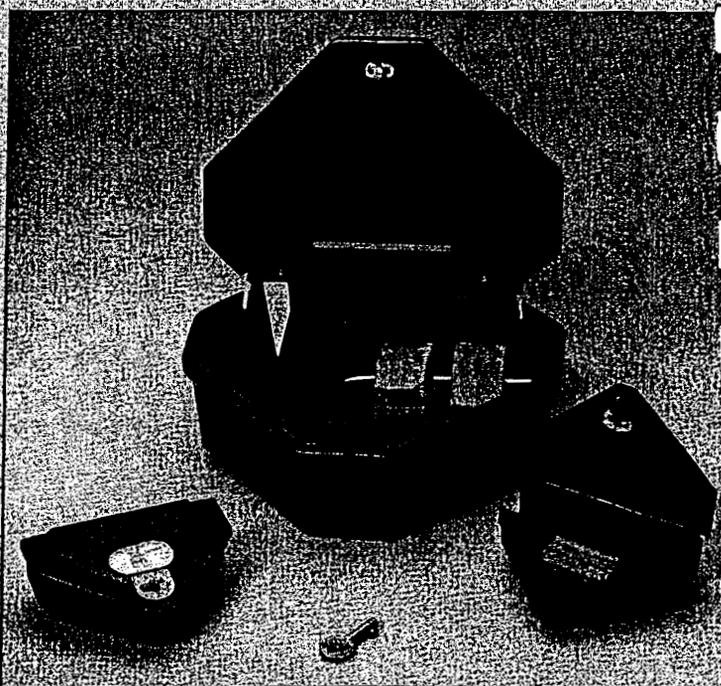
EATON'S 'GOLD KEY' BAIT STATIONS: BECAUSE TIME & LABOR SAVINGS ARE IMPORTANT

To prevent bait translocation, experts recommend securing baits within locked, tamper-resistant stations. And no bait stations are as user-friendly as J.T. EATON'S "Gold Key" Tamper-Resistant Bait Stations – "Gold Key" Rat Depot, "Gold Key" Mouse Depot With Window and "Gold Key" Mouse Depot.

"The Gold Key line is the next generation of bait stations," says Gary Schlosberg, national sales manager for J.T. EATON & CO., Inc., Twinsburg, Ohio. "The one-piece design with a living hinge and Gold Key locking system saves time in opening which, in turn, lowers labor costs. Just insert the Gold Key in the lock, make a quarter turn counter-clockwise, and the station pops open. It's as simple as that. To close, simply snap shut and the station locks." These heavy-duty, injection-molded bait stations feature extra strength construction and outstanding durability. "EATON'S Gold Key stations are strong enough to support a 250-pound person without bulging," Schlosberg says, "so they're ideal for use in a wide range of commercial and industrial accounts." Other product features include:

- Anchoring holes help keep bait stations in place.
- Drain holes at the base of the station prevent the collection of moisture.
- Black color simulates darkness, creating an attractive environment for rodents.
- Unique baffle design helps keep curious hands from securing the bait.
- Triangular shape enables use in both corners and along straight walls.
- Rugged polypropylene construction enables the bait stations to withstand adverse environments.
- See-through openings prompt rodents to enter readily.
- Insert trays help stations to stay clean and contain loose bait.
- Rod holder in rat-size station helps hold bait in place.

"The bait holder rod for the rat-size stations instantly snaps into the molded holder positioned in the bait station wall, keeping the rod firmly in place," Schlosberg observes, "thereby reducing the risk of bait translocation. The rods hold all EATON BAIT BLOCKS with center holes, including the 1-ounce BITREX BAIT BLOCKS, 2-ounce apple or peanut butter flavor BAIT BLOCKS, 8-ounce Semi-Permanent BAIT BLOCKS, and our newest rodenticide, a ½-ounce BROMETHALIN BAIT BLOCK."



EATON'S "Gold Key" Tamper-Resistant Bait Stations are made of heavy-duty, injection-molded plastic, providing excellent durability in a variety of demanding environments.

Pay particular attention to "sweating" pipes. Water condensation is a frequent problem in these locations. It is also a good idea to inspect the sewer system leading into the structure for possible rodent entry.

■ ***Garage (I):** The garage is a frequent route of entry and harborage site for rodents. If garage doors are left open late at night, rats and mice will not be shy about entering the structure in search of food, water or shelter. And once they've entered the garage, it's not particularly difficult to enter the living quarters of the home. Make sure garage doors seal properly and inspect the area for pet food, birdseed and other food sources. These foods should be kept sealed.

■ ***Attics (J):** Attics should be thoroughly inspected in residential accounts. Attics are accessible to roof rats, squirrels, raccoons and birds, which frequently gain access to these areas through open windows, air vents, drain pipes, power lines and overhanging tree limbs. In some situations, Norway rats and mice may also favor these locations because they are left undisturbed. When inspecting these areas from the inside, look for daylight to identify potential access points.

■ **Roof (K):** Your inspection is not complete until you examine the roof. This can be readily accomplished from the ground, but, in some cases, binoculars are very useful. Carefully inspect this area for signs of rodent activity. Pay particular attention to vents and dormers. All vents should be screened and openings along gutters, windows and skylights should be secured. Chimneys should have a chimney cap to prevent rodent entry.

■ **Deck/Patio (L):** Depending on how they are constructed, decks and patios represent potential harborage sites for rodents. Therefore, these locations should be thoroughly inspected whenever providing a residential rodent control service.

■ **Yard (M):** Yards with underbrush, large weeds and clutter are ideal for all types of rodents, providing numerous harborage sites. Communicate to the customer the importance of keeping a well-maintained yard.

TWO NEW PRODUCTS FROM J.T. EATON & CO.

Two innovative new products designed specifically for the pest control industry were recently introduced by J.T. EATON & COMPANY — EATON'S® Bromethalin All-Weather BAIT BLOCKS® and J.T. EATON Presents Dr. Moss's Liquid Bait System™.

"What makes the all-weather BAIT BLOCKS so effective is the bait's 'stop-feed' action which produces results within a day or two of baiting," Gary Schlosberg, national sales manager for J.T. Eaton, says. "Once a lethal dose is ingested, the rodent stops feeding entirely, resulting in a lower cost per kill."

The paraffinized bait is highly palatable and features multiple gnawing edges, further enhancing its effectiveness. It also comes with center holes for easy mounting on Eaton's bait-securing rods, limiting the threat of bait translocation. Other safety features include its bright green color and the addition of Bitrex, the most bitter substance known to man, which discourages ingestion by children.

The BAIT BLOCKS come packaged in 4-pound "Freshness Protector" pails containing 128 one-half ounce blocks.

A second product, Dr. Moss's Liquid Bait System™ is a ready-to-use boric acid bait designed to control ants and cockroaches. EPA approved for use in or near buildings, the bait contains a powerful attractant in a 1% boric acid formulation. Because of the product's low boric acid content, there's no need to dilute it. PCOs simply pour the bait directly into refillable trays. Ants are drawn to the bait's powerful attractant, where they drink the liquid and lay down a pheromone trail from the food source. They then return to the colony where they feed the toxicant to the queen, thereby eliminating the colony. Cockroaches, on the other hand, simply crawl away and die after consuming the bait.

The product is available in easy-to-pour 12-ounce bottles. Each 12-bottle case of Dr.

Moss's Liquid Bait System comes with 144 bait trays. The bait is also available in 1-gallon containers.

For complete information about either of these new products, contact your J.T. EATON sales representative or call 800/321-3421.



J.T. EATON'S Bromethalin All-Weather Bait Blocks are highly palatable and feature multiple gnawing edges.



Dr. Moss's Liquid Bait System is one of the newest additions to J.T. EATON'S product line.

FOLLOWING THE INSPECTION.

Conclude your inspection by thanking the customer for the opportunity to visit their home or apartment. Keep in mind that while conducting the rodent inspection you will want to keep an eye out for other possible pest problems. For instance, in kitchens and bathrooms, cockroaches and ants are common problems. If you encounter an insect infestation in these areas, note it on your inspection report and inform the customer.

Silverfish, centipedes and other occasional invaders gain access to houses and apartments around the foundation of the building. Why not inspect these areas at the same time you are conducting a rodent inspection? Remember, you're a pest control professional who is trained in a variety of pest control disciplines, not just rodent control. Don't overlook new business opportunities by wearing "blind-ers" when conducting a rodent inspection.

CONTROL OPTIONS. Pest control technicians should take an Integrated Pest Management (IPM) approach to rodent control. Control methods range from exclusion and sanitation to the use of non-chemical controls and toxic baits.

Now let's walk through the residential site featured in the accompanying wall chart (see pages 8-9) and consider various management options.

OUTDOORS. With regard to outside baiting around apartments, houses and garages, it is important to use products that will weather better than grains and meals (i.e. wax blocks). Tamper-resistant bait stations prevent larger non-target animals from gaining access to the bait, as well as protect the rodenticide from weathering.

Baits also can be placed advantageously around or behind shrubs and trees near the structure and in the vicinity of drains and electrical wiring coming through walls. One word of caution, however: Whenever it has been determined that rat bait stations are necessary, it is critical that tamper-resistant bait stations be placed in inconspicuous locations. This will help reduce the liability risks associated with rodent control work.

Reduce harborage sites outdoors by recommending to the customer that he/she take steps to eliminate weeds, overgrown vegetation, woodpiles and other conditions conducive to rodent survival. Garbage cans should have tight-fitting lids and be cleaned periodically. Bird baths, standing water and other water

sources should be eliminated where practical.

If a lake or pond is on the property, it must be maintained properly. Weeds and overgrown vegetation provide prime harborage sites for rodents. Identify and treat all burrows.

In addition, all exterior walls should be rodent-proofed. Rodent-proofing involves using construction materials (sheet metal, hardware cloth, cement, mortar, etc.) to seal breaks or openings in buildings. Keep in mind that rats can squeeze through a hole only 1/2-inch in diameter, while mice can gain access to buildings through holes as small as 1/4-inch. Leave any building repairs to the homeowner or apartment manager unless, of course, you're licensed to provide this service.

INDOORS. Attached garages, doors and other entryways (A) are the first areas of concern indoors. Because entryways are considered "high traffic" areas, care must be taken when using toxic baits in these locations. Bait stations should be placed in inconspicuous locations to prevent contact by children and pets.

Place packs are another control option you should consider. Place packs are an effective tool for treating generally inaccessible locations such as attics and false ceilings, but they should not be thrown. That's why they're called "place packs" – they should be *placed*. Now let's proceed with the rest of the building.

■ **Bathrooms (B):** As mentioned previously, bathrooms are attractive to rodents because they serve as a prime water source for these animals. Recommending that the customer fix leaky water pipes and dripping faucets will help toward controlling rodents in these areas. Glue traps are additional treatment options you may want to consider. (If used, they should be placed in the vanity or other protected location.) Baits should only be used in these areas if rodent problems are severe.

■ **Kitchen (C):** Because of the abundance of food in these locations, glue traps and snap traps are favored over toxic baits. Further, rodents have been known to carry pelleted or large particle baits in their cheeks. They also contaminate food, dishes and kitchen utensils with their hair, urine and feces, as well as discarded baits.

Glue traps should be placed in rodent runways between the harborage and feeding areas of rodents. You can also place glue traps inside bait stations or under cover to prevent them from being stepped on or becoming dusty. Other areas where traps can be placed include behind and/or under refrigerators, stoves and other large kitchen appliances.

■ **Basement (H):** Toxic baits placed in tamper-resistant bait stations can be utilized here. Other options include snap traps for rats and mice. Glue traps are also a treatment option in these locations. To achieve the best results, snap traps should be placed perpendicular to the wall, with the trigger facing the wall. For best results, place traps – both snap and glue – near doorways or where mouse droppings have been found.

BAIT STATIONS PROMOTE SAFETY

Tamper-resistant bait stations must be used in areas where rodenticides are likely to come in contact with children or non-target animals (i.e. homes, apartments, etc.). But what makes a bait station tamper-resistant? Tamper-resistant bait stations typically feature a series of baffles or small entrances that prevent children and pets from reaching into them and gaining access to the bait. In addition, rods and other devices are used to provide added security and limit the risk of bait translocation.

J.T. EATON & CO. offers six models that meet or exceed EPA criteria for tamper-resistant status:

■ **Garage/Storage Areas (I):**

Sticky traps and snap traps can be placed along suspected rodent runways and toxic baits in tamper-resistant bait stations also can be placed in the garage and storage areas. Keep in mind, however, that children and pets frequent these locations, so use caution when placing toxic baits in the garage or other storage areas.

■ **Attic (J):** Attics are a common harborage site for mice. The control options of choice in these locations are sticky traps, snap traps and place packs. Most pest control operators prefer place packs in attics since they are easy to use and don't require return visits to the home to service.

■ **Roof (K):** A variety of pests, from roof rats to birds, can cause problems in these areas. When treating

these areas for rodent control, a number of options are available. Remember to use tamper-resistant bait stations whenever possible.

Bird control methods include repellents, netting, toxicants, trapping and porcupine wire. All of these techniques are effective in preventing birds from roosting on ledges and other areas on the roof.

Repellents, like EATON'S 4 the Birds[®] are an effective and economical solution to the problem of roosting birds. For use on rooflines, ledges, beams, trees, shrubs, pipes, vines and other places where birds roost, EATON'S 4 the Birds doesn't harm nuisance birds - it simply makes surfaces unpleasant so the birds do not return. EATON'S 4 the Squirrel[®] is another harmless repellent from J.T. EATON designed to control nuisance squirrels.

■ **False Ceilings.** Glue traps are particularly well suited for use in false ceilings, as are place packs, since these locations are generally inaccessible. If used, traps need to be serviced regularly.

■ **Fireplace.** Raccoons, squirrels and birds can gain entry into homes through fireplace chimneys. Therefore, if the customer does not have a chimney cap, you may want to recommend he/she purchase one. It's the type of add-on service that is very profitable for many PCOs throughout the country.

Now let's move on to a discussion of commercial rodent control programs which are even more demanding than residential accounts. The process is similar, but some of the control recommendations are very different.

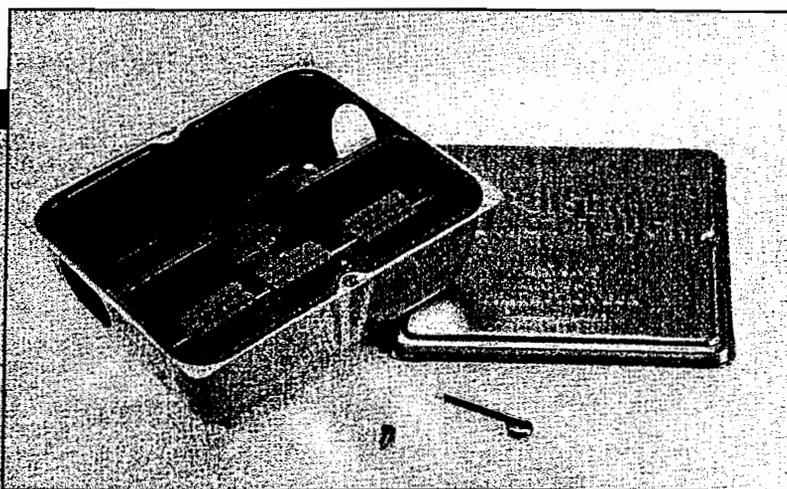
● **EATON'S RAT FORTRESS[™]** Plastic Tamper-Resistant Bait Station (#903) features a unique triangular design that allows placement in corners or against straight walls. Made of tough rigid plastic that will support a 250-pound person, the bait station has two feeding areas that hold up to 2 pounds of bait each.

● **EATON'S MOUSE FORTRESS[™]** Plastic Tamper-Resistant Bait Station (#906) features special inside baffling designed to reduce bait displacement by mice. The station can be readily secured to the floor, holds up to 4 ounces of bait, and comes with EPA-approved locking hardware.

● **EATON'S STRONG BOX[™]** Metal Tamper-Resistant Bait Station (#910) comes with a black plastic insert to insulate the interior from the cold/hot metal surface. Fabricated of heavy-duty galvanized steel, the station features a seamless base for structural strength. Holes in the base enable it to be secured to the floor. A special over-hanging snap-on lid with EPA-approved locking device offers added security.

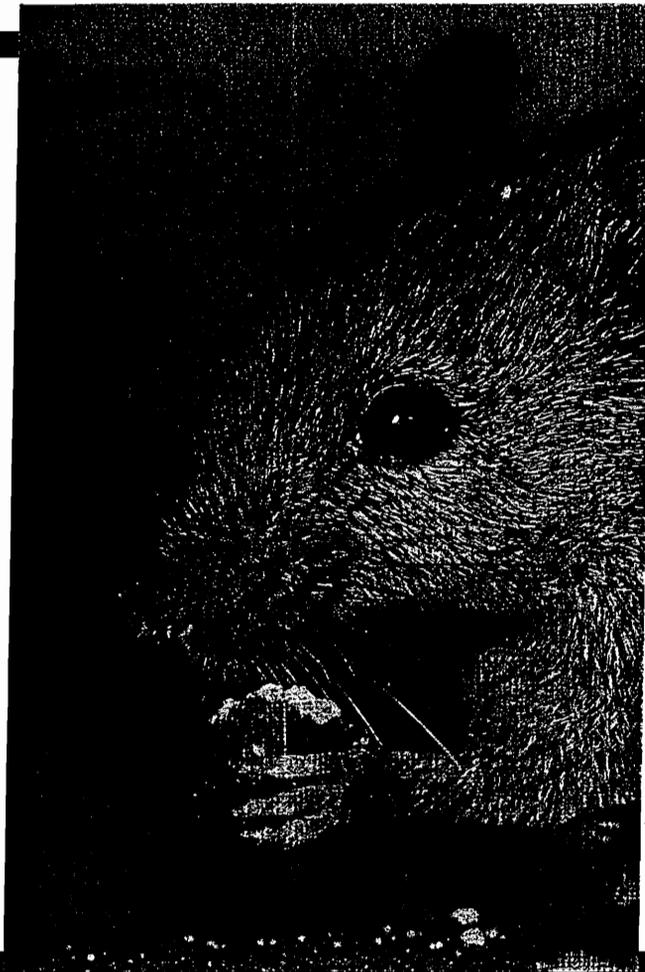
● **EATON'S "GOLD KEY"[™]** TAMPER-RESISTANT BAIT STATIONS (#904, #907 and #907W) are made of heavy-duty, injection-molded plastic, providing excellent durability in a variety of demanding environments. Suited for both indoor and outdoor use, all three stations feature a living hinge and "Gold Key" locking system that saves time when inspecting, thereby lowering your labor costs. Model #904, the Gold Key Rat Depot, comes with a bait holder rod that holds all EATON BAIT BLOCKS firmly in place, providing extra security against bait translocation.

For additional information about J.T. EATON'S complete line of tamper-resistant bait stations, write: J.T. EATON & CO., INC., 1393 East Highland Road, Twinsburg, OH 44087, or call toll-free 800/321-3421. Requests for additional product information can be faxed to the company's corporate headquarters at 330/425-8353. A comprehensive product catalog also is available to interested pest control operators. Simply contact your local product distributor or a J.T. EATON sales representative.



EATON'S STRONG BOX[™] Rat Size Metal Tamper-Resistant Bait Station (#910) comes with a black plastic insert to insulate the interior from the cold/hot metal surface.

PART III



(Photo by Thomas Myers)

COMMERCIAL RODENT CONTROL PROGRAMS

TIME TO GET STARTED. Once you've successfully bid on a project after conducting an initial inspection of a commercial account, you're ready to get started. Upon entering the account – in a freshly pressed uniform, of course – announce your presence and state the purpose of the service call. It is always a good idea to have a representative from the account present to accompany you on the inspection. Remember, the success or failure of your program will be determined, in large part, by the level of customer cooperation you receive.

Recent inspections presuppose a familiarity with the key signs of rodent activity: live or dead rodents, droppings, runways, tracks and rub marks, gnawing damage, burrows and nests, urine stains and rodent odors (see related story on page 5). These signs are key pieces of evidence you use to assess the extent of a rodent problem in an account.

Once you familiarize yourself with the key signs of rodent activity, you're pre-

pared to begin the inspection. We'll start with the exterior of the facility and then move to the interior of the structure (see wall chart on pages 16-17).

BUILDING EXTERIOR. Begin the inspection with a walk inside the fence line of the property. Be on the lookout for conditions that are inviting to rodents, including overgrown weeds, debris and refuse. Carefully examine the building exterior for structural damage, potential harborage sites, poor sanitation and other conditions conducive to rodent activity. You should specifically look for:

- Broken fences
- Spilled food near railroad tracks, loading docks and driveway ramps
- Weeds and tall grass along the fence line
- Piles of junk or other stacked materials on the ground
- Open or loosely covered trash bins and dumpsters

- Breaks in sidewalks
- Open sewers/ditches
- Evidence of poor ground care around lakes or ponds
- Shrubs or vegetation abutting buildings
- Overhanging tree limbs
- Cracks or broken concrete on the building exterior
- Open or broken windows
- Openings around pipes and conduits
- Telephone and electrical lines leading into the building
- Poorly fitting doors

If any of these conditions are present they should be noted on the survey form and the client should be asked to correct them as soon as possible. If rodent burrows or rub marks are found, control measures will be required. A sketch of the building site highlighting where the problems exist should be included in the form. This will provide you with important insights when designing your control program. Always bear in mind that it is easier to control animals outside than inside where abundant food and shelter may be readily available.

THE INTERIOR. It is a good idea to begin the interior inspection at the staff or employee entrance and proceed in a systematic fashion throughout the building. Using the accompanying wall chart published in this supplement (pages 16-17), we'll walk through a typical commercial building, beginning with the locker room.

■ **LOCKER ROOM (A):** Locker rooms are a favorite harborage site for rodents, particularly house mice. Workers often fill their lockers with snacks, providing a ready-made food source for rodents. Unused or damaged lockers also provide excellent harborage sites for mice, as do the gaps under, behind and above lockers. Rats are less of a problem in locker rooms because they are so conspicuous when they invade these areas.

■ **REST ROOMS (B):** Rodents find rest rooms attractive because water is usually readily available. That's why it's so important to repair leaking pipes, damaged spigots and other potential water sources *before* rodents become a problem. Since Nor-

way rats sometimes travel through sewer systems and up into toilet bowls, it may be worthwhile to install a toilet trap system to exclude rats.

■ **KITCHEN AND LUNCH ROOM (C):** With the ready availability of food, water and shelter, the kitchen is particularly inviting to rats and mice. Be aware of food left on counters and sinks, poor sanitation and faulty garbage disposal practices. Check for food scraps around and under equipment and identify possible nesting sites behind, under and around refrigerators, electric ranges, water coolers and other "dead" spaces.

Lunch rooms, like kitchens, frequently suffer from periodic episodes of poor housekeeping, mainly due to employee carelessness. This area often provides rodents with multiple food sources such as stored employee lunches and discarded wrappings. Also, look for food crumbs and scrap paper underneath kitchen appliances, tables, cabinets and trash containers.

■ **LABORATORY (D):** The first step in inspecting these locations is to determine *what* the laboratory is used for. While some laboratories are sterile (i.e. pharmaceutical, food processing), others are not (i.e. animal research). Check sanitation levels and signs of faulty drains, damaged pipes and leaky water taps. *All* food should be packed in closed containers.

of infestation in these locations. Thoroughly inspect cleaning supplies, stacks of rags, boxes and other debris. Remember, protected locations are prime harborage sites for both rats and mice.

■ **STOREROOM/ PRODUCTION AREA (F):** Storerooms fall into two distinct categories – food or non-food storage areas. Food storage areas require closer attention to sanitary practices and other health-related concerns. In particular, make sure materials are placed up off the floor and at least 18 inches away from walls, and floors are regularly swept clean. A white line is often painted 18 inches from the wall so rodent activity and/or droppings can be readily identified.

Follow "Good Manufacturing Practices" when inspecting food storage areas. A variety of food products often passes through these areas, so search carefully for droppings and other signs of rodent activity.

Key "hot spots" in storeroom and production areas include:

- Around overhead doors
- Windows and ledges
- Ceilings
- Behind and under skids
- Around and under equipment
- In and under stored items on the ground
- Inside equipment
- In and under boxes and other containers
- Sewers and water drains

If live traps or glue traps are used, they should be checked frequently, either by yourself or an employee who has been given that responsibility by your customer. Bait placements should be checked at intervals of no more than two weeks.

■ **BOILER ROOM (E):** This is an extremely attractive area for rodents in the winter because it is the warmest room in the building. In addition, boiler rooms sometimes serve as company storage areas. Therefore, pay particular attention to signs

- Broken packaging with spilled foodstuffs

■ **OFFICES (G):** All too frequently food is carelessly left in drawers by workers or meals are eaten at desks, thereby inviting rodents, usually

21st
Century

Training Guide for Commercial

RODENT CONTROL

A Typical Commercial Building with Key Rodent "Hot Spots" and Recommended Treatment Areas.

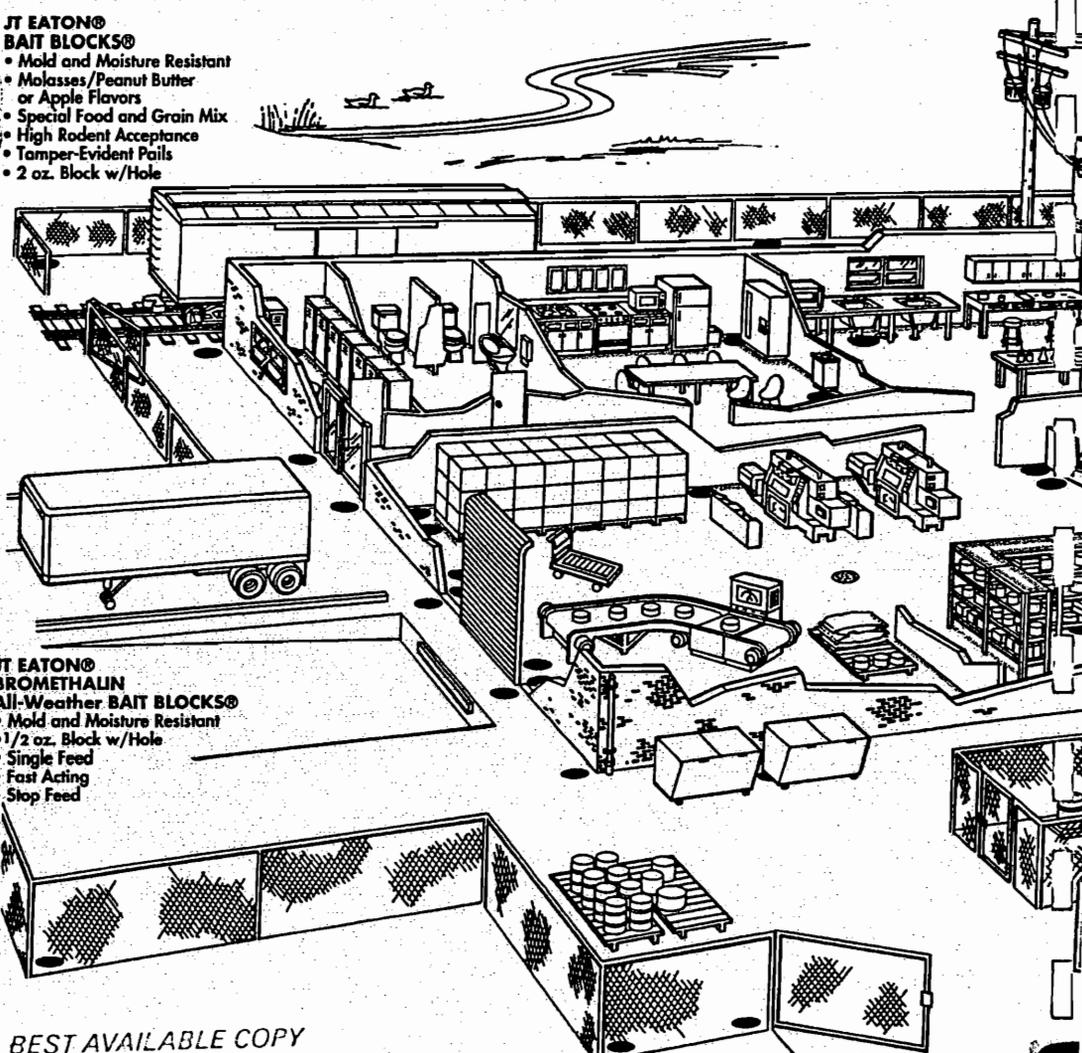
- JT EATON®
BAIT BLOCKS®**
- Mold and Moisture Resistant
 - Molasses/Peanut Butter or Apple Flavors
 - Special Food and Grain Mix
 - High Rodent Acceptance
 - Tamper-Evident Pails
 - 2 oz. Block w/Hole

- JT EATON®
BROMETHALIN
All-Weather BAIT BLOCKS®**
- Mold and Moisture Resistant
 - 1/2 oz. Block w/Hole
 - Single Feed
 - Fast Acting
 - Stop Feed

- JT EATON®
AC FORMULA 90™**
- Effective Single Feeding
 - Tempting Seed Bait
 - Efficient Anticoagulant
 - High Rodent Acceptance
 - 1.5 oz. & 4 oz. Bags and Bulk

- JT EATON®
BAIT BLOCKS®
WITH BITREX®**
- Wax Blocks Palatable to Mice
 - 1 oz. Block w/hole
 - BITREX® "the Most Bitter Substance in the World" Added to BAIT BLOCKS®

BEST AVAILABLE COPY



JT EATON PRODUCT USE CODE

RODENTICIDES	
● Wax Blocks - All Weather BAIT BLOCKS®	● Wax Blocks - All-Weather BAIT BLOCKS®
● Seed Bait - AC FORMULA 90™	● Wax Blocks - BAIT BLOCKS® with BITREX®
REPELLENTS	
● Liquid Gel - The Birds' Best REPELLENT	● Gel Formula - The Squared® SQUIRREL REPELLENT
INSECTICIDES	
● Non-Chemical	● EATON'S KLO® SYSTEM™ INSECTICIDE DUSTS
NON-POISONOUS	
● Traps	● STICK-EM® GLUE TRAPS ● RAT & MOUSE, MOUSE and ELEPHANT SIZE™



This Training Guide is to be used as a recommendation only. Specific placements and quantities for control situations, based on Accordance with local requirements, as well as local P.C. Practices and Federal, State and Local laws.

**JT EATON®
4 the Birds®
BIRD REPELLENT**

- Transparent
- Easily Applied
- Discourages Nuisance Birds from Roosting and Nesting
- Liquid or Gel Formula



**JT EATON®
4 the Squirrel®
SQUIRREL REPELLENT**

- Translucent
- Easily Applied
- Discourages Nuisance Squirrels
- Convenient Gel Formula



**JT EATON®
STICK-EM®
GLUE TRAPS**

- Non-poisonous
- Indefinite Holding Power
- Traps Rats, Mice, Snakes and many types of Insects
- Keeps Pests from Dying in Sensitive Equipment



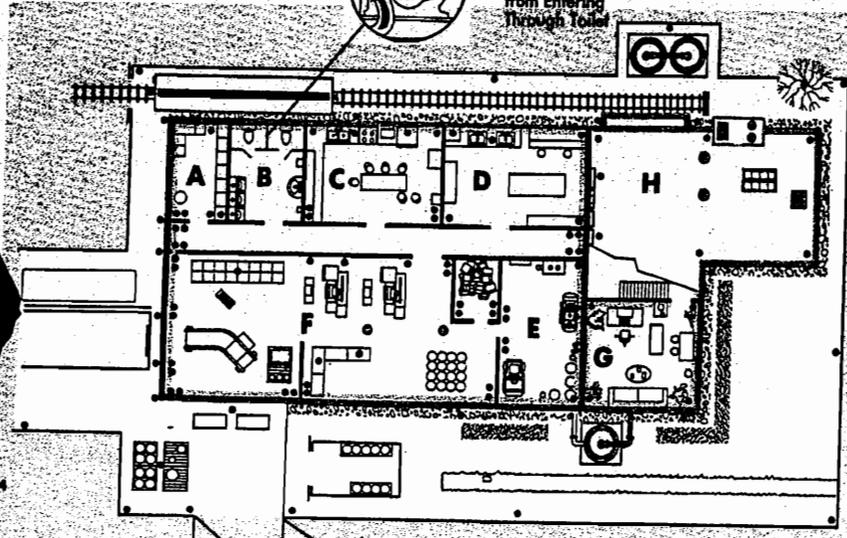
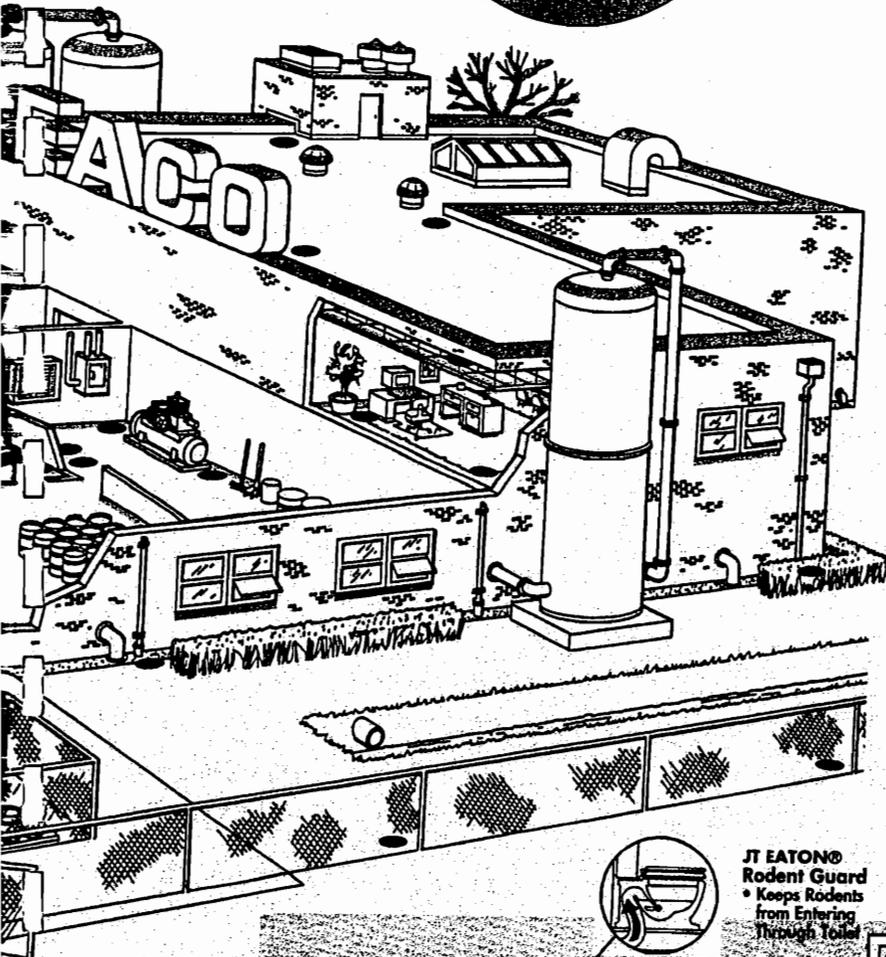
**JT EATON®
K.I.O.® SYSTEM™
DUST INSECTICIDE**

- Effectively Controls Crawling Insects
- Easily applied
- Insects Cannot Build Resistance



**JT EATON®
Rodent Guard**

- Keeps Rodents from Entering Through Toilets



- A • Locker Room**
- B • Rest Rooms**
- C • Kitchen / Laundry Room**
- D • Laboratory**
- E • Boiler Room**
- F • Store Room and Production Areas**
- G • Offices**
- H • Roof / Attics**

***K.I.O.® SYSTEM™ is best used indoors along perimeters, but works well outdoors when kept dry.**

FOLLOW PRODUCT LABEL INSTRUCTIONS

Follow Product Label Directions
 USE JT EATON® RECOMMENDATIONS. BAIT STATIONS should be placed in tamper-resistant BAIT STATIONS. Use FOOD GRADE DURABLE EATON® TAMPER-RESISTANT METAL OR PLASTIC BAIT STATIONS.

EATON®, JT EATON®, BAIT BLOCK®, BAIT BLOCK®, STICK-EM®, K.I.O.® are registered trademarks and AC FORMULA 90™, SYSTEM™, STRONGBOX™, BAT FORTRESS™, MOUSE FORTRESS™, GOLD KEY™ and ELEPHANT SIZE™ are trademarks of JT. Eaton & Co., Inc., Twinsburg, OH 44087. 4 the Birds® and 4 the Squirrel® are registered trademarks of Bird Control International, Macedonia, OH 44050. BITREX® is a registered trademark of Macfadden Smith, Scotland.

mice, into these sensitive locations. Inspect for signs of food stored and consumed in offices and stress the need for good sanitation in your report. First-floor offices are more vulnerable to Norway rats than second-floor offices. Particular attention should be paid to street-level doorways and other employee entrances.

■ **ATTICS/ROOF (H):** Attics, including false ceilings, also should be thoroughly inspected. Attics are accessible to roof rats, squirrels, raccoons and birds, which frequently gain access to these areas through open windows, drain pipes, power lines and overhanging tree limbs. In some situations Norway rats and mice may also favor these locations, primarily because once accessed they are left undisturbed. When inspecting these areas from the inside, visit the account on a bright day and look for daylight to identify key access points.

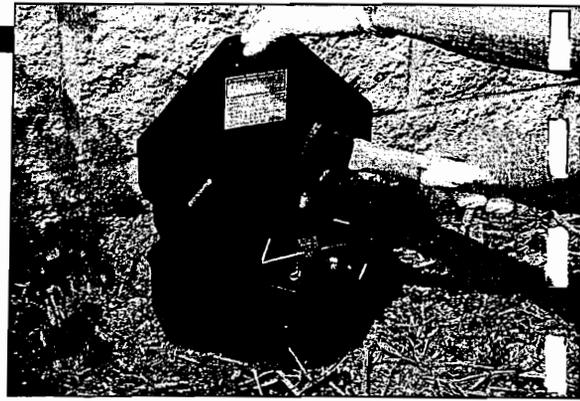
Your inspection is not complete until it includes a visit to the roof. Carefully inspect this area for signs of rodent activity. Pay particular attention to vents and air conditioning units. All vents should be screened and air conditioning units checked for water condensation

problems. Openings along gutters, windows and skylights should be secured to prevent rodent access.

Birds, like rodents, are also sometimes a problem on roofs. They like to perch or roost in and around air conditioning units, signs and outdoor lighting, creating potential health and sanitation problems for your customers, in addition to structural damage to buildings. Bird repellents, porcupine wire and other control measures prevent birds from taking up residence in these locations.

AFTER THE INSPECTION. Prepare your final report and deliver it, in person, to your contact as soon as possible. Urge the client to call you if he has any questions about either the inspection or the report.

Included in the inspection report are your observations, a diagram of the building and surrounding area, and a recommended course of action. The final report also may contain information about other pest problems you may have encountered during the inspection, along with your control recommendations. Keep a copy of the inspection report in



Outdoors, weather-resistant products such as baits should be used since they hold up under difficult environmental conditions better than other rodenticide formulations. Tamper-resistant bait stations should be used both inside and outside an account.

your files in the event a legal problem arises with the account.

CONTROL TECHNIQUES. Pest control technicians should take an Integrated Pest Management (IPM) approach to rodent control in commercial/industrial facilities. Control methods range from exclusion and sanitation to the use of non-chemical controls and toxic baits. When toxic baits are the treatment technique of choice, J. T. Eaton recommends the use of wax blocks on the perimeter of the structure and meal and grain baits or traps inside. In food plants, baits are rarely used indoors. Tamper-resistant bait stations should be used both inside and outside an account. (Note: EPA requires that PCOs follow the label, which directs them to use tamper-resistant bait stations. Some local codes/laws also require the use of tamper-resistant bait stations.)

Now let's walk through the commercial/industrial site featured in the accompanying wall chart.

OUTDOORS. With regard to outside baiting, it is important to use only those materials that weather well. Extruded wax BAIT BLOCKS® or weather-proof pelleted baits in tamper-resistant bait stations are recommended in these locations. Tamper-resistant bait stations prevent non-target animals from gaining access to the bait, as well as protect the rodenticide from weathering. As a general rule, it is recommended that rat bait stations be placed at 50-foot intervals around the fence line, as well as the building.

Baits also can be placed advantageously around shrubs and trees near the building and in the vicinity of drains coming through walls. Additional bait stations should be placed wherever signs of rodent activity are identified. Loading dock areas

Your inspection is not complete until it includes a visit to the roof. Carefully inspect this area for signs of rodent activity. Pay particular attention to vents and air conditioning units. All vents should be screened and air conditioning units checked for water condensation problems.



EATON's "Gold Key" Tamper-Resistant Rat Depot comes with a bait rod holder that holds all sizes of EATON BAIT BLOCKS firmly in place, providing extra security against bait translocation.

where doors must remain open for long periods of time – are an especially critical area in outdoor rodent control. Two words of caution, however: Bait stations should be placed in inconspicuous locations whenever possible. This will reduce theft or damage by workers. They also must be secured so workers and children can't gain access to the bait.

Reduce harborage sites outdoors by recommending to the client that they take steps to eliminate weeds, debris, overgrown vegetation and other conditions conducive to rodent survival. Dumpsters should be cleaned regularly, both inside and out. They should have tight-fitting lids and rest on concrete slabs, which should be washed down on a regular basis. Standing water and other water sources should be eliminated.

If a lake or pond is on the premises, it must be maintained properly. Weeds and overgrown vegetation provide prime harborage sites for rodents. Identify and treat any burrows that circle the pond or lake. Burrows should be baited using either tamper-resistant bait stations nearby the burrows or by placing bait directly into the burrows. Leave all treated burrows opened until control is achieved.

Materials around the building should be stored at least 18 inches off the ground

and at least 1 foot away from walls and fences to discourage rodent harborage or possible entry. In addition, all walls should be "rodent-proofed." Rodent-proofing involves using construction materials (sheet metal, hardware cloth, cement, mortar, etc.) to seal breaks or openings in buildings. Keep in mind that rats can squeeze through a hole only ½-inch in diameter, while mice can gain access to buildings through holes as small as ¼-inch. Leave any building repairs to the client unless, of course, you're licensed to provide this service.

INDOORS. Entryways are the first area of concern indoors. Because entryways are considered "high-traffic" areas, care must be taken when using toxic baits in these locations. Baits should be placed in tamper-resistant bait stations on *both sides* of entryways. Bait stations/traps should be placed in inconspicuous locations to prevent contact with employees or other non-target animals.

Where baits are permitted, place packs are another control option you should consider. Place packs consist of loose grain or seed packed in paper or plastic, usually weighing 1.5 to 4 ounces. Place packs are an effective tool for treating inaccessible or out-of-the-way locations, but they should not be thrown indiscriminately.

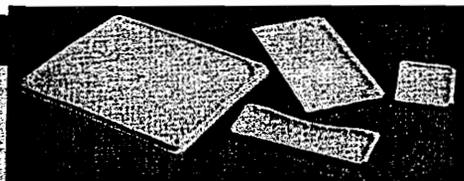
Once a service pattern has been established, monthly visits are probably adequate, but don't forget that seasonal changes may disrupt your program and require extra service. In such cases, flexibility is key.

** Baits are rarely recommended in food plants or food warehouses. In these accounts, glue traps and snap traps are the tools of choice.*

WHY YOU SHOULD USE STICK-EM® GLUE TRAPS

J.T. EATON'S STICK-EM® Glue Traps offer a number of advantages to pest control professionals involved in rodent control work. STICK-EM® Glue Traps are:

- ✓ Safer to use around children and pets, an important consideration in residential settings.
- ✓ Economical, since several rodents can be captured on a single trap.
- ✓ Effective at a wide range of temperatures.
- ✓ Disposable, easy to use and clean.
- ✓ Convenient and economical, requiring no messy baits or traps that can snap fingers.
- ✓ Effective at preventing rodents from dying between walls where decaying carcasses may create foul odor problems.



That's why they're called *place packs*... they should be *placed*.

■ **LOCKER ROOM (A):** The control option of choice in this sensitive area is sanitation in combination with both non-chemical and chemical controls. All food should be removed from lockers and stored in closed containers or a refrigerator. Lockers should be properly maintained and cleaned. Obviously, customer cooperation is essential if you are to control rodents in this area. Make sure management communicates to employees that food should be stored in closed containers. Rodenticides in tamper-resistant bait stations can be placed under lockers if sufficient space is available. If bait stations are not *required by law*, loose place packs are an option.

Non-chemical control options include both sticky traps and snap traps. Both types of traps should be placed in rodent runways (along walls). Initially, you may want to place snap traps unset until rodents become acclimated to the devices. Setting the traps several days later results in greater trap catches.

■ **REST ROOMS (B):** As mentioned previously, rest rooms are attractive to rodents because they are a prime water source. Recommending that the customer fix leaky water pipes and dripping faucets will go a long way toward controlling rodents in these areas. The use of toxic baits in tamper-resistant bait stations, glue traps and multiple-catch live traps are other options you may want to consider. Baits should only be used in these areas if the rodent problem is severe.

■ **KITCHEN AND LUNCH ROOM (C):** Because of the presence of food in these locations, glue traps and snap traps are favored over toxic baits. Rodents have been known to carry pelleted or large particle baits in their cheeks and contaminate food sources.

Glue traps should be placed in rodent runways *between* the harborage and feeding areas of rodents. You can also place glue traps inside bait stations or under cover to prevent them from being stepped on or becoming dusty.

■ **LABORATORY (D):** Proper sanitation is essential to keep laboratories rodent-free. If a rodent problem develops, non-chemical measures (sticky traps, snap traps) are the control options of choice. Never use tracking powders in these locations.

■ **BOILER ROOM (E):** Toxic baits placed in tamper-resistant bait stations can be utilized here. Other options include snap traps for rats and multiple-catch live traps for mice. To achieve the best results place traps next to walls. Glue traps should be placed on the floor, *parallel* to the wall. Snap traps should be placed *perpendicular* to the wall, with the trigger facing the wall. For best results, PCOs should place traps near doorways or where droppings have been found.

■ **STOREROOM/ PRODUCTION AREA (F):** If there is a chance of contaminating food, use a grain or meal bait rather than a pelleted bait to further reduce the threat of pellets being removed or cached. Make sure the baits are placed *behind* pallets and in corners. Other control options include glue traps and multiple-catch live traps.

■ **OFFICES (G):** Because of the sensitive nature of offices, toxic baits in tamper-resistant bait stations are the control measure of choice. Office workers may react negatively to the use of sticky traps or snap traps, and are more likely to accept rodent control measures where the target animal dies out of sight. But glue traps are particularly well suited for use in false ceilings. If used, traps need to be serviced *frequently* in offices.

■ **ROOFS (H):** A variety of pests, from roof rats and pigeons to squirrels and starlings, can cause problems in these areas.

A variety of control techniques are available when treating these locations. Remember to use tamper-resistant bait stations when required. BAIT BLOCKS® are particularly well suited for these areas because they stand up under a variety of weather conditions (hot, humid, wet). Place packs also can be used to treat inaccessible locations under air conditioning units or other out-of-

the-way locations on the roof.

Bird control methods include repellents, netting, toxicants, trapping and porcupine wire. All of these techniques are effective in preventing birds from roosting on signs, ledges and other areas on the roof.

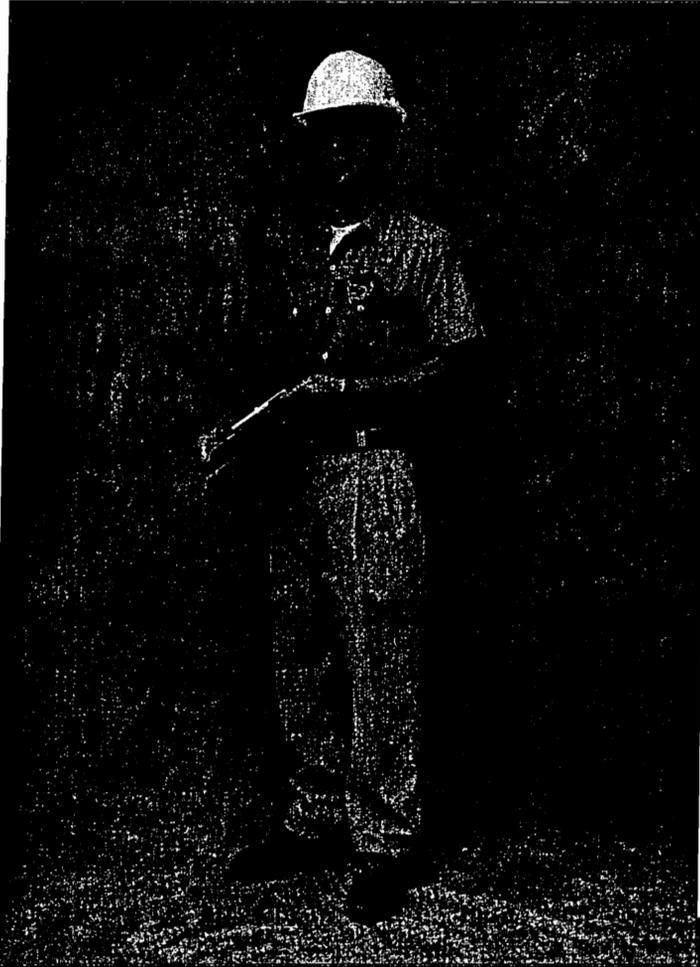
Repellents, like Eaton's 4 the Birds®, are an effective and economical solution to the problem of roosting birds. For use on ledges, girders, struts, signs, beams, trees, shrub storage tanks and pipes, vines at other places where birds roost, EATON'S 4 the Birds® doesn't harm nuisance birds, it simply makes surfaces unpleasant so they do not return.

CONCLUSION. This concludes the inspection and reporting portion of the *J.T. Eaton Rodent Control Training Guide*. However, that just the beginning of your job. Once the initial bait/trap placements are completed, regular follow-up is essential. Rodent control is not a "one shot" operation, but requires conscientious follow-up. If live traps or glue traps are used, they should be checked frequently, either by yourself or an employee who has been given that responsibility by your customer. Traps should be checked on *daily basis*. Bait placements should be checked at intervals of no more than two weeks until it is determined how much bait is being consumed. If all the bait is gone from a particular station, replace it with a greater amount of bait.

Some bait stations are specifically designed as permanent placements. They should not be removed. This is common industry practice in commercial buildings. Other bait stations are placed where rodent activity is present. In these situations, if the bait is left untouched after two weeks, you may want to move these bait stations to sites where fresh signs are detected.

Once a service pattern has been established, monthly visits are probably adequate, but don't forget that seasonal changes may disrupt your program and require extra service. Therefore, it's important to be flexible. Remember, not only technical knowledge, but good customer service skills are required to be successful in the pest control industry.

PART IV



IMPORTANT ADDITIONAL INFORMATION

R

emember, this manual provides only broad guidelines for controlling rodents. Each situation will be unique and require different control strategies.

SAFETY COMES FIRST. No matter what control technique is selected, it's important to remember that safety comes first. When using baits, you must make rational choices to fit each situation. If a control measure is necessary in an area where there is an abundance of natural foods, such as kitchens or around unsealed garbage cans, traps should be used. At the same time, every effort should be made to eliminate the presence of standing water and other water sources. Tracking powders are not a control option of choice in homes or apartments and many commercial accounts where food is prepared or stored, since they are at least 40 times more toxic than the same active ingredient in bait form.

Both you and your client should be aware that rodents may carry food in their cheeks and transport it to hidden, out-of-the-way locations for future consumption.

RODENTS

**J.T. Eaton:
Committed
To You —
Our Valued
Customers**

IPM IS KING. Pest management specialists must never lose sight of the fact that true rodent control succeeds only when it is part of an Integrated Pest Management program. Although we are today favored with some of the most effective rodenticides ever developed, we can't overlook the importance of sanitation and exclusion in preventing rodent entry into homes and apartments.

It is futile to attempt to gain control of a rodent problem in a home or apartment when sanitation is lacking, or abundant rodent harborages exist and the customer is unwilling to repair structural defects in the building. However, once customer cooperation is secured, whatever rodent control problem you're likely to encounter, J.T. EATON & CO. has the product solution. The company offers an extensive range of products from BAIT BLOCKS® and A-C Formula 90™ to sticky traps and bait stations. To learn more about any of the company's products, contact: J.T. EATON & CO., INC., 1393 East Highland Road, Twinsburg, OH 44087, or call toll-free 800/321-3421.

Thank you for using this manual. We hope it is of assistance to you. This is another way we at Eaton are reaching out to service this very important industry.

MISSION STATEMENT

To develop safer and more effective methods for the control of rodents and other pests. To demonstrate our commitment to manufacture and sell only the highest quality products and to support our customers by offering our "Customer Satisfaction Policy."

STICK-EM® Glue Traps have the following patents:

U.S. Patent No. 4,438,584 and 4,599,822 — Canada Patent No. 1155659.

EATON'S®, BAIT BLOCKS®, STICK-EM®, SAFE-TEE®, PEST CATCHERS®, K.I.O.®, ANSWER®, and STICK-A-FLY® are registered trademarks.

A-C FORMULA 90™, DR. MOSS'S LIQUID BAIT SYSTEM™, SERVICE LOG™, SYSTEM™, SERVICE CHART™, EZ Peel™, ELEPHANT SIZE™, and GOLD KEY™, STRONG BOX™, MOUSE FORTRESS™ and RAT FORTRESS™ are trademarks of J.T. Eaton & Co., Inc.

4 THE BIRDS® and 4 THE SQUIRREL® are registered trademarks of Bird Control International.

BITREX® is a registered trademark of Macfarlan Smith, Scotland.

J.T. Eaton's Customer Satisfaction Policy

Every Eaton's product is warranted to provide complete satisfaction when used according to the product's label directions. If, within a period of one (1) year of the date of purchase, you are not completely satisfied with the product, Eaton will replace it, substitute another Eaton product of comparable value, or refund your purchase price — whichever makes you happy. It's your total assurance of quality and satisfaction ... "Guaranteed Satisfaction."



Stanley Z. Baker

C H A I R M A N

Customer Remedies: Return unused portions of the product (or the empty product container) together with your purchase receipt dated within one (1) year of the mailing date of your claim, together with your preference as to replacement, substitution or refund to:
J.T. Eaton & Co., Inc., 1393 East Highland Rd., Twinsburg, OH 44087, 330-425-7801

Eaton's entire liability and your exclusive remedy under this Limited Warranty shall be either (a) return of the purchase price paid, (b) replacement of the product, or (c) substitution for another product of an amount not to exceed the price paid for the original product. This Limited Warranty is void if the failure of the product resulted from misuse or misapplication. Any replacement product will be warranted for the remainder of the original warranty period of thirty (30) days, whichever is longer.

No Liability For Consequential Damages: In no event shall Eaton be liable for any damages whatsoever (including without limitation, direct or indirect damages for personal injury, loss of business profits, business interruption, or any other pecuniary loss) arising out of the use of or inability to use this product. In any case, Eaton's entire liability under any provision of this Limited Warranty shall be limited to the amount of the purchase price paid for the product.

J.T. EATON & CO., INC.

Your Partner In Pest Control

**1393 E. Highland Road.
Twinsburg, Ohio 44087**



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



February 10, 2001

Mr. Ahmed Gharieb
El Nenaiea Company for Dehydration
71 Corniche El Nil
Kanater, El Khieriea

TEL 218-1650
FAX 218-4694

Dear Mr. Ahmed:

I want to thank you and Mr. Hisham Zahran for taking the time to work with Mr. Jim Bowyer, our pest management expert, when he visited with you last year. In a way, the visit was both well and poorly timed. It was poorly timed in that you were involved in a major construction project, but well timed in that the construction gave a chance to make changes to improve your pest management program. I have attached Mr. Bowyer's report for you. The following comments are areas where you should place more emphasis.

1. Storage Area – Your storage area needs to be cleaned up (See photographs 1 and 2). All trash, damaged materials and waste needs to be hauled away. This area serves as it existed in November and before served as a breeding ground for all manner of pests. If there are pieces of equipment or supplies that you wish to keep, you should prepare a more organized storage area. This new storage area should be on a concrete or asphalt pad (or crushed stone). Metal racks should be installed for storing pipes and other materials. Any equipment that is held there should be covered and on pallets or skids.

2. Bait Stations and Live Traps – Bait stations traps should be used as your outer or first line of defense against rodents. These should be placed every 30 meters along your property line. The second line of defense should also consist of bait stations located every 15 meters along the outside of your factory. The inner defense should consist of live traps (Tin Kats, Ketch-Alls, for example) placed every 10-12 meters along the inner walls of your factory. No bait should be used inside the factory. Above each bait station or trap, a numbered card should be placed (see enclosed) that describes what kind of trap is located below. The number on the card should correspond to a number you place on the trap. A sample is enclosed.

3. Denying Access – When the work for receiving the new equipment is done, an effort should be made to secure the plant against pest access. All windows should be screened. Doors should be refitted so that they are self-closing and, if possible, have air curtains that engage upon opening. Doors should all be tight fitting so that rodents cannot enter the plant. Areas around fans should be screened to discourage access for flying insects.

4. Denying Harborage – An effort should be made to assure that there are no places where insects and rodents can hide. This can be done following or during the end of construction. All cracks and crevices should be sealed. If possible, all wall-floor junctures in the factory should be coved or curved. This will allow you to clean more easily, as products tend to accumulate at 90° junctures. The same

attitude should be taken on the plant grounds. Make every effort to eliminate areas where pests can live and breed.

The factory upgrades that you are making are also providing you with an excellent opportunity to upgrade your pest management program. If you follow Mr.. Bowyer's advice and use the exhibits that he has prepared as a guideline for the future, your pest problems should be few and far between. The goal of pest management is prevention of problems, not fighting on-going concerns.

Lastly, you had the opportunity to travel with Mr. Gamal El Khayat from Farm Frites on the study tour to the Northwest Food Processors Association Convention. His company, with Jim Bowyer's help, has ordered new tools for pest management. If you and he managed to build a friendship during the tour, you may want to give him a call in a few weeks and ask to see what Farm Frites has done with the new equipment.

Should you have any questions with regards to any information in this report, or if you would like any help in implementing your pest management program, please feel free to contact Mr. Morad Ahmed or myself.

Thank you again for your hospitality and good luck with the new equipment.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: M. Ahmed, Files



still peel by hand this season. Hopefully the other portion will be completed by April or May of 2001, prior to their summer season.

They presently have an outside pest control Service Company that comes to the plant once per month. Management feels that this is not an adequate, so they supplement this with their own program. Hisham Zahran and Ahmed Gharieb has three inspectors doing daily inspections of all bait stations and inside monitoring cages that have no baits or poisons. The function of these inspectors is to only inspect and if a deficiency or work to be done, other personnel are assigned to the work. The plant also has an ant and bird problem.

The following are a few findings, recommendations and procedures to set up once construction is completed and the plant is back into production:

- At present time there are no monitoring devices or tamper-resistant rodent bait stations on the exterior, due to construction. Install exterior tamper-resistant rodent bait station in lieu of what has been on the exterior in the past. It was stated that bait going into clay tile types of installations has been used. None were found.
- Place tamper-resistant rodent bait stations on either side of all exterior doors, including walk through, sliding and roll-up doors 50 linear feet around the exterior perimeter.
- The exterior fenceline should have these same tamper-resistant rodent bait stations installed every 30 linear meters.
- All tamper-resistant rodent bait stations should have dating cards inside the station so that it can be certified as to when it was inspected, cleaned and serviced.
- All locations should have wall placards installed above the tamper-resistant rodent bait stations in order that if one is damaged, removed or missing it can be determined easily the reinstallation. Each station on the placard and the station should have corresponding numbers that can be transferred to a plot plan or map to determine the number and location of all devices. This is for documentation purposes.
- All stations should be anchored to the ground. Recommend using liquid nail to adhere to concrete or asphalt or secure to fence by a chain. All tamper-resistant rodent bait stations should be anchored and locked.
- On the interior of the plant, the wire cages have been used. It has been determined that from the vibrations and noise in the plant when they are in production, that these cages trip very easily and usually on daily inspections it is found that most if not all of these have been tripped.
- Install tin cats on each side at each exterior doorway. These to be placed just on the inside of the interior wall. Furthermore tin cats need to be placed every 12 linear meters along this exterior wall. Snap traps can supplement these tin cats. Placards should be installed on the wall above each device, with corresponding numbers on both the placard and device. Dating cards should be inserted inside all tin cats.
- Plastic curtains were found in disrepair. Replace all broken or torn plastic curtains with an industrial type air curtain.
- It was noted that there were broken and open windows with no screening. Some of this could have been due to construction. Repair or replace all windows. All should be screened using fine mesh or windows should remain closed.
- Where there are openings in the exhaust fan areas or windows, screening needs to be installed to prevent birds and flies from entering the building.

- The enclosure near the peeling area is too big of a gauge of metal and should be sealed, enclosed or at the very least a fine netting or mesh installed over it to prevent small birds, rodents and flies from entering.
- It was noted that due to construction, the walls and roof are open. It was indicated that these openings would be closed as construction is completed.
- Management indicated that they have 10 - 12 electronic electrocutor fly lights. Replace these with Vector or Gardner type fly light with glueboards. This will prevent fragmentation of the insects. These lights should be placed 2.0 to 2.3 meters high, in areas as to not to attract the flies from outside, but to eliminate those on the inside. For example, they should not be installed near doors where they would be visible from the outside.
- It was noted that there were many holes, cracks and crevices in the interior tile area. Some of this could be due to construction. Seal all cracks and crevices with a smooth epoxy type material that is readily cleanable.
- It was noted that in the floors there were several cracks and crevices. Seal all cracks and crevices with a smooth epoxy type material that is readily cleanable.
- In the back section, beyond the immediate fence line, there is what we call storage area or boneyard. A collection of paper, metal, equipment, junk etc was piled on the ground (see photos 1 & 2). All of this should be removed. There is also some vegetation growing that should be cut down and removed. This area should also be paved either with concrete or asphalt. If there is good equipment that will be saved, keep it stored away from walls and put on raised metal racks.
- Cracks were noted on exterior of building. Recommend sealing entire exterior of building and all exterior doors kept closed to prevent the entry of birds.
- There were cats noted on premises. Suggest removing the cats in and around the food processing plant.
- Recommend the development of a good sanitation pest management inspection report customized to this plant. These reports be filled out on a weekly basis and kept in the pest control manual and that where there are recommendations that actions be taken.
- MSDS copies, labels or labeling information were not found. MSDS copies, labels and labeling information be kept on file and stored in the pest management manual book.
- No pest-sighting sheet found. Recommend a pest-sighting sheet installed and kept in the pest management manual book.
- It was indicated that there is a plot plan of the locations of all bait stations, both toxic and non-toxic in which will be given to me as soon as possible. I suggest that a new map be developed following the previous guidelines.

The above observations are limited recommendations that we could make at this time, due to construction. I would suggest that an outside survey be performed after the factory construction is complete to determine any additional needs. Wish you and your company the best in your new and current endeavors and I hope that we have been helpful to you and your company. Look forward to seeing you again in the near future.

Sincerely,

Jim Bowyer
Quality Assurance Manager

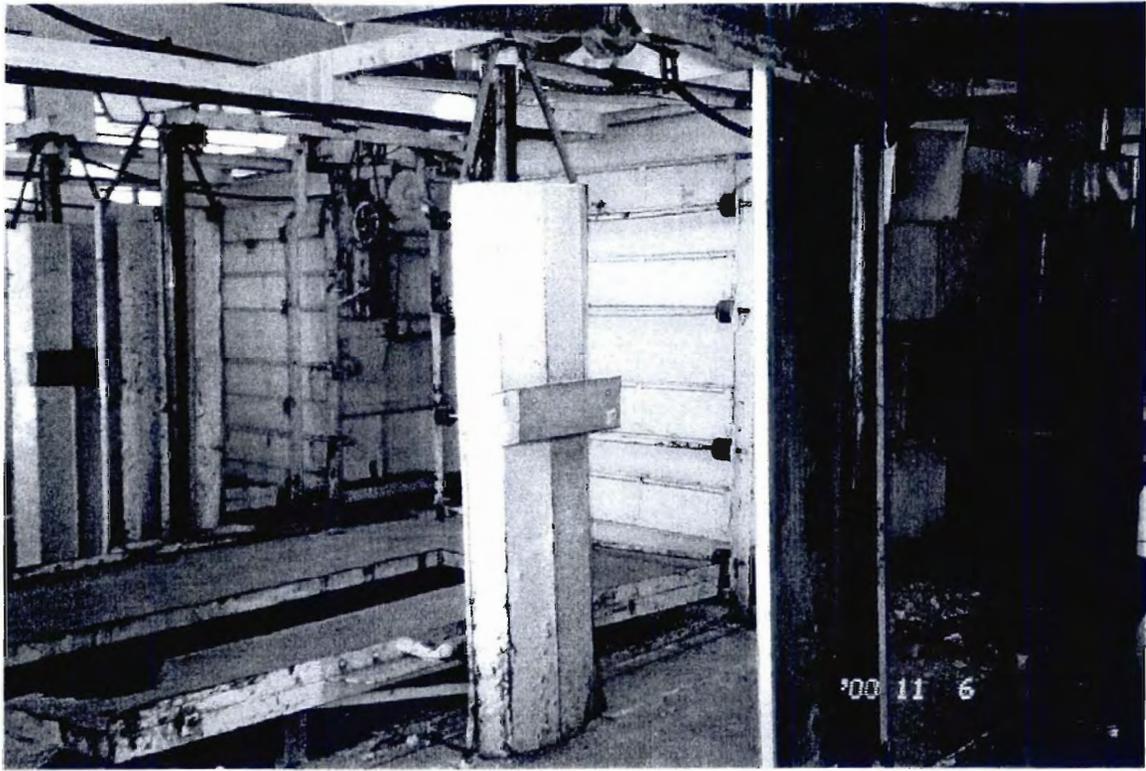


1

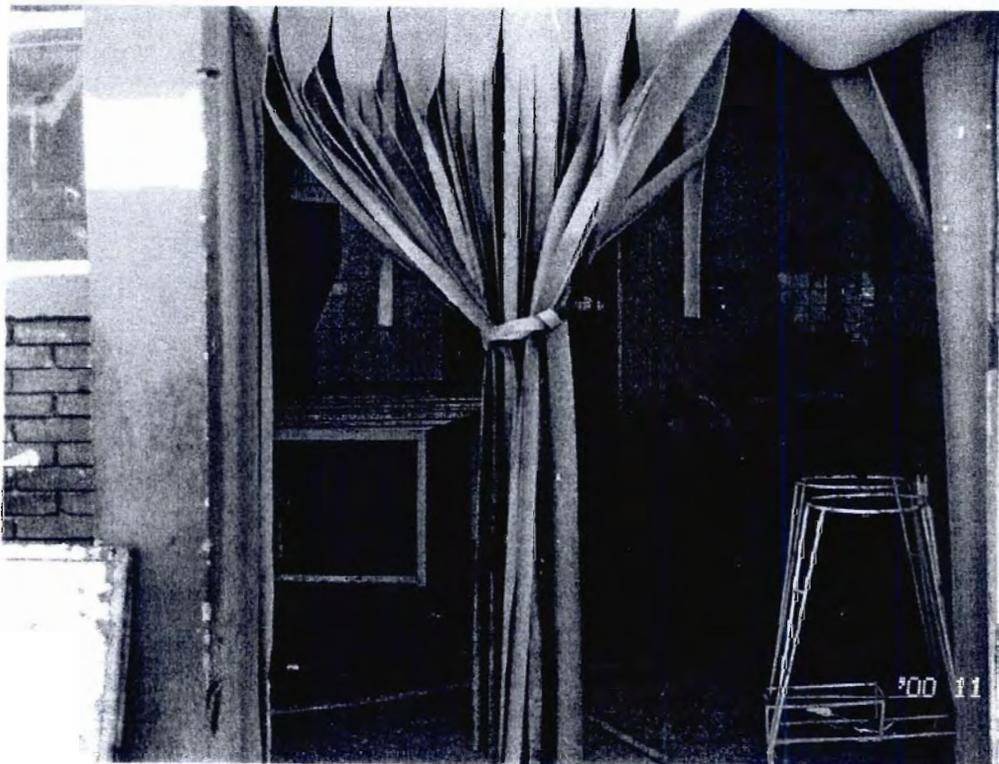


2

EL NEUDINE (1)



3



4

EL NENAIEAE (2)

Standards for Sanitation and IPM Pest Control

1. **Building Exterior.** Is there litter? Are weeds and brush kept clear? Is equipment stored outside? Are pallets or cardboard stored properly? Is trash area properly maintained? Is building free of cracks, crevices or holes?
2. **Building Structure.** Are all windows closed and screened? Do doors fit tightly? Are there cracks or holes in the walls? Does the roof leak? Are there cracks in the floor that can collect debris? Are there cracks around door thresholds, dock plates, etc.?
3. **General Housekeeping.** Is wall clearance adequate? Are spills cleaned up promptly? Are floors cleaned regularly? Do employees have specific cleaning assignments? Are there written instructions?
4. **Storage Practices.** Is storage up off floor by a minimum of 6"? Is storage 45 cm away from walls? Is there ??? Aisles? Are rack legs clean? Are the upper levels of storage racks cleaned? Are pallets clean? Is there spillage on or under racks? Are easily infestable items segregated? Are infested products returned or damaged products segregated?
5. **Employee Areas.** Are lunch or break rooms clean? Are locker rooms clean? Are employee lunches stored or consumed in product areas?
6. **Receiving Practices.** Is there a separate area for damaged products? Are raw materials dated upon arrival?
7. **Storage Organization.** Are shelving/pallets clean and well organized? Are toxic products separated from food grade items? Are maintenance facilities separated from food items? Are nonfood odors present in the facility?
8. **Inventory Control Practices.** Is there a system in place that assures the proper rotation of products? Are finished goods shipped out on a first in, first out (FIFO) basis?
9. **Insect Control.** Is there evidence of insect infestation? Are there conditions present which could support an infestation? Is there potential harborage? Are dead insects present on windows or other areas? Are insect light traps clean?
10. **Rodent Control.** Is there evidence of a rodent infestation? Is there evidence of birds? Is rodent proofing adequate?
11. **Monitoring Results.** Were any insects caught in pheromone traps? Were any insects caught in sticky traps? Do the number of insects caught indicate an infestation? Was the infestation localized?

Pest Management Strategy:

Food processing facilities present an attractive and complex pest control environment. Pest activity in and around food processing facilities has considerable impact on product quality and requires compliance with standards. To effectively meet these challenges it is necessary to apply the principles of Integrated Pest Management (IPM) programs consisting of four (4) basic steps

A.

1. An understanding of the biology and ecology of a pest is critical to develop an effective control program.
2. Always seek a permanent solution to pest problems rather than a series of temporary solutions. Permanent solutions include altering conditions to prevent future occurrences.
3. Use the principles of Integrated Pest Management (IPM) when developing a pest management program.
4. Use pest control methods that have the least impact on the environment and nontarget organisms.

Monitoring by a professional pest control company should be used to constantly monitor pest activity. Application of pesticides may be made but will be limited to preventative applications in areas of historically high pest activity and areas where pests are likely to enter the interior. Pest sighting logs (Exhibit 4) are critical sources of information during these inspections.

On the basis of inspections and monitoring, recommendations should be made to help prevent pest infestation. (See Exhibit 3 for sample Pest Management Inspection Report) These recommendations fall into the following areas.

B.

1. **Sanitation** - The development of a pest infestation is greatly reduced by high standards of sanitation. Sanitation can be defined as the removal of conditions (food, water, harborage) which encourage or allow a pest population to survive.
2. **Building Maintenance** - Proper building and repair practices can prevent significant pest problems. Drainage, sealing, caulking, rodent-proofing, construction and general maintenance of buildings are important steps in this area. An example would be the simple sealing of cracks and crevices which provide harborage for insects within buildings.
3. **Facility Practices and Procedures** - This involves changing behavior of people working in the plant. An example would be making sure that doors to the outside are not kept propped open or that trash is eliminated dumpster lids or trash containers are kept closed.

These recommendations will be documented in the "Sanitation Inspection Report" (Exhibit 4) along with any pest activity noted during service. A detailed list of inspection standards of some items that are included in our sanitation report (Exhibit 3). A customized Sanitation Inspection form can be developed for your plant. The following are the five (5) basic types of control measures that can be used to develop a pest management plan. An IPM program will include at least two (2) or more of the following:

1. **Sanitation** - Proper sanitation is necessary for prevention but is a means of controlling existing infestations. The removal of food and water sources stresses the pest populations, making traps and baits more effective. In addition, university research has shown that oils, greases and dirt render many insecticides less effective.
2. **Mechanical Control** - These methods involve the use of traps, barriers, caulking, mechanical exclusion (screening), using air currents and manipulation of environmental factors (temperature and humidity).
3. **Cultural Control** - This involves changing the habits and behaviors of people to reduce infestations. An example of this would be changing cleaning schedules to prevent product accumulation or help train food processing plant or warehouse personnel to clean spills as soon as they occur.
4. **Biological Control** - Traditionally this measure uses biological organisms or their by-products to control pests. Examples include the use of *Bacillus Thuringiensis* for aquatic breeding insects, parasitic wasps for fly control or fungus for cockroach control.
5. **Material Application Control** - The correct and safe use of materials may constitute a portion of our control operations. All materials are carefully reviewed for their appropriateness and appropriate application techniques that have been selected.

Although the use of chemical control measures, may be use, they will not always be a part of our control plan. Many of the non-chemical control measures need to be implemented by your plant facility personnel. These recommendations will be reported to facility management on our "Sanitation Inspection Reports," (Exhibit 3).

Exhibit 5

IN-HOUSE SURVEY GUIDELINES

(Use this as a guide for your in-house survey inspection)

Consider the following information when completing your in-house survey inspection report.

A. Exterior of the facility:

1. Make note of sanitation conditions. Look for excessive debris, excessive standing water, liquid or product spills. Poor interior or exterior storage practices.
2. Check outside bait stations for the following:
 - ~ Are they anchored?
 - ~ Is the bait fresh?
 - ~ Are markers in place?
 - ~ Are service date stickers under lid?
 - ~ Last time serviced? _____
 - ~ Are stickers dated and initialed?
 - ~ Has there been rodent activity? (Evidence of bait being eaten or droppings)
 - ~ Are the bait stations placed sufficiently for a good preventative monitoring program?
 - ~ Are the bait stations numbered for a rodent location map?
 - ~ A note how many will be serviced each month?
3. Are birds roosting?
4. Were fire ant hills seen?
5. Dead flies by lights?
6. Is there high grass or weeds outside, or near exterior fence line?

B. Interior of facility:

1. Check Ketch-Alls or Tin Cats for the following:
 - ~ Are they properly wound?
 - ~ Are they properly placed?
 - ~ Are wall markers present?
 - ~ Check dates - are they serviced on a regular basis?
 - ~ Are they clean inside? (Free of webs, dirt and debris?)
 - ~ Any evidence of rodent activity? Are the Ketch-Alls or Tin Cats sufficiently in place for a good preventative monitoring program?
 - ~ Tin Cats or Ketch-Alls damaged?
 - ~ A note how many serviced each month?
2. Make note of rodent droppings and where each month.
3. Are there any infestations - insects/rodent - location and type.
4. Ask employees about pest sightings and frequency.

C. Insects:

1. Any evidence of insect activity? Where?
2. Is there a flying insect problem? What kind?

D. Structures and Sanitation:

1. Look for and note any structural deficiencies (open doors, door sweeps, screening required, lift doors in need of repair, broken windows, etc.)
2. Look for dirt, webs, debris, mold and leaks.
3. Make drawing of facility noting locations of monitoring devices and bait stations.

E. Equipment

1. Do they have light traps in place?
2. Are they properly placed?
3. Do they need additional light traps to keep flying insects under control?
4. Trays clean? Bulbs changed?

F. Program/Pricing:

1. Note all types of services and time for each.
2. Note bird control, pheromone trapping, etc. (any other necessary programs)

Exhibit 6

LIST OF VENDORS TO PURCHASE EQUIPMENT

JT Eaton & Company, Inc.
Patricia Slover
1393 East Highland Road
Twinsburg, OH 44087
(330) 425-7801 - (800) 321-3421
(330) 425-8353 Fax
www.jteaton.com

Innovative Pest Management
Carl Doucette
PO Box 265
El Segundo, CA 90245-0265
(310) 322-1999 - (800) 608-1999
(310) 322-8575 Fax

Target Specialty Products
Rich Records
15415 Marquardt Avenue
Santa Fe Springs, CA 90670
(562) 802-2238
(562) 802-3296
www.target-specialty.com

Atlantic Paste & Glue Co., Inc.
Darlene Porter
170 53rd St.
Brooklyn, NY 11232
(718) 492-3648 - (800) 458-7454 (Out of State)
(718) 439-0039 Fax
www.catchmaster.com

PCO-Tech
17355 Darwin Ave. #1
Hesperia, CA 92345
(760) 947-6650
(760) 245-8381 Fax

Chapin Manufacturing, Inc.
PO Box 549
Batavia, NY 14021-0549
(716) 343-3140 - (800) 444-3140
(800) 944-4329
www.chapinmfg.com

Whitmore Micro-Gen
Research Laboratories
(800) 777-8570
www.wmmg.com

Hot Foot America
Sales & Marketing
298 Belvedere Ave.
Belvedere, CA 94920
(800) 843-6334 or (770) 985-8273 Fax
www.hotfoot.com

Van Waters & Rogers, Inc.
(800) 888-4VWR
www.vwr-ltd.com

FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103
www.fmc.com

Bayer Corporation
PO Box 4913
Kansas City, MO 64120
(800) 842-8020
www.nobugs.com

Paragon Professional Pest Control
Steve Diaz
4371 Westlawn Ave.
(310) 397-2070 (Phone/Fax)
(310) 995-8160 (Mobile)
(800) 238-9254 (Orders)

Waterbury Companies, Inc.
Robert C. Bennet
32 Mattatuck Heights
Waterbury, CT 06705
(800) 845-3495
(800) 432-9982 Fax
bugsbennet@aol.com
www.Watco.com

3M Occupational Health &
Environmental Safety Division
Brendan P. Donohue
6023 S. Garfield Ave.
Los Angeles, CA 90040-3682
(800) 952-4496 (Voice Mail)
(661) 260-3247 (Fax)
bdonohue@mmm.com

Micro-Flo Company
PO Box 5948
Lakeland, FL 33807
(800) 451-8461
(941) 647-3412 Fax
microflo@earthlink.net

Woodstream
An EKCO Group Company
Lititz, PA 17543
www.victorpest.com

Cleary Chemical
Paul J. Walgenbach Ph.D, PCA, BCE
789 Lakecrest Dr.
El Dorado Hills, CA 95762
(916) 933-3180 (800) 524-1662
(916) 933-0785 (Fax)
(916) 201-6225 (Mobile)
paul.walgenbach@clearychemical.com

Dow AgroSciences LLC
Tim Maniscalco
(317) 337-4359
www.dowagro.com



RODENT STATION No. _____

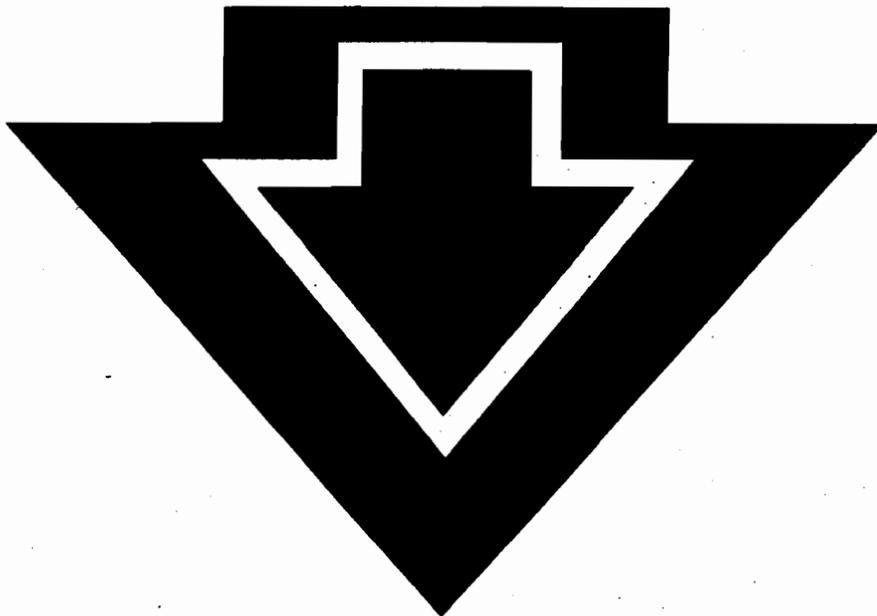
CONTAINS BAIT

TRAP ONLY, CONTAINS NO BAIT

DO NOT DAMAGE OR REMOVE

THIS RODENT STATION IS

SERVICED _____ **PER MONTH**





Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



March 3, 2001

Eng. Yasser Mohamed Fahmy
Wadi Food Processing
El Kodes El Sharif Street, #61
Mohandeseen, Cairo

Dear Eng. Fahmy:

I would like to thank you and your staff for the hospitality and support extended to Mr. James Bowyer when he visited your plant last year. Mr. Bowyer was impressed by your operation, but indicated that there is still a great deal of work to do in the area of pest management. This task is made more difficult because the plant is located in the middle of your olive groves. I have attached a copy of Mr. Bowyer's report, which includes some photographs that he took while at the factory and several exhibits with guidelines for better pest management. I have taken the liberty to summarize a few of his recommendations below.

1. Pest Management Service – Mr. Bowyer suggests that you look into using an outside pest management service. This company could handle what is now being done internally. It doesn't cost anything to talk to different people and get bids.
2. Leaks – Wadi Foods needs to make a more concerted effort to eliminate potential sources of food and water for all pests. Photograph #11 shows a leaking hose. Moisture will attract insects, rodents and birds. Fix all leaks and consider regrading floors so that water drains properly and does not collect in puddles.
3. Areas Behind Buildings - Accumulations of trash and debris were observed in the area outside the main building. This is a situation that will attract pests and provide harborage. This area must be cleaned.
4. Tamper Resistant Bait Stations - The bait stations and how bait is being presented (photographs #4, 5 and 10) do not meet the standards of what should be used for pest control. Tamper resistant bait stations that are resistant to the elements and can be both locked and secured to the ground are the recommended style of traps. We are enclosing a document on pest control, which has a picture of this kind of bait station. Each bait station or live trap in your plant should include a dating card in or on the trap and a placard mounted on the wall above the trap designating its location.
5. Air Curtains – Air curtains need to be turned on to be effective. Be sure that all units are turned on to provide a barrier to flying insects. You may also want to modify all doors so that they contain a solenoid switch that will engage an air curtain whenever a door is opened.
6. Ornamental Vegetation – Ornamental vegetation is attractive but will attract pests. We suggest that you trim the vegetation back from the buildings at least

45 cm (see photographs # 1 and 2) and place crushed stone along the buildings. This will help to discourage pest harborage.

7. Fly Light Traps - All light traps should be properly located and fitted with functional UV lights. Lights should be tested using a meter that monitors UV emissions to assure that they are emitting light at the proper wavelength. As the strength of the emissions decrease, their ability to attract flies drops. Lights should be changed at least twice every year, or more frequently if needed. When lights burn out, the bulbs should be replaced immediately (see photograph #6).
8. Nightly Fogging – You told Mr. Bowyer that you conduct a nightly fogging program for flying insects. If you make a greater effort to secure the plant against pest access and upgrade sanitation, you may be able to eliminate or reduce the need for fogging. This could result in significant cost savings.
9. Documentation of the Program - It is imperative that you develop a detailed pest management program. All documentation related to the program, including details of the program, maps designating locations of traps or insect traps and recordkeeping forms should be placed into a master manual for pest control. This manual should be developed by the quality and pest management group (with help from an outside agency if you elect to go that route), and reviewed and signed off by management. Since Wadi Foods is interested in the export market, having an organized and well-documented pest control program will help impress your customers.

We have also enclosed a copy of a document that has been developed here at ALEB entitled "Pest Control for the Food Processor". The document is in both English and Arabic and should help with upgrading your pest management programs.

Should you have any questions or require any additional information, please do not hesitate to contact either Mr. Morad Ahmed or myself. Thank you again for your hospitality.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: Files, M. Ahmed



February 23, 2001

Mr. Richard F. Stier
Team Director/Technical Support
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Wadi Foods

Dear Rick,

On November 8, I visited Wadi Foods and met with engineer Yasser Mohammed Fahmy. We also scheduled an appointment with the Planning and Follow-up Manager. This meeting was later on the same day and lasted approximately 2 hours. The meetings were followed by an audit of the entire plant.

Wadi Food produces extra virgin olive oil, black and green table olives, which are pitted and stuffed with almonds, red pepper and carrot, olive paste, mixed carrot pickles, pickled vegetables, onions, lemons, cucumbers, peppers, green and black and also with hot pepper. In addition, they produce sun-dried tomatoes with thyme added in and sun dried tomatoes in olive oil.

The plant is located outside of Sadat City and has been in operation for 3 years. They grow all of their own olives and have over 100 acres of olive orchards. They started growing these trees 7 years ago in preparation of plant production. There is approximately 4,000 square meters in the plant with an adjoining warehouse building. They produce about 4 metric tons of product per day and can store up to 20 tons. They run 1 eight-hour shift, 7 days a week throughout the year. They have about 40 full time workers.

At present they are doing their own in-house pest control service with 10 fly light traps. This location has problems with rats, flies, and fruit flies. Wadi Foods is in the process of building some new holding tanks.

The following are a few observations and recommendations for Wadi Foods:

- At present Wadi Foods is doing their own in-house pest control service. Suggest investigating a knowledgeable outside pest control service company to perform these services. The outside firm should be provided with an outline or specification of required services so they can submit a realistic bid.
- At present they have exterior fly bait traps hanging about with natural protein oil. These should be cleaned and rebaited on a daily basis.
- Personnel are using head covers in the processing area, however no beard covers are provided for those with beards. Recommend beard covers be purchased and used.
- At the receiving area and at the start of the production line there are some holes in the cinderblock allowing rodents both access and a hiding place. Recommend sealing all openings in cinderblock so rodents can't enter, nest, and hide.

- The entire exterior area where the production line starts is completely open and exposed to flies. Suggest that this area be enclosed with a tight fitting small mesh screen to prevent flies from entering.
- Some barrels and containers stored in this same area have no covers to prevent attracting pests. Recommend tight fitting covers on barrels holding product to prevent fly infestation attraction.
- In this same entry area, there is a water connection that has a leak and causing water to puddle. Fix leaks in pipes and install new gaskets to prevent water puddling on floor (see photograph 11).
- In receiving area drums and other product are stacked up against the wall leaving no access. Store all items at least 45 cm from walls leaving space for cleaning, inspections, inventory control and installation of monitoring devices.
- Both the exterior doors from the receiving area do not fit correctly. Repair with weatherproofing or replace doors so they are tight fitting.
- In processing area three fly light traps should be lowered. These are insectocutor type units and should be replaced with the Gardner, Vector or Gilbert type units which utilize glue boards.
- This same recommendation goes for the fly light units in the main processing plant. These units should be positioned to attract the flies already inside the building and not attract flies from outside. A schedule needs to be established to inspect, clean and replace glue boards as needed in these fly light traps. Each fly light unit should be numbered and a diagram developed showing the location of all units.
- The master pest control log should contain this information as to the dates of service, and inspections done what was found and performed.
- Fly light traps should be mounted on walls approximately 2.5 meters in height. The ones in the center of plant should be no higher than 2 meters to be more attractive to interior flies and so as to not to attract flies from the outside.
- All fly light bulbs in the food processing area should be shatter proof. They should be changed at least twice per year basis, and more often if required. There is obviously no program for checking the UV strength of these bulbs at this time. The staff are just waiting for them to burn out before they are changed. Emissions from the bulbs should be monitored using a UV emissions meter. Changes to the bulbs should be made when strength begins to decline.
- A dating sticker should be on the fly light and this information documented in the master pest control file, showing when inspected, cleaned and bulb replacement.
- In processing area and other parts of plant only a few live cage type rat traps were found. Recommend the use of multiple tin cats or catch-alls be installed on the

inside of the exterior walls in lieu of the single catch traps. Snap traps could also be used as a monitoring device. These devices should be installed on both sides of the exterior walk through, sliding, or roll up doors. Dating cards should be in the monitoring device. A wall placard with corresponding numbers on both the device and the placard should be installed above each device.

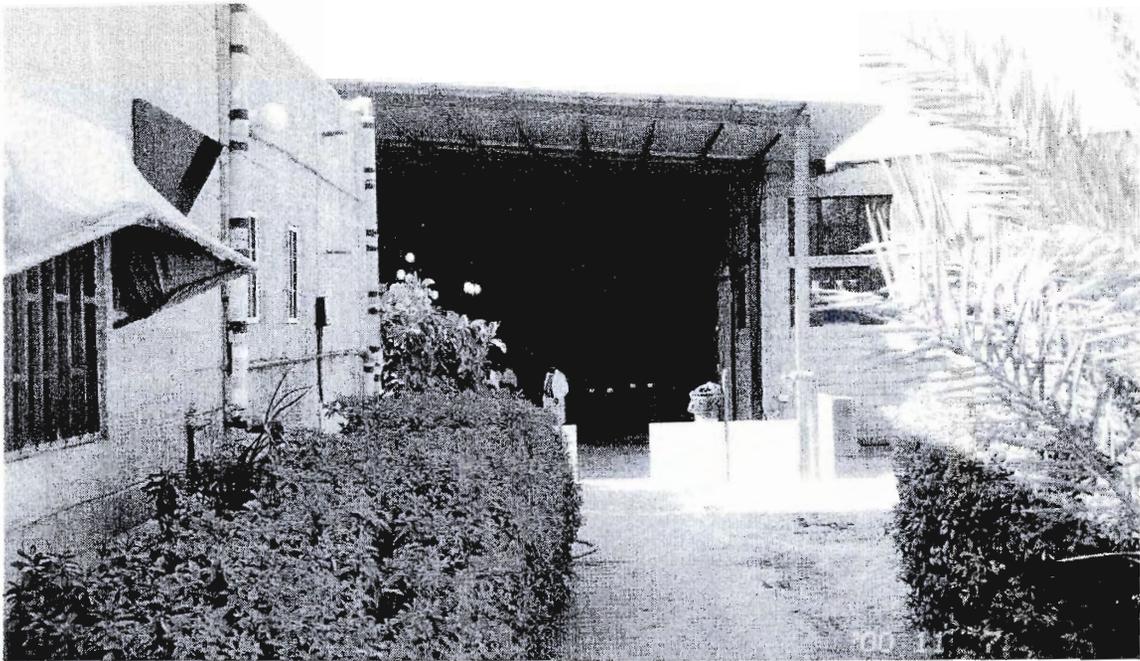
- At the bottling room the exterior door at the bottom has gaps and needs to be fitted. Door sweeps or a new door needs to be installed.
- There is wood shelving in bottling room. Replace with metal shelving or raised racks.
- Remove existing cage traps and replace with tin cats in bottling room.
- Management and ourselves were allowed to go into the production area with no head covers, mask, gloves, beard covers and wearing jewelry. Recommend all persons going into a production area are required to wear head covers, beard covers, gloves, masks and all jewelry removed before entering.
- In the upstairs storage area, there is product stored up against walls. Recommend that all products be stored 45 cm away from walls for easy access for cleaning, inspections, and installation of monitoring devices.
- Wooden racks were found upstairs. Replace these with raised, metal racks.
- It was noted that there were air curtains that were not turned on. Recommend all air curtains be kept on while doors are open. If air curtains are not directed properly, direct correctly and make sure that it is the correct type for that size door. Consider installing solenoids on all doors that will engage the air curtains when the doors are opened.
- There are areas downstairs in the production area that have storage next to walls. Recommend all storage be 45 cm away from walls for easy access for cleaning, inspections, and installation of monitoring devices.
- I was told that the fly lights were cleaned and inspected each day. Recommend more thorough cleaning.
- Spices and herbs should be stored at least 45 cm from walls for cleanings, inspections, and installation of monitoring devices.
- Seal all swinging doors to prevent rodent and pest entry.
- Eliminate puddles in packaging area. Repair all dripping pipes and regrade floors to assure proper drainage.
- Some barrels of product were left uncovered and were breeding and attracting fruit flies. Cover all barrels to eliminate fruit fly infestations.

- In packaging area, some lights in the fly light units were completely burned out. Replace all burned out bulbs and routinely change on a twice per year basis.
- Exhaust fans in packaging area need fine small mesh netting to prevent pest entry.
- Debris on exterior of building needs to be cleaned up and removed from buildings. This will serve as harborage and will attract pests.
- There is trash piles and debris piled outside the main plant and beyond walled area. Clean and remove all unused junk and trash from premises, cleaned up.
- Eliminate all old wood and boards from exterior ground area where new construction is taking place.
- Exterior baiting stations used flex tubing (see photograph #10) with a tracking powder that was accessible to pests and people. In addition, rat bait was just sitting exposed on cardboard (see photographs 4 & 5). Eliminate this practice immediately. Install tamper resistant rodent bait station with a wall placard installed above each one with corresponding numbers on both the tamper-resistant rodent bait station and the placard.
- Install industrial air curtains on all sliding, roll up, and walk through doors to prevent fly entry.
- Exterior fence line should have tamper resistant rodent bait stations every 30 meters, with the same specifications as the ones around the exterior building.
- There are 3 lines of rodent defense; the exterior fence line will be the first line of defense with stations located every 30 meters; the second line is the exterior of the building with bait containers placed every 15 meters and at either side of all exterior doors, and the third line of defense are the interior monitoring devices, which include tin cats, catchalls or snap traps.
- At present there is nightly fogging done at this plant. This program could be eliminated if greater attention is paid to denying access to the plant and if overall sanitation is improved.

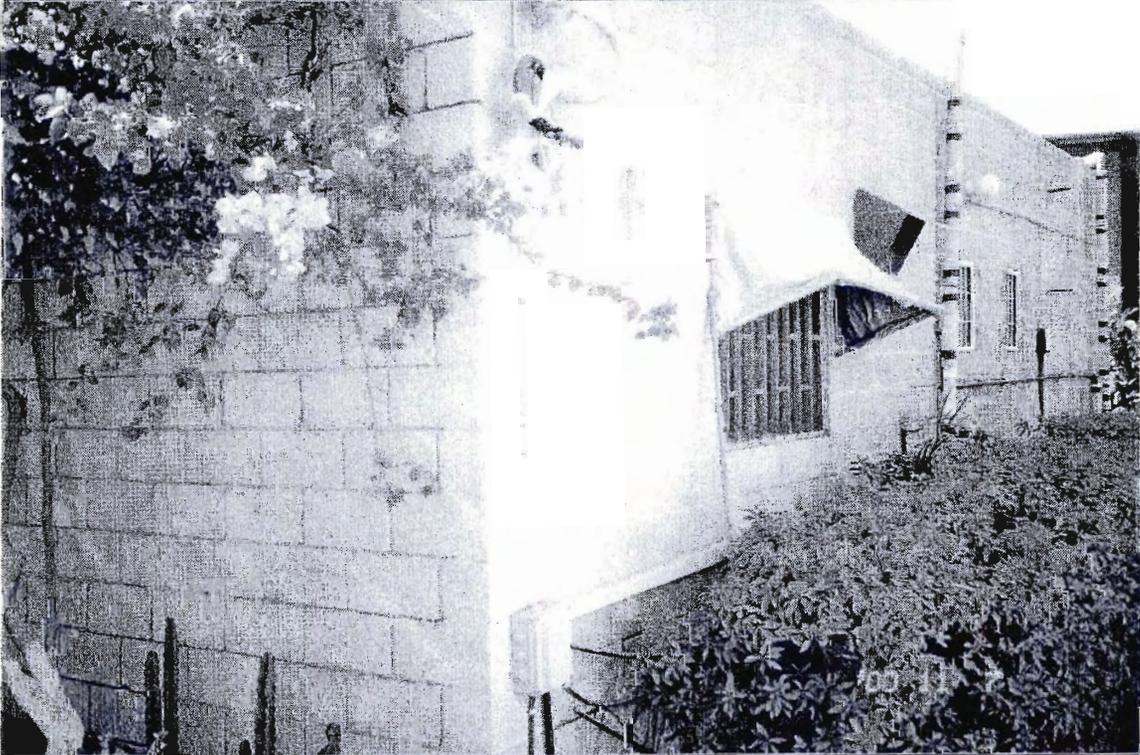
I sincerely hope that some of these findings and recommendations will be useful to Wadi Foods. Should there be any questions please feel free to contact me.

Sincerely,

Jim Bowyer
Quality Assurance Manager



1

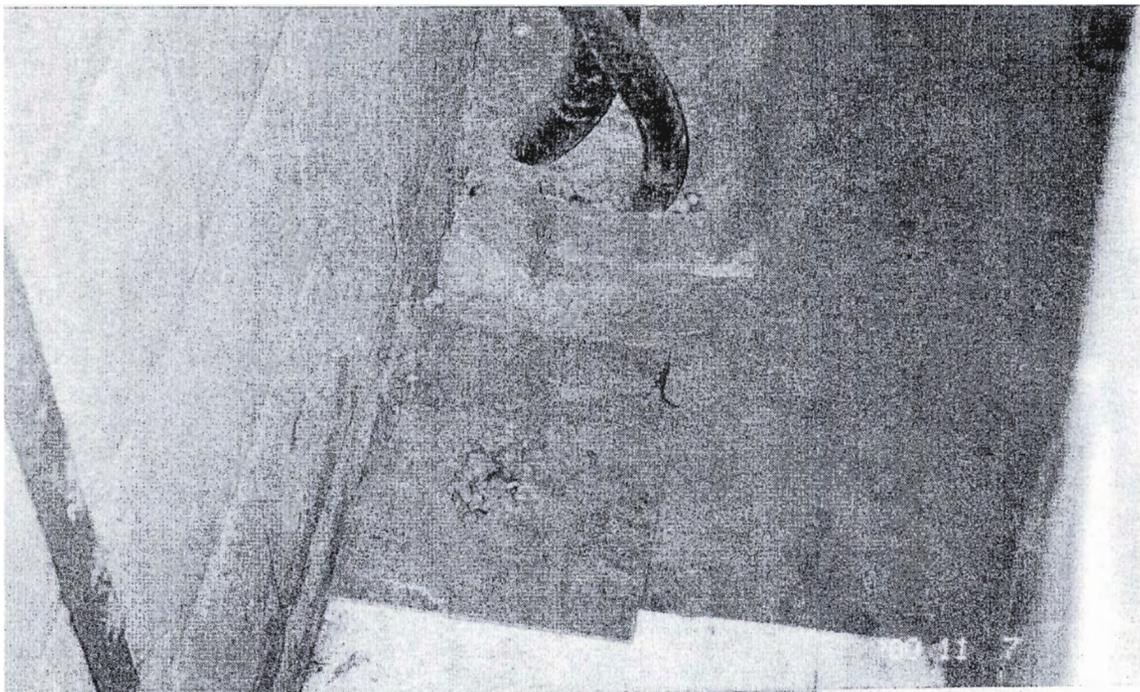


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3

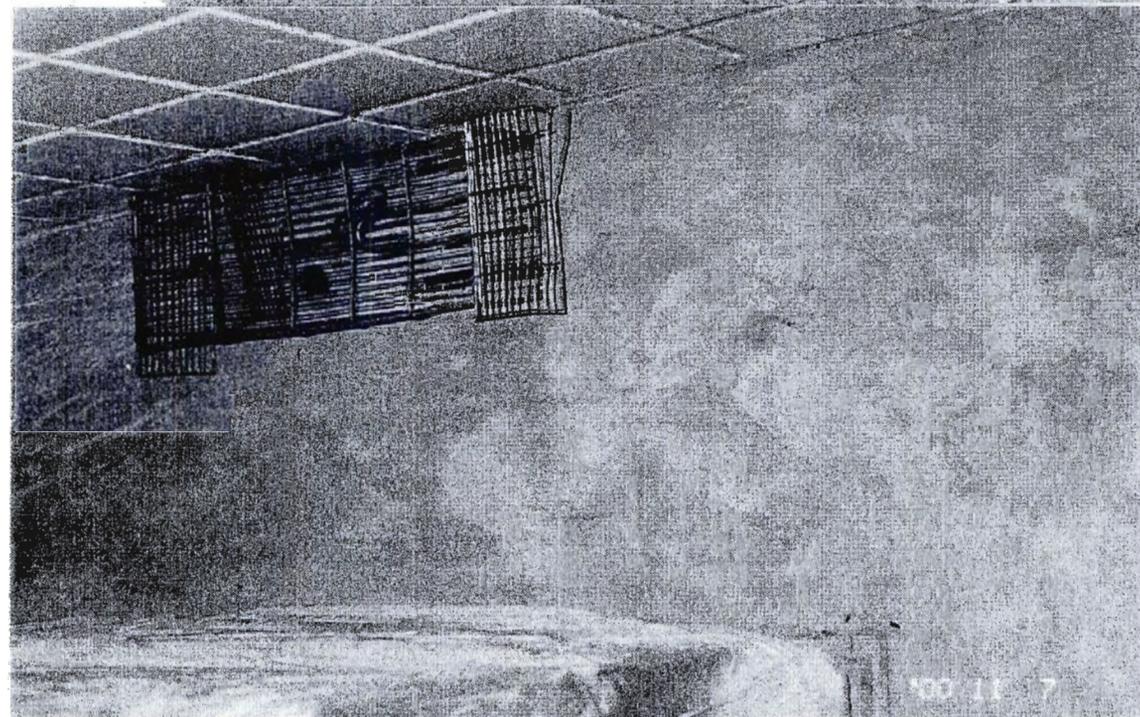
Woo:
Floor



4



5



6

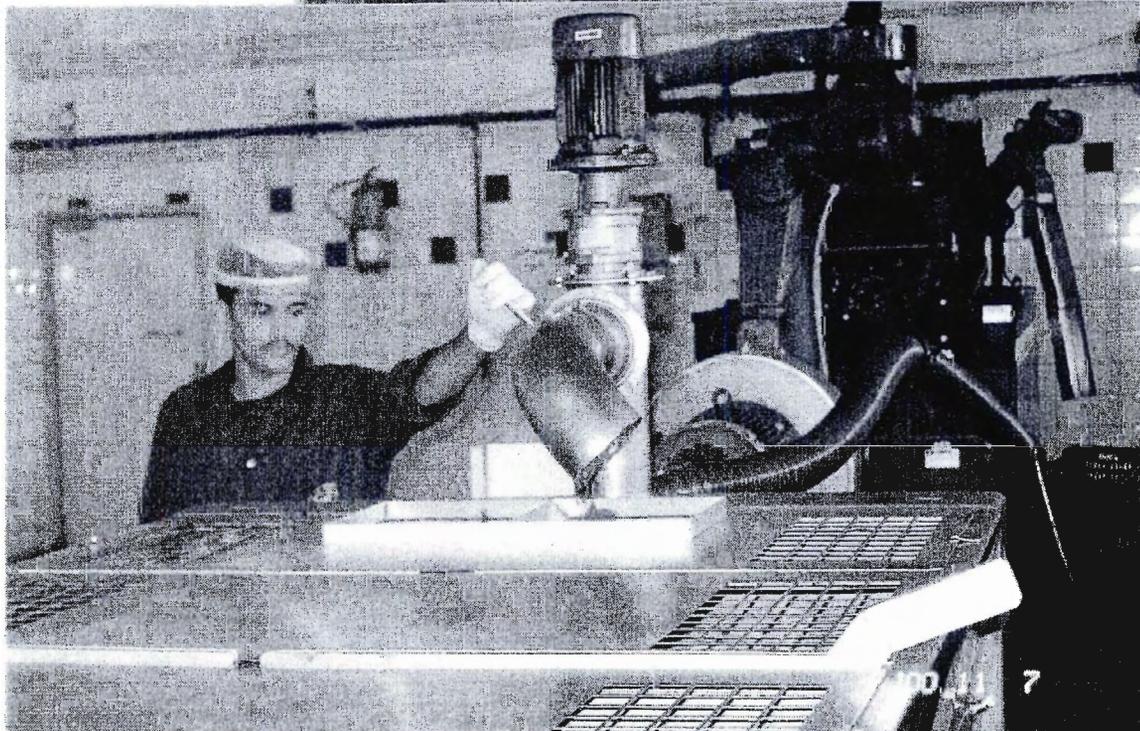
Wagon
Floor 6



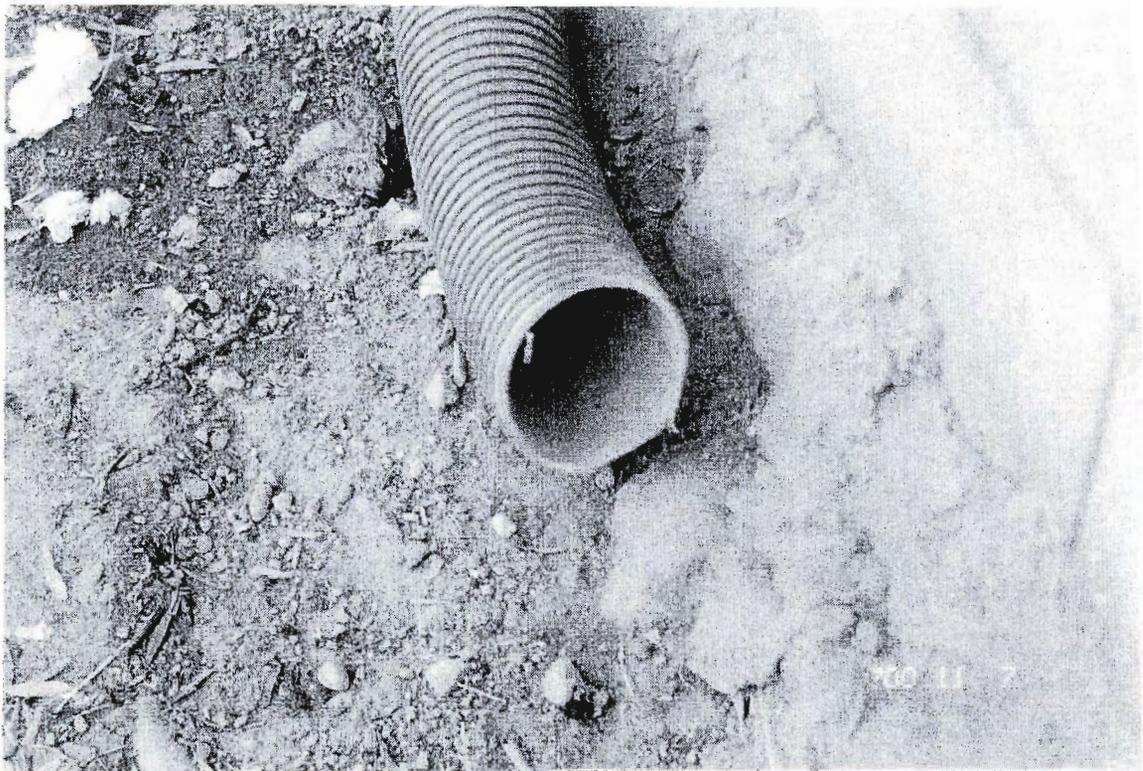
7



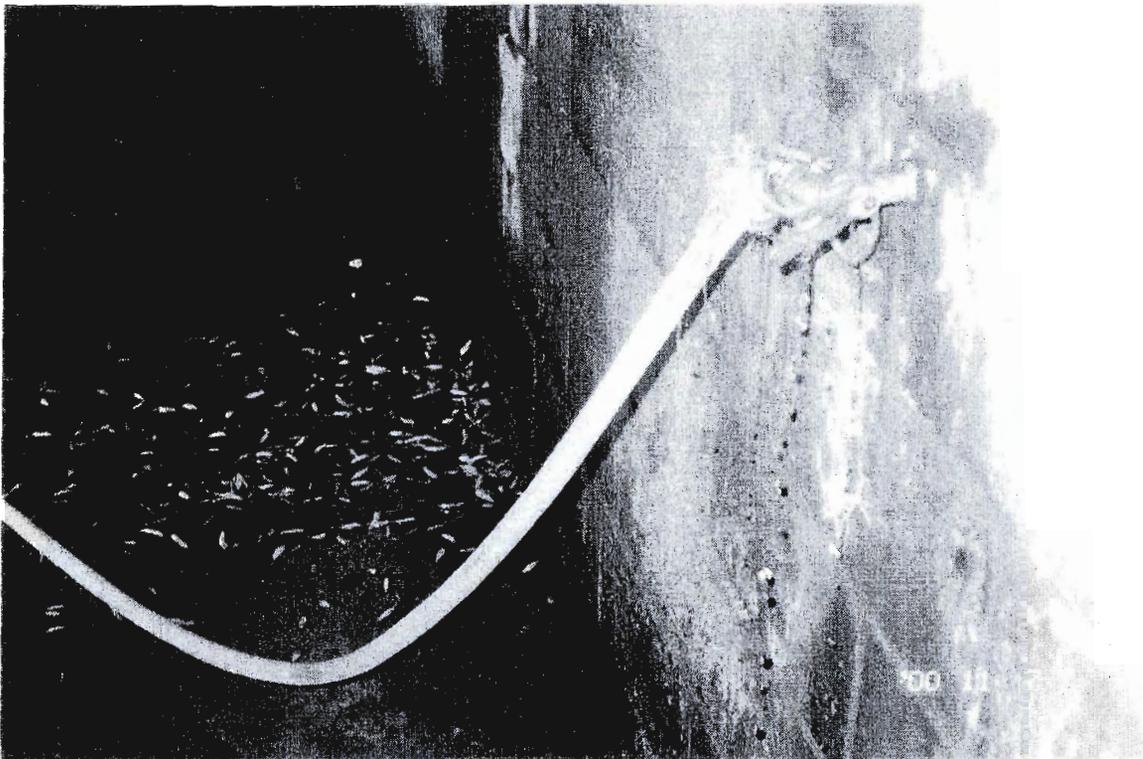
8



9



10



11

Standards for Sanitation and IPM Pest Control

1. **Building Exterior.** Is there litter? Are weeds and brush kept clear? Is equipment stored outside? Are pallets or cardboard stored properly? Is trash area properly maintained? Is building free of cracks, crevices or holes?
2. **Building Structure.** Are all windows closed and screened? Do doors fit tightly? Are there cracks or holes in the walls? Does the roof leak? Are there cracks in the floor that can collect debris? Are there cracks around door thresholds, dock plates, etc.?
3. **General Housekeeping.** Is wall clearance adequate? Are spills cleaned up promptly? Are floors cleaned regularly? Do employees have specific cleaning assignments? Are there written instructions?
4. **Storage Practices.** Is storage up off floor by a minimum of 6"? Is storage 45 cm away from walls? Is there ??? Aisles? Are rack legs clean? Are the upper levels of storage racks cleaned? Are pallets clean? Is there spillage on or under racks? Are easily infestable items segregated? Are infested products returned or damaged products segregated?
5. **Employee Areas.** Are lunch or break rooms clean? Are locker rooms clean? Are employee lunches stored or consumed in product areas?
6. **Receiving Practices.** Is there a separate area for damaged products? Are raw materials dated upon arrival?
7. **Storage Organization.** Are shelving/pallets clean and well organized? Are toxic products separated from food grade items? Are maintenance facilities separated from food items? Are nonfood odors present in the facility?
8. **Inventory Control Practices.** Is there a system in place that assures the proper rotation of products? Are finished goods shipped out on a first in, first out (FIFO) basis?
9. **Insect Control.** Is there evidence of insect infestation? Are there conditions present which could support an infestation? Is there potential harborage? Are dead insects present on windows or other areas? Are insect light traps clean?
10. **Rodent Control.** Is there evidence of a rodent infestation? Is there evidence of birds? Is rodent proofing adequate?
11. **Monitoring Results.** Were any insects caught in pheromone traps? Were any insects caught in sticky traps? Do the number of insects caught indicate an infestation? Was the infestation localized?

Pest Management Strategy:

Food processing facilities present an attractive and complex pest control environment. Pest activity in and around food processing facilities has considerable impact on product quality and requires compliance with standards. To effectively meet these challenges it is necessary to apply the principles of Integrated Pest Management (IPM) programs consisting of four (4) basic steps

A.

1. An understanding of the biology and ecology of a pest is critical to develop an effective control program.
2. Always seek a permanent solution to pest problems rather than a series of temporary solutions. Permanent solutions include altering conditions to prevent future occurrences.
3. Use the principles of Integrated Pest Management (IPM) when developing a pest management program.
4. Use pest control methods that have the least impact on the environment and nontarget organisms.

Monitoring by a professional pest control company should be used to constantly monitor pest activity. Application of pesticides may be made but will be limited to preventative applications in areas of historically high pest activity and areas where pests are likely to enter the interior. Pest sighting logs (Exhibit 4) are critical sources of information during these inspections.

On the basis of inspections and monitoring, recommendations should be made to help prevent pest infestation. (See Exhibit 3 for sample Pest Management Inspection Report) These recommendations fall into the following areas.

B.

1. **Sanitation** - The development of a pest infestation is greatly reduced by high standards of sanitation. Sanitation can be defined as the removal of conditions (food, water, harborage) which encourage or allow a pest population to survive.
2. **Building Maintenance** - Proper building and repair practices can prevent significant pest problems. Drainage, sealing, caulking, rodent-proofing, construction and general maintenance of buildings are important steps in this area. An example would be the simple sealing of cracks and crevices which provide harborage for insects within buildings.
3. **Facility Practices and Procedures** - This involves changing behavior of people working in the plant. An example would be making sure that doors to the outside are not kept propped open or that trash is eliminated dumpster lids or trash containers are kept closed.

These recommendations will be documented in the "Sanitation Inspection Report" (Exhibit 4) along with any pest activity noted during service. A detailed list of inspection standards of some items that are included in our sanitation report (Exhibit 3). A customized Sanitation Inspection form can be developed for your plant. The following are the five (5) basic types of control measures that can be used to develop a pest management plan. An IPM program will include at least two (2) or more of the following:

1. **Sanitation** - Proper sanitation is necessary for prevention but is a means of controlling existing infestations. The removal of food and water sources stresses the pest populations, making traps and baits more effective. In addition, university research has shown that oils, greases and dirt render many insecticides less effective.
2. **Mechanical Control** - These methods involve the use of traps, barriers, caulking, mechanical exclusion (screening), using air currents and manipulation of environmental factors (temperature and humidity).
3. **Cultural Control** - This involves changing the habits and behaviors of people to reduce infestations. An example of this would be changing cleaning schedules to prevent product accumulation or help train food processing plant or warehouse personnel to clean spills as soon as they occur.
4. **Biological Control** - Traditionally this measure uses biological organisms or their by-products to control pests. Examples include the use of *Bacillus Thuringiensis* for aquatic breeding insects, parasitic wasps for fly control or fungus for cockroach control.
5. **Material Application Control** - The correct and safe use of materials may constitute a portion of our control operations. All materials are carefully reviewed for their appropriateness and appropriate application techniques that have been selected.

Although the use of chemical control measures, may be use, they will not always be a part of our control plan. Many of the non-chemical control measures need to be implemented by your plant facility personnel. These recommendations will be reported to facility management on our "Sanitation Inspection Reports," (Exhibit 3).

Exhibit 5

IN-HOUSE SURVEY GUIDELINES

(Use this as a guide for your in-house survey inspection)

Consider the following information when completing your in-house survey inspection report.

A. Exterior of the facility:

1. Make note of sanitation conditions. Look for excessive debris, excessive standing water, liquid or product spills. Poor interior or exterior storage practices.
2. Check outside bait stations for the following:
 - ~ Are they anchored?
 - ~ Is the bait fresh?
 - ~ Are markers in place?
 - ~ Are service date stickers under lid?
 - ~ Last time serviced? _____
 - ~ Are stickers dated and initialed?
 - ~ Has there been rodent activity? (Evidence of bait being eaten or droppings)
 - ~ Are the bait stations placed sufficiently for a good preventative monitoring program?
 - ~ Are the bait stations numbered for a rodent location map?
 - ~ A note how many will be serviced each month?
3. Are birds roosting?
4. Were fire ant hills seen?
5. Dead flies by lights?
6. Is there high grass or weeds outside, or near exterior fence line?

B. Interior of facility:

1. Check Ketch-Alls or Tin Cats for the following:
 - ~ Are they properly wound?
 - ~ Are they properly placed?
 - ~ Are wall markers present?
 - ~ Check dates - are they serviced on a regular basis?
 - ~ Are they clean inside? (Free of webs, dirt and debris?)
 - ~ Any evidence of rodent activity? Are the Ketch-Alls or Tin Cats sufficiently in place for a good preventative monitoring program?
 - ~ Tin Cats or Ketch-Alls damaged?
 - ~ A note how many serviced each month?
2. Make note of rodent droppings and where each month.
3. Are there any infestations - insects/rodent - location and type.
4. Ask employees about pest sightings and frequency.

C. Insects:

1. Any evidence of insect activity? Where?
2. Is there a flying insect problem? What kind?

D. Structures and Sanitation:

1. Look for and note any structural deficiencies (open doors, door sweeps, screening required, lift doors in need of repair, broken windows, etc.)
2. Look for dirt, webs, debris, mold and leaks.
3. Make drawing of facility noting locations of monitoring devices and bait stations.

E. Equipment

1. Do they have light traps in place?
2. Are they properly placed?
3. Do they need additional light traps to keep flying insects under control?
4. Trays clean? Bulbs changed?

F. Program/Pricing:

1. Note all types of services and time for each.
2. Note bird control, pheromone trapping, etc. (any other necessary programs)

Exhibit 6

LIST OF VENDORS TO PURCHASE EQUIPMENT

JT Eaton & Company, Inc.
Patricia Slover
1393 East Highland Road
Twinsburg, OH 44087
(330) 425-7801 - (800) 321-3421
(330) 425-8353 Fax
www.jteaton.com

Innovative Pest Management
Carl Doucette
PO Box 265
El Segundo, CA 90245-0265
(310) 322-1999 - (800) 608-1999
(310) 322-8575 Fax

Target Specialty Products
Rich Records
15415 Marquardt Avenue
Santa Fe Springs, CA 90670
(562) 802-2238
(562) 802-3296
www.target-specialty.com

Atlantic Paste & Glue Co., Inc.
Darlene Porter
170 53rd St.
Brooklyn, NY 11232
(718) 492-3648 - (800) 458-7454 (Out of State)
(718) 439-0039 Fax
www.catchmaster.com

PCO-Tech
17355 Darwin Ave. #1
Hesperia, CA 92345
(760) 947-6650
(760) 245-8381 Fax

Chapin Manufacturing, Inc.
PO Box 549
Batavia, NY 14021-0549
(716) 343-3140 - (800) 444-3140
(800) 944-4329
www.chapinmfg.com

Whitmore Micro-Gen
Research Laboratories
(800) 777-8570
www.wmmg.com

Hot Foot America
Sales & Marketing
298 Belvedere Ave.
Belvedere, CA 94920
(800) 843-6334 or (770) 985-8273 Fax
www.hotfoot.com

Van Waters & Rogers, Inc.
(800) 888-4VWR
www.vwr-ltd.com

FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103
www.fmc.com

Bayer Corporation
PO Box 4913
Kansas City, MO 64120
(800) 842-8020
www.nobugs.com

Paragon Professional Pest Control
Steve Diaz
4371 Westlawn Ave.
(310) 397-2070 (Phone/Fax)
(310) 995-8160 (Mobile)
(800) 238-9254 (Orders)

Waterbury Companies, Inc.

Robert C. Bennet
32 Mattatuck Heights
Waterbury, CT 06705
(800) 845-3495
(800) 432-9982 Fax
bugsbenet@aol.com
www.Watco.com

Micro-Flo Company

PO Box 5948
Lakeland, FL 33807
(800) 451-8461
(941) 647-3412 Fax
microflo@earthlink.net

Woodstream

An EKCO Group Company
Lititz, PA 17543
www.victorpest.com

Cleary Chemical

Paul J. Walgenbach Ph.D, PCA, BCE
789 Lakecrest Dr.
El Dorado Hills, CA 95762
(916) 933-3180 (800) 524-1662
(916) 933-0785 (Fax)
(916) 201-6225 (Mobile)
paul.walgenbach@clearychemical.com

Dow AgroSciences LLC

Tim Maniscalco
(317) 337-4359
www.dowagro.com

**3M Occupational Health &
Environmental Safety Division**

Brendan P. Donohue
6023 S. Garfield Ave.
Los Angeles, CA 90040-3682
(800) 952-4496 (Voice Mail)
(661) 260-3247 (Fax)
bdonohue@mmm.com



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



March 14, 2001

Mr. Mahmoud Abdel Wahab
Rashiedy Mizan Confectionary
178 Port Said Street
El Saleda Zienab
Cairo

Dear Mr. Mahmoud:

On behalf of the Agricultural-Led Export Business project, I would like to thank you and your colleagues for working with Mr. James Bowyer during his visit of last year. He was pleased to see progress towards upgrading your operations, and especially your commitment to employee education. A copy of his report is enclosed. I have summarized some of his comments below:

1. Pest Control Company – If Rashidy Mizan is going to continue using the outside pest control operator (PCO), you must demand that they provide you with documentation of monitoring activities, pest activity and any actions they take. They should also provide you with maps showing the locations of all rodent traps, bait stations and fly traps. You must also forbid them from using baited tomatoes as a means to control rodents.
2. Bait Stations – Mr. Bowyer recommends that you purchase tamper-proof bait stations for the outside of your plant. These stations should be secured to the ground or chained to a fence, locked and contain a dating card.
3. Doors – An effort should be made to keep doors closed at all times. Some operations install self-closing features on their doors. Mr. Bowyer described how you could use a product called Invisinet to keep pests out if doors must remain open. Suppliers of this product and others may be found in the manual that accompanies this report.
4. Access Points – All access points into the plant should be blocked. Mr. Bowyer specifically cites openings around pipes where they pass through exterior walls.
5. Grain Spills – Spills must be cleaned immediately so as not to attract birds and other pests.
6. Light Traps – Light traps need to be included in the master log. This log should designate when the bulbs should be changed, their locations and activity. Lights should be changed at least twice a year, or more

frequently, if UV emissions from the bulbs begins to drop. Emissions should be monitored with a meter on a regular schedule.

7. Master Log – Mr. Bowyer described in detail what should be contained in your master pest control log. As noted earlier, this should be assembled by the pest control operator.

Thank you again for your hospitality. Should you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: M. Ahmed, Files





Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



March 12, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: El Rashidi El Mizan Confectionery

Dear Rick,

On 11/9/00 I visited the El Rashidi El Mizan Confectionery Food Processing plant. This plant has 40,000 square meters of space. They opened this facility six years ago, yet still have their original plant in Cairo in operation. This is a 111-year-old company and wants to continue to upgrade its standards. In fact, during the month of November, which is their food safety month, they are having a series of seminars for all 800 to 850 employees. They are going to divide them up into 30 to 40 people in a group and have small work sessions, plus a workshop for the entire group. Mr. Roy Harper from a sister company is putting on the seminars about safety and sanitation.

The product they produce is from sesame with glucose, sugar and other items and is used on some meat, on bread, but mostly as a dessert. The product they have is Tahina, Halawa plain, Halawa spread, Halawa deluxe, molasses and a Halawa energy candy bar.

I met with Dr. Mahamoud Abdel Wahab, the Research & Development/QA & QC Director, Mr. Ahmed Gamal Momen, the Human Resources Manager and Engineer Fathy Ahmed Abdalla, the Health Management Manager for about an hour and a half and then did an audit of the plant.

They indicated that they are trying to follow the GMP's, are getting their HACCP program in order, and hope to be HACCP certified. They're getting familiar with HACCP and have identified 2 critical control points. Dr. Waheb said the biggest challenge is to change people's culture, habits, and thinking.

They have two long shifts, 24 hours a day and 365 days a year. This facility has concerns and problems with rodents, flies, and birds. They have an outside pest control firm who services one time per week with ZP and rodent bait. The plant personnel supplement their efforts changing non-toxic rodent traps on the inside. No one seems to know who, when, or how many of the fly light traps are checked. There are approximately 29 live wire cages, catch traps on the inside. There are 3 or 4 rats caught each week. There is no documentation from the outside pest control company or any pest control log.

The following are a few findings and recommendations that should be implemented at this plant:

- The present pest Control Company was reported tossing tomatoes laced with ZP around the outside. We strongly recommend that this type of service be stopped immediately. Install tamper-resistant rodent bait stations on the outside fence line each 30 meters. These should also be installed on the exterior of the building either side of all exterior doors including walk through, roll up or sliding doors. These stations should be anchored either to the ground, fence or wall so that they cannot be removed. This anchoring may be done with liquid nail, spikes in the ground or chains.
- Tin cats or Ketch-Alls, snap traps and glue boards should be installed inside. These installations should be on the interior of exterior wall on either side of doors and every 12 meters.
- In the plant much of the tile floor has been cracked or broken with parts of it missing. This tile should be repaired or portions replaced to prevent hiding places for insects and bacteria, with a smooth, cleanable epoxy.
- Sliding doors remain open when not in use. They also have loose fitting netting with openings at the sides and bottom. The following should be done: recommend doors be kept in a closed position when not in use and if they must remain open for air as the building does not have AC, recommend installing AC or a fine Invisinet produced by Hot Foot International on a snug frame which can be custom fitted and then raised and lowered automatically. Install an access door in the netting. This will prevent birds and flies from gaining access.
- There are openings in walls of the plant around piping, which should be sealed to prevent outside rodent invaders from gaining access.
- Exterior fans are not covered with netting to prevent entrance of flies. Seal these fans with a fine mesh netting to prevent flies from entering.
- Grain spills were noted on the ground at the rear and side entrance to the plant. Each spill should be thoroughly cleaned (not just a quick sweeping) to prevent attracting birds and allowing them to feed. Many birds were noted feeding on this grain and then enter the building. Recommend a written cleaning schedule and procedure be installed to deep clean these spills as they occur.
- In the warehousing area of the plant it was noted there were many open windows and broken glass on these windows. Recommend broken glass be repaired and if they are to remain open and install tightly fitting small mesh netting.
- There are only few fly light traps and these have no documentation as to when they are cleaned, serviced or bulbs replaced. Recommend that



additional units be installed and that existing ones be replaced with the Vector or Gardner type units. These types of units have stronger UV lights and glueboards, which flies, are trapped and adhere to. The units should be installed at approximately 2 meters above the floor and slightly lower for those units mounted on the walls. They should be placed so as to not attract outside flies, but those already in the building. A schedule should be set up on a weekly basis to inspect, clean, replace dirty or filled glueboards. A dating card should be installed to record these inspections and services.

- A master log should then record the dates of inspections and service of all fly light units, the condition of the traps and any other recommendation. This master log should contain a diagram of the locations of the fly light units and the number of the unit. The corresponding number should be on the fly light machine and the placard above the unit.
- The bulbs in the machines should be read with a meter to determine whether the UV is still strong enough to attract flies. Bulbs which are still burning but are not emitting UV at the proper wavelength should be replaced.
- The bulbs should be replaced at least twice per year basis and the ones used in the food processing area need to be of the shatterproof type.
- The master pest control log should contain all MSDS copies, copies of labels and labeling information, sanitation inspection report developed indicating all areas of the plant reporting such items as sanitation conditions, housekeeping, structural deficiencies and rodent and insect proofing recommendations. These reports should be done during each inspection by a pest control Service Company and a copy put in the master pest control log. In addition a pest sighting report should be added to the master pest control logbook.

I hope that these recommendations will help you in attaining your sanitation goals.

Sincerely,

Jim Bowyer
Quality Assurance Manager





Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry

Abt

Abt Associates Inc.

February 11, 2001

Dr. F. El Shobaki
Dr. F. El Shobaki Trade Export Agencies
6 El Shobaki Street Maryoutia Canal
El Hefnawi Street, El Haram
Giza

Dear Dr. Shobaki:

I would like to thank you for the hospitality extended to Mr. James Bowyer, our pest management expert, when he visited your operation last year. I have enclosed a copy of Mr. Bowyer's report, plus a number of pictures that you allowed him to take while in the plant. Appended to the report are a number of exhibits prepared by Mr. Bowyer, which include pest control guidelines, samples of forms that you could use and suppliers of pest control equipment.

The following is a quick summary of Mr. Bowyer's report. If you read his report carefully and follow the recommendations, the result should be a better operation. Since you export all you manufacture, assuring quality, especially to buyers in Japan, is extremely important.

1. Pest Exclusion – You should consider taking some steps to deny pest access to the plant. Doors should be tight fitting on the top, bottom and sides. For example, the door shown in picture 11 will not ever close tightly and be a barrier to pests. If ventilation is necessary, the installation of netting that will exclude pests but allow airflow should be considered. Pest control is extremely important for many reasons. You may have heard that one of your competitors had a fire recently. The cause was attributed to rats.

2. Grounds – Mr. Bowyer observed four dogs running in the plant grounds. This is a practice that should be discontinued. Also, looking at picture 11, it appears that the exterior grounds are not paved. Consideration should be given to paving this area. It will help keep things a bit cleaner. If you do decide to pave, be sure that the contractors grade the area properly so that it drains.

3. Cleaning – We would suggest that you implement a regular cleaning program. This should include both sweeping and vacuuming. As may be seen in pictures 4 and 5, there is dust all over. This dust is probably a combination of product and grit. This is the kind of situation that can attract insect pests and create an infestation.

4. Warehouse – It is also recommended that you maintain corridors of 45 cm between stored product and the walls, and 35 cm access aisles between

stacks of product. These aisles will allow access for cleaning, pest monitoring, inspection and inventory control. Stacking product directly against the walls as may be seen in pictures 4 and 5 is an invitation to an infestation.

5. Pest Control Manual – We also suggest that you develop a pest control manual. This manual would contain all your pest programs, including but not limited to trap locations, bait station locations, light trap locations, monitoring forms, cleaning programs, MSDS (Materials Safety date Sheets) sheets for any chemicals used in pest control, and who is responsible for what tasks.

This may seem like a great deal of information, but we will be more than happy to work with you in developing and/or evaluating any programs on which you decide to work. As mentioned earlier, you may be held to a higher standard since exporting is your business. You need to build good quality, safety and sanitation programs to not only protect you good name and products, but to satisfy any auditors. Many buyers' auditors are very hard on potential customers, so it is easier to be proactive and build the programs ahead of time.

Thank you again for your hospitality. Should you have any questions or require any additional information, please feel free to contact Mr. Morad Ahmed or myself.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: Files, M. Ahmed



January 31, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Dr. F. Elshobaki, Trade-Export-Agencies

Dear Rick,

I met with Dr. and Mrs. Elshobaki and their son, Sherif F. Elshobaki the Marketing Manager, of the Dr. F. Elshobaki Trade-Export-Agencies on November 12, 2000. This firm is a family business and has been in operation for over 30 years. This company exports herbs and spices. Dr. F. Elshobaki Company cleans the material before product is exported with the exception of camomile flowers, as they are too brittle. Some of these herbs are used by the pharmaceutical and medical industries. Attached is a listing of some materials that are exported by this firm.

This company is located in the Giza area of Cairo, Egypt. The material for export is all grown locally in Egypt by Egyptian growers. This company is a 100% export company and has no domestic business.

Dr. F. Elshobaki Company exports primarily to the United States, Japan, Europe and the United Kingdom, with Japan receiving the largest share. They try to deal in only high quality material and are looking to increase their exports.

They have storage area in this facility of 500 sq. meters and another 500 sq. meters at another location, giving them a total of 1000 sq. meters. This firm has 18 - 20 permanent workers and usually operates on one 8-hour shift each day. At times, depending on demand, they will occasionally operate two shifts. They work a seven day week.

All material is fumigated at some point on the premises, or sometimes in a container before it is shipped. An outside company called Aradis Fumigating Company uses Methyl Bromide fumigation. Once the fumigation is completed a certificate is submitted.

Dr. F. Elshobaki stated that they have no outside pest control service company at the present time, but do their own in-house service. He stated that he believes they have up to 12 traps located with one assigned person to inspect rodent bait stations and service them. The poison they use is imported and all of the bait stations are on the inside of the plant and warehouse area. Management claims that there is not too much of a problem with flies or rodents. They only have a few sightings of rats, maybe 3 - 4 times per week. Dr. F. Elshobaki stated that there is no pest control log or any documentation of application on the premises.

Most of their workers are long time employees, earn 10 pounds per day, and are considered to be part of the family.

The following are a few findings and recommendations that should be implemented at this plant:

- The cleaning section and storage area of this facility is in an open area and, therefore, exposed. Doors are not properly fitted and are also left open. The ceiling is open on the first and second level allowing air to circulate. The upstairs has no roof covering and the center is completely open. With this facility design, there is easy access to the building for flies, rodents and birds.
 - Recommend that the exterior doors be repaired, fitted or replaced to prevent the entry of rodents, flies and birds from gaining access. In lieu of replacing all doors, install tight fitting frames with invisinet netting to prevent entry. These nets should be in a closed position at all times except during deliveries. A zipper can be installed in the netting to allow for walk through traffic.
 - The overhead opening on the first and second level should have fine or small mesh netting installed to prevent entry of pest invaders. With the above netting installed, it will still allow for what Dr. Elshobaki states is required circulation for the product.
 - The large open area on the overhead on the second level should be enclosed or small netting installed to prevent pest invaders from entering.
- During this inspection there were no rodent bait traps or stations observed. I was then told that the stations were placed down on the floor level behind stored product. This product had been stored against the wall for a good period of time. Storage practices should be changed to allow for a minimum of 45cm between walls and stored product. Aisles of 35cm in width should be maintained between product to allow access to walls for cleaning, inspections and installation of monitoring devices.
 - On the inside of the plant, tin cats or snap traps should be installed to catch and monitor rodent activity, rather than the wire cage single set catch traps. A monitoring device should be installed on either side of all exterior doors and then each 12 linear meters.
 - Tamper-resistant rodent bait stations should and can be installed on the exterior of the property at either side of the exterior doors and then each 15 linear meters.
 - Recommend a custom map be developed for this plant indicating all locations of inside monitoring devices and exterior tamper-resistant rodent bait stations. This map should be placed in the master pest control log.
 - Placards should be installed on the wall above all bait stations with corresponding numbers.
 - Dating cards should be placed in each monitoring device and tamper-resistant rodent bait station. These dating cards are to be punched or dated during each service.
 - All exterior tamper-resistant rodent bait stations should be anchored securely to the ground, wall or fence line.
- There were 4 dogs allowed to run freely on the exterior grounds. This practice should not be allowed at a food processing and handling facility.
- In the exterior area where the dogs were allowed to run, there is fly activity. Fly bait traps should be installed.
- There are no air curtains at exterior doors of this facility. Recommend installing customized industrial air curtains at all exterior doorways.

- The second level has a small packaging room with much storage, junk and debris. Remove all unused storage, junk and debris.
- There is no documentation or pest management log. Develop a pest management manual which includes logs and all programs.
 - This manual should include a map indicating locations of all tamper-resistant rodent bait stations, fly bait stations and monitoring devices. All bait stations should have corresponding numbers on both the placard and the bait station. The same numbers should be on the map.
 - Placards should be permanently installed on wall above monitoring station with both having corresponding numbers.
 - All tamper-resistant bait stations and tin cats will be anchored so that they can't be removed or tampered with.
 - Pest management sanitation inspection reports or logs should be developed, and findings and recommendations should be reported. A copy of this pest management report should be kept in the pest management log.
 - Pest-sighting sheet should be included in the pest management manual. This is used to note any individual sightings and the actions taken with comments (See attached).
 - A material used report should also be developed and kept in the pest management log.
 - MSDS sheets (Material Safety Data Sheets) should be kept in pest management logs of all materials being used.
 - Documentation showing dates of inspections and service.
- A written plan should be developed showing when pest control service frequency of visits by outside firm and who the assigned person is performing the service and what will be inspected by all individuals and when pest control is done in-house of all monitoring and tamper-resistant rodent bait stations.

This is a brief report of the survey that was done at the Dr. F. Elshobaki Company. I hope that some of these suggestions prove worthy and are completed to better help protect the herbs and spices. In this manner I believe that a larger share of the export market could be obtained when following the HACCP and GMP's more closely followed with good operating practices. Should we be of any further assistance please let me know.

Sincerely,

Jim Bowyer
Quality Assurance Manager

SHOBAKI



1



2



3



4

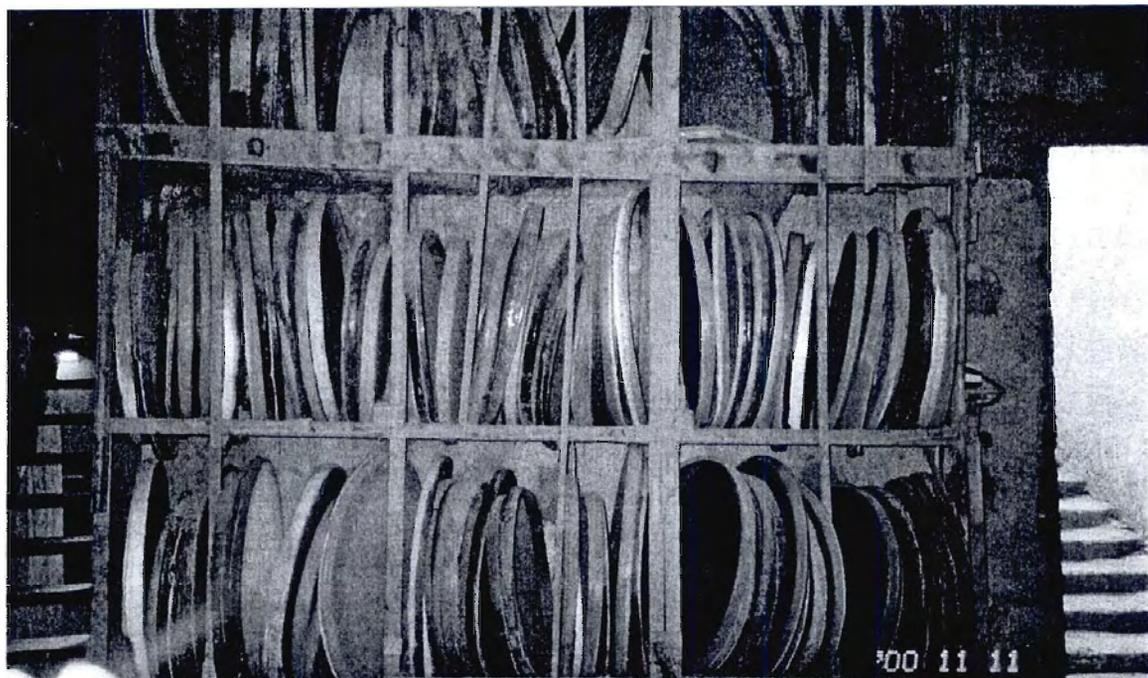


5

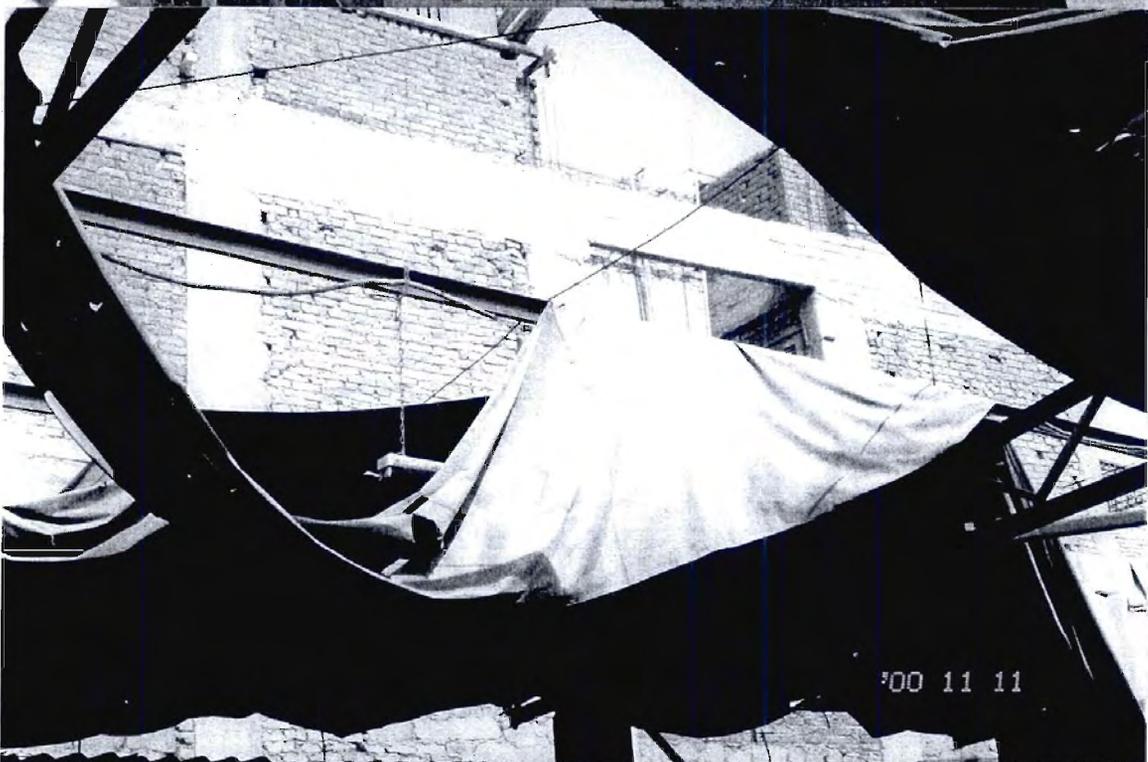


6

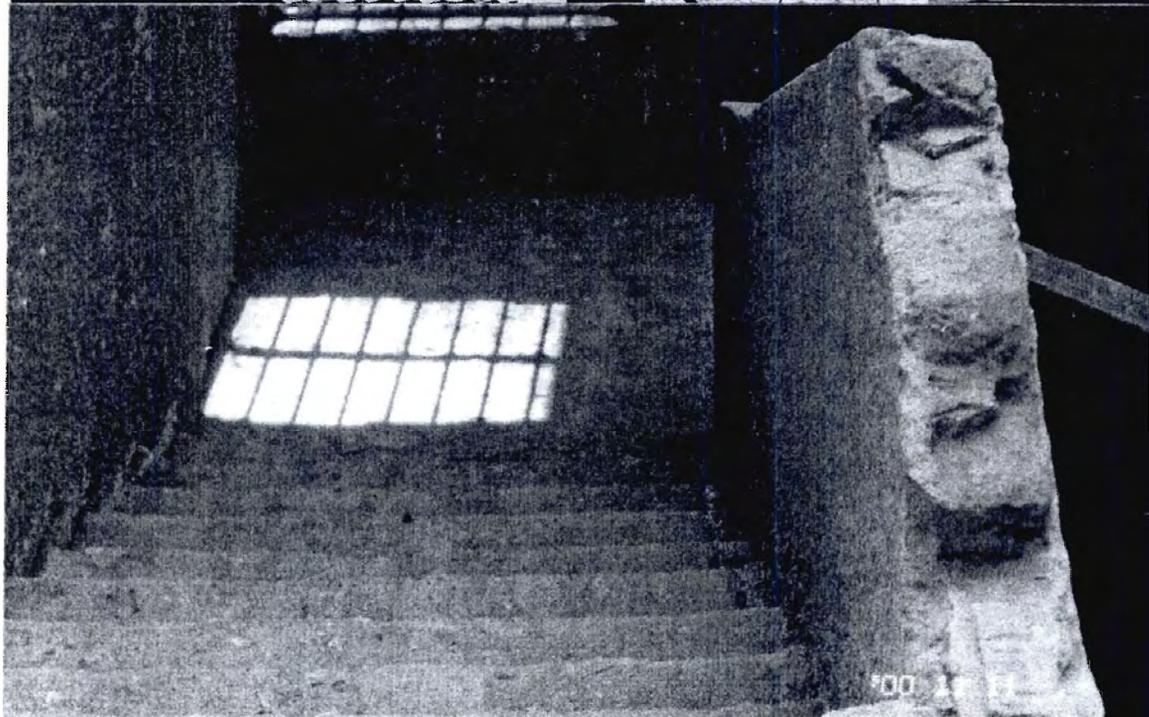
ШОБЕН



7



8

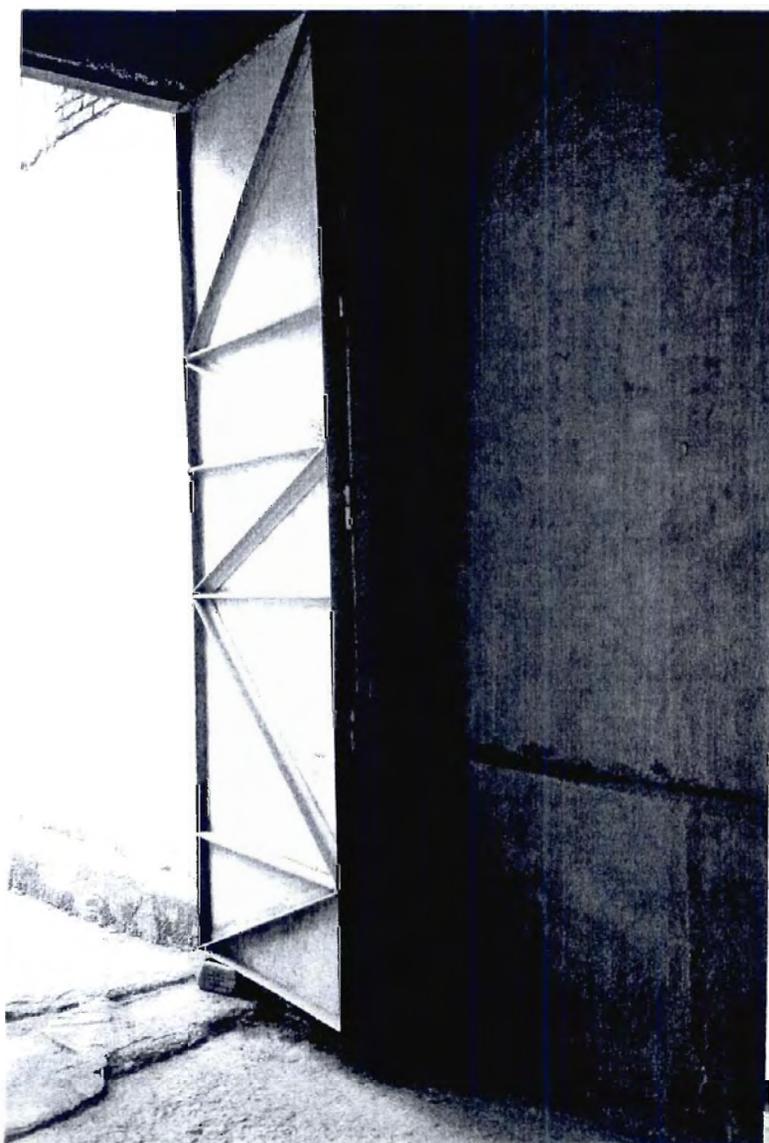


9



SHOBAKI 4

10



11

Standards for Sanitation and IPM Pest Control

1. **Building Exterior.** Is there litter? Are weeds and brush kept clear? Is equipment stored outside? Are pallets or cardboard stored properly? Is trash area properly maintained? Is building free of cracks, crevices or holes?
2. **Building Structure.** Are all windows closed and screened? Do doors fit tightly? Are there cracks or holes in the walls? Does the roof leak? Are there cracks in the floor that can collect debris? Are there cracks around door thresholds, dock plates, etc.?
3. **General Housekeeping.** Is wall clearance adequate? Are spills cleaned up promptly? Are floors cleaned regularly? Do employees have specific cleaning assignments? Are there written instructions?
4. **Storage Practices.** Is storage up off floor by a minimum of 6"? Is storage 45 cm away from walls? Is there ??? Aisles? Are rack legs clean? Are the upper levels of storage racks cleaned? Are pallets clean? Is there spillage on or under racks? Are easily infestable items segregated? Are infested products returned or damaged products segregated?
5. **Employee Areas.** Are lunch or break rooms clean? Are locker rooms clean? Are employee lunches stored or consumed in product areas?
6. **Receiving Practices.** Is there a separate area for damaged products? Are raw materials dated upon arrival?
7. **Storage Organization.** Are shelving/pallets clean and well organized? Are toxic products separated from food grade items? Are maintenance facilities separated from food items? Are nonfood odors present in the facility?
8. **Inventory Control Practices.** Is there a system in place that assures the proper rotation of products? Are finished goods shipped out on a first in, first out (FIFO) basis?
9. **Insect Control.** Is there evidence of insect infestation? Are there conditions present which could support an infestation? Is there potential harborage? Are dead insects present on windows or other areas? Are insect light traps clean?
10. **Rodent Control.** Is there evidence of a rodent infestation? Is there evidence of birds? Is rodent proofing adequate?
11. **Monitoring Results.** Were any insects caught in pheromone traps? Were any insects caught in sticky traps? Do the number of insects caught indicate an infestation? Was the infestation localized?

Pest Management Strategy:

Food processing facilities present an attractive and complex pest control environment. Pest activity in and around food processing facilities has considerable impact on product quality and requires compliance with standards. To effectively meet these challenges it is necessary to apply the principles of Integrated Pest Management (IPM) programs consisting of four (4) basic steps

A.

1. An understanding of the biology and ecology of a pest is critical to develop an effective control program.
2. Always seek a permanent solution to pest problems rather than a series of temporary solutions. Permanent solutions include altering conditions to prevent future occurrences.
3. Use the principles of Integrated Pest Management (IPM) when developing a pest management program.
4. Use pest control methods that have the least impact on the environment and nontarget organisms.

Monitoring by a professional pest control company should be used to constantly monitor pest activity. Application of pesticides may be made but will be limited to preventative applications in areas of historically high pest activity and areas where pests are likely to enter the interior. Pest sighting logs (Exhibit 4) are critical sources of information during these inspections.

On the basis of inspections and monitoring, recommendations should be made to help prevent pest infestation. (See Exhibit 3 for sample Pest Management Inspection Report) These recommendations fall into the following areas.

B.

1. **Sanitation** - The development of a pest infestation is greatly reduced by high standards of sanitation. Sanitation can be defined as the removal of conditions (food, water, harborage) which encourage or allow a pest population to survive.
2. **Building Maintenance** - Proper building and repair practices can prevent significant pest problems. Drainage, sealing, caulking, rodent-proofing, construction and general maintenance of buildings are important steps in this area. An example would be the simple sealing of cracks and crevices which provide harborage for insects within buildings.
3. **Facility Practices and Procedures** - This involves changing behavior of people working in the plant. An example would be making sure that doors to the outside are not kept propped open or that trash is eliminated dumpster lids or trash containers are kept closed.

These recommendations will be documented in the "Sanitation Inspection Report" (Exhibit 4) along with any pest activity noted during service. A detailed list of inspection standards of some items that are included in our sanitation report (Exhibit 3). A customized Sanitation Inspection form can be developed for your plant. The following are the five (5) basic types of control measures that can be used to develop a pest management plan. An IPM program will include at least two (2) or more of the following:

1. **Sanitation** - Proper sanitation is necessary for prevention but is a means of controlling existing infestations. The removal of food and water sources stresses the pest populations, making traps and baits more effective. In addition, university research has shown that oils, greases and dirt render many insecticides less effective.
2. **Mechanical Control** - These methods involve the use of traps, barriers, caulking, mechanical exclusion (screening), using air currents and manipulation of environmental factors (temperature and humidity).
3. **Cultural Control** - This involves changing the habits and behaviors of people to reduce infestations. An example of this would be changing cleaning schedules to prevent product accumulation or help train food processing plant or warehouse personnel to clean spills as soon as they occur.
4. **Biological Control** - Traditionally this measure uses biological organisms or their by-products to control pests. Examples include the use of *Bacillus Thuringiensis* for aquatic breeding insects, parasitic wasps for fly control or fungus for cockroach control.
5. **Material Application Control** - The correct and safe use of materials may constitute a portion of our control operations. All materials are carefully reviewed for their appropriateness and appropriate application techniques that have been selected.

Although the use of chemical control measures, may be use, they will not always be a part of our control plan. Many of the non-chemical control measures need to be implemented by your plant facility personnel. These recommendations will be reported to facility management on our "Sanitation Inspection Reports," (Exhibit 3).

Exhibit 5

IN-HOUSE SURVEY GUIDELINES

(Use this as a guide for your in-house survey inspection)

Consider the following information when completing your in-house survey inspection report.

A. Exterior of the facility:

1. Make note of sanitation conditions. Look for excessive debris, excessive standing water, liquid or product spills. Poor interior or exterior storage practices.
2. Check outside bait stations for the following:
 - ~ Are they anchored?
 - ~ Is the bait fresh?
 - ~ Are markers in place?
 - ~ Are service date stickers under lid?
 - ~ Last time serviced? _____
 - ~ Are stickers dated and initialed?
 - ~ Has there been rodent activity? (Evidence of bait being eaten or droppings)
 - ~ Are the bait stations placed sufficiently for a good preventative monitoring program?
 - ~ Are the bait stations numbered for a rodent location map?
 - ~ A note how many will be serviced each month?
3. Are birds roosting?
4. Were fire ant hills seen?
5. Dead flies by lights?
6. Is there high grass or weeds outside, or near exterior fence line?

B. Interior of facility:

1. Check Ketch-Alls or Tin Cats for the following:
 - ~ Are they properly wound?
 - ~ Are they properly placed?
 - ~ Are wall markers present?
 - ~ Check dates - are they serviced on a regular basis?
 - ~ Are they clean inside? (Free of webs, dirt and debris?)
 - ~ Any evidence of rodent activity? Are the Ketch-Alls or Tin Cats sufficiently in place for a good preventative monitoring program?
 - ~ Tin Cats or Ketch-Alls damaged?
 - ~ A note how many serviced each month?
2. Make note of rodent droppings and where each month.
3. Are there any infestations - insects/rodent - location and type.
4. Ask employees about pest sightings and frequency.

C. Insects:

1. Any evidence of insect activity? Where?
2. Is there a flying insect problem? What kind?

D. Structures and Sanitation:

1. Look for and note any structural deficiencies (open doors, door sweeps, screening required, lift doors in need of repair, broken windows, etc.)
2. Look for dirt, webs, debris, mold and leaks.
3. Make drawing of facility noting locations of monitoring devices and bait stations.

E. Equipment

1. Do they have light traps in place?
2. Are they properly placed?
3. Do they need additional light traps to keep flying insects under control?
4. Trays clean? Bulbs changed?

F. Program/Pricing:

1. Note all types of services and time for each.
2. Note bird control, pheromone trapping, etc. (any other necessary programs)

Exhibit 6

LIST OF VENDORS TO PURCHASE EQUIPMENT

JT Eaton & Company, Inc.
Patricia Slover
1393 East Highland Road
Twinsburg, OH 44087
(330) 425-7801 - (800) 321-3421
(330) 425-8353 Fax
www.jteaton.com

Whitmore Micro-Gen
Research Laboratories
(800) 777-8570
www.wmmg.com

Innovative Pest Management
Carl Doucette
PO Box 265
El Segundo, CA 90245-0265
(310) 322-1999 - (800) 608-1999
(310) 322-8575 Fax

Hot Foot America
Sales & Marketing
298 Belvedere Ave.
Belvedere, CA 94920
(800) 843-6334 or (770) 985-8273 Fax
www.hotfoot.com

Target Specialty Products
Rich Records
15415 Marquardt Avenue
Santa Fe Springs, CA 90670
(562) 802-2238
(562) 802-3296
www.target-specialty.com

Van Waters & Rogers, Inc.
(800) 888-4VWR
www.vwr-ltd.com

Atlantic Paste & Glue Co., Inc.
Darlene Porter
170 53rd St.
Brooklyn, NY 11232
(718) 492-3648 - (800) 458-7454 (Out of State)
(718) 439-0039 Fax
www.catchmaster.com

FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103
www.fmc.com

PCO-Tech
17355 Darwin Ave. #1
Hesperia, CA 92345
(760) 947-6650
(760) 245-8381 Fax

Bayer Corporation
PO Box 4913
Kansas City, MO 64120
(800) 842-8020
www.nobugs.com

Chapin Manufacturing, Inc.
PO Box 549
Batavia, NY 14021-0549
(716) 343-3140 - (800) 444-3140
(800) 944-4329
www.chapinmfg.com

Paragon Professional Pest Control
Steve Diaz
4371 Westlawn Ave.
(310) 397-2070 (Phone/Fax)
(310) 995-8160 (Mobile)
(800) 238-9254 (Orders)

Waterbury Companies, Inc.
Robert C. Bennet
32 Mattatuck Heights
Waterbury, CT 06705
(800) 845-3495
(800) 432-9982 Fax
bugsbennet@aol.com
www.Watco.com

Micro-Flo Company
PO Box 5948
Lakeland, FL 33807
(800) 451-8461
(941) 647-3412 Fax
microflo@earthlink.net

Woodstream
An EKCO Group Company
Lititz, PA 17543
www.victorpest.com

Cleary Chemical
Paul J. Walgenbach Ph.D, PCA, BCE
789 Lakecrest Dr.
El Dorado Hills, CA 95762
(916) 933-3180 (800) 524-1662
(916) 933-0785 (Fax)
(916) 201-6225 (Mobile)
paul.walgenbach@clearychemical.com

Dow AgroSciences LLC
Tim Maniscalco
(317) 337-4359
www.dowagro.com

**3M Occupational Health &
Environmental Safety Division**
Brendan P. Donohue
6023 S. Garfield Ave.
Los Angeles, CA 90040-3682
(800) 952-4496 (Voice Mail)
(661) 260-3247 (Fax)
bdonohue@mmm.com



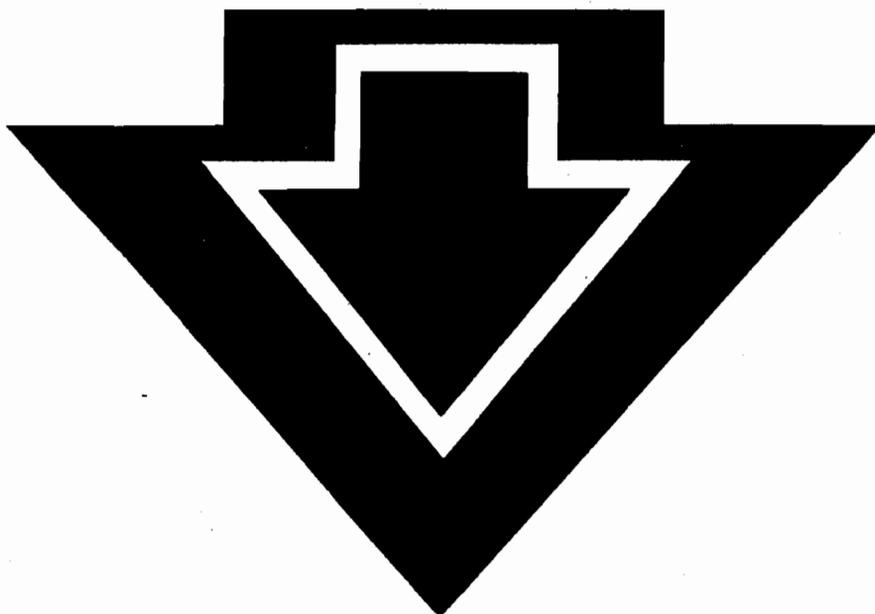
RODENT STATION No. _____

CONTAINS BAIT

TRAP ONLY, CONTAINS NO BAIT

**DO NOT DAMAGE OR REMOVE
THIS RODENT STATION IS**

SERVICED _____ **PER MONTH**



DR.F.ELSHOBAKI
TRADE, EXPORT, AGENCIES



TEL: 202-38 69 898

FAX: 202-38 41 120

P.O.Box: 2117 / CAIRO / EGYPT

E-mail: shobaki@thewayout.net

ALEB (AGRICULTURE-LED EXPORT BUSINESSES)

Fax: 748 0729

No. of pages: 1 (incl. cover page)

Date: 22/03/2001

Dear Mr. Richard F. Stier,

Hereby we would like to thank you very much for Mr. Bowyer's Sanitation and Pest Control report, which you have sent us on the 11th of February 2001.

This report is very helpful for us, since it attracted our attention to several problems, which could have a very negative impact on our business, some of which we did not even notice. We also want to thank you for the recommendations of how to solve these problems. We already started working on solving some of the problems. We actually implemented most of the recommendations concerning our Warehouse.

Some of the problems that were mentioned in the report need a lot of money to solve them. Thus we started creating a budget for this purpose, and we will hopefully be able to gradually solve all the problems, which were mentioned in the report.

Thank you very much once again for all the effort you make to support our company in all possible ways.

With best regards

A handwritten signature in black ink, appearing to read 'Dr. F. Elshobaki'.

Dr. F. Elshobaki
President



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



February 11, 2001

TEL011-336-15/016
FAX 011-336-013

Mr. Desoky Shehata
Americana/Egyptian Canning Company
3rd Industrial Zone, Lot 38
6th of October City

Dear Mr. Desoky:

I would like to thank you and your staff for the hospitality extended to Mr. Jim Bowyer, our pest management expert, during his visit in November. He was impressed with the operation, but feels that you can improve even more. The enclosed report includes a list of his suggestions. The following comments will serve to emphasize those made by Mr. Bowyer.

1. Doors – Mr. Bowyer observed that there were doors into the factory that remained open. Doors should remain closed when not in use and should seal tightly to exclude pests. If you need to keep doors open for ventilation, he suggests that you install a product called invisinet. Another option is to install rapid rollup doors. Mr. Mohamed Dagher saw an example of such a product at the Northwest Food Processors Convention manufactured by a French company called Nergeco.

2. Fly Light Traps – Light traps must be properly maintained. Bowyer recommends that they monitored regularly and bulbs changed at least twice a year. We suggest that Americana purchase a light meter to measure emission from your bulbs. As the intensity drops, so does the ability of the trap to attract insects. Bulbs should be replaced when the intensity begins to decay. Installation of shatterproof bulbs will further protect products from possible adulteration.

3. Bait Stations – The bait stations that are used on the outside of the plant should be replaced with tamper-resistant stations that can be secured to the ground or a wall and locked. Mr. Gamal El Khayat from Farm Frites, who accompanied Mr. Mohamed on the recent trip to the United States, ordered a number of this kind of trap with the assistance of Mr. Bowyer. When his order comes in, you may want to examine these units for yourself. It is not advisable to leave baits exposed. A placard (see enclosed sample) should be mounted above each bait station. The number on the card should match that of the bait station.

4. Pest Control Manual – Americana needs to develop a pest control manual. This manual should include summaries of all programs, MSDS sheets (Materials Safety Data Sheets), maps showing the locations of all bait stations,

live traps and fly light traps, forms used to monitor pest sightings and pest activity, plus certificates or licenses for your pest control operator.

We have also included a number of exhibits prepared by Mr. Bowyer summarizing basic pest management principles, plus samples of monitoring forms. We hope that the enclosed will help to answer any questions you might have.

Finally, ALEB will be conducting our second Better Process Control School the week of February 25 through March 1. We hope that you will send a few more of your staff this year. Should you wish to send a large group (five or more people), please give Mr. Morad Ahmed or myself a call. With that kind of group, I am sure that we will be able to offer you a discounted rate for the program.

Thank you again for your hospitality. Should you have any questions, or require any assistance, please do not hesitate to call.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: Files, M. Ahmed



February 1, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Americana Egyptian Canning Company

Dear Rick,

On Nov. 15, 2000, I had an appointment with the Americana Company (Egyptian Canning Company). I first met with Hisham Said, Warehouse Manager, Mohamed Saleh, Quality Assurance Department and Desoky Shehata, Operations Manager.

This company cans and packages for many different companies. It has one 8-hour shift in operation and produces 3000 cases of product each day, five days per week. This company has 50 employees.

This plant has been in operation for 2 years and does have an outside pest control service company. Their name is Sotaico, and are members of the National Pest Control Association.

Mr. Said, said that they have a pest control log which contains maps of the rodent stations and locations of the fly light traps. This log also contains comments about this plant on the Pest Management Sanitation Inspection Report. He states there are 25 rodent bait stations and 20 fly light traps. He also states that the lab keeps the MSDS copies on file. I didn't see the MSDS copies.

The size of the plant is over 16,000 sq. meters. Pest control is now done on a once per month schedule. During the first year, with heavier rodent infestations, it was 2 times per month. He stated that the rodent problem inside is not too bad. They only see one rat sighting every 3 to 4 days inside the plant. Outside they are scurrying about quite actively. You can see rats around the exterior daily.

The following are a few findings and recommendations that should be implemented at this plant:

- I must commend the plant for their storage practices and the use of clearly marked lines on the interior of the exterior walls. This allows them to keep all products away from walls and maintain clear aisles, which allows accessibility for cleaning, inspections, inventory control, and installation of monitoring devices.
- Exterior doors leading into the plant were left in an open position. All doors must be kept closed at all times when not in use. If doors must remain open for ventilation, install tight fitting frames with fine mesh invisinet netting, in order to protect against outside pest invaders including, rodents, flies, and birds. This invisinet netting can be installed with a zipper for walk through traffic.

- Gaps and openings were noted on the bottoms and sides of all sliding doors. These doors need to be fitted snugly so that all openings will be sealed to prevent the entrance of rodents into the building.
- Fly light traps have missing bulbs and one was unplugged, making it rather useless. Recommend that this fly light trap be properly positioned, plugged in and used on a routine basis to help control interior flies.
- Fly light traps should have a written schedule for when they are cleaned, serviced and when bulbs are replaced. Recommend that this be initially performed on a two times per month and that a dating card be installed to verify inspections.
- Bulbs are presently kept in place until they burn out. Bulbs need to be replaced on a regular schedule (at least twice per year) as they lose efficacy of attracting flies before they burn out.
- All fly light traps in food processing area need to have shatterproof bulbs installed.
- Exterior rodent bait stations are wooden box types with no locks. There are 15 cm diameter clay pipes that are exposed on both ends so that the bait can be easily accessible. There is another area where exposed bait was sitting on a piece of cardboard. Recommend that this practice be eliminated immediately and that tamper-resistant rodent bait stations be installed on both sides of all exterior doors and then every 15 linear meters thereafter. Placards should be placed directly above bait stations and have numbers corresponding to the bait station. A dating card should be inserted indicating dates of cleaning, inspections and replacement of bait. This area of protection is known as the second line of defense.
- All exterior bait stations along the building or fence line should be anchored or secured to ground.. This can be done with Liquid Nail, adhering it directly to asphalt or cement.
- The first line of defense should be the exterior fence line, with all of the specifications as above except that they are to be installed each 30 linear meters. The placards should be attached to the exterior fence and the tamper-resistant rodent bait stations anchored to the ground or by chain to the fence line.
- There is exposed bait and bait boxes on the inside of the facilities. This procedure is clearly in violation of the GMP's. Remove all of these stations and install non-toxic tin cats or snap traps. These should be installed on either side of the interior of the exterior doors. Also, the monitoring devices should also have a dating card inserted in the station and a placard on the wall directly above each monitoring device with corresponding numbers on both the placard and station.
- Some bait stations were found to be dirty and had spider webs. Clean each time service is done.
- Exterior bait stations need to be inspected on no less than once per month and should there be a lot of activity the frequency should be then increased. All interior stations should be inspected and cleaned on a weekly basis.

- In processing area some product and other materials were stored up against wall. Keep all product and storage 45 cM away from walls for cleaning, inspections and installation of monitoring devices.
- In the packaging and processing rooms most people had head coverings, including some individuals who wore baseball caps. Jewelry and watches were also being worn. Only approved head covers should be worn and no jewelry or watches are to be worn while processing food. Have everyone remove all of these items before entering food-processing area.
- Prepare map and insert into the pest management log showing the locations of the exterior fence line the locations of the tamper-resistant rodent bait stations.
- We recommend that the pest management manual be expanded to include the following; MSDS copies, approved materials listing, materials used listing, pest sighting worksheet, copy of certificate of insurance for pest control company and a copy of pest control company's license or certification.

This is a brief report of the survey that was done at the Americana Company. I hope that some of these suggestions are helpful to you. If implemented, these will help with better control of rodents and other pests. Should we be of any further assistance please let me know.

Sincerely,

Jim Bowyer
Quality Assurance Manager

Standards for Sanitation and IPM Pest Control

1. **Building Exterior.** Is there litter? Are weeds and brush kept clear? Is equipment stored outside? Are pallets or cardboard stored properly? Is trash area properly maintained? Is building free of cracks, crevices or holes?
2. **Building Structure.** Are all windows closed and screened? Do doors fit tightly? Are there cracks or holes in the walls? Does the roof leak? Are there cracks in the floor that can collect debris? Are there cracks around door thresholds, dock plates, etc.?
3. **General Housekeeping.** Is wall clearance adequate? Are spills cleaned up promptly? Are floors cleaned regularly? Do employees have specific cleaning assignments? Are there written instructions?
4. **Storage Practices.** Is storage up off floor by a minimum of 6"? Is storage 45 cm away from walls? Is there ??? Aisles? Are rack legs clean? Are the upper levels of storage racks cleaned? Are pallets clean? Is there spillage on or under racks? Are easily infestable items segregated? Are infested products returned or damaged products segregated?
5. **Employee Areas.** Are lunch or break rooms clean? Are locker rooms clean? Are employee lunches stored or consumed in product areas?
6. **Receiving Practices.** Is there a separate area for damaged products? Are raw materials dated upon arrival?
7. **Storage Organization.** Are shelving/pallets clean and well organized? Are toxic products separated from food grade items? Are maintenance facilities separated from food items? Are nonfood odors present in the facility?
8. **Inventory Control Practices.** Is there a system in place that assures the proper rotation of products? Are finished goods shipped out on a first in, first out (FIFO) basis?
9. **Insect Control.** Is there evidence of insect infestation? Are there conditions present which could support an infestation? Is there potential harborage? Are dead insects present on windows or other areas? Are insect light traps clean?
10. **Rodent Control.** Is there evidence of a rodent infestation? Is there evidence of birds? Is rodent proofing adequate?
11. **Monitoring Results.** Were any insects caught in pheromone traps? Were any insects caught in sticky traps? Do the number of insects caught indicate an infestation? Was the infestation localized?

Pest Management Strategy:

Food processing facilities present an attractive and complex pest control environment. Pest activity in and around food processing facilities has considerable impact on product quality and requires compliance with standards. To effectively meet these challenges it is necessary to apply the principles of Integrated Pest Management (IPM) programs consisting of four (4) basic steps

A.

1. An understanding of the biology and ecology of a pest is critical to develop an effective control program.
2. Always seek a permanent solution to pest problems rather than a series of temporary solutions. Permanent solutions include altering conditions to prevent future occurrences.
3. Use the principles of Integrated Pest Management (IPM) when developing a pest management program.
4. Use pest control methods that have the least impact on the environment and nontarget organisms.

Monitoring by a professional pest control company should be used to constantly monitor pest activity. Application of pesticides may be made but will be limited to preventative applications in areas of historically high pest activity and areas where pests are likely to enter the interior. Pest sighting logs (Exhibit 4) are critical sources of information during these inspections.

On the basis of inspections and monitoring, recommendations should be made to help prevent pest infestation. (See Exhibit 3 for sample Pest Management Inspection Report) These recommendations fall into the following areas.

B.

1. **Sanitation** - The development of a pest infestation is greatly reduced by high standards of sanitation. Sanitation can be defined as the removal of conditions (food, water, harborage) which encourage or allow a pest population to survive.
2. **Building Maintenance** - Proper building and repair practices can prevent significant pest problems. Drainage, sealing, caulking, rodent-proofing, construction and general maintenance of buildings are important steps in this area. An example would be the simple sealing of cracks and crevices which provide harborage for insects within buildings.
3. **Facility Practices and Procedures** - This involves changing behavior of people working in the plant. An example would be making sure that doors to the outside are not kept propped open or that trash is eliminated dumpster lids or trash containers are kept closed.

These recommendations will be documented in the "Sanitation Inspection Report" (Exhibit 4) along with any pest activity noted during service. A detailed list of inspection standards of some items that are included in our sanitation report (Exhibit 3). A customized Sanitation Inspection form can be developed for your plant. The following are the five (5) basic types of control measures that can be used to develop a pest management plan. An IPM program will include at least two (2) or more of the following:

1. **Sanitation** - Proper sanitation is necessary for prevention but is a means of controlling existing infestations. The removal of food and water sources stresses the pest populations, making traps and baits more effective. In addition, university research has shown that oils, greases and dirt render many insecticides less effective.
2. **Mechanical Control** - These methods involve the use of traps, barriers, caulking, mechanical exclusion (screening), using air currents and manipulation of environmental factors (temperature and humidity).
3. **Cultural Control** - This involves changing the habits and behaviors of people to reduce infestations. An example of this would be changing cleaning schedules to prevent product accumulation or help train food processing plant or warehouse personnel to clean spills as soon as they occur.
4. **Biological Control** - Traditionally this measure uses biological organisms or their by-products to control pests. Examples include the use of *Bacillus Thuringiensis* for aquatic breeding insects, parasitic wasps for fly control or fungus for cockroach control.
5. **Material Application Control** - The correct and safe use of materials may constitute a portion of our control operations. All materials are carefully reviewed for their appropriateness and appropriate application techniques that have been selected.

Although the use of chemical control measures, may be use, they will not always be a part of our control plan. Many of the non-chemical control measures need to be implemented by your plant facility personnel. These recommendations will be reported to facility management on our "Sanitation Inspection Reports," (Exhibit 3).

Exhibit 5

IN-HOUSE SURVEY GUIDELINES

(Use this as a guide for your in-house survey inspection)

Consider the following information when completing your in-house survey inspection report.

A. Exterior of the facility:

1. Make note of sanitation conditions. Look for excessive debris, excessive standing water, liquid or product spills. Poor interior or exterior storage practices.
2. Check outside bait stations for the following:
 - ~ Are they anchored?
 - ~ Is the bait fresh?
 - ~ Are markers in place?
 - ~ Are service date stickers under lid?
 - ~ Last time serviced? _____
 - ~ Are stickers dated and initialed?
 - ~ Has there been rodent activity? (Evidence of bait being eaten or droppings)
 - ~ Are the bait stations placed sufficiently for a good preventative monitoring program?
 - ~ Are the bait stations numbered for a rodent location map?
 - ~ A note how many will be serviced each month?
3. Are birds roosting?
4. Were fire ant hills seen?
5. Dead flies by lights?
6. Is there high grass or weeds outside, or near exterior fence line?

B. Interior of facility:

1. Check Ketch-Alls or Tin Cats for the following:
 - ~ Are they properly wound?
 - ~ Are they properly placed?
 - ~ Are wall markers present?
 - ~ Check dates - are they serviced on a regular basis?
 - ~ Are they clean inside? (Free of webs, dirt and debris?)
 - ~ Any evidence of rodent activity? Are the Ketch-Alls or Tin Cats sufficiently in place for a good preventative monitoring program?
 - ~ Tin Cats or Ketch-Alls damaged?
 - ~ A note how many serviced each month?
2. Make note of rodent droppings and where each month.
3. Are there any infestations - insects/rodent - location and type.
4. Ask employees about pest sightings and frequency.

C. Insects:

1. Any evidence of insect activity? Where?
2. Is there a flying insect problem? What kind?

D. Structures and Sanitation:

1. Look for and note any structural deficiencies (open doors, door sweeps, screening required, lift doors in need of repair, broken windows, etc.)
2. Look for dirt, webs, debris, mold and leaks.
3. Make drawing of facility noting locations of monitoring devices and bait stations.

E. Equipment

1. Do they have light traps in place?
2. Are they properly placed?
3. Do they need additional light traps to keep flying insects under control?
4. Trays clean? Bulbs changed?

F. Program/Pricing:

1. Note all types of services and time for each.
2. Note bird control, pheromone trapping, etc. (any other necessary programs)

Exhibit 6

LIST OF VENDORS TO PURCHASE EQUIPMENT

JT Eaton & Company, Inc.
Patricia Slover
1393 East Highland Road
Twinsburg, OH 44087
(330) 425-7801 - (800) 321-3421
(330) 425-8353 Fax
www.jteaton.com

Innovative Pest Management
Carl Doucette
PO Box 265
El Segundo, CA 90245-0265
(310) 322-1999 - (800) 608-1999
(310) 322-8575 Fax

Target Specialty Products
Rich Records
15415 Marquardt Avenue
Santa Fe Springs, CA 90670
(562) 802-2238
(562) 802-3296
www.target-specialty.com

Atlantic Paste & Glue Co., Inc.
Darlene Porter
170 53rd St.
Brooklyn, NY 11232
(718) 492-3648 - (800) 458-7454 (Out of State)
(718) 439-0039 Fax
www.catchmaster.com

PCO-Tech
17355 Darwin Ave. #1
Hesperia, CA 92345
(760) 947-6650
(760) 245-8381 Fax

Chapin Manufacturing, Inc.
PO Box 549
Batavia, NY 14021-0549
(716) 343-3140 - (800) 444-3140
(800) 944-4329
www.chapinmfg.com

Whitmore Micro-Gen
Research Laboratories
(800) 777-8570
www.wmmg.com

Hot Foot America
Sales & Marketing
298 Belvedere Ave.
Belvedere, CA 94920
(800) 843-6334 or (770) 985-8273 Fax
www.hotfoot.com

Van Waters & Rogers, Inc.
(800) 888-4VWR
www.vwr-ltd.com

FMC Corporation
Agricultural Products Group
Philadelphia, PA 19103
www.fmc.com

Bayer Corporation
PO Box 4913
Kansas City, MO 64120
(800) 842-8020
www.nobugs.com

Paragon Professional Pest Control
Steve Diaz
4371 Westlawn Ave.
(310) 397-2070 (Phone/Fax)
(310) 995-8160 (Mobile)
(800) 238-9254 (Orders)

Waterbury Companies, Inc.
Robert C. Bennet
32 Mattatuck Heights
Waterbury, CT 06705
(800) 845-3495
(800) 432-9982 Fax
bugsbennet@aol.com
www.Watco.com

Micro-Flo Company
PO Box 5948
Lakeland, FL 33807
(800) 451-8461
(941) 647-3412 Fax
microflo@earthlink.net

Woodstream
An EKCO Group Company
Lititz, PA 17543
www.victorpest.com

Cleary Chemical
Paul J. Walgenbach Ph.D, PCA, BCE
789 Lakecrest Dr.
El Dorado Hills, CA 95762
(916) 933-3180 (800) 524-1662
(916) 933-0785 (Fax)
(916) 201-6225 (Mobile)
paul.walgenbach@clearychemical.com

Dow AgroSciences LLC
Tim Maniscalco
(317) 337-4359
www.dowagro.com

3M Occupational Health &
Environmental Safety Division
Brendan P. Donohue
6023 S. Garfield Ave.
Los Angeles, CA 90040-3682
(800) 952-4496 (Voice Mail)
(661) 260-3247 (Fax)
bdonohue@mmm.com



RODENT STATION No. _____

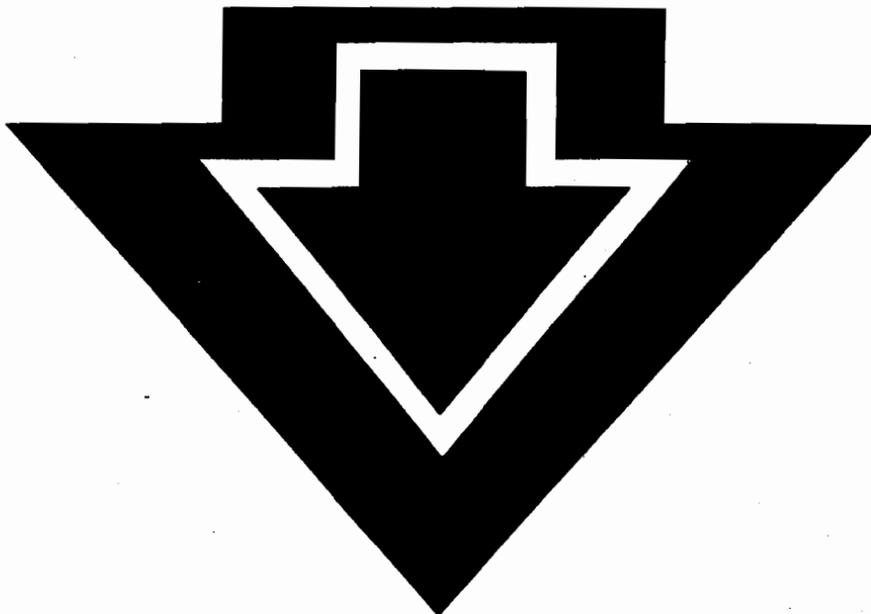
CONTAINS BAIT

TRAP ONLY, CONTAINS NO BAIT

DO NOT DAMAGE OR REMOVE

THIS RODENT STATION IS

SERVICED _____ **PER MONTH**





Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry

Abt

Abt Associates Inc.

February 11, 2001

Dr. Ashraf E.S. Hassan
Cairo Agro Processing Company
Nile Fruit & Pulp
28 Mohamed Said El Halwani Street
Heliopolis, Cairo

Dear Mr. Ashraf:

I would like to thank you for taking the time to work with Mr. James Bowyer, our pest management expert, when he was here last November. During his visit, he worked with Mr. Abdel Nasser Morsy and Mr. Khaled El Sayed.

Mr. Bowyer has completed his report on your facility, a copy of which is enclosed. Even though his comments extend over several pages, he was quite complimentary. As an example, he was quite impressed that you "stuck to your no cameras policy." When you set procedures, it is imperative that they be applied to each and every visitor to your plant.

I will touch on a few of Mr. Bowyer's comments.

1. Rodent Control – Your staff noted that you see rats in the approximately once a week, and regularly on the grounds. Keeping the interior of the building and the grounds clean and well-maintained will help to eliminate food and harborage for these pests. Following the program described on the second page of the report will not only help to reduce populations, but will allow you to more accurately monitor activity.
2. Use of Open Packages of Bait – This is a practice that should be eliminated immediately, especially inside the factory.
3. Standing water – Water was noted to be leaking from plumbing and accumulating on the ground. Standing water will attract all manner of pests. Repair all leaks and regrade your floors to assure that they drain properly.
4. Pest Control Log – Mr. Bowyer observed that you do not maintain a pest control log. Page 3 of his report describes what such a log should contain. As you build your export business or look to work with multinationals here in Egypt (Coca Cola, for example), programs and records demonstrating control will become more important.

There was one other area that you may want to consider looking to upgrade; doors. Mr. Bowyer observed that several of your doors were left open. The usual cause for this is that these are heavy and hard to move, so they are

opened in the morning and remain open all day. Leaving the doors open will allow insects, rodents and birds to enter the facility. Mr. Boyer suggests that you install a roll-up netting of some sort. Another thought would be rapid roll-up doors. These units roll up or down within seconds, so fork lift operators can move in and out of a plant with very little delay. There are several companies who manufacture such doors. In fact, Amr Rashad may have seen one such company at the Northwest Food Processors Association convention last month. The company who exhibited there was a French company called Nergeco. They can be reached at:

Nergeco Technologies
BP 6
43220 Dunnieres
FRANCE
TEL 33-471-66-85-98
FAX 33-471-61-93-87

Should you have any questions or require any additional information, please do not hesitate to contact us.

Sincerely,

Richard F. Stier
Director, Technical Services

cc: M. Ahmed, Files



January 29, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Nile Fruit Pulp Company-Agro-processing S.A.E. Cairo

Dear Rick,

The Nile Fruit Pulp Company is a Cairo Agro-processing company. The main items they process are mango, guava and some apricot juices. This food processing plant was built and has been in operation for six months. This facility is very clean and their cleaning procedure is excellent. The processing equipment is from Italy and has a computer that directs the equipment. The surrounding area is well organized, clean and neat, there are no cracks or crevices in walls.

I met with the Engineer, Mr. Abdel Nasser Morsy, the Quality Assurance Manager and Mr. Khalid El Sayed, Fruit Protection Manager on 11/16/00 at their plant in Heliopolis, Egypt.

This plant has about 35,000-sq. ft. of space and they are building another structure next door, which will contain a cooler. They have their own lab, which is fully equipped.

Occasionally they have rat sightings, about once per week, inside the plant and many sighting on the exterior. produces 20 tons of product each day.

The following are a few findings and recommendations that should be implemented at this plant:

- For the most part storage practices are good, except for a few of the following exceptions:
 - In the warehouse next to a row of mango drums there is clutter and storage next to the wall and between the mango drums and walls. Remove the clutter and keep all items 1/2 meter or 18" away from all walls.
 - In a certain few areas of the warehouse and production, product pallets and empty cases were up against the wall with no access between them. For the above two items keep a 1/2 meter or 18" aisle way from the wall for inspections, cleaning and installation of monitoring devices. Recommend a white or yellow line be placed on the floor to mark this boundary of distance as to where items can be stored. Additionally, a 0.4 – 0.5 M aisle should be outlined in between rows of product.
- No pictures from cameras were allowed to be used in the production or lab area, which is a correct policy. I commend them on sticking to policy and not allowing me to take pictures.
- The exterior doors were sealed quite well, however some of the exterior doors were left in the open position. Always keep doors closed when not in use. If they are to remain open for circulation of air, a roll-up, fitted netting should be framed and installed to prevent entry of flies, rodents and birds.

- Open doors should also have automatic on and off industrial air curtains to prevent entry of flies, rodents and birds.
- At the receiving dock there was stored material against walls. Always leave an 0.5 M path between walls and product for inspections, cleaning and installation of monitoring devices or tamper-resistant rodent bait stations.
- On the exterior, near the boiler and other heavy equipment, there was water leaking from plumbing and equipment causing puddles of water to accumulate on the ground. All leaks need to be repaired to prevent standing water from attracting pests to the moisture and mosquitoes from breeding. The floor should also be regraded to assure proper drainage.
- In and around the water closets there was standing water attracting mosquitoes and fruit flies to breed. Remove all standing water and make an effort to keep all floor surfaces dry to keep pests from accumulating. Again, proper grading of floors will help assure drainage.
- On the inside of the facility, for rodent control, there was indiscriminate placing of open packages of Racumin and Tamak rat poison. **Terminate this practice immediately and remove all poison bait from inside facility.** Replace with a non-toxic multiple curiosity tin cats, monitoring devices or snap traps for rodent control monitoring. These devices should be placed on the interior of the exterior wall at either side of walk through, roll up or sliding exterior doors and then each 12 linear meters on the interior of the same exterior walls. With these monitoring devices there should be the following items:
 - Dating cards should be installed inside each monitoring device to verify and document dates of inspections, cleaning and freshening of bait.
 - Wall placards should be attached to the wall by way of liquid nail or some glue at each monitoring device to show where they belong. Each wall placard and monitoring device should be numbered with corresponding numbers on the placard and monitoring devices or bait stations.
- On the exterior of the building there were no tamper-resistant rodent bait stations or any monitoring devices. This is the second line of defense to protect from rodents. On the exterior area tamper-resistant rodent bait stations should be placed on either side of the exterior walk through, sliding or roll up doors and then each 15 linear meters. In addition, the exterior fence line should have these same tamper-resistant rodent bait stations installed at each 30 linear meters. The following items should be at each tamper-resistant rodent bait stations:
 - A dating card should be inserted in each bait station to indicate the date of cleaning, inspections and service. These dating cards are to remain inside the tamper-resistant rodent bait station so that regulators, auditors, an outside service or in-house quality assurance can track quality assurance.
 - Wall placards should be permanently adhered to the exterior wall or fence at each monitoring device to show where these units should be placed. All wall placards should have corresponding numbers with the monitoring devices and bait stations.
 - All monitoring devices and tamper-resistant rodent bait stations should be anchored to the ground, cement or asphalt either with liquid nail or a chain to some permanent structure such as a fence line.
 - All stations should be locked to prevent the entry of others not authorized to get into these devices. All of the above stations, both exterior and interior should be inspected, cleaned, fresh bait installed where needed, dating cards completed with the date of service. The exterior stations should be inspected a minimum of once per month and the interior a minimum of once per week.

- There are not enough fly light traps at this time. Install fly light traps so as to not to attract outside flies, but to attract existing flies already inside structure and eliminate them. These installations need to be mounted on walls 1.5 to 2.0 M high and inspected each week. I suggest the Vector, Gilbert or Gardner type fly light units. Preferably the Gardner as it has a stronger light power and more glue space for the fly to adhere to.
- Only use shatterproof bulbs in the production section and change bulbs on a written, documented schedule twice per year. Document the dates when bulbs have been changed or replaced. The fly light traps are to be inspected and cleaned on a weekly basis. One big advantage of these types of fly light units is the installation of glueboards, as the fly cannot only fly around the light, but should it land it will adhere and stick to the glueboard.
- At the present time there is no pest control log set up for documentation in accordance with GMP's, HACCP and AIB Standards. Recommend that a pest management log be set up containing:
 - A master listing of all inspection dates and services pertaining to this facility.
 - Develop a pest management inspection report that is customized to your facility that is to be filled out during each inspection and service and a completed copy to be filled and kept in the pest management log book. Information to be kept in this report is evidence of any rodent activity, dates of service, storage practices, sanitation conditions, housekeeping and information on rodent and insect proofing needs.
 - Develop diagram maps of facility showing locations of all exterior and interior tamper-resistant rodent bait stations, curiosity-monitoring devices, tin cats and flytraps. All traps and bait stations should have different corresponding numbers on a permanently installed wall placard indicating locations of all devices.
 - The log should contain a copy of the material use report, approved material used list, MSDS copies, labels, labeling information copies of certificate of insurance and copy of regulatory license and certification when an outside service company is used.

The above observations are limited recommendations. With this information and implementation of this program your client will be well on their way to a good documented pest management program.

Sincerely,

Jim Bowyer
Quality Assurance Manager

Standards for Sanitation and IPM Pest Control

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4. **Biological Control** - Traditionally this measure uses biological organisms or their by-products to control pests. Examples include the use of *Bacillus Thuringiensis* for aquatic breeding insects, parasitic wasps for fly control or fungus for cockroach control.
5. **Material Application Control** - The correct and safe use of materials may constitute a portion of our control operations. All materials are carefully reviewed for their appropriateness and appropriate application techniques that have been selected.

Although the use of chemical control measures, may be use, they will not always be a part of our control plan. Many of the non-chemical control measures need to be implemented by your plant facility personnel. These recommendations will be reported to facility management on our "Sanitation Inspection Reports," (Exhibit 3).

Exhibit 5
IN-HOUSE SURVEY GUIDELINES

(Use this as a guide for your in-house survey inspection)

Consider the following information when completing your in-house survey inspection report.

A. Exterior of the facility:

1. Make note of sanitation conditions. Look for excessive debris, excessive standing water, liquid or product spills. Poor interior or exterior storage practices.
2. Check outside bait stations for the following:
 - ~ Are they anchored?
 - ~ Is the bait fresh?
 - ~ Are markers in place?
 - ~ Are service date stickers under lid?
 - ~ Last time serviced? _____
 - ~ Are stickers dated and initialed?
 - ~ Has there been rodent activity? (Evidence of bait being eaten or droppings)
 - ~ Are the bait stations placed sufficiently for a good preventative monitoring program?
 - ~ Are the bait stations numbered for a rodent location map?
 - ~ A note how many will be serviced each month?
3. Are birds roosting?
4. Were fire ant hills seen?
5. Dead flies by lights?
6. Is there high grass or weeds outside, or near exterior fence line?

B. Interior of facility:

1. Check Ketch-Alls or Tin Cats for the following:
 - ~ Are they properly wound?
 - ~ Are they properly placed?
 - ~ Are wall markers present?
 - ~ Check dates - are they serviced on a regular basis?
 - ~ Are they clean inside? (Free of webs, dirt and debris?)
 - ~ Any evidence of rodent activity? Are the Ketch-Alls or Tin Cats sufficiently in place for a good preventative monitoring program?
 - ~ Tin Cats or Ketch-Alls damaged?
 - ~ A note how many serviced each month?
2. Make note of rodent droppings and where each month.
3. Are there any infestations - insects/rodent - location and type.
4. Ask employees about pest sightings and frequency.

C. Insects:

1. Any evidence of insect activity? Where?
2. Is there a flying insect problem? What kind?

D. Structures and Sanitation:

1. Look for and note any structural deficiencies (open doors, door sweeps, screening required, lift doors in need of repair, broken windows, etc.)
2. Look for dirt, webs, debris, mold and leaks.
3. Make drawing of facility noting locations of monitoring devices and bait stations.

Equipment

1. Do they have light traps in place?
2. Are they properly placed?
3. Do they need additional light traps to keep flying insects under control?
4. Trays clean? Bulbs changed?

Program/Pricing:

1. Note all types of services and time for each.
2. Note bird control, pheromone trapping, etc. (any other necessary programs)

LIST OF VENDORS TO PURCHASE EQUIPMENT**J Eaton & Company, Inc.**

Patricia Slover
 193 East Highland Road
 Twinsburg, OH 44087
 (30) 425-7801 - (800) 321-3421
 (30) 425-8353 Fax
 www.jteaton.com

Innovative Pest Management

Carl Doucette
 PO Box 265
 El Segundo, CA 90245-0265
 (310) 322-1999 - (800) 608-1999
 (310) 322-8575 Fax

Target Specialty Products

Rich Records
 15415 Marquardt Avenue
 Santa Fe Springs, CA 90670
 (52) 802-2238
 (562) 802-3296
 www.target-specialty.com

Atlantic Paste & Glue Co., Inc.

Dorlene Porter
 170 53rd St.
 Brooklyn, NY 11232
 (78) 492-3648 - (800) 458-7454 (Out of State)
 (718) 439-0039 Fax
 www.catchmaster.com

CO-Tech

755 Darwin Ave. #1
 Esperia, CA 92345
 (760) 947-6650
 (760) 245-8381 Fax

Chapin Manufacturing, Inc.

PO Box 549
 Batavia, NY 14021-0549
 (716) 343-3140 - (800) 444-3140
 (30) 944-4329
 www.chapinmfg.com

Whitmore Micro-Gen

Research Laboratories
 (800) 777-8570
 www.wmmg.com

Hot Foot America

Sales & Marketing
 298 Belvedere Ave.
 Belvedere, CA 94920
 (800) 843-6334 or (770) 985-8273 Fax
 www.hotfoot.com

Van Waters & Rogers, Inc.

(800) 888-4VWR
 www.vwr-ltd.com

FMC Corporation

Agricultural Products Group
 Philadelphia, PA 19103
 www.fmc.com

Bayer Corporation

PO Box 4913
 Kansas City, MO 64120
 (800) 842-8020
 www.nobugs.com

Paragon Professional Pest Control

Steve Diaz
 4371 Westlawn Ave.
 (310) 397-2070 (Phone/Fax)
 (310) 995-8160 (Mobile)
 (800) 238-9254 (Orders)

Waterbury Companies, Inc.
Robert C. Bennet
32 Mattatuck Heights
Waterbury, CT 06705
(800) 845-3495
(800) 432-9982 Fax
bugsbennet@aol.com
www.Watco.com

Micro-Flo Company
PO Box 5948
Lakeland, FL 33807
(800) 451-8461
(941) 647-3412 Fax
microflo@earthlink.net

Woodstream
An EKCO Group Company
Lititz, PA 17543
www.victorpest.com

Cleary Chemical
Paul J. Walgenbach Ph.D, PCA, BCE
789 Lakecrest Dr.
El Dorado Hills, CA 95762
(916) 933-3180 (800) 524-1662
(916) 933-0785 (Fax)
(916) 201-6225 (Mobile)
paul.walgenbach@clearychemical.com

Dow AgroSciences LLC
Tim Maniscalco
(317) 337-4359
www.dowagro.com

**3M Occupational Health &
Environmental Safety Division**
Brendan P. Donohue
6023 S. Garfield Ave.
Los Angeles, CA 90040-3682
(800) 952-4496 (Voice Mail)
(661) 260-3247 (Fax)
bdonohue@mmm.com



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry



February 26, 2001

Engineer Ahmed Khamis
Siclam Dairy Processing
Mostafa Kamel Street
El-Ras El Soda
Alexandria

Dear Eng. Ahmed:

I would like to thank you for taking the time to entertain Mr. James Bowyer, Mr. Morad Ahmed and myself when we visited you last year. As part of this visit, Mr. Bowyer worked with your staff to conduct a pest control of the facility. We understand that conducting such an audit during a period when you were doing construction may seem unfair, but on the positive side, it also gave you a chance to make needed repairs. I have enclosed a copy of the report that Mr. Bowyer prepared. This report includes several photographs that he took which highlight problem areas. I have summarized some of his comments below.

1. Ornamental Vegetation - The grounds are, as Mr. Bowyer noted, "*attractive with heavy vegetation and flowerbeds.*" He suggests that they be trimmed to assure that there is a vegetation-free strip around the buildings. This will minimize harborage for pests. He also commented that date palms would provide "*ideal hiding areas for pests*". To discourage this practice, trees are occasionally sheathed with metal to prevent the rats from climbing and nesting in the fronds. The city of Honolulu, Hawaii has done this to minimize infestations in the downtown area.
2. Areas Behind Buildings - Accumulations of trash and vegetation were observed in the area behind the buildings (see photographs 4, 5 and 6). This is a situation that will attract pests and provide harborage. This area must be cleaned up and the vegetation removed. Serious consideration should be given to covering the area with crushed stone, concrete or asphalt to discourage pest harborage and prevent the growth of vegetation.
3. Tamper Resistant Bait Stations - The bait stations that you are using (photograph #7 and 10) do not meet the standards of what should be used for pest control. Tamper resistant bait stations that are resistant to the elements and can be both locked and secured to the ground are the recommended style of traps. We are enclosing a document on pest control, which has a picture of this kind of bait station. Each bait station or live trap in your plant should include a dating card in or on the trap and a placard mounted on the wall above the trap designating its location.
4. Crack & Crevice Treatment - There were a number of cracks and cervices observed within the plant. We would suggest that you seal these cracks to eliminate harborage for pests.

5. Documentation of the Program - It is imperative that you develop a detailed pest management program. All documentation related to the program, including details of the program, maps designating locations of traps or insect traps and recordkeeping forms should be placed into a master manual for pest control.
6. Pest Access - The plant should be designed to discourage pest access. All gaps in walls (photograph 8), such as those around pipes (photographs 13 and 14) should be sealed or screened to eliminate access to pests. All windows must be screened with a fine mesh screen to keep out flies and other insects. Finally, doors must also be kept closed when not in use and should be fitted with rubber bumpers or other fittings to eliminate access.
7. Storage - As may be seen in photograph 15, packaging materials are stacked against a wall. Materials should never be stored directly against a wall. Corridors of at least 45 cm should be maintained between walls and stored product to allow the monitoring of traps, for cleaning, inspection and for inventory control.
8. Employee Practices - Workers should not be allowed to wear any jewelry, including watches and rings when working in the food processing plant. All workers, men included, should be wearing hair restraints when in the plant. If any workers have beards, they should also be wearing a beard net or snood.
9. Fly Light Traps - All light traps should be properly located and fitted with functional UV lights. Lights should be tested using a meter that monitors UV emissions to assure that they are emitting light at the proper wavelength. As the strength of the emissions decrease, their ability to attract flies drops. Lights should be changed at least twice every year, or more frequently if needed.

Mr. Bowyer also suggests that we conduct another when you have completed all your construction. Now that they work has been completed, we sincerely hope that we can work with you to arrange another visit.

Should you have any questions with regards to Mr. Bowyer's report or my comments, please feel free to contact Mr. Morad or myself.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: M. Ahmed, Files, Mr. Asraf Amin (Siclam)



February 13, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Seclam Dairy Processing

Dear Rick,

On November 19, 2000 Rick Stier, Morad and myself visited and audited the Seclam plant. This plant processes, when in full operation, dairy products such as: milk, cheese and has a juice processing section. Portions of this plant are remodeling at this time. The juice plant should be in operation in another 2 weeks. The milk processing portion should be in operation in one to four months.

We met with Juice Manager Engineer, Ahmed Khamis; the juice manager. We also met with Engineer Ashraf Amin and the sanitation and pest control manager.

This company is presently doing in-house pest control service with their own personnel. They are routinely checking bait stations and fly light traps. There is a villa on the premises, which has been converted into offices. This is a separate building from the processing plant buildings. There are buildings in which they process cheese, juice and one that processes milk. While in full production they will produce 7,000 units of juice per hour. They are planning on running two shifts each day. There are 450 workers at the plant. The milk plant also produces yogurt, buffalo and cow milk.

This company was started in 1948 under Swiss ownership. It was nationalized during the Nasser years and controlled by the government until 1998, at which time it was privatized. They started the remodel in June of 2000.

At one time they did have a private outside pest control firm servicing the plant. They kept seeing rats, which motivated them to go in-house. The pest control manager is in charge of that department and has five or six people that report to him, all of whom have assigned areas. They are all full time workers for pest control projects only. In addition, they have a supervisor from an outside pest control company that comes in periodically to offer advice and spends two to three hours at the plant. The name of this company is Sotaico Pest Company from Heliopolis and they are members of the National Pest Control Association.

The juice plant is scheduled to be back in operation in December and they are attempting to get the milk plant in production by February. All new juice processing equipment is in place and was built and shipped from France. A Company by the name of Serac-Telstar built the equipment.

The following are a few findings and recommendations for this installation. Thorough and complete final inspections could not be done as much of the plant was in a state of remodel and monitoring devices were not in place at present time.

- The grounds on the outside are attractive with heavy vegetation and flowerbeds with many large date palm trees. Recommend that all vegetation be trimmed back away from building and there be a vegetation free strip around all building no less than 45 cm in width. With the heavy vegetation on the grounds and especially the date palms, it makes for ideal hiding areas for pests and accessible for rodents to nest and hide. Consider sheathing the palms with metal to discourage rats from climbing.
- On the exterior and the back end of the buildings, especially the juice processing building, there is much debris, junk and storage. Recommend that all debris, junk and unused equipment be removed from the premises and that the area be leveled and keep vegetation free. Filling the area with crushed stone or paving it would help discourage plant growth.
- In these exterior areas, it was noted that they used bait stations constructed from 15 – 20 cm diameter clay pipes that contained exposed bait. Some areas had exposed bait just lying on cardboard. These stations were not placed correctly, but strewn out in the middle of open areas. Recommend that as a second line of defense, tamper-resistant bait stations be installed around the exterior of all buildings. These tamper-resistant rodent bait stations should be on either side of all exterior doors and every 15 meters thereafter.
- Tamper resistant rodent bait stations should be anchored to the ground so that they can not be tampered with or removed.
- Each bait station should have in it a dating card, so that the frequency of inspections can be determined. All exterior bait stations should be checked no less than 1 time per month. These inspections should be conducted on a routine basis. The stations should be cleaned and fresh bait installed as needed. Should there be evidence of activity, the frequency of inspections should be adjusted accordingly. At each station there should be a wall placard placed above the station with corresponding numbers on both the placard and the station.
- The first line of defense should be at the exterior fence line. At the fence line the same tamper-resistant rodent bait stations should be installed each 30 meters.
- All exterior tamper-resistant rodent bait stations should be anchored to the ground or fence so that they cannot moved or tampered with.
- All tamper-resistant rodent bait stations should be locked and anchored. These bait stations should also have a placard with corresponding numbers placed above on the placard and on the tamper-resistant rodent bait station.
- A dating card is to be installed in each station to monitor inspections, cleaning and frequency of service.

- I was told that at this facility they fog inside each day early in the morning and at night. With a little effort, his practice could be reduced or eliminated. Adoption of programs to exclude pests will discourage pest access and the development of infestations (screened windows, closed doors, good sanitation).
- Presently many exterior doors remain open. Doors should remain closed and be tight fitting when not being used. For high traffic areas, consider purchasing rapid roll-up doors. These doors will open or close in less than five seconds.
- All openings and holes leading into the structure should be sealed.
- Windows should be kept closed at all times. Broken windows and screens should be repaired to prevent the entry of flies.
- We recommend that proper working industrial air curtains be installed at all exterior doors so that during short periods when deliveries are made there is something to prevent flies from entering. These units must also be properly maintained to assure that they are adjusted and working properly.
- At present inside the facility there were some single catch live cages to capture rodents. Recommend that these devices be replaced with either tin cats and/or snap traps. The monitoring devices are placed on the interior of all exterior walls on either side of doors and then every 12 meters thereafter.
- Windows were found to have no screens. Install a fine mesh screening on all windows.
- Fogging for flies is only a temporary fix and other steps must be taken to eliminate these infestations.
- At present there are no rodent bait stations around the exterior of buildings. The claim is that water and rain affect them. If properly installed tamper-resistant rodent bait stations were used they would be protected from inclement weather. You must have that second line of defense around the exterior of each building.
- Cracks and crevices were found inside buildings. Seal all cracks and crevices with a smooth, cleanable epoxy.
- In some processing areas tiles were broken. Tiles should be replaced or repaired to eliminate potential hiding places for pests and bacteria.
- In some areas of the processing plant, materials were stored items up against walls. All storage should be 45 cm away from walls to allow for easy inspections, cleaning, inventory control and placement of monitoring devices.
- In the processing areas, male workers were not wearing head or beard covers. Head and beard covers must be worn at all times in the processing areas. All

jewelry and watches must be removed before entering the processing areas.

- In the juice processing areas there was exposed, open bait on cardboard found. This practice must be eliminated immediately. No bait should be used inside the processing areas.
- There were not an adequate number of fly light machines installed in the proper areas. Fly light machines should be installed at strategic points to eliminate inside flies and so not attract flies from the outside. The wall mounted fly light machines should be two meters high and the fly lights out in the center of the building should be no more than 2.3 to 2.5 meters high.
- Floor drains were found to be dirty. Floor drains should be cleaned on a regular schedule, preferably every day using proper cleaning techniques.
- Develop a pest control log containing copies of all sanitation inspection reports, MSDS copies, labels and labeling information, pest sighting sheets, material use reports, fly light traps inspection reports, and mapping diagrams for all monitoring devices and tamper-resistant rodent bait stations.
- Recommend that this plant be audited again, once it is in operation and when all devices are in place. Furthermore, a good thorough inspection should be made when the remodeling is done.

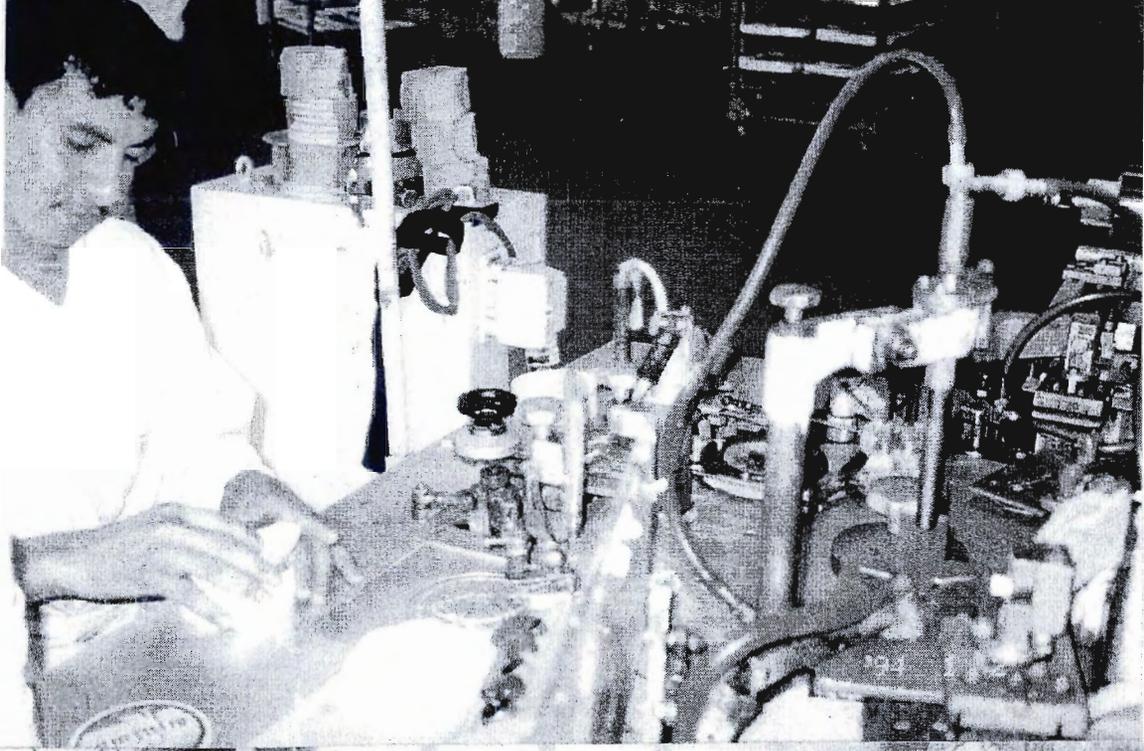
I hope some of these findings and recommendations will be useful to the Seclam organization. Should there be any questions please feel free to contact me.

Sincerely,

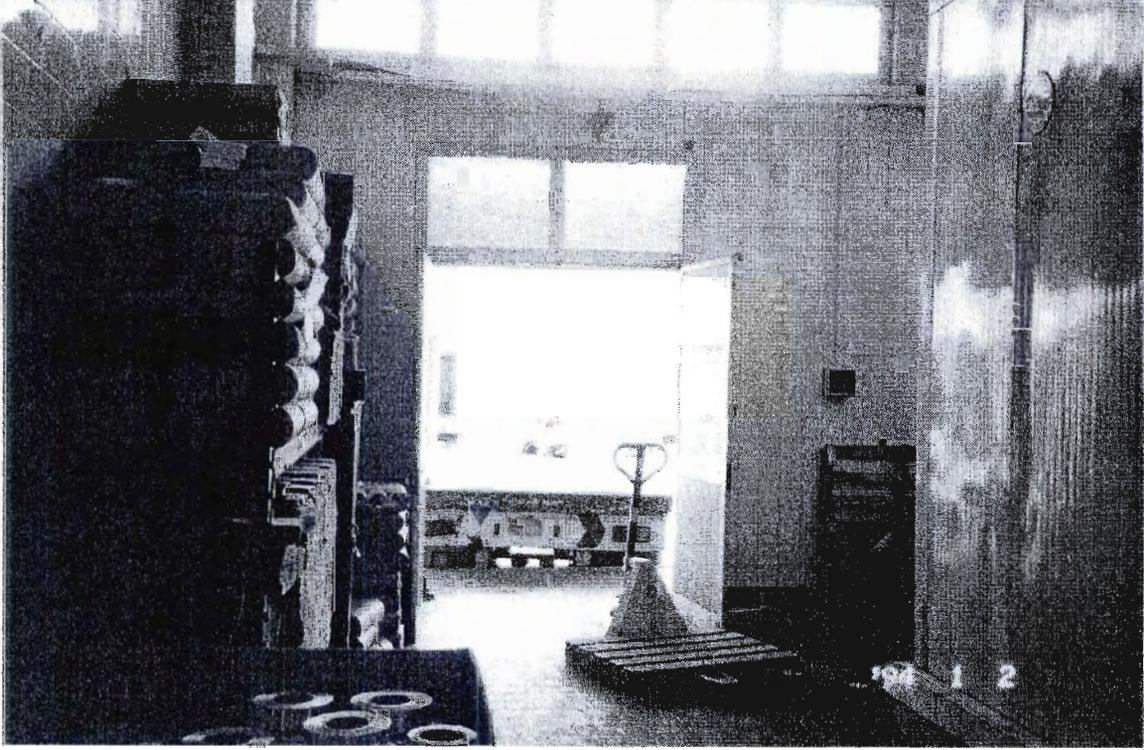
Jim Bowyer
Quality Assurance Manager



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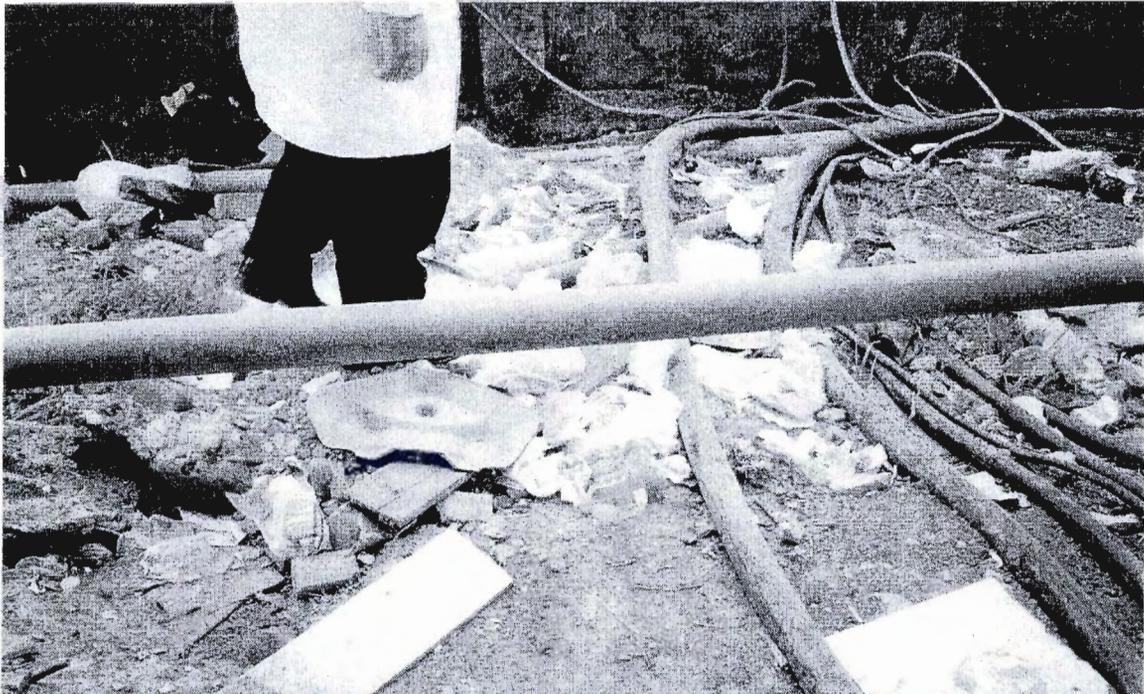


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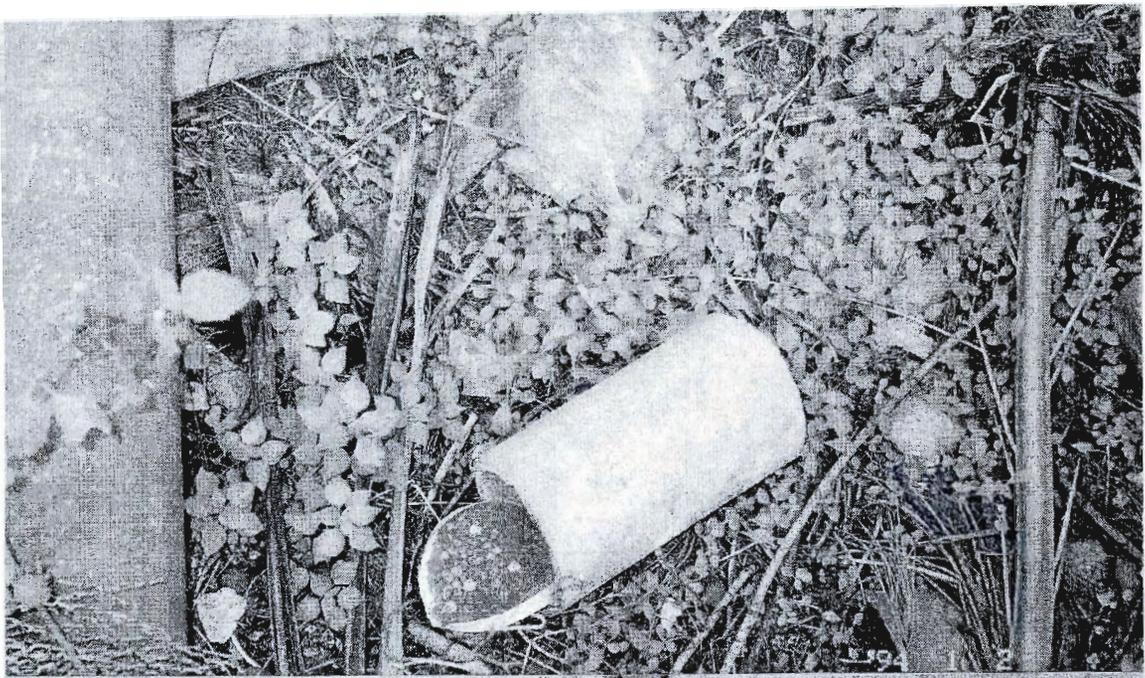
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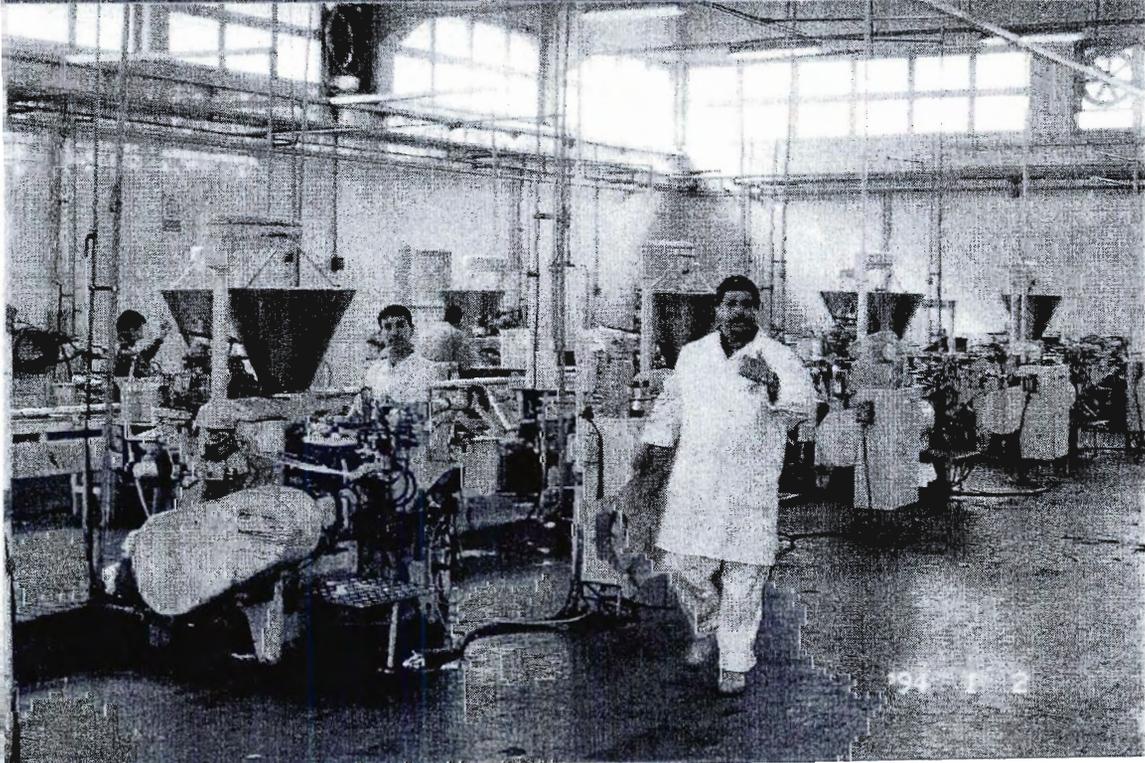
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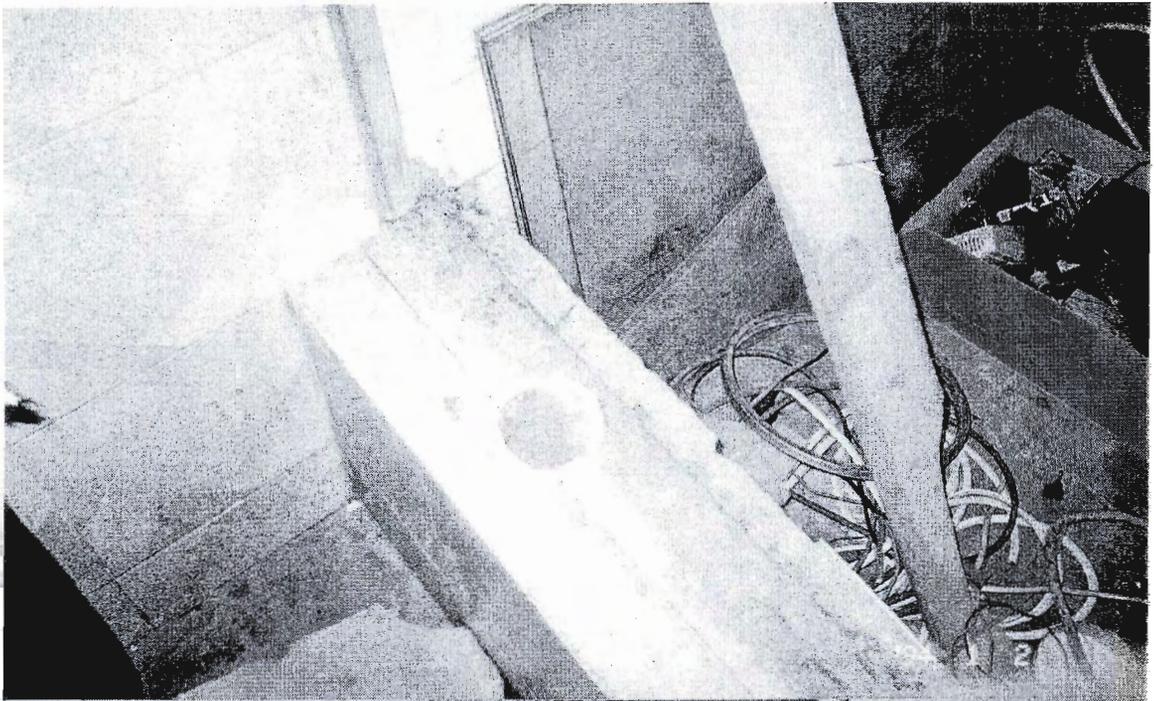
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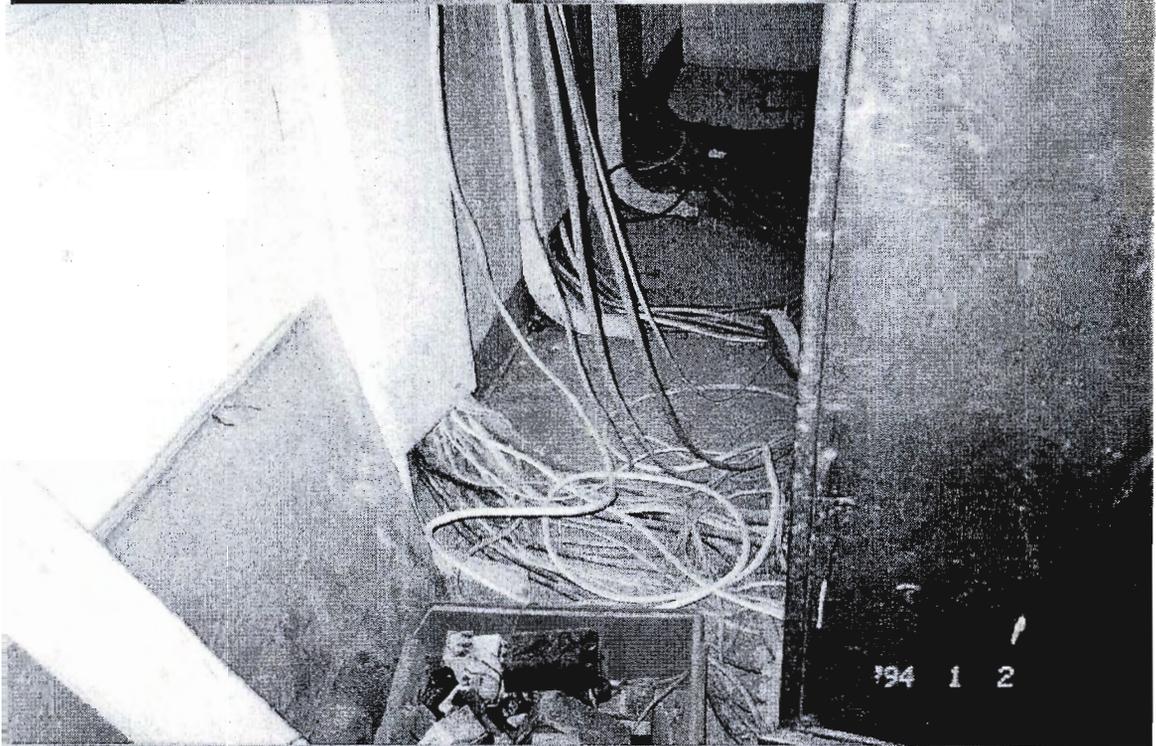


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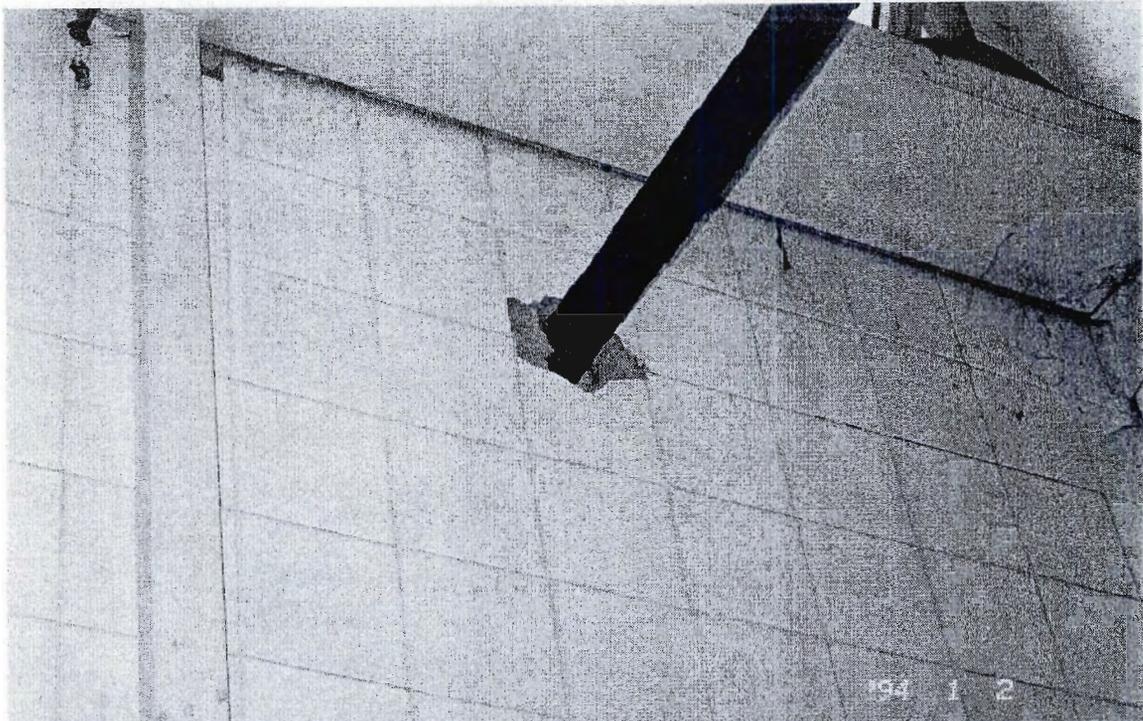


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15



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry

Abt

Abt Associates Inc.

February 26, 2001

Dr. Sherif Maamoun
Roasty
Cairo Alexandria Agricultural Road
Km 24 Senduon Center
Kaloubia

Dear Dr. Sherif:

I would like to thank you for taking the time to entertain Mr. James Bowyer, when he visited you last year. As part of this visit, Mr. Bowyer worked with your staff to conduct a pest control of the facility. As you will see in his report, he was quite impressed with your commitment to sanitation and food safety. He did, however, observe a few problems.

I have enclosed a copy of the report that Mr. Bowyer prepared. I have summarized some of his comments below.

1. **Tamper Resistant Bait Stations** - The bait stations that you are using do not meet the standards of what should be used for pest control. Tamper resistant bait stations that are resistant to the elements and can be both locked and secured to the ground are the recommended style of traps. We are enclosing a document on pest control, which has a picture of this kind of bait station. Each bait station or live trap in your plant should include a dating card in or on the trap and a placard mounted on the wall above the trap designating its location.
2. **Rodent Infestation** - Mr. Bowyer observed rat during his inspection. When rats are observed during daylight hours, it usually indicates that there is a severe rodent problem as these animals are nocturnal (prefer night). The rat ran into the plant after being seen. This observation highlighted another problem; access to the plant. Doors should be designed to exclude pests.
3. **Areas Behind Buildings** - Accumulations of trash and vegetation were observed in the area behind the buildings. This is a situation that will attract pests and provide harborage. This area must be cleaned up and the vegetation removed. Serious consideration should be given to covering the area with crushed stone, concrete or asphalt to discourage pest harborage and prevent the growth of vegetation.

4. Ant Infestation - Steps should be taken to eliminate the infestations that were observed. This includes both killing the ants and eliminating their nests.
5. Documentation of the Program - It is imperative that you develop a detailed pest management program. All documentation related to the program, including details of the program, maps designating locations of traps or insect traps and recordkeeping forms should be placed into a master manual for pest control.
6. Storage - As may be seen in photograph 15, packaging materials are stacked against a wall. Materials should never be stored directly against a wall. Corridors of at least 45 cm should be maintained between walls and stored product to allow the monitoring of traps, for cleaning, inspection and for inventory control.
7. Fly Light Traps - All light traps should be properly located and fitted with functional UV lights. Lights should be tested using a meter that monitors UV emissions to assure that they are emitting light at the proper wavelength. As the strength of the emissions decrease, their ability to attract flies drops. Lights should be changed at least twice every year, or more frequently if needed. We would also suggest that you consider moving away from light traps that have glueboards in them.

Should you have any questions with regards to Mr. Bowyer's report or my comments, please feel free to contact Mr. Morad or myself.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: M. Ahmed, Files



February 18, 2001

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: Roasty Chickens-United Company for Poultry

Dear Rick,

On November 22, 2000 I visited the Roasty Chicken Processing Plant. During our initial interview I met with Dr. Sherif Maamoun, Consultant and Quality Assurance Director, Dr. Lamiaa Farouk, Quality Assurance for this company. This firm's parent company is MG and has several different plants and types of businesses. It is privately held and has been in the poultry business since 1984. This new plant was established in 1998. I must commend this organization for their procedures at setting up good manufacturing practices. An example of this is the requirement that we remove all jewelry and watches from as we were making the survey. In addition, booties, jackets and head covers were required to be worn and washing of our hands with a bactericide as we were walking into each department. The one item that was not readily available was beard covers. These need to be kept on-hand for those workers and visitors with beards.

The plant operates two 7-hour shifts, six days each week. They have approximately 500 workers, and 8,000 square meter plant. This plant produces about 30 ton of chicken per day. This plant exports to the Gulf States and just began exporting to Africa. They also serve the domestic market. Roasty would like to increase their export market and realize they must continue to improve their quality and adhere to the GMP's and HACCP standards.

It was noted that the all workers in the production area wore gloves, jackets, and head covers in the processing area. It was also noted that one supervisor, while instructing a worker in a certain process, had his glove off his hand. Gloves should remain on at all times while in processing area.

We observed that all unused equipment in the processing area was tightly covered after cleaning with plastic to avoid contamination.

We also noted that the company required all persons entering different departments in processing area to wash their hands with a bactericide. A change of booties was also required.

At present, the Roasty Company is using an outside Pest Control Service called Sotoki Pest Control. They are servicing on a twice per month basis and all employee lockers are treated once per month.

Much of the progress that has occurred at this plant is credited to Dr. Sherif Maamoun's efforts. He is a medical doctor, has been trained and worked in the United States from 1991-1997. He feels that there has been progress at this plant, but there is still to be accomplished. He appreciates the help from ALEB in establishing good manufacturing practices.

The following are a few findings and recommendations at this installation.

- Exterior rodent bait stations had Racummin rat bait (an anticoagulant) in exposed 15 cm diameter, clay, and red tile pipes. These stations were open, exposed and not anchored to the ground. Recommend tamper-resistant rodent bait stations be installed on either side of exterior walk through, roll-up and sliding doors. In addition to that on the exterior of the building these tamper-resistant rodent bait stations should be installed every 15 meters. Each rodent bait station should be anchored to the ground or wall. One way this anchor could be done is with Liquid Nail which will anchor the station to asphalt or cement. Also, a chain may be attached to the bait station to anchor it to the fence. All rodent bait stations should have a dating card inside the bait container to determine the time of each service, cleaning and replacement of bait when this has occurred for documentation purposes. This information should be transferred to the Master Pest Control Log.
- At each tamper-resistant rodent bait station location there should be a wall placard installed with corresponding numbers on both the placard and the tamper-resistant rodent bait station above. These exterior stations are considered the second line of defense.
- The first line of defense, is the exterior fence line. There should be a tamper-resistant rodent bait station installed every 30 meters. The same procedure as listed above should be followed, (i.e. inserting dating cards, a wall placard with corresponding numbers and anchored).
- The third line of defense would be monitoring devices on the interior of the plant. At this time the single catch wire cage traps are being used as the monitoring device. Replace these devices with tin cats or catch all multiple curiosity traps. These traps should be placed on the interior of all exterior walls. One should be located on either side of all walk through, sliding or roll-up doors or then every 12 meters. The same procedure should be followed as on the exterior. To supplement these efforts, snap traps could be used to monitor activity.
- It was noted that on several occasions there were ants invading the interior of this facility. Ants were quite active and visible on the exterior of the buildings. Recommend baiting and treating of the exterior ants to eliminate them at the source before they gain access to the building.
- No documentation or sanitation inspection reports were found. Roasty should develop a custom program for pest management, which will include sanitation inspection reports. These materials need to be developed. Any observations should be recorded on the forms. Items to be included in the manual are: records of actual infestations, storage practices, maps with locations of all traps, sanitation, housekeeping, and areas that need to be pest or rodent proofed. A copy of this

should go into a master pest control log file. This filing should be done after reviewing with Roasty management.

- We observed areas on the exterior where vegetation had grown near the buildings. We also observed rodent activity by the warehouse. A large rat ran out of one of the open rodent bait stations and proceeded to go underneath a door and into the water purification section.
- There are doors that have opening on the sides and bottoms. Properly fit or replace all doors to eliminate gaps and openings.
- When heavy vegetation is allowed this encourages harborage of rodents. The exterior area, particularly in the back of the plant warehouse, has heavy vegetation, storage, and debris. Clean all storage and debris from exterior and make vegetation free line at least 45 cm from buildings.
- The entrance to the rendering and killing area of the plant has fly activity. Doors were found to be not in a tightly sealed condition when in a closed position. All doors must be sealed and must fit tightly.
- On the exterior and in rendering area there were some open containers with renderings. Recommend that these containers be sealed with lids and closed to prevent the attraction of flies.
- Flies were found on the outside area. Removal of vegetation and standing water should help reduce fly infestations.
- Near the killing room and incoming chicken room, there were Polyethylene bags with renderings exposed. All bags should remain sealed or closed so as to not attract flies.
- On the interior walls of the processing area there are cracks and some broken tiles. They should be repaired, sealed with a smooth epoxy, and readily cleanable.
- All storage on the interior walls of the plant facility should be a minimum of 45 cm from walls to allow for inspection, cleaning, inventory control and installation of monitoring devices.
- Single catch wire cage traps have no placards on the interior.
- Some exterior doors opening to the outside were left in an open position. All doors must remain closed at all times when not in use.
- In the warehouse area, most aisles and wall spaces were acceptable. There were a few areas where pallets were on the ground and not 45 cm away from walls. Keep all items 45 cm away from walls for cleaning, inspections, and installation of monitoring devices.

- Some doors were left open in the warehouse. All doors are to remain closed at all times except when in used.
- Screens on windows are of too large of a mesh allowing flies to enter. Install small mesh screening on all windows.
- Fly light maintenance is taken care of in-house personnel. Bulbs were found not to be changed until they burn out. Bulbs should be of a shatterproof type of and we recommend the Gardner, Vector or Gilbert type with glue boards and not the Insectocutors so as to eliminate fragmentation of insects.
- All fly lights should be installed approximately 2 meters high on the wall so as to eliminate flies on the interior and not attract them from the outside, that is, the lights should not be visible from the outside.
- Maintenance of fly light traps should be done on a weekly basis. They should be cleaned and new glue boards installed as needed. All fly light bulbs should be changed twice per year, or as needed. We suggest that you buy a UV emission meter to monitor light to assure bulb performance.
- It was noted that there is a 15 cm diameter opening of pipe allowing for easy access for rodents to enter. Seal these openings to prevent invaders from entering.
- All inspections should be documented with a dating card and information noted in the pest control management log.
- The log should also contain MSDS copies; labels and labeling information and pest management inspection report forms. A pest-sighting sheet and material use reports. In addition, documentation of certification or licensing of the outside pest control company an insurance certificate.

I hope these findings and recommendations will be useful to you and your client. I look forward to returning to this plant to see the progress of Dr. Maamoun. Should there be any questions please feel free to contact me.

Sincerely,

Jim Bowyer
Quality Assurance Manager



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry

Abt

Abt Associates Inc.

December 20, 2000

Mr. Magdy Maamoun
Montana for Food Industries
52 Gameat El Dowal El Arabia Street
El-Khalig Tower
Monhadseen

Dear Mr. Magdy:

We would like to thank you and your staff for providing Mr. James Bowyer with a second opportunity to audit you plant. He conducted a complete pest control audit on November 22 after completing a similar inspection at the Roasty facility. He was escorted on his inspection by Mr. Fadel El Gueretly.

Mr. Bowyer's report on the November visit is enclosed. He noted that there had been some improvements made since his previous visit, but there is still much work to be done. As his report references the earlier visit, we are also enclosing a copy of the previous report with the cover letter that we prepared.

We urge you to make a serious commitment to pest management. It is one of the primary areas which auditors representing buyers will look into. We also suggest that you share these reports with your pest management firm. They should be treated as a partner, not simply a vendor. Work with them.

To provide you with a better understanding of pest management and its importance, we are enclosing a short booklet that ALEB has developed called "Pest Control for the Food Processor". This document includes not only information on pest control, but a list of suppliers of pest management equipment.

Thank you again for your hospitality. Should you have any questions or require any additional information, do not hesitate to call.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: Files, M. Ahmed

December 14, 2000

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: United Co. for Food Industries (S.A.E.) Montana

Dear Rick,

I met and spoke with Mr. Fadel El Gueretly, the General Manager of this plant. Mr. Guertly noted that not many conditions had changed since my last trip, with the exception of the following:

- Some cleanup around the exterior had been done.
- Some of the bait stations have now been anchored and have covers. The covers are still inadequate and are not tamper-resistant as they open on either side of the bait.
- Many of the bait stations are now presently numbered and covered with metal guards.
- The fly light insectocutors have been shut down and are not being used. These fly light traps should be replaced with proper fly light units, because of the possibility of fragmentation of the insect into the product. Suggest replacing with the Vector, Gardner or Filbert type of units,

Attached is a copy of the findings and recommendations from the audit done in June of 2000. All items are the same except the above items mentioned.

Should we be able to help further do not hesitate to let us know.

Sincerely,

Jim Bowyer
Quality Assurance Manager



Agriculture - Led Export Businesses

Supporting Egypt's Processed Foods Export Industry

Abt

Abt Associates Inc.

October 5, 2000

Mr. Magdy Maamoun
Montana for Food Industries
52 Gameat El Dowal El Arabia Street
El-Khalig Tower
Monhadseen

Dear Mr. Magdy:

Earlier this year, Mr. James Bowyer conducted a pest control audit at your plant. This was part of a scope of work to help processors, like yourselves, upgrade their pest management programs. He was ably assisted by Mr. Fadel and Mr. Ansary during his visit.

We have attached a copy of Mr. Bowyer's observations and recommendations, and must agree with his comment that "*there is quite a bit of work to do.*" Since so much of your current business involves exports, we would strongly suggest that you work with your pest control company to upgrade the operation. Buyers are becoming more and more demanding with the passage of time, and many will insist on auditing your plant. As an example, an auditor would not be happy to find birds roosting inside the plant.

Many thanks to you and your staff for the hospitality extended to Mr. Bowyer. Should you have any questions or require any additional information, please feel free to contact us.

Thank you again.

Sincerely yours,

Richard F. Stier
Director, Technical Services

cc: Files, M. Ahmed

December 14, 2000

Mr. Richard F. Stier
Team Director/Technical Support
ALEB
12 Dokki St., Suites 601 and 602
Dokki Cairo, Egypt

Subject: United Co. for Food Industries (S.A.E.) Montana

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Attached is a copy of the findings and recommendations from the audit done in June of 2000. All items are the same except the above items mentioned.

Should we be able to help further do not hesitate to let us know.

Sincerely,

Jim Bowyer
Quality Assurance Manager

- Found leaking plumbing and sewage. Recommend that plumbing be repaired to stop leaking.
- Seal and caulk openings at roofline.
- Remove wood shelving and install metal racks for storage away which should be 18" from the wall and 6" off the floor.
- Paint white lines 18" from walls, to remind people to keep storage away from walls and do not place product in this area.
- Cracks and crevices in many walls and floors. Seal with a permanent, smooth, easy cleanable material.
- Drain covers were broken in the packing area. Replace all broken drain covers with new ones.
- Birds are roosting and nesting inside the plant buildings and the processing area. Eliminate birds and seal upper openings to prevent birds from gaining access.
- Windows are left open and some have no screens or are broken. Windows should be kept closed at all times and have screens installed, which are new and fitted properly to prevent flies, birds and rodents from gaining access.
- The building has exhaust fans with no screening to prevent the entrance of flies. Install fine mesh screening at the exhaust fans to prevent pest entry.
- Improper bait stations were noted with exposed bait and not in tamper-resistant rodent bait stations. Install tamper-resistant rodent bait stations on the exterior on either side of all exterior doors and each 50 linear feet.
- Install monitoring devices such as: Tincats, Ketch-Alls and Snap Traps on either side of the door and around the circumference of the interior walls.
- Bait and monitoring stations inside or outside have no wall placards. Install wall placards at each interior monitoring device and exterior tamper-resistant rodent bait station with corresponding numbers on both to the station and wall placard.
- No dating cards were found at any bait or monitoring station. All interior-monitoring stations should be inspected and dated on a weekly basis. All exterior tamper-resistant rodent bait stations should have a properly filled out dating card a minimum of once per month.
- Many bait stations and monitoring devices were not anchored to the ground or floor. Anchor all bait stations and monitoring devices to floor, ground or fenceline.
- Insectocutors had no documentation as to when the bulbs were last replaced, cleaned. Replace all insectocutors with Gardner or Vector type fly light traps with glueboards. These fly lights must have shatterproof bulbs and be routinely cleaned with bulbs replaced on a twice per year basis.
- Properly install all fly lights at 5 - 7 feet in height. Install them so as not to attract flies from the outside, but to attract the existing flies already inside.
- Cardboard storage was noted up against the wall in warehouse. Keep all storage away from walls 18" and have 14" isleways in between rows of product.

From these findings, recommendations, and observations you can see there is quite a bit of work to be accomplished at the Montana plant. I realize that the plant is getting older and has some vintage in it, however much of this can be accomplished to correct the many sanitation and structural deficiencies. Should we be able to help further assistance do not hesitate to let us know.

Sincerely,

Tom Bowyer
Quality Assurance Manager

DATE: November 27, 2000
TO: Director, Co-Directors & COP
FROM: Rick Stier
RE: Meeting with Sotaico

BACKGROUND: One of the basic weaknesses in the quality and safety programs for the Egyptian food processing industry is in the area of pest management. To help improve the industry in this area, Technical Services has utilized the expertise of Mr. James Bowyer of Clark Pest Control. He has conducted a number of plant audits and conducted classes in Integrated Pest Control. During his recent visit, Morad Ahmed made an effort to bring pest control operators from Egypt into the workshops. The only company to take up his invitation was Sotaico.

SUMMARY: Sotaico sent their people to the workshops in both Alexandria and Cairo. Attendance in Cairo was based on what they heard in Alexandria. Sotaico management felt that they could benefit from Mr. Bowyer's expertise, and requested that he meet with them. They, therefore, made arrangements to visit with us on Friday November 24 at 11:00 in our offices.

Sotaico representatives included Mr. Nagy Toueg (Founder & President), Mr. Rawi Camel Toueg and Mr. Adel. Rick Stier and Jim Bowyer represented ALEB.

Mr. Nagy used to work for Bayer until he split off to form his own company. He is a member of the same international pest control organization in which Jim Bowyer is involved, and tries to attend the annual meeting in the United States each year. Sotaico has been making an effort to work with their clients to control pests by improving sanitation and getting clients to eliminate conditions that encourage pest access and multiplication. They are trying to eliminate the use of chemicals as much as they can. Mr. Nagy said that they lost a contract with Sheraton because they wouldn't spray as per the request of Sheraton. The hotel failed to address the root of the problem, so spraying would have been a waste of their money and his time. He said that the biggest problem here is that customers base their selection of a pest control operator solely on price, not on quality of the service. Mr. Bowyer explained that Clark is one of the more expensive services in the western United States, but their business has continued to grow because people appreciate good service and a job well done. Jim encouraged him to "not give up." We also explained that as processors begin to build export businesses and the supermarket industry within Egypt becomes more competitive, operators will demand quality or be forced to adopt better techniques through economics; improve or else. I mentioned that there are many companies who designate specific service providers. If, for example, they can impress an operation such as the Tricon Restaurant Group with their knowledge and commitment to quality, that organization could designate them their recognized pest control operator. This would mean that all organizations doing business with Tricon in Egypt would have to utilize their services. The Sotaico people did say that they know Ms. Belinda Lee, who is the Tricon auditor here in the Middle East.

Mr. Nagy realizes that he is somewhat hamstrung by a lack of supplies. He does act as the representative for a few products, but runs into problems with customs. For

example, the plastic bait stations that Mr. Bowyer showed to the group would probably double in price thanks to customs duties. This would put them out of reach for his clients. We suggested that he contact some of the manufacturers and try and get a license to produce some products here in Egypt. He would contact Bowyer with regards to this issue. Jim can help make introductions in the USA.. Another concern is the time and money that it takes to register a compound in Egypt. Nagy figures that it is a 2-3 year process that could cost between 10,000 and 20,000LE. Nagy has found that the MAXFORCE product produced by Chlorox (?) is a very effective means for controlling cockroaches, but the product is not registered here. He would like to use it, but doesn't want to invest the money. The issue is further complicated by the fact that the licensed Chlorox distributor has no interest in such products, preferring to focus on detergents and such. MAXFORCE is also quite expensive (200 LE for a 2 ounce tube).

The bottom line is that he would like to work with ALEB. I told him we are trying to make the industry more aware of pest management. Based on the response that we have seen to Mr. Bowyer's latest series of workshops, it seems as if we are accomplishing that. If they realize that this is important, they will need a good supplier, which means Sotaico. If they upgrade pest control operations (and other quality and safety programs) in their plants, there is a real potential for building their business with discriminating buyers overseas.

NEXT STEPS:

1. Encourage Task 4 to begin working with the pest management service sector.
2. Encourage Task 5 to work with US suppliers of pest control materials to enter into partnerships with Egyptian importers/representatives. Jim Bowyer should be kept "in the loop" on this.
3. Pass Sotaico information on to Sainsbury's (Mr. Peter Holland).
4. Begin passing information on Sotaico and other pest management companies on to our client base.

CONTACT INFORMATION:

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Societe Technique Agricole Industrielle et Commerce (Sotaico)
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Heliopolis, Cairo
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