



ClariFly
LAWYER

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INTEGRATED PEST MANAGEMENT PROGRAM PLANNING GUIDE

 **CENTRAL**
LIFE SCIENCES



THE FOUR SPECIES OF FLIES MOST COMMONLY AFFECTING LIVESTOCK

CONFINED

HOUSE
FLY



POTENTIAL
IMPACT

- Can cause aggravation and annoyance during feeding
- Implicated in the transmission of 65 disease organisms

REST
ON

Manure, soil, fences, weeds, trees, buildings, etc.

BREED
IN

Manure, moist/decaying materials

FEED
ON

Manure, feed, waste, sweat, tears

WHAT TO
LOOK FOR

- Flies on structures and animals, and around feed
- Constant livestock movement
- Livestock bunching

STABLE
FLY



- Can cause blood loss, reduced weight gain or weight loss, reduced milk production

Barn walls, fences, weeds, etc.

Manure, moist/decaying materials

Blood of livestock

- Flies on lower legs of livestock
- Cattle stomping or bunching
- Constant livestock movement

PASTURE

HORN
FLY



- Can cause painful bites
- Can cause reduced feeding and weight gain
- Implicated in spread of heifer mastitis

Cattle

Fresh manure

Blood of cattle

- Flies on back/sides of cattle
- Bunching, tail switching
- Visible irritation

FACE
FLY



- Can cause reduced grazing, weight loss
- Can transmit *Moraxella bovis*, the cause of pink eye

Barn walls, fences, weeds, etc.

Fresh manure

Saliva, tears, nasal mucus

- Flies on face of animal, especially around eyes and mouth



— A comprehensive IPM program consists of three phases:

STEP 1: PLANNING

- Helps operators understand the extent of their insect problems
- Charts a course to address issues proactively instead of being reactive

STEP 2: IMPLEMENTATION

- Implement insect control tactics to reduce infestations on your property
- Execute a multi-method approach to insect control

STEP 3: EVALUATION

- Follow up on program effectiveness
- Checking and monitoring on a regular basis
- Reviewing/adapting a program as needed



STEP 1: PLANNING



Set out recommended Starbar® traps inside and around your facilities to measure the amount of fly activity. This will help you understand the extent of the fly problem, know which target areas to address, and know how to determine the best mix of tactics for maximum fly control for your operation. Perfect for controlling flies on both small- and large-scale operations, Starbar® baits offer superior control of nuisance and disease-spreading flies. Their bait matrices encourage flies to feed and can be used in rotation to discourage fly resistance.

1. INSPECT

Inspect operation and find areas with heaviest insect populations

2. LEARN

Learn the most economical means for minimizing insect infestations and damage through various control measures

3. SET

Set a threshold where insect populations and environmental conditions dictate that action must be taken

4. TRAIN

Train your employees on the best mix of tactics in the most important target areas for maximum control





STEP 2: IMPLEMENTATION



To deliver the best results, use an all-encompassing approach to insect control that utilizes cultural, physical, biological, and chemical control efforts.

1. CULTURAL

Maintain sanitation and keep premises in order, especially focusing on manure management

2. PHYSICAL/MECHANICAL

Repair buildings and sanitation structures, denying entry to insects

3. BIOLOGICAL CONTROL

Release natural fly predators on the premises

4. CHEMICAL CONTROL

Biorational and conventional fly control products



STEP 2: IMPLEMENTATION

CULTURAL

Comprehensive insect control begins in the Cultural phase where daily habits are established and best sanitation practices are implemented around the facility.



MANURE MANAGEMENT

Manage manure in a timely and consistent manner as it is the primary breeding site for flies.



MAINTAIN WEEDS & GRASS

Regularly maintain weeds and tall grasses as they provide an ideal resting place for flies and other insects. On pasture, clear or spread out grass clumps or mulch when possible.



CHANGE BEDDING

Clean up spilled milk and feed. Replace decaying straw and wood shavings in livestock bedding. They can serve as breeding sites for flies and cockroaches.



ROTATE HUTCHES

Keep calf hutches and pens well ventilated. Regularly clean each, and move calf hutches on a consistent schedule.



STEP 2: IMPLEMENTATION

PHYSICAL/ MECHANICAL

Efforts include the maintenance of all structures and facilities that deny flies, cockroaches, and other insects' access points, and make the areas less hospitable to the pests.



IMPROVE AIR FLOW

Install fans to produce a downward and outward air flow. This limits fly activity in barns and enclosed spaces.



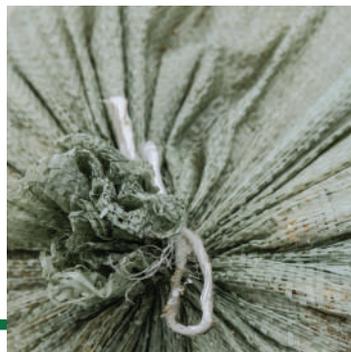
DENY ENTRY

Remove fly and cockroach entry points in structures by caulking cracks, filling holes, and sealing around electrical outlets.



REPAIR STRUCTURES

Replace broken windows. Replace torn mesh screens. Repair broken doors. Keep roofs in repair. Close open walls.



SEAL REFUSE

Keep garbage tightly sealed and isolated in an enclosed area.



STEP 2: IMPLEMENTATION

BIOLOGICAL CONTROL

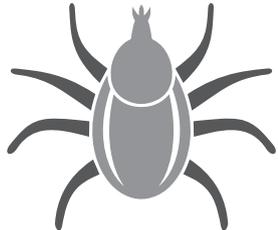
Biological control incorporates naturally occurring fly enemies to help keep their populations in check. These beneficial pests can be used as part of an IPM program to maximize fly-control efforts with no adverse effect to animals or humans.

BENEFICIAL INSECTS INCLUDE:

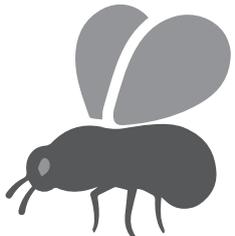
PREDATORY BEETLES



MITES



PARASITIC WASPS



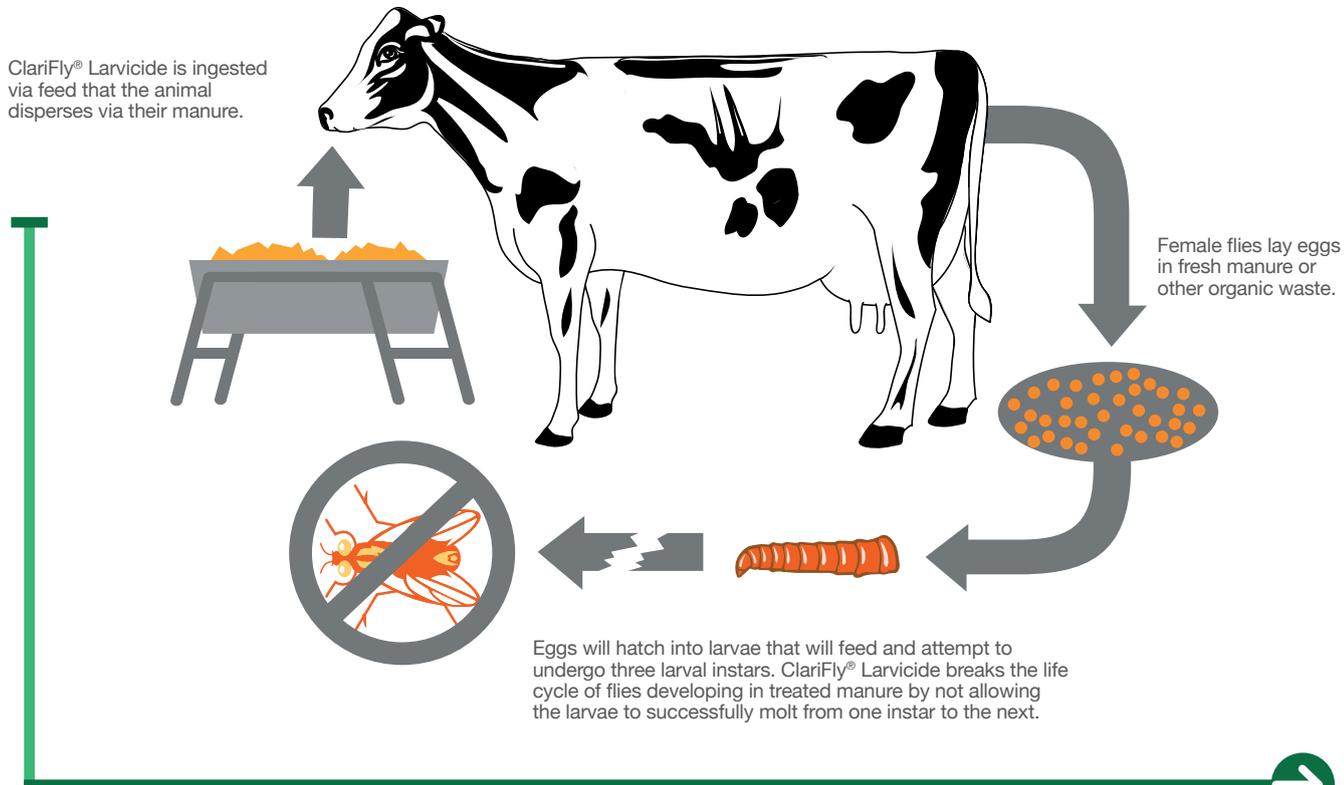
FLY PATHOGENS



STEP 2: IMPLEMENTATION

CHEMICAL CONTROL- BIORATIONAL

Use feed-through fly control, such as ClariFly® Larvicide. Once ingested, it passes through the livestock and into the animal's manure, where flies lay eggs. The active ingredient then interferes with the life cycle, preventing the adult flies from emerging from the manure by stopping them in the larval stage. For best results, begin using in the feed mix early in the spring, 30 days before flies begin to appear through 30 days after the first frost.

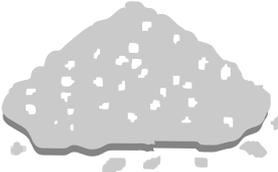


STEP 2: IMPLEMENTATION

CHEMICAL CONTROL- CONVENTIONAL

Control adult flies, cockroaches, mosquitoes, etc. by incorporating a balanced mix of insect control modes of action throughout the operation, and ensuring a rotation of modes of action to prevent resistance.

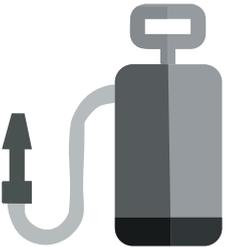
BAITS



TRAPS



SPRAYS & FOGGERS



SPECIALTY



RECOMMENDED PRODUCTS

FOR CHEMICAL CONTROL-CONVENTIONAL

BAITS



QUIKSTRIKE®
FLY BAIT



GOLDEN MALRIN®
FLY BAIT



CYANAROX®
INSECTICIDAL BAIT

TRAPS



BITE FREE™
STABLE FLY TRAP



FLY TERMINATOR® PRO
FLY TRAP



QUIKSTRIKE® II
FLY ABATEMENT STRIP

SPRAYS & FOGGERS



CATTLE ARMOR™ 1%
SYNERGIZED POUR ON



PROLATE/LINTOX HD™
INSECTICIDAL SPRAY



INHIBIDOR™
INSECTICIDAL POUR-ON

SPECIALTY



ALLUVIUM™
COCKROACH GEL BAIT



EXHALT™ WDG INSECT
GROWTH REGULATOR

NOTES





THE RIGHT LEVEL OF CONTROL

HIGH

CEILING, ATTICS, AND RAFTERS

- Flies rest up high
- Bright colors entice flies to land
- Hang in livestock areas above livestock reach



MEDIUM

WALLS, FENCES, AND CORRALS

- Pheromones and feeding stimulants lure flies to traps
- Hang along fence lines, calf hutches, sheds, and more to attract flies



LOW

FLOORS, LEDGES, GATES, AND OFF THE GROUND

- Flies feed at low levels
- Sugar base and attractants encourage flies to feed
- Scatter on the ground or hang outside of livestock's reach
- Rotate between fly baits introducing new active ingredients and mode of actions



IN, ON, AROUND

CATTLE AND PASTURE

- Multiple premise control options that can be used throughout an operation to fight a variety of insects





STEP 3: EVALUATION



After implementing your fly control products, monitor fly populations throughout the operation with the use of speck cards and a variety of traps. It is important to rotate modes of action to prevent resistance. Document your progress with a concise record of locations, conditions, and actions taken.

1. TRACK

Track fly population results by using speck cards and traps from Starbar® Products

2. ROTATE

Rotate modes of action to prevent resistance

3. DOCUMENT

Document the progress, making changes as necessary





**FOR MORE INFORMATION, CONTACT YOUR FEED DEALER,
VISIT WWW.CENTRALLIFESCIENCES.COM
OR CALL 1-800-347-8272.**



Always read and follow label instructions. Alluvium, Altosid, the cow head design, Cattle Armor, ClariFly, ClariFly with design, Cyanarox, Exhalt, Golden Malrin, Inhibidor, Prolate/Lintox HD, QuikStrike, Starbar, and Starbar with design are trademarks of Wellmark International. Bite Free, Captivator, EZ Trap, Fly Stik, Fly Terminator, FlyRelief, and Red to Yellow gradation are trademarks of Farnam Companies, Inc. ©2022 Wellmark International. CTL 22-006